

Well History Report
For

Chevron et al Newburn II-23

At
Exploration License Area 2359
Off the Scotian Shelf
Offshore, Nova Scotia

RECEIVED

NOV 20 2002

CANADA-NOVA SCOTIA
OFFSHORE PETRO BOARD

November 2002

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INFORMATION RELEASE DATE

AUG 21 2004

CATEGORY

1

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category 2 data
Released Aug 21/07

Part 1

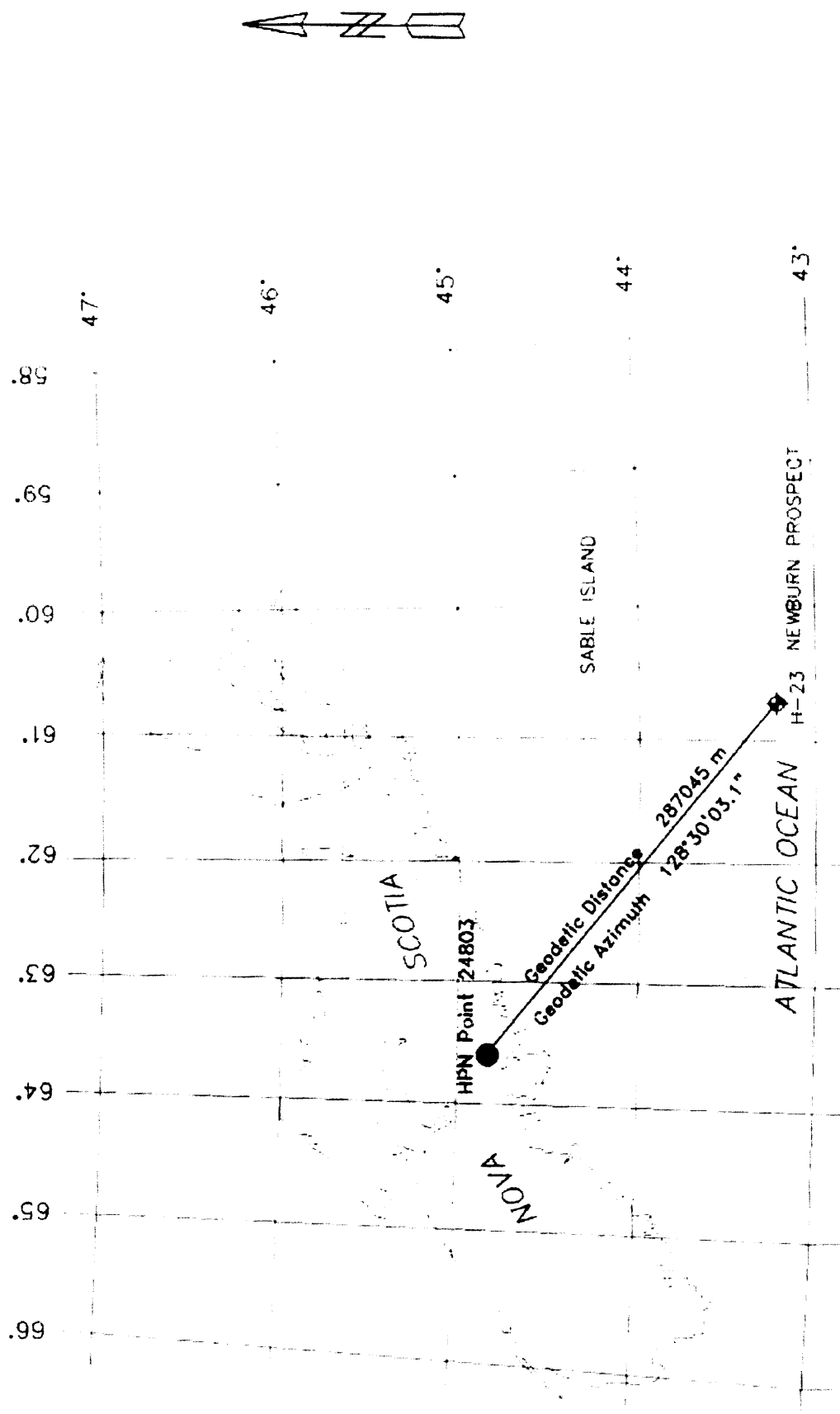
Introduction

1.5 Difficulties and Delays

<u>Incident</u>	<u>Time</u>	<u>Percent of Total Well Time</u>
➤ Well control incidents and associated activities.	206.5hrs	9.3%
➤ Problems with directional and MWD/LWD equipment failures.	62.0hrs	2.8%
➤ Problems with other equipment failures.	52.0hrs	2.3%
➤ Rig Repair.	41hrs	1.8%
➤ Problems with cuttings drying equipment.	40hrs	1.8%
➤ Problems associated with failed logging tools.	26.5hrs	1.2%
➤ Miscellaneous Unexpected Event time	81.0hrs	3.6%
• Deviation problems causing well to be respud (18.5hrs)		
• Lost ROV visibility while drilling 660mm hole section (7hrs)		
• Investigate suspect high inclination of LPWH bullseye (7hrs)		
• Trouble getting pressure test on 508mm casing (12hrs)		
• Trouble drilling cement and float equipment (21.5hrs)		
• Time spent trying to work 197mm liner to bottom (8hrs)		
• Miscellaneous (7hrs)		

For a detailed description of the above noted events, refer to the Hole Section Summary in Appendix C.

LOCATION OF WELLSITE

DETAIL OF UNIT H
SECTION 23

Not to Scale

PART 1: Introduction

1.1 Introduction

Chevron et al Newburn H-23 is located approximately 287 kilometers east-southeast of Halifax, Nova Scotia at 43 12' 16.726" North latitude and 60 48' 18.442" West longitude (NAD 83) in a water depth of 977m.

The purpose of the well was to test for an economically significant hydrocarbon column that targeted seismically defined deepwater turbidite sandstone reservoirs that are the bypassed and lowstand equivalents of the known productive delta-front sandstones in the Sable Basin. The well was programmed as an S-curve directional profile in order to optimize penetration points on two key seismic horizons within the prospective interval.

Chevron Canada Limited was the operator of record for the Chevron et al Newburn H-23 well. A dynamically positioned drillship, the Transocean Deepwater Millennium drilled the well.

The original well was spud at 00:30hrs May 22, 2002 and was drilled 56m BML and was subsequently abandoned due to excessive deviation. The rig was moved 40m North and the well was respued at 12:30 May 22, 2002. The well was drilled with an S-curve directional profile and reached a total depth of 6070m MD at 04:00 August 9, 2002. The well penetrated the Tertiary and Cretaceous sediments and terminated in the base of the Early Cretaceous. The well was abandoned and the Deepwater Millenium was released from the Chevron et al Newburn H-23 location at 03:30 August 22, 2002.

1.2 Location Map

See page 3 for the Chevron et al Newburn H-23 wellsite location map.

1.3 General Information

1.3.1	Well name	Chevron et al Newburn H-23
1.3.2	Co-ordinates	43 12' 16.726" N 60 48' 18.442" W (NAD83)

The above final coordinates situate the well 1.34m at 190.14 degrees from the proposed location. The preliminary position determination was calculated using 100 Differential Global Positioning Survey (DGPS) fixes observed at a 10-second interval.

The final positioning was calculated once the 914mm casing and Low Pressure Wellhead Housing (LPWH) were set. Dual frequency carrier phase GPS observations were collected over two 12 hour sessions, with data collected at 30 second intervals. The data was processed along with GPS base station data from the Canadian Active Control Network points in St John's Nfld. and Schefferville PQ to process the final location. All positioning data was collected on the drillship using surface positioning instrumentation. The accuracy of the primary positioning equipment was verified using the Dynamic Positioning system on the Deepwater Millenium prior to commencing survey operations.

1.4 Drilling Unit Performance

See Appendix A for a graphical summary of weather conditions and vessel response.

Part 2

General Information

PART 2: General Information

- 2.1 Well Name & Number: Chevron et al Newburn H-23
Unit: H
Section: 23
Grid: 43 20' N, 60 45' W
- 2.2 Exploration Agreement (Permit): EL 2359
- 2.3 Operator: Chevron Canada Limited
500 – 5th Avenue S.W.
Calgary, Alberta
T2P 0L7
- 2.4 Agent: Chevron Canada Resources Ltd.
Suite 1407, Purdy's Wharf Tower 1
1959 Upper Water St.
Halifax, NS
B3J 3N2
- 2.5 Contractor: Transocean
R & B Falcon Canada Co.
235 Water Street
Suite M102.
St. John's, NF
A1C 1B6
- 2.6 Well Location: 43 12' 16.726" N
60 48' 18.442" W
(NAD83)
- 2.7 Unique Well Identifier: 300H234320060450
- 2.8 Drilling Unit:
Name: Deepwater Millennium Drillship

Port of Registry: Panama

Year Built: 1999

Shipyard: Samsung Heavy Industries. Kyungnam, South Korea
- 2.9 Position Keeping: Dynamic Positioning
-

Part 3

Drilling & Completion

Operations

PART 3: Drilling and Completion Operations

3.1	<u>Elevations</u>	Rotary Table:	24 m
		Water Depth:	977 m
		Seafloor – m RT:	1001 m
3.2	<u>Total Depth</u>	Driller:	6070 m MD
		Logged Depth:	6077.5 m MD
		Plug Back Depth:	1023 m MD
3.3	<u>Significant Dates:</u>	Spud:	00:30 hrs, May 22, 2002
		Re-spud:	12:30 hrs, May 22, 2002
		TD reached:	04:00 hrs, August 9, 2002
		Rig Released:	03:30 hrs, August 22, 2002
3.4	<u>Well Status</u>	Abandoned	
3.5	<u>Costs</u>	AFE Estimate:	\$79 499 000
		Field Estimate:	\$83 356 456
3.6	<u>Hole Sizes and Depths</u>		
	<u>Classification</u>	<u>Interval</u>	<u>Hole</u>
	Structural	1001 m – 1100 m	1067 mm
	Surface	1100 m – 1917 m	660 mm
	Intermediate 1	1917 m – 3515 m	432 mm
	Intermediate 2	3515 m – 4418 m	311 mm
	Main 1	4418 m – 5425 m	216 mm
	Main 2	5425 m – 6070 m	165 mm
3.7	<u>Daily Drilling Reports</u>		
	See Appendix B for the Daily Drilling Reports		
3.8	<u>Hole Section Summary</u>		
	See Appendix C for the Hole Section Summary.		
3.9	<u>Bit Record</u>		
	See Appendix D for the Bit Record		
3.10	<u>BHA Summary</u>		
	See Appendix E for a detailed breakdown of the BHA's used to drill Newburn H-23.		
3.11	<u>Casing and Cementing Reports</u>		
	See Appendix F for the casing and cementing reports.		
3.12	<u>Sidetracked Hole</u>		
	Not Applicable		

3.13 Drilling Fluid

See Appendix G for Drilling Fluid Summary

3.14 Fluid Disposal/Cuttings Disposal

See Appendix G - Drilling Fluid Summary for information concerning Fluid Disposal and Cuttings Disposal.

3.15 Fishing Operations

There were no fishing operations during the drilling of the Chevron et al Newburn H-23 well.

3.16 Well Kicks

A drilling break occurred at 5404m MD while drilling ahead with a 1655 kg/m³ mud density. The well was flow checked at 5405m MD and shut in with a 0.24m³ volume increase. The following pressures were observed: SIDPP – 5934kPa, SICP – 4760kPa. The well was killed using the Driller's Method and a mud weight of 1775kg/m³. While circulating the influx out of the hole, returns were partially lost as a result of a plugged choke. A total of 49m³ were lost prior to regaining full circulation. A total of 119 hours was spent circulating and conditioning mud to 1775-1790kg/m³ after the initial well kill as a result of severely gas cut mud.

3.17 Formation Leak-off Tests

See Appendix H for Formation Integrity Test results

3.18 Time Distribution

Tables summarizing hourly breakdown by hole section is included in Appendix I

3.19 Directional and Deviation Surveys

See Appendix J for a listing of the directional and deviation surveys and a plan view of the well.

3.20 Abandonment Plugs

<u>Type of Plug</u>	<u>Interval</u>	<u>Felt</u>	<u>Cement and Additives</u>
196.9mmCementRetainer	5332m MD	No	
Squeeze	5332-5480m MD	No	3.0m ³ - 1920kg/m ³ "G" cement+41.6 L Halad-344EXP+30.2 L SCR-10045+4 L HR-25+ 22.7 L CFR-3.
Cement Plug	5302-5332m MD	No	0.66m ³ - 1920kg/m ³ "G" cement+41.6 L Halad-344EXP+30.2 L SCR-10045+4l HR-25+ 22.7 L CFR-3.
Cement Plug	4170-4270m MD	No	2.2m ³ – 1920kg/m ³ "G" cement + 8 l/tonne Halad 344-EXP,6 l/tonne SCR-100 + 5 l/tonne CFR-3
251mmCement Retainer	1109m MD	No	
Squeeze	1086-1250m MD	No	5.25m ³ – 1910kg/m ³ "G" cement + 15 l/tonne Halad 344-EXP+10 l/tonne CaCl ₂ + 6 l/tonne CFR-3
346mmCement Retainer	1086m MD	No	
Squeeze	1023-1247m MD	No	23.0m ³ – 1910kg/m ³ "G" cement + 30 l/tonne CaCl ₂ + 6 l/tonne CFR-3

Refer to Appendix K for a detailed diagram of the final Plug and Abandon schematic, a copy of the Well Termination Record and a copy of the final location ROV seabed survey report.

3.21 Well Schematic

Refer to Appendix L for a detailed diagram of the final as drilled wellbore schematic.

3.22 Fluid Samples

Not Applicable

3.23 Final Legal Survey Plan

Will be submitted as part of this report upon when approved survey is received from Thales Geoservices Canada Ltd.

3.24 Support Craft:

3.24.1 Supply Vessels

The following supply vessels were utilized during operations:

<u>Vessel</u>	<u>Owner Contractor</u>	<u>Flag</u>	<u>BHP</u>	<u>Functions</u>
Bonavista	Maersk	Canadian	10 880	AHTS
Chancellor	Maersk	Canadian	14 400	AHTS
Hebron Sea	Secunda Marine	Canadian	10 500	AHTS

2.24.2 Logistics Summary: Supply Vessels

Supply Vessel Sailings:

Maersk Chancellor: 16
Maersk Bonavista : 17
Hebron Sea: 6

Total: 39 Sailings

3.24.3 Helicopters

Two Cougar Helicopters were used to support the operation, the S61, and the S76.

3.24.4 Logistics Summary: Helicopters

Number of Outbound Flights: 109
Number of Inbound Flights: 109
Total Number of Helicopter Flights: 218
Number of cancelled flights: 24

Number of Passengers moved on Outbound Flights: 759
Number of Passengers moved on Inbound Flights: 775
Total Number of Passengers moved by Helicopter: 1534

Freight moved on Outbound Flights: 8923 lbs
Freight moved on Inbound Flights: 1703 lbs
Total Freight moved by Helicopter: 10626 lbs.



CANADA-NOVA SCOTIA
OFFSHORE PETROLEUM BOARD

WELL TERMINATION RECORD

WELL DATA

Well Name: Chevron et al Newburn H-23

Drilling Unit: Deepwater Millennium

Field/Pool: Exploration License 2359

Final Coordinates: Lat: 43 deg 12 min. 16.7121 s N

Elevations RT/KB: 1001m RT

Spud Date: May 22, 2002

Total Depth: 6070 m MD / 5983m TVD

Operator: Chevron Canada Resources

Contractor: Transocean

Well Status: Abandoned

Long: 60 deg. 48 min. 18.4330 s W

Water Depth: 277m

Well Termination Date: August 21, 2002

CASING AND CEMENTING

O.D.:	Weight	Grade:	Depth Set:	Cement and Additives
* 914.4mm.	1080 kg/m.	X-60 Grade Structural Casing	set at 1093m	cemented with 93.8 tonne. 1910 kg/m ³ G + 20 l/tonne CaCl ₂ cement.
* 508mm	251 kg/m.	X-56 Grade Surface Casing	set at 1902m	cemented with 232 tonne. 1550 kg/m ³ foamed G lead cement w/ 7 l/tonne Zonosealant 2000 + 57.8 tonne 1910 kg/m ³ G tail cement w/ 20 l/tonne CaCl ₂ .
* 346mm.	131 kg/m.	P110 Int. Casing	set at 3502m	cemented with 56.7 tonne. 1560 kg/m ³ G lead cement w/ 3.3% PHG. 10 l/tonne SCR-100L. 12 l/tonne Halad-344L + 21.3 tonne. 1895 kg/m ³ G tail cement w/ 7 l/tonne SCR-100L & 14 l/tonne Halad-344L.
* 251mm.	93.5 kg/m.	P/C110 Int. Casing	set at 4402m MD	cemented with 24.5 tonne. 1875 kg/m ³ G lead cement w/ 35% SSA-1. 0.2% Super CBL. 6 l/tonne SCR-100L. 16 l/tonne Halad-344 + 4.3 tonne. 1875 kg/m ³ G tail cement w/ 35% SSA-1. 6 l/tonne SCR-100L & 16 l/tonne Halad-344.
* 197mm.	68.6 kg/m.	HC-O125 Int. Liner	set at 5403m MD - TOL at 4224m MD	cemented with 9.8 tonne. 1875 kg/m ³ G cement w/ 35% SSA-1. 17.7 l/tonne Halad -344EXP. 13 l/tonne Halad 413L & 8 l/tonne SCR-100L.

PLUGGING PROGRAM

Approval of the following program was obtained by (person) John Connor / Scott McLeod - Chevron/Texaco
from (person) Bob Hale of the Canada - Nova Scotia Offshore Petroleum Board
by means of email dated August 16, 2002

Type of Plug:	Interval:	Fcl/Pressure Tested:	Cement & Additives
*Cement retainer set at 5332m. Squeezed 3 m ³ -1920 kg/m ³ G cement below retainer (5332m-5480m) and spotted 0.66 m ³ above retainer (5302m-5332m) w/ 41.6 l Halad-344EXP. 30.2 l SCR-10045.4 l HR-25 & 22.7 l CFR-3.			
*Balanced plug set across 197mm liner top (4170m-4270m) with 4.1 tonne. 2.17 m ³ . 1920 kg/m ³ G cement w/ 8 l/tonne Halad 344-EXP. 6 l/tonne SCR-100 & 5 l/tonne CFR-3			
*Set 251mm cement retainer at 1109m. Cut 251mm casing at 1104m. Set 346mm cement retainer at 1086m. Squeezed 6.7 tonne. 5.25 m ³ . 1910 kg/m ³ G cement w/ 15 l/tonne Halad 344 EXP. 10 l/tonne CaCl ₂ . 6 l/tonne CFR-3. Cement interval 1086m - 1250m.			
*Cut 346mm casing at 1083m. Squeezed 12.7 m ³ below cut point into casing annuli and 10.33m ³ above cut point for a plug interval of 1023m - 1247m. Total of 29.9 tonne. 23.05 m ³ of 1910 kg/m ³ G cement w/ 6 l/tonne CFR-3 & 30 l/tonne CaCl ₂ pumped. Plug negative pressure tested w/ seawater. Wellhead cut at 1003m (2m BML) and recovered.			

Please see attached abandonment schematic dated August 20, 2002

Lost Circulation/Overpressure Zone: Top of overpressure estimated at 3550m RT. No lost circulation experienced.
Wellbore ballooning experienced following mud density increase from 1650 kg/m³ to 1780 kg/m³ after 0.23 m³ gas
influx at 5404m

Equipment left on Seafloor (Describe): None - Wellhead cut 2m below mudline and recovered

Provision for Re-entry (Describe and attach sketch): N/A

Downhole Completion/Suspension Equipment: N/A

DECLARATION

The undersigned Operator's Representative hereby declares that on the basis of personal knowledge of operations undertaken at the above named well, the above information is true, accurate and complete.

Signed: [Signature]
Operator's Representative

Title: Drilling Project Manager

Name: Drew Taylor

Date: August 22, 2002

ACKNOWLEDGEMENT

Acknowledged by: [Signature]

Chief Executive Officer ENSOPB

Date: Sept. 26/02

J. E. (JIM) DICKEY
Chief Executive Officer

Part 4

Geological

PART 4: GEOLOGICAL

4.1 Formation Tops

Rotary Table Elevation: 24.00m

Ground Elevation: -977.00m

Marker	Prognosis (mRT)	Sample Top (mRT)	Sample Top (mTVD)	Log Top (mRT)	Log Top (mTVD)	Subsea (m)	Thickness (m)
Base Pliocene	1,660	1,636	1,636	1,636	1,636	-1,612	883
Oligocene Unc.		2,519	2,519	2,519	2,519	-2,495	267
Eocene Chalk		2,786	2,786	2,786	2,786	-2,762	65
Base Tertiary	3,216	2,851	2,851	2,851	2,851	-2,827	128
Dawson Canyon Wyandot Petrel		2,979	2,979	2,979	2,979	-2,955	45
Cenomanian Unc.	3,714	3,024	3,024	3,024	3,024	-3,000	546
Logan Canyon Albian Marker		3,570	3,570	3,570	3,570	-3,546	340
Logan Canyon Prodelta Marker		3,910	3,910	3,910	3,910	-3,886	189
Sequence C	4,354	4,099	4,099	4,099	4,099	-4,075	187
Top Turbidite Facies		4,286	4,286	4,286	4,286	-4,262	164
Naskapi Member Equivalent		4,450	4,448	4,450	4,448	-4,424	111
Sequence B	4,786	4,561	4,553	4,561	4,553	-4,529	264
Verill Canyon		4,825	4,795	4,825	4,795	-4,771	200
Sequence A	5,344	5,025	4,973	5,025	4,973	-4,949	975
Basal Marker	6,264	6,000	5,912	6,000	5,912	-5,888	47
Base Sequence A	5,794	6,047	5,959	6,047	5,959	-5,935	

4.2 Geological Significance

Chevron et al Newburn H-23 tested a new play-type for the basin as well as testing >2000m of stratigraphy that had never been penetrated by any well in the offshore Nova Scotia.

Newburn H-23 established that the basin has source rock capable of generating hydrocarbons and that migration has occurred within the basin. Sands were encountered at several levels in the well, suggesting that sediment influx into the deepwater basin has occurred during various times. The well also provided an important calibration point for seismic velocities.

In addition to providing information on several risk aspects of the basin, the well also acquired data concerning sediment pressures and rock properties which will be useful for future well planning purposes.

4.3 Lithological Summary

Rotary Table Elevation: 24.00

Ground Elevation: -977.00

All depths are measured from Kelly Bushing Elevation

Tertiary

Base Pliocene

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	1,636	1,636	-1,612	883
Log Top	1,636	1,636	-1,612	

Evaluation:

Geological sampling and logging began in the Pliocene, after setting the 20" (508 mm) casing at 1902m. This formation consists predominately of Claystone; gray to gray green, soft to firm, fine glauconite grains, trace loose very fine quartz grains, and very fine disseminated pyrite. The mud gas readings generally remained low in the shale. A number of sidewall cores were taken in this section for biostratigraphic analysis and x-ray diffraction analysis. No visible porosity or shows are present in this section.

Conclusion:

No shows or reservoir capacity were noted in this section.

Oligocene Unconformity

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	2,519	2,519	-2,495	267
Log Top	2,519	2,519	-2,495	

Evaluation:

This marker was not detected in samples while drilling and the top is picked from wireline logs. The sediments encountered in this section are described as generally consisting of claystone which is gray, firm and blocky, amorphous, slightly silty, with common traces of disseminated pyrite, and trace carbonaceous flakes. There are also common thin beds of limestone, beige to gray white and greenish in part, with lime mudstone locally becoming partly crystalline, crumbly to firm and slightly hard in part, argillaceous with minor clear calcite. There is a significant colour change in the claystones from gray to light gray at approximately 2600m. The interval becomes more carbonate-rich at the base and a minor gas peak of 4.3% is associated with the limestone stringers at the base of this interval. The section appears to be normally pressured.

Conclusion:

No shows or reservoir capacity were noted in this section.

Eocene Chalk

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	2,786	2,786	-2,762	65
Log Top	2,786	2,786	-2,762	

Evaluation:

The Eocene Chalk was marked by increased limestone content. The limestone is very light greenish gray, soft to firm, brittle, amorphous to subblocky, mudstone to locally packstone with very fine pyrite laminae. Occasionally the unit grades to marlstone with minor gray to brown, calcareous to marly claystone stringers and thin interbeds. No mudlog anomalies are noted through this zone and the section appears to be normally pressured.

Conclusion:

No shows or reservoir capacity were noted in this section.

Base Tertiary

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	2,851	2,851	-2,827	128
Log Top	2,851	2,851	-2,827	

Evaluation:

The Base Tertiary is marked by a transition zone from carbonates above to a sequence of consisting predominately of claystone. The claystone is medium gray to gray brown, subblocky, firm to moderately hard, brittle and very calcareous. Very fine disseminated pyrite and loose pyrite is common. Occasional glauconitic grains and carbonaceous specks are noted. Locally grading from claystone to shale. No mudlog anomalies are noted through this zone and no abnormal pressure was encountered.

Conclusion:

No shows or reservoir capacity were noted in this section.

Late Cretaceous**Dawson Canyon (Wyandot Petrel)**

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	2,979	2,979	-2,955	45
Log Top	2,979	2,979	-2,955	

Evaluation:

Note originally listed in the prognosis as the well was predicted to penetrate the basinward shaly equivalent to this limestone unit. This top was picked based on wireline logs and its lithology is represented by medium gray to brownish gray claystone. The claystone is firm to blocky, partly marly, grading occasionally to siltstone with glauconite grains and carbonaceous flakes. Occasional thin limestones are

interbedded with the claystone. The mud gas log is low through this section and there are no intervals containing visible porosity or shows. The unit appears to be normally pressured.

Conclusion:

No shows or reservoir capacity were noted in this section.

Cenomanian Unconformity

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	3,024	3,024	-3,000	546
Log Top	3,024	3,024	-3,000	

Evaluation:

This is the only formation top that was actually picked based on samples while drilling this well. The Cenomanian unconformity was marked by a marked shift on the LWD gamma ray log. The shift on the log did not correspond with any significant change in the sample descriptions. The section below the unconformity is predominately claystone, brownish to gray in colour, firm to blocky in part, calcareous becoming occasionally marly, silty grading locally to siltstone with trace glauconite and common carbonaceous flakes and streaks. Occasional interbedded with a beige limestone. There is a slight mud gas peak (13%) at 3040m that is associated with limestone stringers and to a doubling of the ROP through this interval. The mud gas log through the remainder of the section is low and there are no intervals containing visible porosity or shows. No indications of abnormal pressure in the samples or on the mudlog.

Conclusion:

No shows or reservoir capacity were noted in this section.

Early Cretaceous

Logan Canyon (Albian Marker)

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	3,570	3,570	-3,546	340
Log Top	3,570	3,570	-3,546	

Evaluation:

There was no noticeable change in the samples from the overlying unit into this interval. The claystone is medium gray, block to platy in part, slightly amorphous, moderately calcareous, silty, with common trace carbonaceous flakes, occasional siltstone stringers and some trace pyrite. Thin, minor limestone stringers are present throughout this section. The mud gas log through the remainder of the section is low and there are no intervals containing visible porosity or shows. No indications of abnormal pressure in the samples or with connection gases.

Conclusion:

No shows or reservoir capacity were noted in this section.

Logan Canyon (Prodelta Marker)

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	3,910	3,910	-3,886	189
Log Top	3,910	3,910	-3,886	

Evaluation:

This marker was not recognized while drilling, but was subsequently picked on logs. In hindsight, the marker is associated with the presence of thin dolomite interbeds. The dolomite beds are tan to beige, mudstone to partly cryptocrystalline, moderately hard to brittle with common carbonaceous streaks and rare trace chert. Towards the base of the unit the dolomite beds are replaced by calcareous stringers. The mud gas log through the remainder of the section is low with a slight increase in C3 near the bottom of this unit. There are no intervals containing visible porosity or shows. No indications of abnormal pressure in the samples or with connection gases.

Conclusion:

No shows or reservoir capacity were noted in this section.

Sequence C

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	4,099	4,099	-4,075	187
Log Top	4,099	4,099	-4,075	

Evaluation:

Another marker was not recognized while drilling, but was subsequently picked on logs. The corresponding lithology drilled at this depth consisted of claystone, brownish gray, blocky, slightly calcareous, silty, grading to siltstone in part, occasional limestone stringers, grading to marl, trace white calcareous siltstone. The limestone is light brown to tan, microcrystalline to partly mudstone, brittle, argillaceous, with trace glauconite. No mud gas anomalies through the section. There are no intervals containing visible porosity or shows. No indications of abnormal pressure in the samples or with connection gases.

Conclusion:

No shows or reservoir capacity were noted in this section.

Top Turbidite Facies

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	4,099	4,099	-4,075	187
Log Top	4,099	4,099	-4,075	

Evaluation:

The top of the Turbidite Facies is marked by an increase in limestone stringers alternating with claystone beds. The claystone is brown, grayish brown, firm and blocky, silty, slightly calcareous with trace carbonaceous specks. The limestone is off white, grayish white, chalky, soft to crumbly, argillaceous, with trace carbonaceous flakes, glauconite and common interbeds of a silty white clay laminae. Lower in the interval, sandstone units are developed. Associated with the sandstone units is a continued increase in the gas cut mud while drilling despite raising the mud weights. Total gas readings reach as high as 20%.

Two sand-rich intervals were encountered. The upper sandstone interval is ~10m thick. In samples the sandstone was described as off white, partly buff, fine grained to occasional medium grained, subrounded, generally well sorted. The matrix contained white limestone and was partly argillaceous. Dead oil stains with dull yellow fluorescence and very slight weak white cut were noted. Sidewall cores were taken in this sand unit and in places the unit develops into a pebble conglomerate. The conglomerate matrix is a strongly calcareous very fine grained sand matrix with patchy porosity and no shows. A lower unit which appears shalier on logs is ~10m thick. It is also described as sandstone in the sidewall cores. This lower sandstone appears to be well cemented with calcite cement, although some patchy fair visible porosity is present, again with no shows. Routine core analyses of the sidewall cores in both sandstone intervals indicate porosities ranging up to 17%, with permeabilities generally less than 1 md but ranging as high as 42 md.

Conclusion:

Two gas-bearing, generally tight sandstone were encountered in this interval. Although non-commercial, these sandstones provided evidence that clastic sediments are reaching this basin, and that gas is being generated and migrating through this basin.

Naskapi Member Equivalent

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	4,450	4,447	-4,424	110
Log Top	4,450	4,447	-4,424	

Evaluation:

The samples from this interval are predominately claystone, light to medium gray, firm, subblocky, slightly calcareous, silty laminations and stringers, local very fine disseminated pyrite, some fine carbonaceous specks, locally grading to siltstone. No mud gas anomalies through the section. There are no intervals containing visible porosity or shows. No indications of abnormal pressure in the samples or with connection gases.

Conclusion:

No shows or reservoir capacity were noted in this section.

Sequence B

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	4,561	4,553	-4,529	264
Log Top	4,561	4,553	-4,529	

Evaluation:

Sequence B is marked by the first encounter of shale which is light to medium gray, firm, subblocky, slightly calcareous, with silty laminations and stringers, local very fine disseminated pyrite, fine carbonaceous specks. It locally grades to siltstone. No mud gas anomalies through the section. There are no intervals containing visible porosity or shows. No indications of abnormal pressure in the samples or with connection gases.

Conclusion:

No shows or reservoir capacity were noted in this section.

Verill Canyon

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	4,825	4,795	-4,771	200
Log Top	4,825	4,795	-4,771	

Evaluation:

The Verill Canyon is a continuation of the shale sequence from above and was only distinguished on logs. The shale was medium to dark gray with a trace of gray brown, firm to moderately hard, brittle, subblocky, calcareous, with very fine carbonaceous specks, with traces of very fine disseminated pyrite, brown limestone stringers and white very calcareous sandy stringers. No mud gas anomalies through the section. There are no intervals containing visible porosity or shows. No indications of abnormal pressure in the samples or with connection gases.

Conclusion:

No shows or reservoir capacity were noted in this section.

Sequence A

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	5,025	4,973	-4,949	975
Log Top	5,025	4,973	-4,949	

Evaluation:

Sequence A was identified based on logs. The unit is predominately medium gray shale, firm, subblocky, brittle, very calcareous, with trace very fine disseminated pyrite and carbonaceous specks, trace calcareous veinlets, and trace light gray calcareous sandstone laminations.

There are occasional interbeds of sandstone ranging from a few meters to 13meters thick. The samples showed loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded and with poor visible porosity and no apparent shows in samples. The sandstone unit at 5405m was extensively sidewall cored and the porosities estimated from these cores range from 7% to 19% porosity, with permeabilities up to 6 md.

A couple of gas influxes were taken during the drilling from 5100md to 5425m. Twice the mud weight was raised in response to the influxes and eventually the continued high gas cut (~60%) prompted the running of the 7" liner.

Conclusion:

Thin sandstone units are present throughout this sequence. The sandstones appear to be gas bearing where encountered. The described porosity is generally poor although the sidewall cores from the sand at 5405m indicate porosities as high as 19% and permeabilities reaching 6 md.

Basal Marker

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	6,000	5,912	-5,888	47
Log Top	6,000	5,912	-5,888	

Evaluation:

The Basal Marker is seen in samples as a brown to gray brown shale, soft, calcareous with pyrite lenses and loose pyrite. There are minor light gray brown silty laminae and trace white limestone fragments. No mudgas anomalies through the section.

Conclusion:

No shows or reservoir capacity were noted in this section.

Base Sequence A

	Measured Depth (m)	True Vertical Depth (m)	Subsea (m)	Thickness (m)
Sample Top	6,047	5,959	-5,935	
Log Top	6,047	5,959	-5,935	

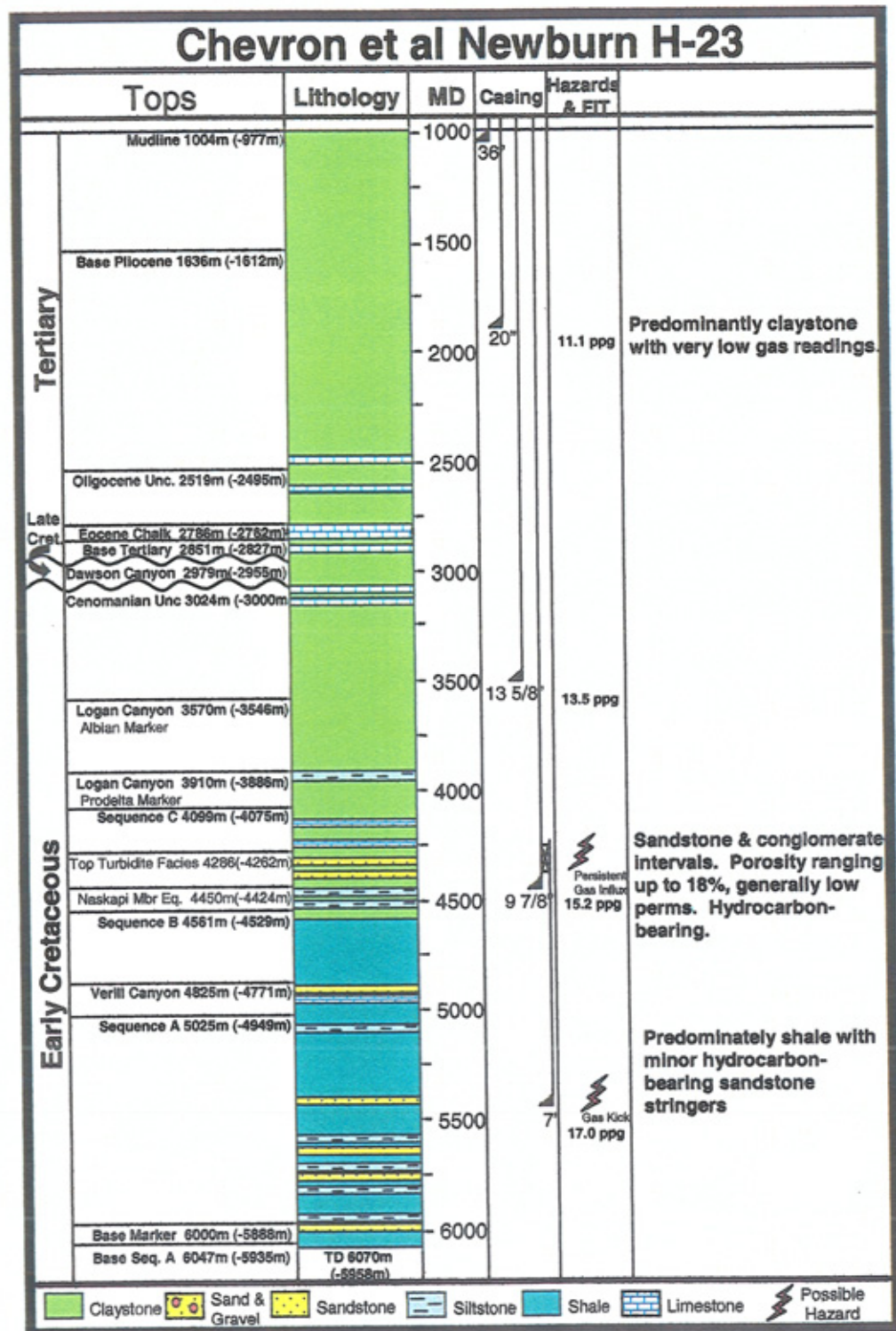
Evaluation:

The Base Sequence A is a light gray to gray brown shale, soft to firm, brittle, slightly calcareous, locally silty, with finely disseminated pyrite, trace carbonaceous specks and trace orange brown siderite.

Conclusion:

No shows or reservoir capacity were noted in this section.

4.4 Stratigraphic Column



Part 5

Well Evaluation

PART 5: WELL EVALUATION

5.1 Drill Cuttings

Drill cuttings were collected every ten (10) meters from 1920m to 3510m and collected every five (5) meters from 3515m to 6070m (TD). Detailed drill cuttings lithology descriptions are contained in Appendix O.

5.1.1 Missing Drill Cuttings Samples:

Sample Type	Interval	Reason for Missing Sample
Bulk/Dried Samples	5380m to 5405m	Samples missing due to well control problems. Samples were collected but we had no ability to depth tie.
	6055m	Described at wellsite. Missing in transport.
Vial/Washed and Dried Samples	5380m to 5405m	Samples missing due to well control problems. Samples were collected but we had no ability to depth tie.
	6055m	Described at wellsite. Missing in transport.

5.1.2 The following analyses have been carried out on the Drill Cuttings Samples:

Analyses Type	Interval	Location of Analyses Results
<i>Biostratigraphic Studies</i> Performed on 125 gram sample of washed and dried cuttings	1920m to 6070m 30m sample interval	Appendix V.
<i>Dielectric Constant Analysis</i> Performed on 125 gram sample of washed and dried cuttings	1920m to 6070m 30m sample interval	Appendix W.
<i>Fluid Inclusion Analysis</i> Performed on 125 gram sample of washed and dried cuttings	1920m to 6070m 5m sample interval	Appendix X.
<i>Vitrinite Reflectance Analysis</i> Performed on 40 gram sample of unwashed and dried cuttings	1920 to 6070m 200m sample interval	Appendix Y.
<i>Rock Eval Analysis</i> Performed on 15 ml sample of washed and dried cuttings	3500 to 6070m Variable sample interval from 20m to 50m	Appendix Z.

5.1.3 Distribution of Drill Cutting Samples

The cuttings samples were taken at ten (10) meter intervals from 1920m to 3510m, and at five (5) meter intervals from 3515m to 6070m. The cutting samples were distributed as follows:

Sample Type	Interval	Recipient and No. of sets
One 8x12" plastic lined cloth bag of unwashed and dried cuttings	Ten (10) meter intervals from 1920m to 3510m, and at Five (5) meter intervals from 3515m to 6070m	CNSOPB Data Archive and Core Storage Facility 201 Brownlow Avenue, Suite 27 Dartmouth, Nova Scotia B3B 1W2 (1 set)
One 5x7" plastic lined cloth bag of unwashed and dried cuttings	Ten (10) meter intervals from 1920m to 3510m, and at Five (5) meter intervals from 3515m to 6070m	Conoco Canada 2410 C – 2 nd Avenue S.E. Calgary, Alberta T2E 6J9 (1 set) Chevron Canada 1204, 45 th Avenue N.E. Calgary, Alberta T2E 2P1 (1 set)
One 15ml vial of washed and dried cuttings	Ten (10) meter intervals from 1920m to 3510m, and at Five (5) meter intervals from 3515m to 6070m	CNSOPB Data Archive and Core Storage Facility 201 Brownlow Avenue, Suite 27 Dartmouth, Nova Scotia B3B 1W2 (1 set) Geological Survey of Canada Dept of Energy, Mines and Resources 3303-33 rd Street N.W. Calgary, Alberta T2L 2A7 (1 set) Conoco Canada 2410 C – 2 nd Avenue S.E. Calgary, Alberta T2E 6J9 (1 set) Chevron Canada 1204, 45 th Avenue N.E. Calgary, Alberta T2E 2P1 (1 set) Petro-Canada 2624, 150-6 th Avenue S.W. Calgary, Alberta T2P 3E3 (1 set)
One 25ml vial of washed and dried cuttings	Ten (10) meter intervals from 1920m to 3510m, and at Five (5) meter intervals from 3515m to 6070m	CNSOPB Data Archive and Core Storage Facility 201 Brownlow Avenue, Suite 27 Dartmouth, Nova Scotia B3B 1W2 (1 set)

In addition, the following samples were distributed for analyses:

Sample Type	Interval	Recipient and No. of sets
<i>Biostratigraphic Studies</i> One 125 gram sample in 5"x 7" plastic lined cloth bag containing washed and dried cuttings	Thirty (30) meter intervals from 1920m to 6070m	Global Geolab Ltd. 729b – 15 Street S.W. Medicine Hat, Alberta T1A 4W7 (1 set)
<i>Dielectric Constant Analysis</i> One 125 gram sample in 5"x 7" plastic lined cloth bag containing washed and dried cuttings	Thirty (30) meter intervals from 1920m to 6070m	En Laboratories Braeside of Keig Alford Aberdeenshire AB33 8BY (1 set)
<i>Fluid Inclusion Analysis</i> One 125 gram sample in 5"x 7" plastic lined cloth bag containing washed and dried cuttings	Five (5) meter intervals from 1920m to 6070m	C & M Storage 3311 Highway 77 South Schulenburg, Texas 78956 (1 set)
<i>Vitrinite Reflectance Analysis</i> One 40 gram sample in 5"x 7" plastic lined cloth bag containing unwashed and dried cuttings	Two hundred (200) meter intervals from 1920m to 6070m	Global GeoEnergy Research Ltd. 1657 Barrington Street, Suite 427 Halifax, Nova Scotia B3J 2A1 (1 set)

5.2 Mud Log Data

A high resolution gas-monitoring system that interfaced with the MWD/LWD was used to monitor gas and drilling activities on the rig. The drilling monitoring services began in the 1067mm (42") hole section. The gas monitoring began in the 431.8mm (17") hole section.

The Mud Log Report and a complete set of Mud Logs (1:600 & 1:240), Drilling Logs (1:240) and Pressure Logs (1:240) have been forwarded in a separate volume called Datalog Final Well Report, Chevron et al Newburn H-23, August 2002.

5.3 Conventional Core Data

No conventional cores were taken during well operations.

5.4 Sidewall Cores

A total of 80 sidewall cores were recovered out of 83 attempted using a rotary sidewall coring tool. A summary of the coring activities and detailed Sidewall Core Descriptions are located in Appendix P.

5.4.1 The following table summarizes the analyses have been carried out on the Sidewall Core Samples:

Analysis	Core Samples	Location of Analyses Results
Biostratigraphic Analysis (43 cores analyzed)	<u>431.8mm (17") hole section</u> Cores # 1-25 <u>317.5mm (12 ¼") hole section</u> Cores # 1-5, 7, 9,19-24 <u>216mm (8 ½") hole section</u> Cores # 1, 14, 20 <u>165mm (6 ½") hole section</u> Cores # 7, 8	Appendix V.
Routine Core Analysis (24 cores analyzed)	<u>431.8mm (17") hole section</u> No cores <u>317.5mm (12 ¼") hole section</u> Cores # 6, 8, 10-18 <u>216mm (8 ½") hole section</u> Cores # 8-12, 24 <u>165mm (6 ½") hole section</u> Cores # 1-6, 9	Appendix S.
X-ray Diffraction Analysis (49 cores analyzed)	<u>431.8mm (17") hole section</u> Cores # 5-8, 10 <u>317.5mm (12 ¼") hole section</u> Cores # 2-3, 5-6, 8, 10-18, 22, 24 <u>216mm (8 ½") hole section</u> Cores # 2-6, 8-12, 14-16, 18-25 <u>165mm (6 ½") hole section</u> Cores # 1-6, 9	Appendix T.
Whole Core Photos (37 cores photographed)	<u>431.8mm (17") hole section</u> No cores <u>317.5mm (12 ¼") hole section</u> Cores # 6, 8, 10-18 <u>216mm (8 ½") hole section</u> Cores #2-6,8-12, 15-16, 18-19, 21-25 <u>165mm (6 ½") hole section</u> Cores # 1-6, 9	On CD only in Appendix U.
Thin Section Photos (37 cores sectioned)	<u>431.8mm (17") hole section</u> No cores <u>317.5mm (12 ¼") hole section</u> Cores # 6, 8, 10-18 <u>216mm (8 ½") hole section</u> Cores #2-6,8-12, 15-16, 18-19, 21-25 <u>165mm (6 ½") hole section</u> Cores # 1-6, 9	Appendix U.
Rock Eval (57 cores analyzed)	<u>431.8mm (17") hole section</u> Cores #1-25 <u>317.5mm (12 ¼") hole section</u> Cores # 1-5, 7,9, 12, 18-24 <u>216mm (8 ½") hole section</u> Cores # 1-6, 14-16, 18-23, 25 <u>165mm (6 ½") hole section</u> Cores # 7,8	Appendix W.

5.5 LWD Log Data

The following LWD logs were recorded in the Newburn H-23 well:

<i>Hole Section</i>	<i>Logs Recorded</i>
<u>660.4mm (26") hole section</u>	ARCLWD (GR-Res) Drilling Timelog
<u>431.8mm (17") hole section</u>	ARCLWD (GR-Res) Drilling Timelog
<u>317.5mm (12 1/4") hole section</u>	ARCLWD (GR-Res) ISONIC Drilling Timelog
<u>216mm (8 1/2") hole section</u>	ARCLWD (GR-Res) ISONIC Drilling Timelog
<u>165mm (6 1/2") hole section</u>	ARCLWD (GR-Res) (Failed over last 250m of hole) Drilling Timelog

5.6 Wireline Log Data

The following wireline logs were recorded in Newburn H-23. See Appendix Q for Wireline Logging Reports.

<i>Hole Section</i>	<i>Logs Recorded</i>
<u>431.8mm (17") hole section</u> (June 12, 2002)	Descent #1: PEX-DIS-EMS (GR, Array Induction, N/D, Dipole Sonic and Environ.) Descent #2: GR-CSAT-CSAT-CSAT (Zero Offset VSP) Descent #3: GR-MSCT (Rotary Sidewall Coring Tool)
<u>317.5mm (12 1/4") hole section</u> (June 25, 2002)	Descent #1: AIT-DSI-LDT-CNL-NGS-EMS (SpectralGR, Array Induction, N/D, Dipole Sonic and Environ.) Descent #2: GR-MDT (Formation Tester) Descent #3: GR-OBMI-CIS (Oil based MicroImager) Descent #4: GR-MSCT (Rotary Sidewall Coring Tool)
<u>216mm (8 1/2") hole section</u> (July 18, 2002)	Descent #1: OBMI-LDT-CNL-HNGS (did not get to bottom) (SpectralGR, N/D, Oil based MicroImager) Descent #2: GR-CMR (Magnetic Resonance Log) Descent #3: GR-LDT-CNL (N/D over bottom of open hole) Descent #4: GR-MSCT (Rotary Sidewall Coring Tool)
<u>177.8mm (7") cased hole</u> (July 30 th , 2002)	Descent #5: GR-CSAT-CSAT-CSAT-DSI (Zero Offset VSP and Dipole Sonic through casing)
<u>165mm (6 1/2") hole section</u> (August 10, 2002)	Descent #1: GR-DSI-AIT (GR, Dipole Sonic, Array Induction) Descent #2: GR-CNL-LDT (GR, Neutron/Density) Descent #3: GR-MSCT (Rotary Sidewall Coring Tool) (Failed) Descent #4: GR-MSCT (Rotary Sidewall Coring Tool) (Failed) Descent #5: GR-MSCT (Rotary Sidewall Coring Tool) (8 cores) Descent #6: GR-MSCT (Rotary Sidewall Coring Tool) (1 core) Descent #7: GR-MSCT (Rotary Sidewall Coring Tool) (Failed)

5.7 Velocity Surveys

Two zero offset VSP surveys were conducted by Schlumberger of Canada in this well.

The first VSP was carried out on June 12th, 2002 in the 431.8mm (17") open hole section. The survey was run as a single run from 3515m to 1865m, with a 15m sample interval from 3515m to 1865m and a 100m sample interval from 1800m to 1400m. A sample was shot at 1200m and at the mudline at 1000m. Twenty-one checkshot levels were recorded in Run #1.

The second VSP was carried out over the 177.8mm (7") liner cased hole section on July 30th. The survey was run as a single run from 5415m to 3360m. A total of 142 levels were acquired. Three checkshot levels at 985m, 1000m and 1015m, plus overlapping levels with Run #1 for quality control purposes were taken. No downgoing checkshots were taken in either VSP run.

The data was acquired using the three component triple CSAT down hole tool equipped with GAC accelerometers. The G-gun Itaga (4 x 40 cu in and 4 x 150 cu in capacity) was used as a source and fired at 2000 psi air pressure. The source was positioned 5m below the SRD seal level, the same as the hydrophone. An attempt was made to make the source position similar for both runs however the 300 deg azimuth used in Run #1 was not achieved because of sea conditions. The gun and hydrophone azimuth in Run #2 was 285.

A complete description of the data acquisition and processing of both VSP runs has been forwarded in a separate volume called Chevron et al Newburn H-23, Field Mahone, Nova Scotia Canada. Borehole Seismic Survey, 12 June 2002.

5.8 Wireline Formation Tests

Twelve pressure points were attempted in the 317.5mm (12 1/4") hole section. Eleven of the pressure points had a lost seal, and the remaining pressure point was tight. Details concerning the testing intervals and results are documented in Appendix R.

5.9 Drill Stem Tests

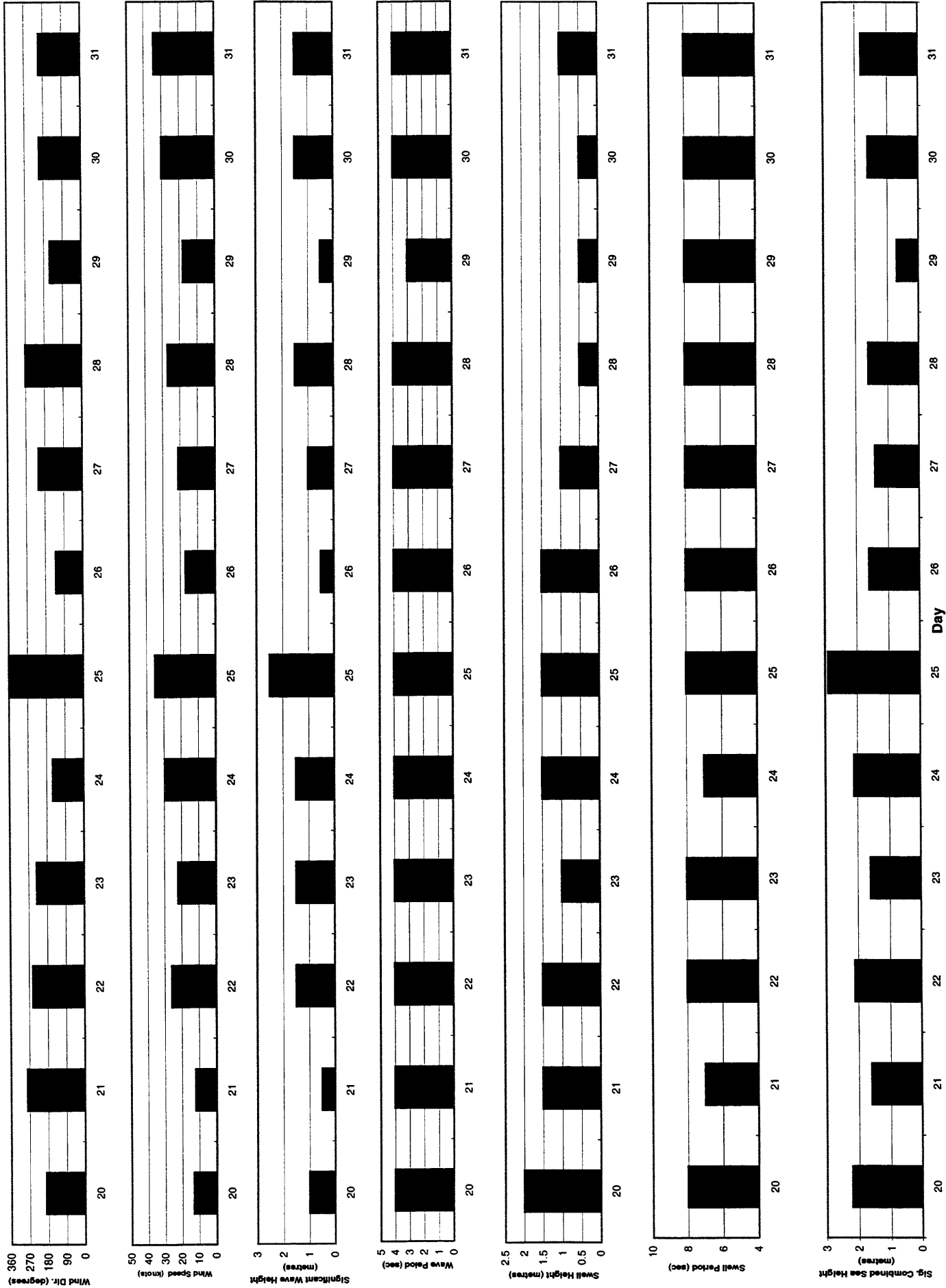
No Drill Stem Tests were carried out on Newburn H-23.

Appendix A

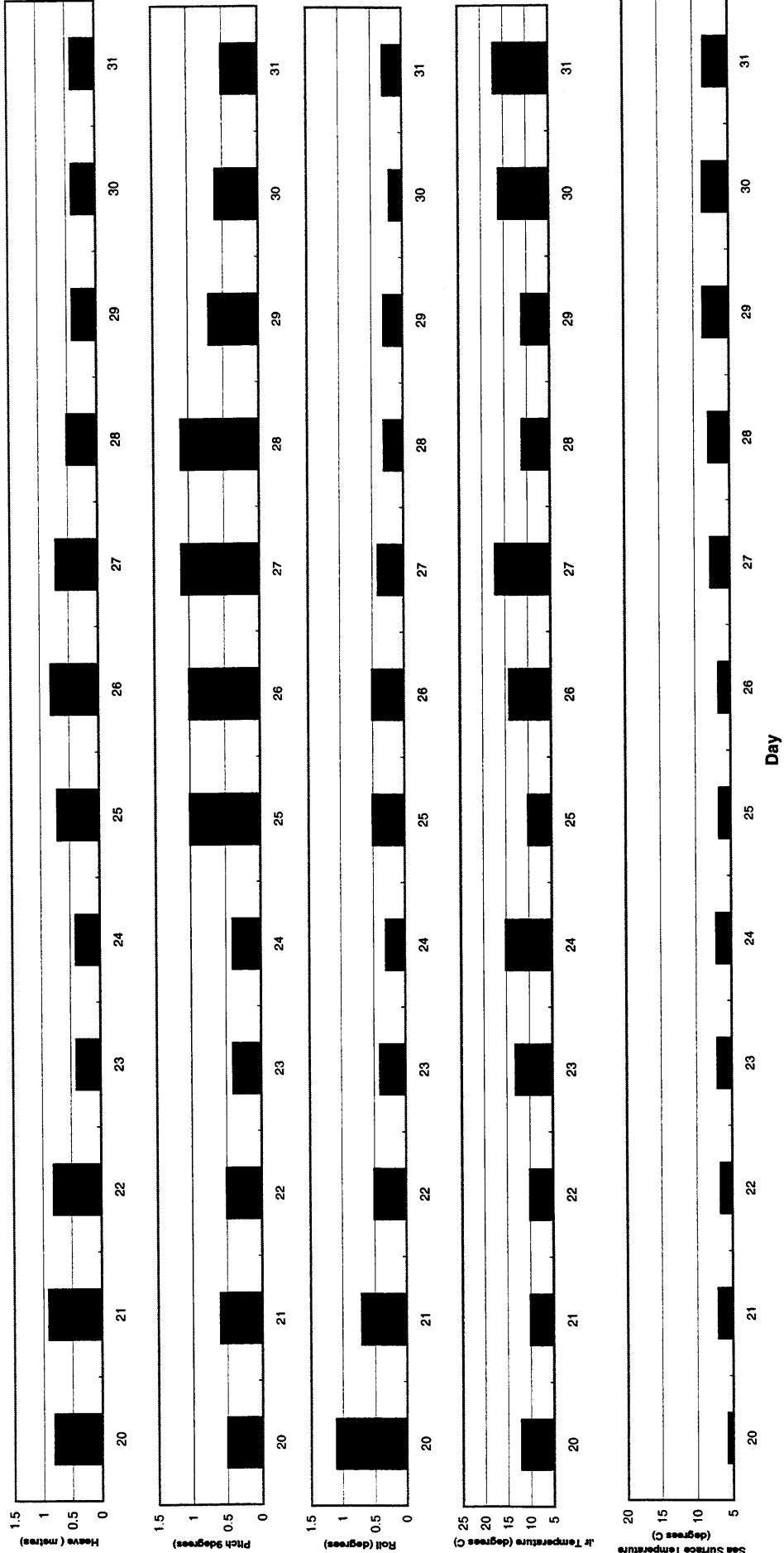
Weather Conditions & Vessel Response

Appendix A
Weather conditions and vessel response

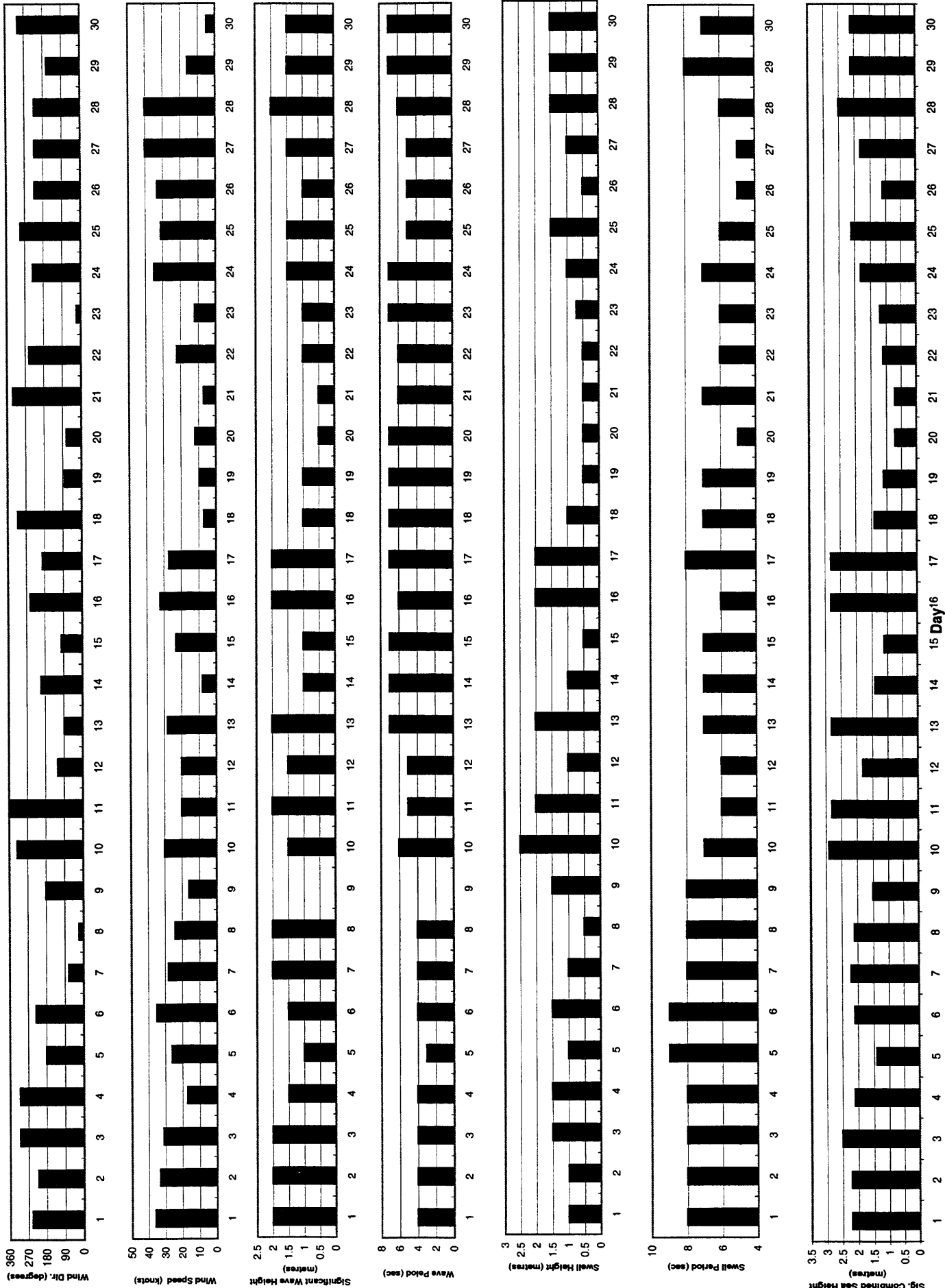
Deepwater Millennium, Response to Exercise Environmental Data, Newburn H-23
Plot of Daily Maximums, May 20, 2002 to May 31, 2002



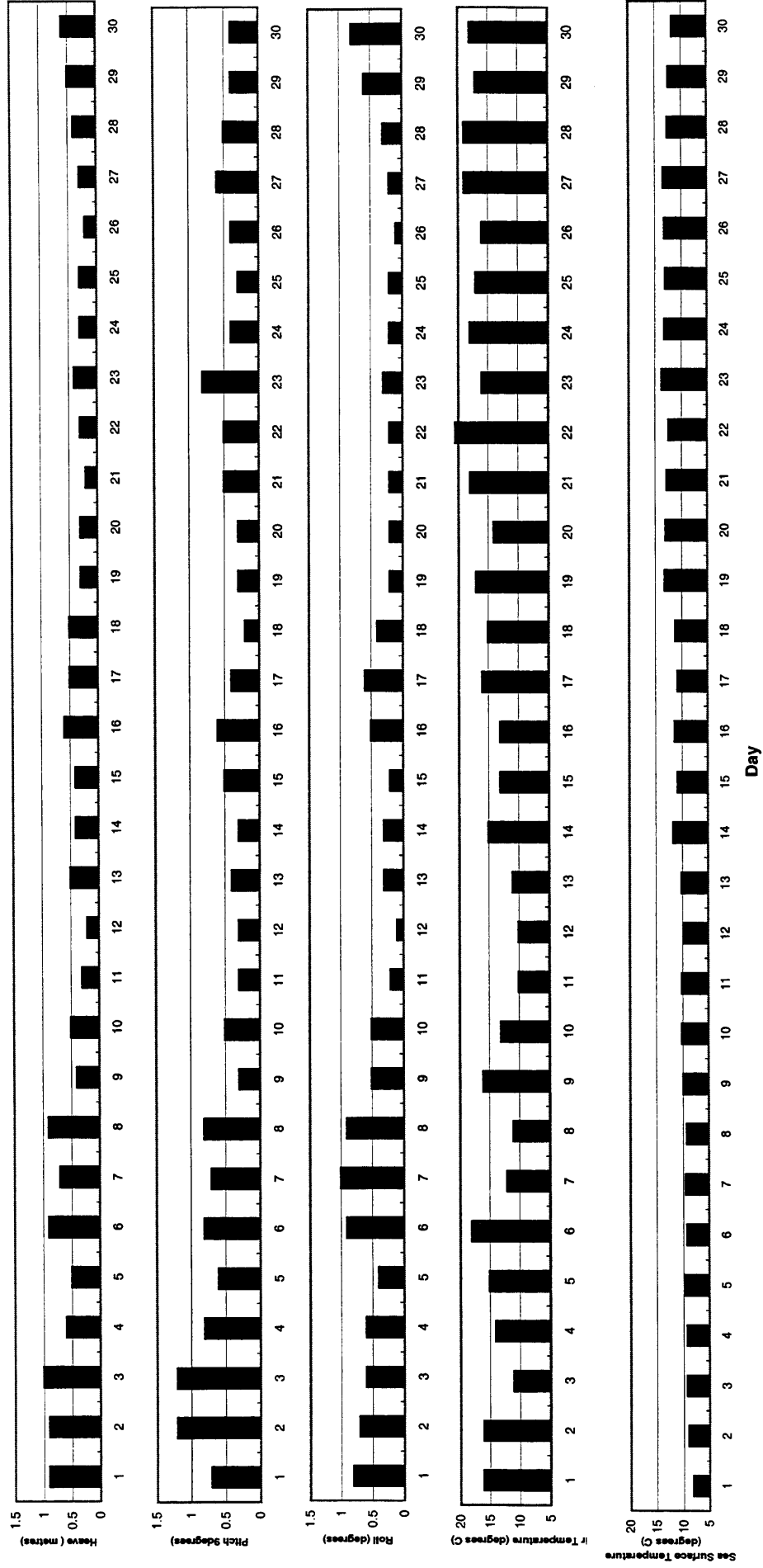
Deepwater Millennium, Response to Exercise Environmental Data, Newburn H-23
Plot of Daily Maximums, May 20, 2002 to May 31, 2002



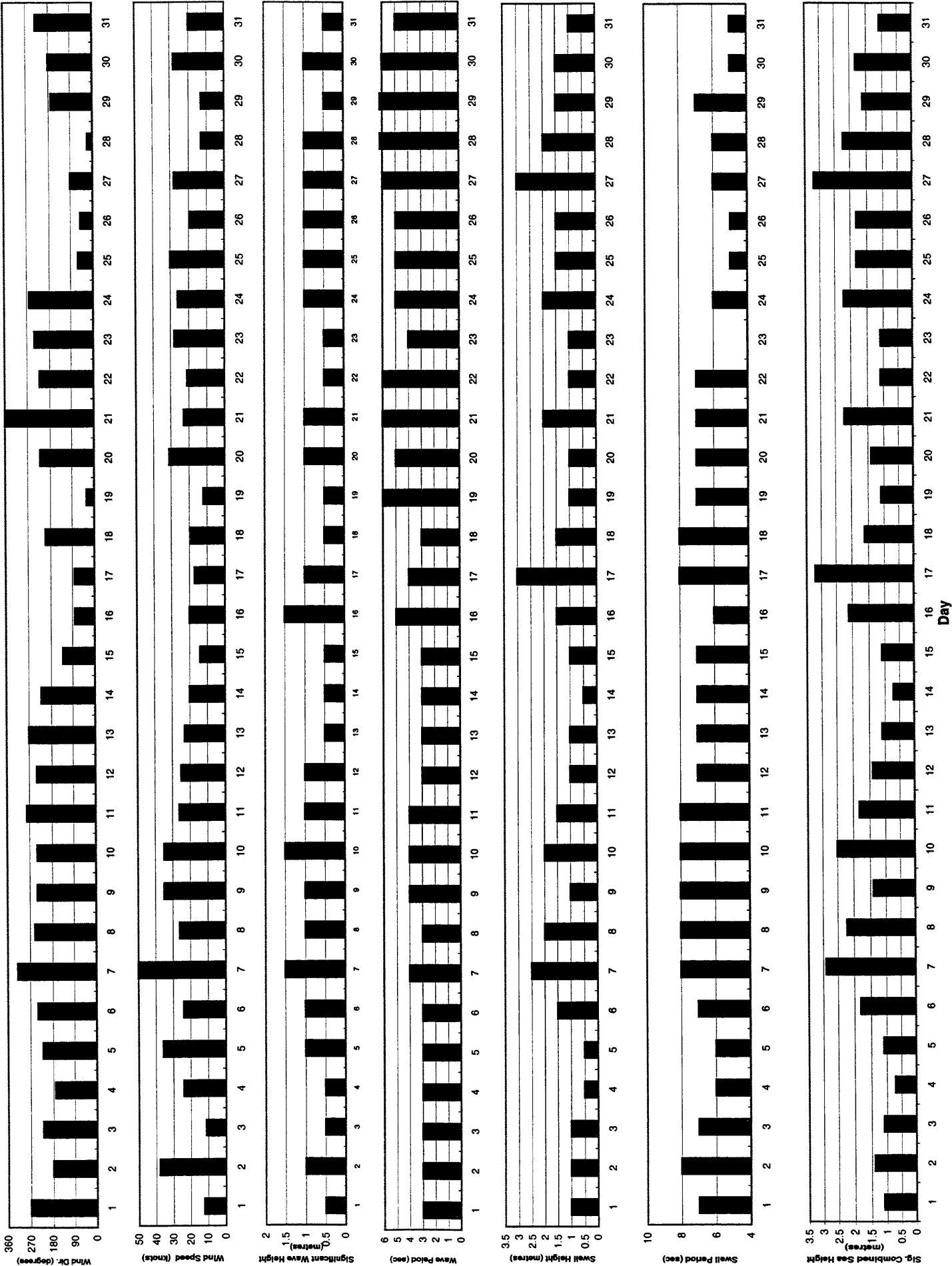
Deepwater Millennium, Response to Extreme Environmental Data, Newburn H-23
Plot of Daily Maximums, June 01, 2002 to June 30, 2002



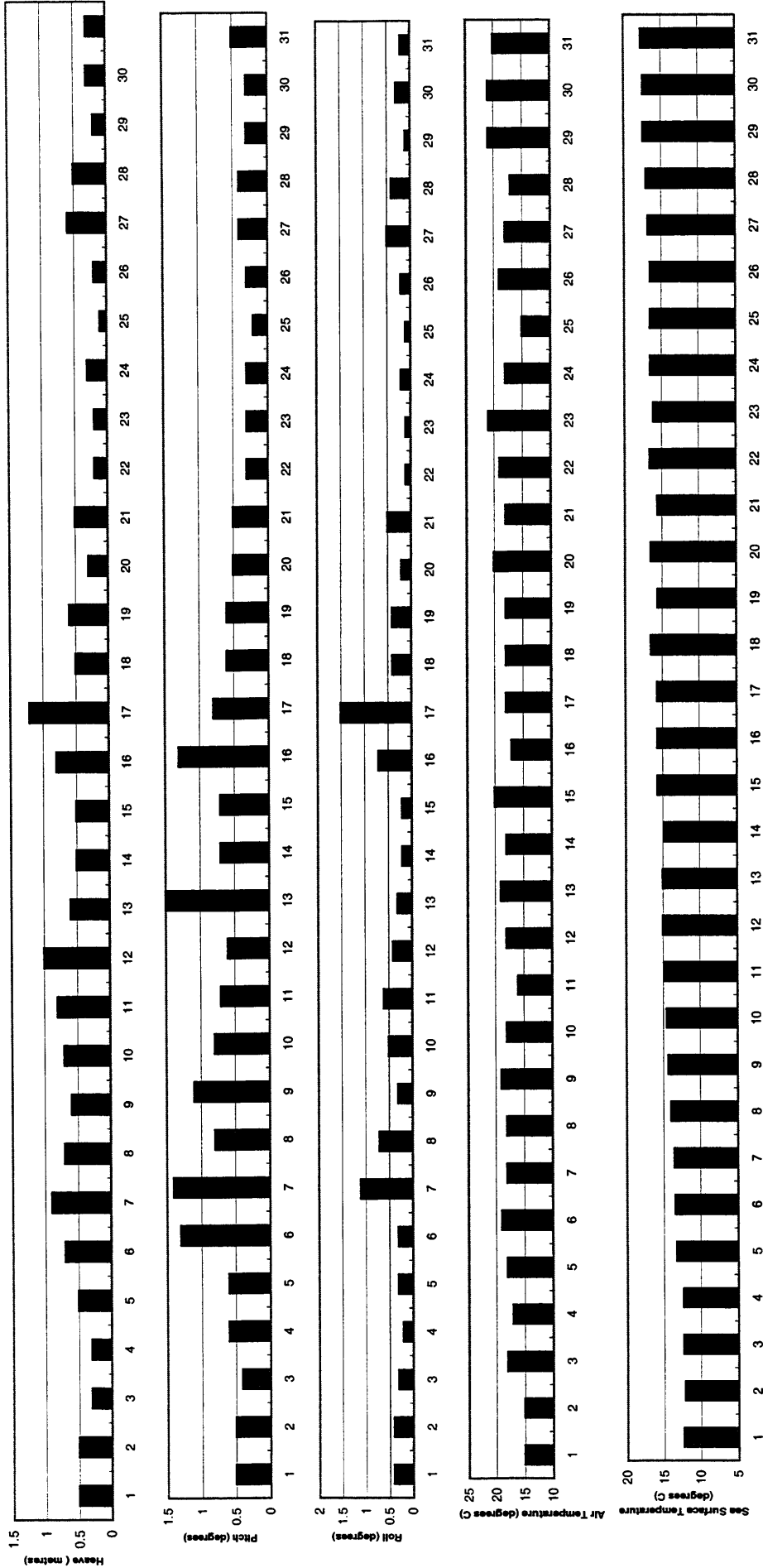
Deepwater Millennium, Response to Extreme Environmental Data, Newburn H-23
Plot of Daily Maximums, June 01, 2002 to June 30, 2002



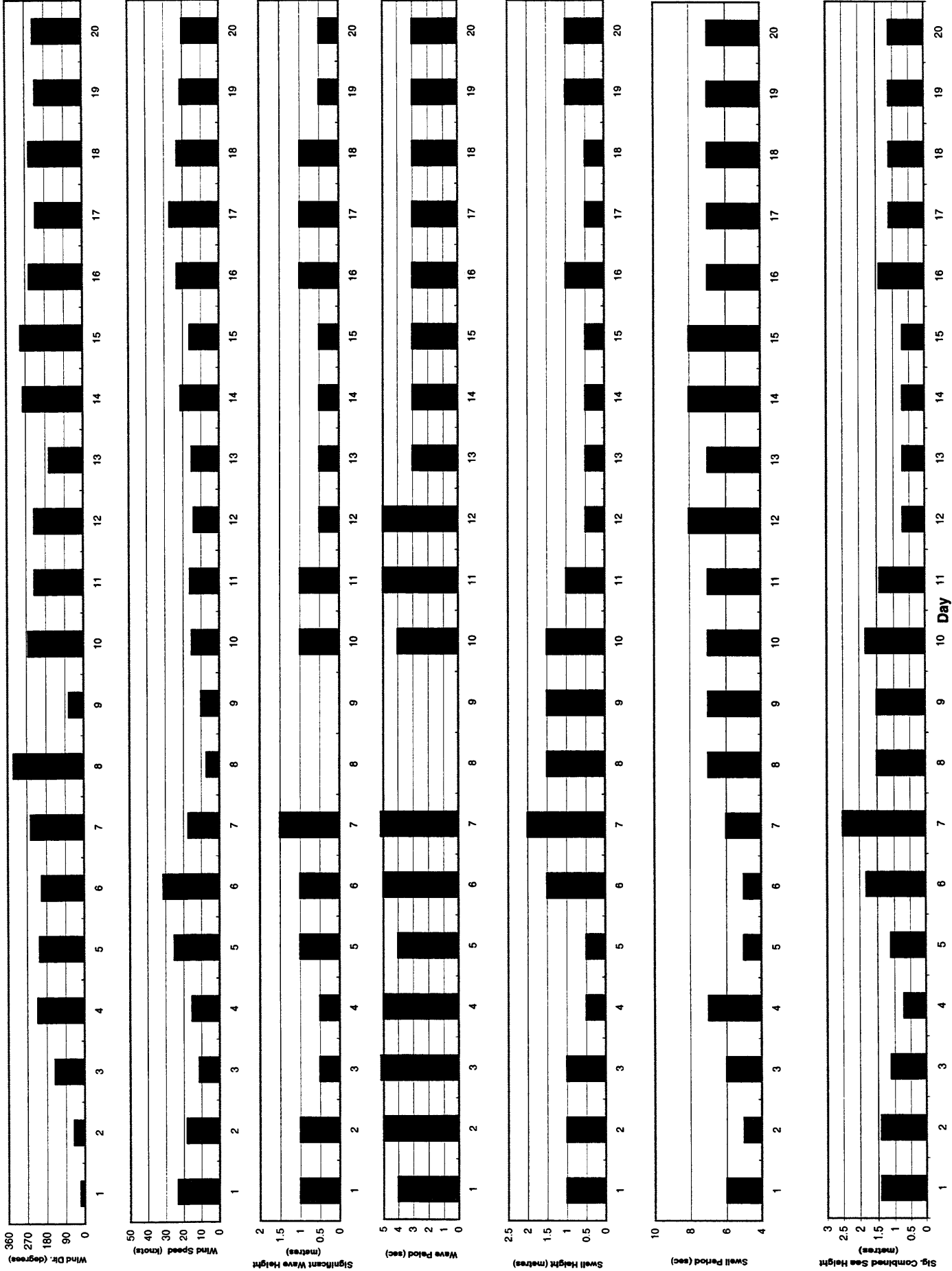
Deepwater Millennium, Response to Ex. Environmental Data, Newburn H-23
Plot of Daily Maximums, July 01, 2002 to July 31, 2002



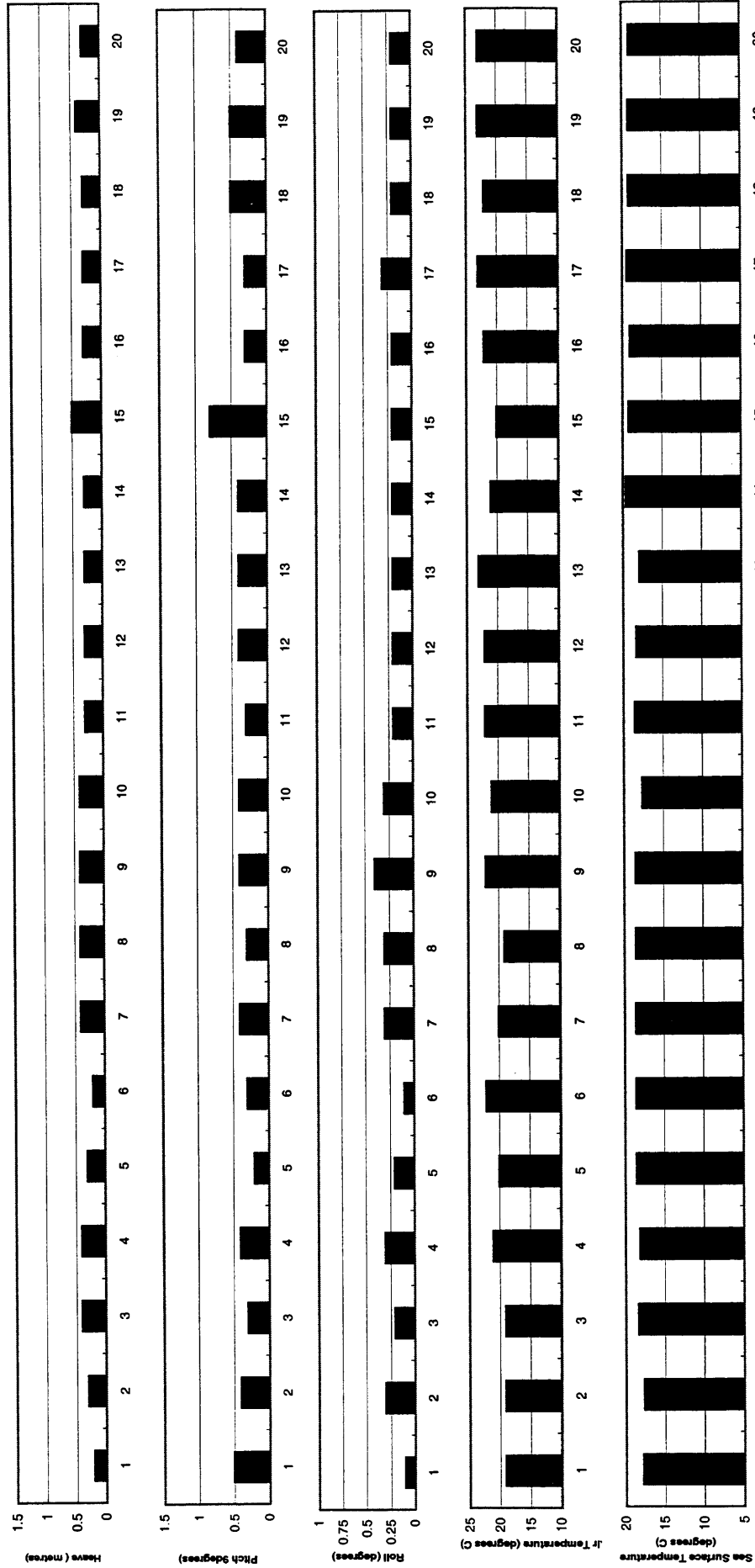
Deepwater Millennium, Response to Extended Environmental Data, Newburn H-23
Plot of Daily Maximums, July 01, 2002 to July 31, 2002



Deepwater Millennium, Response to Extreme Environmental Data, Newburn H-23
Plot of Daily Maximums, August 01, 2002 to August 20, 2002



Deepwater Millennium, Response to Extreme Environmental Data, Newburn H-23
Plot of Daily Maximums, August 01, 2002 to August 20, 2002



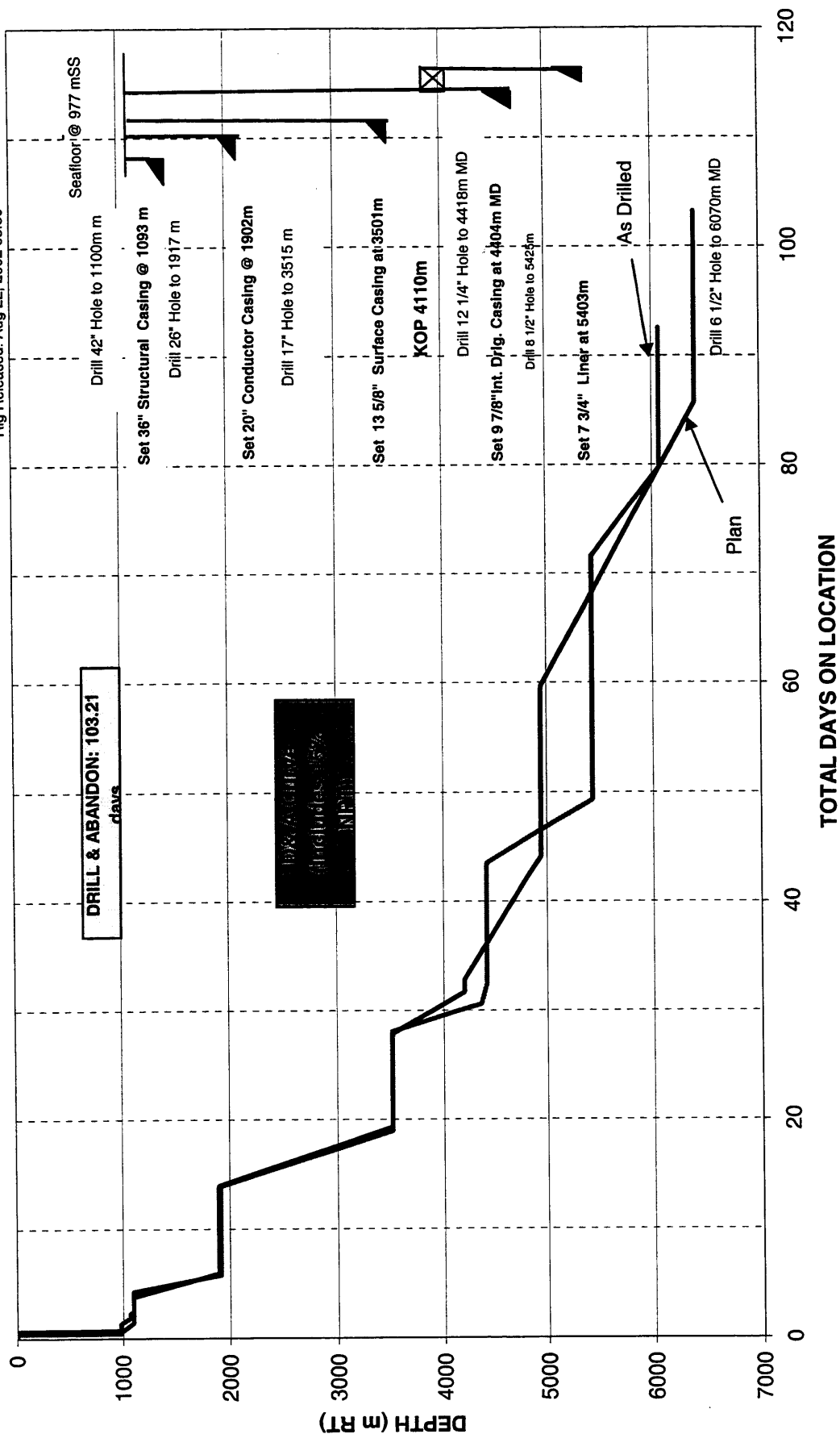
Appendix B
Daily Drilling Report
Time-Depth Curve

Appendix B
Daily Drilling Reports/ Time-Depth Curve

Chevron et al Newburn H-23

Time Versus Depth Curve

Spud: May 22, 2002 12:30 hrs
TD Reached: Aug 9, 2002 04:00
Rig Released: Aug 22, 2002 03:30



Chevron Canada Resources

Drilling Activity Report

Measured Depth: 0 m		TVD: 0 m		PBTD: 0 m		Proposed MD: 0 m		Proposed TVD: 0 m	
DOL: 1		DFS: 0		Spud Date: 0-Jan-00		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque: 0		Drag: 0		Rot Wt: 0		P/U Weight: 0		S/O Wt: 0	
Last Casing Size: Set At: 0 m		MD: 0 m		TVD: 0 m		Shoe Test: 0 m		Leakoff? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Cum Rot Hrs on Casing: 0.0		Cum Rot Hrs on Casing Since Last Calliper: 0.0		Whipstock Set @: 0.0		KOP: 0 m		TVD: 0 m	
Liner Size: Set At: 0 m		MD: 0 m		TVD: 0 m		Liner Top At: 0 m		MD: 0 m	
Mud Co: 0		Type: 0		Sample From: 0		Wt. kg/m ³ : 0		FV: 0	
WL API: 0		HTHP: 0		FC(1/32) API/HTHP: 0		Solids: 0		% Oil: 0	
Pm: 0		P/I/M: 0		Carb: 0		Cl: 0		Ca/Mg: 0	
Engr Service		Materials added last 24 hrs: 0		Bent: 0.00		Solids % HGLG: 0		% DS/Bent: 0	
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Cl:	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size No. Size		TFA, cm ²	MD In
						0 0.0 0 0.0			MD Out
						0 0.0 0 0.0			TVD Out
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G
									Char
									?Pull
									Cost/meter
Total Length of BHA: 0 m		BHA Description:							
Bit Cost	Row 1 0	Row 2 0	Rig\$/hr	\$0	Trip Time, hr	DC Size, mm	DP Size, mm	Hours On Jars	Hrs Since Last Inspection
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, bar	lter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
				0		0			
				0		0			
Survey MD		Angle	Direction	TVD	N/S Coordinate		E/W Coordinate	Vertical Section	
0.0 m									
0.0 m									
0.0 m									
Hrs.	(From -To) h:m	Operations Covering 24 Hours Ending at Midnight							
12:00	0:00 - 12:00	Ship in transit to new location. Position @ 12:00 hrs 28° 20.2' N, 89° 32.6' E miles traveled: 88.5, miles to go: 62.4.							
	-	Functioned E.D.S. on BOP stump @ 38 sec., working on rig maintenance & cleaning							
6:00	12:00 - 18:00	Ship in transit, ship arrive location @ 18:00, 28°50.1' N 90°6.0' W							
6:00	18:00 - 24:00	Called dock @ 21:00 hr to check on boat, preparing tubulars for Chevron inspection							
	-	Continue inspection of cement manifold, performing PM on cement unit and checking calibration of cement unit electronics.							
	-	Continue inspection of BOP & riser: Upper Annular preventer element needs replacing.							
	-	prepare subs for inspection, preparing decks for loadout							
	-								
	-	Initial Rig Survey:							
	-	Diesel = 17,317 bbl (2,753.18 cubic meters)							
	-	Helicopter fuel = 1231 gallons (4.66 cubic meters)							
	-	Drill Water = 7957 bbl (1,265.06 cubic meters)							
	-	Barite = 4,218 sacks (191.29 metric tons)							
	-								
24 hr Summary:									
Off TFE location @ 12:01 a.m. Sail to anchor point at Grande Isle block 62. At anchor point @18:00.									
Projected Operations: Conduct TSF underwater hull inspection in lieu of drydock; TSF crown repairs; send in drill pipe for inspection; prepare drill ship for CNSOPB									
COF									
Safety Issues:								Accidents:	
Daily Mud Cost: \$0.00		Daily Tangible Cost: \$0.00		Daily Drilling Cost: \$424,485.00		WBS Element No. (Drig) RWFECD-22251			
Cum Mud Cost: \$0.00		Cum Tangible Cost: \$0.00		Cum Drilling Cost: \$424,485.00		WBS Element No. (Comp)			
Daily Comp Cost		Cum Completion Cost		Cum Well Cost: \$424,485.00		Total Appr:			
Bulk Gel, m ³ : 0.00		Cement, m ³ : 0.00		Fuel, m ³ : 2,752.88		Bulk Wt, m ³ : 88.48		Chevron %	
Country: Canada		Rig: DW Millennium		Rig Phone: 504-592-3318		Drilling Reps: T Robichaux / J Bruton		API Number:	
Field: Mahone		Lease: Newburn		Well #: H-23		Date: 2-May-02			

Chevron Canada Resources

Drilling Activity Report

Measured Depth:		0 m		TVD:		0 m		PBDT:		Proposed MD:		0 m		Proposed TVD:		0 m	
DOL:		2		DFS:		Spud Date:		0-Jan-00		Daily meters:		0 m		Daily Rot Hrs:		0.0	
Torque:		Drag:		Rot Wt:		0		PU Weight:		0		S/O Wt:		0		Last BOP Test:	
Last Casing Size:		Set At:		0 m		MD:		0 m		TVD:		Shoe Test:		Leakoff?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Cum Rot Hrs on Casing:		0.0		Cum Rot Hrs on Casing Since Last Calliper:		0.0		Whipstock Set @:		KOP:							
Liner Size:		Set At:		0 m		MD:		0 m		TVD:		Liner Top At:		0 m		MD 0 m TVD	
Mud Co:		Type:		Sample From:		Wt.		FV:		PV:		YP:		Gel:			
WL API:		HTHP:		FC(1/32) API/HTHP:		Solids:		% Oil:		% Water:		% Sand:		MBT:		pH:	
Pm:		PI/Mt:		Carb:		Cl:		Ca/Mg:		Bent:		0.00		Solids % HGLG:		0	
Engr Service		Materials added last 24 hrs:															
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:		Remarks:							
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm		No. Size No. Size		TFA, cm²	MD In		MD Out		TVD Out		
						0	0.0	0	0.0		0 m		0 m		0 m		
						0	0.0	0	0.0		0 m		0 m		0 m		
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G	Char	?Pull		Cost/meter				
Total Length of BHA:		0 m		BHA Description:													
Bit Cost	Row 1	0	Row 2	0	Rig\$ /hr	\$0	Trip Time, hr	DC Size, mm:	DP Size, mm:	Hours On Jars:	Hrs Since Last Inspection:						
Bit	Liner, mm	Stroke, meters	m³STK	SPM	Press, bar	liter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min	Bit HHP	BHP/PSQ. IN.		Pump HHP				
				0		0											
				0		0											
Survey MD		Angle	Direction	TVD		N/S Coordinate		E/W Coordinate		Vertical Section		DLS					
0.0 m																	
0.0 m																	
0.0 m																	
Hrs.	(From - To) hh:mm	Operations Covering 24 Hours Ending at Midnight															
2:30	0:00 - 2:30	Prepare subs for inspection by Tri-Drill. Prepare 21 riser joints for inspection by ABB Vetco Gray.															
	-	Continue BOP inspection: Surveyed flex hoses on intermediate riser joint. Lower boost hose & upper conduit hose have impact damage.															
	-	R/R send in damaged hoses to manufacturer for inspection. ABB-Vg arrive to perform UT inspection on 21 riser joints															
9:30	2:30 - 12:00	MV Cape Hope arrived with personnel, diving equipment & equipment for crown repairs.															
12:00	12:00 - 24:00	Park TDS. Prepare and unstring block. R/U divers for UWILD. Will be diving during daylight hours only. No over-the-side lifts allowed w/ divers in water.															
	-	No over-the-side lifts allowed w/ divers in water.															
	-																
	-	Received immersion suits to replace life jackets															
	-																
	-																
	-																
	-																
	-																
	-																
	-																
24 hr Summary:																	
At anchor. Continue BOP inspection. Receive dive equipment for underwater hull inspection. Park TDS and unstring block for crown repairs.																	
Send in DP for inspection.																	
Projected Operations: Continue underwater inspection and crown repairs while performing heavy lift inspection on rig.																	
Safety Issues:														Accidents:			
														NAR			
Daily Mud Cost:		\$0.00		Daily Tangible Cost:		\$0.00		Daily Drilling Cost:		\$277,548.00		WBS Element No. (Drip)					
Cum Mud Cost:		\$0.00		Cum Tangible Cost:		\$0.00		Cum Drilling Cost:		\$699,285.00		WBS Element No. (Comp)					
Daily Comp Cost				Cum Completion Cost				Cum Well Cost		\$699,285.00		Total Appr:					
Bulk Gel, m³:		0.00		Cement, m³:		0.00		Fuel, m³:		2,752.88		Bulk Wt, m³:		88.48			
Country:		Canada		Rig:		DW Millennium		Rig Phone:		504-592-3316		Drilling Reps:		T Robichaux / J Bruton			
Field:		Mahone		Lease:		Newburn		Well #:		H-23		Date:		3-May-02			

Chevron Canada Resources

Drilling Activity Report

Measured Depth:		0 m		TVD:		0 m		PBD:		Proposed MD:		0 m		Proposed TVD:		0 m								
DOL:		3		DFS:		0		Spud Date:		0-Jan-00		Daily meters:		0 m		Daily Rot Hrs:		0.0		Total Rot Hrs:		0.0		
Torque:		Drag:		Rot Wt:		0		P/U Weight:		0		S/O Wt:		0		Last BOP Test:								
Last Casing Size:		Set At:		0 m		MD		0 m		TVD		Shoe Test:		Leakoff?		<input type="checkbox"/> Yes		<input type="checkbox"/> No						
Cum Rot Hrs on Casing:		0.0		Cum Rot Hrs on Casing Since Last Caliper:		0.0		Whipstock Set @:				KOP:												
Liner Size:		Set At:		0 m		MD		0 m		TVD		Liner Top At:		0 m		MD		0 m		TVD				
Mud Co:		Type:				Sample From:		Wt, kg/m³		FV:		PV:		YP:		Gel:								
WL API:		HTHP:		FC(1/32) API/HTHP:		Solids:		% Oil:		% Water:		% Sand:		MBT:		pH:								
Pm:		PI/MI:		Carb:		Cl:		Ca/Mg:		Bent:		0.00		Solids % HG/LG:		0		% DS/Bent:		0				
Engr Service:		Materials added last 24 hrs:																						
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:		Remarks:														
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm		TFA, cm²		MD In		MD Out		TVD Out										
						No.	Size	No.	Size															
						0	0.0	0	0.0		0 m		0 m		0 m									
						0	0.0	0	0.0				0 m		0 m									
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G	Char	7Pull	Cost/meter												
Total Length of BHA:		0 m		BHA Description:																				
Bit Cost	Row 1	0	Row 2	0	Rips /hr	\$0	Trip Time, hr	DC Size, mm	DP Size, mm	Hours On Jars:	Hrs Since Last Inspection:													
Bit	Liner, mm	Stroke, meters	m³/STK	SPM	Press, bar	liter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min	Bit HHP	BHHP/SQ. IN.	Pump HHP												
				0		0																		
				0		0																		
Survey MD		Angle	Direction	TVD	N/S Coordinate		E/W Coordinate		Vertical Section		DLS													
0.0 m																								
0.0 m																								
0.0 m																								
Hrs.	(From -To) hr:mm	Operations Covering 24 Hours Ending at Midnight																						
6:00	0:00 - 6:00	Finish unstringing block to remove and inspect crown sheaves.																						
	-	Back load M/V Cape Hope w/ drill pipe for DS-1 Level 5 inspection.																						
	-	Bob Ballard (ABS) on board to confirm status of COF work and conduct inspection of rig.																						
	-	Cont UT riser inspection. BOP inspection: Shaffer technician re-terminate fiber optic cables to Seacon connector on yellow mux cable																						
	-	Riser connector successfully tested on all circuits																						
6:00	6:00 - 12:00	Release M/V Cape Hope. Jump divers to perform ABS underwater hull inspection in lieu of drydock (UWILD).																						
9:00	12:00 - 21:00	Start R/U Swaco drill cuttings dryer. Begin inspecting crossovers and subs inspection. Found 4 bad subs.																						
3:00	21:00 - 24:00	Offload M/V C-Rambler w/ 20" csg. Continue inspection of drill pipe subs. Change crown sheave bearings and races																						
	-																							
	-																							
	-																							
	-																							
	-																							
	-																							
	-																							
24 hr Summary:																								
At anchor. Continue BOP inspection. Divers performing underwater hull inspection. Dismantle crown block sheaves for repair																								
Receive 20" casing at rig																								
Projected Operations: Continue underwater inspection and crown repairs while performing heavy lift inspection on rig.																								
Safety Issues:																								
Accidents:																								
Daily Mud Cost:		\$0.00		Daily Tangible Cost:		\$0.00		Daily Drilling Cost:		\$276,639.00		WBS Element No. (Drig)		RWFECD-22251										
Cum Mud Cost:				Cum Tangible Cost:				Cum Drilling Cost:		\$973,185.00		WBS Element No. (Comp)												
Daily Comp Cost				Cum Completion Cost				Cum Well Cost		\$973,185.00		Total Appr:												
Bulk Gel, m³:		0.00		Cement, m³:		0.00		Fuel, m³:		2,752.88		Bulk Wt, m³:		88.48		Chevron %		API Number:						
Country:		Canada		Rig:		DW Millennium		Rig Phone:		504-592-3316		Drilling Reps:		T Robichaux / J Bruton / T Gilbert										
Field:		Exploration		Lease:		E L 2359		Well #:		Chevron et al Newburn H-23		Date:		4-May-02										

Drilling Activity Report

Measured Depth:		0 m		TVD:		0 m		PBD:		Proposed MD:		0 m		Proposed TVD:		0 m	
DOL:		4		DFS:		Spud Date:		0-Jan-00		Daily meters:		0 m		Daily Rot Hrs:		0.0	
Torque:		Drag:		Rot Wt:		P/U Weight:		0 S/O Wt:		0		Last BOP Test:					
Last Casing Size:		Set At:		0 m		MD		0 m		TVD		Shoe Test:		Leakoff?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Cum Rot Hrs on Casing:		0.0		Cum Rot Hrs on Casing Since Last Calliper:		0.0		Whipstock Set @:				KOP:					
Liner Size:		Set At:		0 m		MD		0 m		TVD		Liner Top At:		0 m		MD 0 m TVD	
Mud Co:		Type:		Sample From:		Wt. kg/m ³		FV:		PV:		YP:		Gel:			
WL API:		HTHP:		FC(1/32) API/HTHP:		Solids:		% Oil:		% Water:		% Sand:		MBT:		pH:	
Pm:		P/Mf:		Carb:		Cl:		Ca/Mg:		Bent:		0.00		Solids % HGLG:		0	
Engr Service		Materials added last 24 hrs:														0	
Drig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Cl:		Remarks:							
Bit No.		IADC		Size		Manufacturer		Serial Number		Type		Jets, mm No. Size No. Size		TFA, cm ²		MD In MD Out TVD Out	
												0 0.0 0 0.0		0 m		0 m 0 m	
												0 0.0 0 0.0				0 m 0 m	
meters		Hours		WOB		RPM		I-Row		O-Row		DC		Loc		B G Char ?Pull Cost/meter	
Total Length of BHA:		0 m		BHA Description:													
Bit Cost		Row 1		0		Row 2		0		Rigs \$/hr		\$0		Trip Time/hr		DC Size, mm:	
Bit		Liner, mm		Stroke, meters		m ³ STK		SPM		Press, bar		liters/min		Jet Vel, m/sec		DP AV, m/min DC AV, m/min Bit H-IP	
								0				0					
								0				0					
Survey MD		Angle		Direction		TVD		N/S Coordinate		E/W Coordinate		Vertical Section		DLS			
0.0 m																	
0.0 m																	
0.0 m																	
Hrs.		(From -To) hh:mm															
Operations Covering 24 Hours Ending at Midnight																	
12:00		0:00		12:00													
12:00		12:00		24:00													
24 hr Summary:																	
At anchor. Continue BOP inspection. Divers performing underwater hull inspection. Dismantle crown block sheaves for repair																	
Receive 20" casing at rig																	
Projected Operations:																	
Safety Issues:																Accidents: NAR	
Daily Mud Cost:		\$0.00		Daily Tangible Cost:		\$0.00		Daily Drilling Cost:		\$276,639.00		WBS Element No. (Drig)		RWFECD-22251			
Cum Mud Cost:		\$0.00		Cum Tangible Cost:		\$0.00		Cum Drilling Cost:		\$1,249,824.00		WBS Element No. (Comp)					
Daily Comp Cost				Cum Completion Cost				Cum Well Cost		\$1,249,824.00							

Chevron Canada Resources

Drilling Activity Report

Measured Depth: 0 m		TVD: 0 m		PBTD: 0 m		Proposed MD: 0 m		Proposed TVD: 0 m	
DOL: 5		DFS:		Spud Date: 0-Jan-00		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque:		Drag: 0		Rot Wt: 0		PU Weight: 0		S/O Wt: 0	
Last Casing Size:		Set At: 0 m		MD: 0 m		TVD: 0 m		Shoe Test: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Cum Rot Hrs on Casing: 0.0		Cum Rot Hrs on Casing Since Last Calliper: 0.0		Whipstock Set @:		KOP:			
Liner Size:		Set At: 0 m		MD: 0 m		TVD: 0 m		Liner Top At: 0 m	
Mud Co:		Type:		Sample From:		WL: kg/m ³		FV: PV: YP: Gel:	
WL API:		HTHP:		FC(1/32) API/HTHP:		Solids:		% Oil:	
Pm:		PI/M:		Carb:		Cl:		Ca/Mg:	
						Bent: 0.00		Solids % HG/LG: 0	
Engr Service		Materials added last 24 hrs:							
Drig Gas:		Max Gas:		Conn. Gas:		Tnp Gas:		Trip Ct:	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size No. Size		TFA, cm ²	MD In
						0 0.0 0 0.0			MD Out
						0 0.0 0 0.0			TVD Out
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G
									Char
									7Pull
									Cost/meter
Total Length of BHA: 0 m		BHA Description:							
Bit Cost	Row 1 0	Row 2 0	Rigs /hr \$0	Trip Time/hr	DC Size, mm:	DP Size, mm:	Hours On Jars:	Hrs Since Last Inspection:	
Bit	Liner, mm	Stroke, meters	m ³ STK	SPM	Press, bar	liter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
				0		0			
				0		0			
Survey MD		Angle	Direction	TVD	N/S Coordinate		E/W Coordinate	Vertical Section	
0.0 m									
0.0 m									
0.0 m									
Hrs.	(From -To) hh:mm	Operations Covering 24 Hours Ending at Midnight							
6:00	0:00 - 6:00	Inspect 3 crown sheaves w/ Tri-drill inspector.							
1:30	6:00 - 7:30	unload 36" casing from m/v Cape Hope							
4:30	7:30 - 12:00	Release m/v Cape Hope. Install new bearing and races in 3 crown sheaves and replace same.							
		BOP: Riser lifting equip not inspected in 1 yr. Tri-Drill to inspect while on ship. Pipe Rams dressed & re-installed. R/R upper chk valves							
6:00	12:00 - 18:00	Continue ABS hull inspection w/ divers. Prepare 3 other crown sheaves for inspection by Tri-drill.							
6:00	18:00 - 24:00	Divers out of water for night. Re-install 3 crown sheaves and prepare to inspect other 3. sub insp. work on & insp. Bop & riser jts. r/u swaco							
		Swaco R/U approximately 30%							
24 hr Summary:									
At anchor. Continue BOP inspection. Divers performing underwater hull inspection. Dismantle crown block sheaves for repair									
Receive 20" casing at rig									
Projected Operations: Continue underwater inspection and crown repairs while performing heavy lift inspection on rig.									
Safety Issues:								Accidents:	
Daily Mud Cost: \$0.00		Daily Tangible Cost: \$0.00		Daily Drilling Cost: \$276,639.00		WBS Element No. (Drig)		RWFEC-R1257	
Cum Mud Cost: \$0.00		Cum Tangible Cost: \$0.00		Cum Drilling Cost: \$1,526,463.00		WBS Element No. (Comp)			
Daily Comp Cost		Cum Completion Cost		Cum Well Cost: \$1,526,463.00		Total Appr:			
Bulk Gel, m ³ : 0.00		Cement, m ³ : 0.00		Fuel, m ³ : 2,752.88		Bulk WL, m ³ : 88.48		Chevron %	
Country: Canada		Rig: DW Millennium		Rig Phone: 504-592-3316		Drilling Reps: T Robichaux / J Bruton / T Gilbert		API Number:	
Field: Exploration		Lease: EL 2359		Well #: Chevron et al Newburn H-23		Date: 6-May-02			

Chevron Canada Resources

Drilling Activity Report

Measured Depth: 0 m		TVD: 0 m		PBD: 0 m		Proposed MD: 0 m		Proposed TVD: 0 m																																																			
DOL: 5		DFS: 0		Spud Date: 0-Jan-00		Daily meters: 0 m		Daily Rot Hrs: 0.0																																																			
Torque: 0		Drag: 0		Rot Wt: 0		P/U Weight: 0		S/O Wt: 0																																																			
Last Casing Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Shoe Test: 0 m																																																			
Cum Rot Hrs on Casing: 0.0		Cum Rot Hrs on Casing Since Last Calliper: 0.0		Whipslock Set @: 0 m		KOP: 0 m		Leakoff? <input type="checkbox"/> Yes <input type="checkbox"/> No																																																			
Liner Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Liner Top At: 0 m																																																			
Mud Co: 0		Type: 0		Sample From: 0		Wt. kg/m ³ : 0		FV: 0																																																			
WL API: 0		HTHP: 0		FC(1/32) API/HTHP: 0		Solids: 0		% Oil: 0																																																			
Pm: 0		PI/MF: 0		Carb: 0		Cl: 0		Ca/Mg: 0																																																			
Engr Service		Materials added last 24 hrs:		Bent: 0.00		Solids % HG/LG: 0		% DS/Bent: 0																																																			
<table border="1"> <tr> <td colspan="2">Orig Gas:</td> <td colspan="2">Max Gas:</td> <td colspan="2">Conn. Gas:</td> <td colspan="2">Trip Gas:</td> <td colspan="2">Trip Cl:</td> </tr> <tr> <td colspan="10">Remarks:</td> </tr> </table>										Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Cl:		Remarks:																																							
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Cl:																																																			
Remarks:																																																											
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm		TFA, cm ²	MD In	MD Out	TVD Out																																																
						No.	Size	No. Size																																																			
						0	0.0	0	0.0	0 m	0 m																																																
						0	0.0	0	0.0	0 m	0 m																																																
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G	Char	Cost/meter																																																
Total Length of BHA: 0 m BHA Description:																																																											
<table border="1"> <tr> <td>Bit Cost</td> <td>Row 1</td> <td>0</td> <td>Row 2</td> <td>0</td> <td>Rig\$/hr</td> <td>\$0</td> <td>Trip Time/hr</td> <td>DC Size, mm:</td> <td>DP Size, mm:</td> <td>Hours On Jars:</td> <td>Hrs Since Last Inspection:</td> </tr> <tr> <td>Bit</td> <td>Liner, mm</td> <td>Stroke, meters</td> <td>m³/STK</td> <td>SPM</td> <td>Press. bar</td> <td>liters/min</td> <td>Jet Vel. m/sec</td> <td>DP AV, m/min</td> <td>DC AV, m/min</td> <td>Bit H-HP</td> <td>BH-HP/SQ. IN.</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>0</td> <td></td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>0</td> <td></td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>												Bit Cost	Row 1	0	Row 2	0	Rig\$/hr	\$0	Trip Time/hr	DC Size, mm:	DP Size, mm:	Hours On Jars:	Hrs Since Last Inspection:	Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press. bar	liters/min	Jet Vel. m/sec	DP AV, m/min	DC AV, m/min	Bit H-HP	BH-HP/SQ. IN.					0		0										0		0					
Bit Cost	Row 1	0	Row 2	0	Rig\$/hr	\$0	Trip Time/hr	DC Size, mm:	DP Size, mm:	Hours On Jars:	Hrs Since Last Inspection:																																																
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press. bar	liters/min	Jet Vel. m/sec	DP AV, m/min	DC AV, m/min	Bit H-HP	BH-HP/SQ. IN.																																																
				0		0																																																					
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Survey MD		Angle	Direction	TVD	N/S Coordinate		E/W Coordinate		Vertical Section		DLS																																																
0.0 m																																																											
0.0 m																																																											
0.0 m																																																											
Hrs.	(From-To) hh:mm	Operations Covering 24 Hours Ending at Midnight																																																									
2:00	0:00 - 2:00	cont. work on crown sheave & prepare bop t/pressure test.																																																									
4:00	2:00 - 6:00	offload m/v c-enforcer 6-5/8" 40.9 lb/ft DP, dc, & 6-5/8" HWDP, take on 16.0 ppg mud & cont. w/rig projects.																																																									
6:00	6:00 - 12:00	Continue off load M/V C-Enforcer and M/V Mylene Tide. Replace 3 crown sheaves. Continue sub inspection R/U Swaco (35% complete).																																																									
	-	BOP: Chk Lubricomp bearings in ST lock housings. Several broken, R/R w/newer model. Insp WH connector. Locate replacement Mux cable.																																																									
4:00	12:00 - 16:00	Prepare BOP for pressure testing.																																																									
1:30	16:00 - 17:30	Prepare heavy lifting gear for inspection by Tri-Drill																																																									
3:00	17:30 - 20:30	divers continue underwater hull inspection, R/U Swaco equipment (40% complete). Replace last 3 crown sheaves.																																																									
3:30	20:30 - 24:00	M/V Stone Buccaneer @ location receive diesel & JP-5 HELI-FUEL (in MPT) from same.																																																									
	-																																																										
	-																																																										
	-																																																										
	-																																																										
	-																																																										
24 hr Summary:																																																											
At anchor. Continue BOP inspection. Divers performing underwater hull inspection. Dismantle crown block sheaves for repair																																																											
Receive 20" casing at rig																																																											
Projected Operations: Continue underwater inspection and crown repairs while performing heavy lift inspection on rig.																																																											
Safety Issues: Held pre-tour safety meetings. Overhead hazards.																																																											
Accidents: NAR																																																											
Daily Mud Cost: \$0.00		Daily Tangible Cost: \$0.00		Daily Drilling Cost: \$276,639.00		WBS Element No. (Orig)		RWFECD-22251																																																			
Cum Mud Cost: \$0.00		Cum Tangible Cost: \$0.00		Cum Drilling Cost: \$1,803,102.00		WBS Element No. (Comp)																																																					
Daily Comp Cost		Cum Completion Cost		Cum Well Cost: \$1,803,102.00		Total Appr:																																																					
Bulk Gel, m ³ : 0.00		Cement, m ³ : 0.00		Fuel, m ³ : 2,752.88		Bulk Wt, m ³ : 88.48		Chevron %		API Number:																																																	
Country: Canada		Rig: DW Millennium		Rig Phone: 504-592-3316		Drilling Reps: T Robichaux / J Bruton / T Gilbert																																																					
Field: Exploration		Lease: EL 2359		Well #: Chevron et al Newburn H-23		Date: 7-May-02																																																					

Drilling Activity Report

Measured Depth:								TVD:						PSTD:							Proposed MD:									Proposed TVD:																																									
DOL:								DFS:								Spud Date:								Daily meters:								Daily Rot Hrs:								Total Rot Hrs:																															
Torque:								Drag:								Rot Wt:								P/U Weight:								S/O Wt.								Last BOP Test:																															
Last Casing Size:								Set At:								0 m								MD	0 m								TVD	Shoe Test:								Leakoff?								<input type="checkbox"/> Yes								<input checked="" type="checkbox"/> No													
Cum Rot Hrs on Casing:								0.0								Cum Rot Hrs on Casing Since Last Caliper:								0.0								Whipstock Set @:																KOP:																							
Liner Size:								Set At:								0 m								MD	0 m								TVD	Liner Top At:								0 m								MD	0 m								TVD												
Mud Co:								Type:								Sample From:								WL kg/m ³ :								FV:								PV:								YP:								Gel:															
WLA PI:								HTHP:								FC(1/32) API/HTHP:								Solids:								% Oil:								% Water:								% Sand:								MBT:								pH:							
Pm:								PI/Mf:								Cat:								Cl:								Car/Mg:								Bent:	0.00							Solids % HG/LG:	0							% DS/Bent:	0														
Engr Service								Materials added last 24 hrs:																																																															
Drig Gas:								Max Gas:								Conn. Gas:								Trip Gas:								Trip Ct:								Remarks:																															
Bit No.	IADC	Size	Manufacturer				Serial Number				Type				Jets, mm No. Size No. Size				TFA, cm²				MD In				MD Out				TVD Out																																								
															0 0.0 0 0.0				0 m				0 m				0 m																																												
															0 0.0 0 0.0								0 m				0 m				0 m																																								
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G	Char	?Pull	Cost/meter																																																											
Total Length of BHA:													0 m													BHA Description:																																													
Bit Cost	Row 1	0	Row 2	0	Rig\$ /hr	\$0	Trip Time/hr	DC Size, mm:				DP Size, mm:				Hours On Jars:				Hrs Since Last Inspection:																																																			
Bit	Liner, mm	Stroke, meters	m³/STK	SPM	Press, bar	liter/min	Jet Vol, m/sec	DP AV, m/min				DC AV, m/min				Bit HHP				BHHP/SQ. IN.				Pump HHP																																															
				0		0																																																																	
				0		0																																																																	
Survey MD				Angle	Direction	TVD				N/S Coordinate				E/W Coordinate				Vertical Section				DLS																																																	
0.0 m																																																																							
0.0 m																																																																							
0.0 m																																																																							
Hrs.	(From -To) hh:mm	Operations Covering 24 Hours Ending at Midnight																																																																					
6:00	0:00 ~ 6:00	Continuing offload of fuel off m/v Stone Buccaneer. Crown repairs done. Begin installing uprights for heliport fire wall. Offload m/v C-Enforcer Backload C-Enforcer with dive equipment and trash.																																																																					
6:00	6:00 ~ 12:00	Re-assemble crown and begin inspection using Tri-Drill. R/U Swaco (40% complete).																																																																					
6:00	12:00 ~ 18:00	Finished with crown inspection. R/D equipment from crown. Weld in new pad eyes to hold sheaves for 4 man rider winches.																																																																					
2:00	18:00 ~ 20:00	Resume Inspection of heavy lift equipment, riser running tools and drill pipe subs using Tri-Drill.																																																																					
4:00	20:00 ~ 24:00	Start restringing of blocks w/ 1" drill line.																																																																					
-	-	Transfer faulty yellow mux cable from reel to shipping reel for return to TSF. Secure spare pod for shipment back to Shaffer for upgrade.																																																																					
-	-	Lift yellow pod bell for access to FCR wiring (annual recommended Shaffer PM, but never performed on this stack).																																																																					
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-	-																																																																						
24 hr Summary:																																																																							
At anchor. Continue BOP inspection. Re-assemble crown block after repairs. Inspect same. Continue heavy-lift inspection.																																																																							
Projected Operations: Continue performing heavy lift inspection on rig and BOP inspection while receiving inspected drill pipe back to rig.																																																																							
Safety Issues: Held pre-tour safety meetings. Overhead hazards.																																																																							
Accidents: NAR																																																																							
Daily Mud Cost: \$0.00				Daily Tangible Cost: \$0.00				Daily Drilling Cost: \$276,639.00				WBS Element No. (Drig) RWFECD-R1257																																																											
Cum Mud Cost: \$0.00				Cum Tangible Cost: \$0.00				Cum Drilling Cost: \$2,079,741.00				WBS Element No. (Comp)																																																											
Daily Comp Cost				Cum Completion Cost				Cum Well Cost \$2,079,741.00				Total Appr:																																																											
Bulk Gel, m³: 0.00				Cement, m³: 0.00				Fuel, m³: 2,752.88				Bulk WL, mc: 88.48				Chevron %				API Number:																																																			
Country: Canada				Rig: DW Millennium				Rig Phone: 504-592-3316				Drilling Reps: T Robichaux / J Bruton / T Gilbert																																																											
Field: Exploration				Lease: EL 2359				Well #: Chevron et al Newburn H-23				Date: 8-May-02																																																											

Chevron Canada Resources

Drilling Activity Report

Measured Depth: 0 m		TVD: 0 m		PBD: 0 m		Proposed MD: 0 m		Proposed TVD: 0 m	
DOL: 7		DFS: 0		Spud Date: 0-Jan-00		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque: 0		Drag: 0		Rot Wt: 0		PU Weight: 0		S/O Wt: 0	
Last Casing Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Shoe Test: 0	
Cum Rot Hrs on Casing: 0.0		Cum Rot Hrs on Casing Since Last Caliper: 0.0		Whipstock Set @: 0		KOP: 0		Leakoff? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Liner Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Liner Top At: 0 m	
Mud Co: 0		Type: 0		Sample From: 0		Wt. kg/m ³ : 0		FV: 0	
WL API: 0		HTHP: 0		FC(1/32) API/HTHP: 0		Solids: 0		% Oil: 0	
Pm: 0		PI/Mt: 0		Carb: 0		Cl: 0		Ca/Mg: 0	
Engr Service		Materials added last 24 hrs: 0		Bent: 0.00		Solids % HGLG: 0		% DS/Bent: 0	
Drig Gas: 0 Max Gas: 0 Conn. Gas: 0 Trip Gas: 0 Trip Ct: 0 Remarks: 0									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size No. Size		TFA, cm ²	MD In
0	0	0	0	0	0	0	0	0	0 m
0	0	0	0	0	0	0	0	0	0 m
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G
0	0	0	0	0	0	0	0	0	0
Total Length of BHA: 0 m BHA Description: 0									
Bit Cost	Row 1	0	Row 2	0	Rig \$ /hr	\$0	Trip Time, hr	DC Size, mm	DP Size, mm
Bit	Liner, mm	Stroke, meters	m ² STK	SPM	Press, bar	liter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
Survey MD	Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section	DLS		
0.0 m	0	0	0	0	0	0	0		
0.0 m	0	0	0	0	0	0	0		
0.0 m	0	0	0	0	0	0	0		
Hrs.	(From -To) hh:mm	Operations Covering 24 Hours Ending at Midnight							
3:00	0:00 - 3:00	Continue installing uprights on Heli-fuel tank firewall installation. Re-string block, cut 80' drill line.							
3:00	3:00 - 6:00	Removing 1" drill line from drawworks drum							
3:00	6:00 - 9:00	Prepare deadline anchor, drilling line drum clamp, and elevators for magnetic particle inspection by Tri-Drill.							
3:00	9:00 - 12:00	Continue with mag particle inspection. Continue firewall installation. BOP work: Resume PM on FCR's in yellow pod.							
		6 DDV cables on yellow pod & 9 on blue pod replaced after contamination was found on pins. Complete testing 4 FCR's in yellow pod.							
3:00	12:00 - 15:00	Drum clamp inspection completed. Slip drill line cable on drum.							
9:00	15:00 - 24:00	Resume firewall installation. Conduct mpi inspection on bails, elevator, & tds equipment.							
24 hr Summary:									
At anchor. Continue BOP inspection. Continue heavy-lift equipment inspection.									
Receive 20" casing at rig									
Projected Operations: Finish loading drill pipe on ship. Finish heavy lift and TDS inspection. Set sail for Nova Scotia, Canada									
Safety Issues: Held pre-tour safety meetings. Fire watch safety.									
Accidents: NAR									
Daily Mud Cost: \$0.00		Daily Tangible Cost: \$0.00		Daily Drilling Cost: \$276,639.00		WBS Element No. (Drig) RWFE-CR1257			
Cum Mud Cost: \$0.00		Cum Tangible Cost: \$0.00		Cum Drilling Cost: \$2,356,380.00		WBS Element No. (Comp)			
Daily Comp Cost		Cum Completion Cost		Cum Well Cost: \$2,356,380.00		Total Appr:			
Bulk Gal, m ³ : 0.00		Cement, m ³ : 0.00		Fuel, m ³ : 5,164.94		Bulk Wt, m ³ : 88.48		Chevron %	
Country: Canada		Rig: DW Millennium		Rig Phone: 504-592-3316		Drilling Reps: T Robichaux / J Bruton / T Gilbert		API Number:	
Field: Exploration		Lease: EL 2359		Well #: Chevron et al Newburn H-23		Date: 9-May-02			

Drilling Activity Report

Measured Depth: 0 m										TVD: 0 m										PBTD: 0 m										Proposed MD: 0 m										Proposed TVD: 0 m																																																																																																													
DOL: 8										DFS:										Spud Date:										Daily meters: 0 m										Daily Rot Hrs: 0.0										Total Rot Hrs: 0.0																																																																																																			
Torque:										Drag:										Rot Wt: 0										PIU Weight: 0										S/O Wt: 0										Last BOP Test:																																																																																																			
Last Casing Size:										Set At: 0 m										MD										0 m										TVD										Shoe Test:										Leakoff? <input type="checkbox"/> Yes <input type="checkbox"/> No																																																																																									
Cum Rot Hrs on Casing: 0.0										Cum Rot Hrs on Casing Since Last Caliper: 0.0										Whipstock Set @:										KOP:																																																																																																																							
Liner Size:										Set At: 0 m										MD										0 m										TVD										Liner Top At: 0 m										MD										0 m										TVD																																																																					
Mud Co:										Type:										Sample From:										WL, kg/m ³ :										FV:										PV:										YP:										Gel:																																																																															
WL API:										HTHP:										FC(1/32) API/HTHP:										Solids:										% Oil:										% Water:										% Sand:										MBT:										pH:																																																																					
Pm:										PI/Mt:										Crb:										Cl:										Car/Mg:										Bent: 0.00										Solids % HGLG: 0										% DS/Bent: 0																																																																															
Engr Service										Materials added last 24 hrs:																																																																																																																																											
Drig Gas:										Max Gas:										Conn. Gas:										Trip Gas:										Trip Ct:										Remarks:																																																																																																			
Bit No.										IADC										Size										Manufacturer										Serial Number										Type										Jets, mm										TFA, cm ²										MD In										MD Out										TVD Out																																																	
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meters										Hours										WOB										RPM										I-Row										O-Row										DC										Loc										B										G										Char										7Pull										Cost/meter																													
Total Length of BHA:										0 m										BHA Description:																																																																																																																																	
Bit Cost										Row 1										0										Row 2										0										Rig\$ /hr										\$0										Trip Time, hr										DC Size, mm:										DP Size, mm:										Hours On Jars:										Hrs Since Last Inspection:																																							
Bit										Liner, mm										Stroke, meters										m ³ /STK										SPM										Press, bar										Iter/min										Jet Vel, m/sec										DP AV, m/min										DC AV, m/min										Bit HHP										BHP/SQ. IN.										Pump HHP																													
																														0																				0																																																																																																			
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Survey MD										Angle										Direction										TVD										N/S Coordinate										E/W Coordinate										Vertical Section										DLS																																																																															
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0.0 m																																																																																																																																																					
Hrs.										(From -To) hh:mm										Operations Covering 24 Hours Ending at Midnight																																																																																																																																	
14:30										0:00 - 14:30										Off-load 200 jts of 6-5/8" 27 lb/ft drill pipe from m/v C-Enforcer. Back load old mux line and garbage.																																																																																																																																	
																				Install becket & pins on TDS to blocks after Tri-Drill inspection. Replace cylinder seals on lower extension arm, upper swivel bearing																																																																																																																																	
																				and replace main drive wheel on PHM. Prepare ship for transit.																																																																																																																																	
																				BOP: Continue Shaffer PM on yellow pod w/ numerous FCR and DDV cable failures. 10 DDVs failed capacitance test as well.																																																																																																																																	
																				Spooled replacement mux cable onto yellow mux reel. Original mux cable had 4 10 AWG AC voltage conductor wires. The replacement																																																																																																																																	
																				cable has 4 pairs of 12 AWG AC voltage conductor wires. Each has different color schemes. ET's verified color of wire to pin in connector.																																																																																																																																	
24:00										0:00 - 24:00										Departed for transit to Canada.																																																																																																																																	
																				Total bulk materials taken on:																																																																																																																																	
																				16.0 ppg water base mud = 5830 bbls (926.90 cubic meters)																																																																																																																																	

Chevron Canada Resources

Drilling Activity Report

Measured Depth: 0 m		TVD: 0 m		PBTD: 0 m		Proposed MD: 0 m		Proposed TVD: 0 m	
DOL: 9		DFS:		Spud Date:		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque:		Drag:		Rot Wt: 0		P/U Weight: 0		S/O Wt: 0	
Last Casing Size:		Set At: 0 m		MD: 0 m		TVD: 0 m		Shoe Test: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Cum Rot Hrs on Casing: 0.0		Cum Rot Hrs on Casing Since Last Caliper: 0.0		Whipstock Set @:		KOP:			
Liner Size:		Set At: 0 m		MD: 0 m		TVD: 0 m		Liner Top At: 0 m	
Mud Co:		Type:		Sample From:		Wt. kg/m ³ :		FV: PV: YP: Gel:	
WL API:		HTHP:		FC(1/32) API/HTHP:		Solids: % Oil: % Water: % Sand:		MBT: pH:	
Pm:		P/MF:		Carb: Ct:		Ca/Mg: Bent: 0.00		Solids % HGALG: 0 % DS/Bent: 0	
Engr Service		Materials added last 24 hrs:							
Drig Gas: Max Gas: Conn. Gas: Trip Gas: Trip Ct: Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size No. Size		TFA, cm ²	MD In MD Out TVD Out
						0 0.0 0 0.0			0 m 0 m 0 m
						0 0.0 0 0.0			0 m 0 m 0 m
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G Char ?Pull Cost/meter
Total Length of BHA: 0 m BHA Description:									
Bit Cost	Row 1 0	Row 2 0	Rig \$ /hr	\$0	Trip Time, hr	DC Size, mm:	DP Size, mm:	Hours On Jars:	Hrs Since Last Inspection:
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press. bar	liter/min	Jet Vel, m/sec	DP AV, m/min DC AV, m/min	Bit HHP BHP/PSQ. IN. Pump HHP
				0		0			
				0		0			
Survey MD		Angle	Direction	TVD	N/S Coordinate		E/W Coordinate	Vertical Section DLS	
0.0 m									
0.0 m									
0.0 m									
Hrs.	(From-To) hh:mm	Operations Covering 24 Hours Ending at Midnight							
7:00	0:00 - 7:00	In transit. @ 0600hrs. lat.27-14.3 N, long 88-02.6 W, heading: 123degs, speed-10kts.							
	-	In transit to Nova Scotia, Canada. @0600 distance traveled 153nm dist to go 1971nm, work on phm							
4:00	7:00 - 11:00	Work on replacing 27 A-60 doors for CNSOPB certification. R/U Swaco (45% complete). Complete mux line installation.							
	-	Overhaul fluid end of mud pump #1. Inspect valves, seats, liners and swabs. Replace 3 swabs.							
1:00	11:00 - 12:00	In transit. @ 1200hrs: lat: 26-45.7 N, long: 87-14.2 W, heading: 123degs, speed: 10knts.							
	-	BOP: complete Shaffer PM on yellow pod with 28 FCR section failures, 45 DDV cable failures and 9 DDV valves replaced. Terminate yellow mux cable to slip ring. Due to lack of spare parts decide to stump test BOP's before performing Shaffer PM on blue pod.							
5:30	12:00 - 17:30	Continue A-60 door installation and Swaco R/U (50% completed)							
0:30	17:30 - 18:00	In transit. @1800hrs, lat.26-15.7n, long.086-22.4w, heading 123degs, speed.9.8kts, In transit, distance traveled 269nm, distance to go 1887nm							
	-	Shut down work. Only working 0600 - 1800 during transit. All rig lights lowered for navigational safety during night.							
6:00	18:00 - 24:00	In transit. Location @ 2400hrs: lat.25-43.6 N, long. 085-28.9 W. Heading: 123degs, speed 9.6 kts.							
	-	Distance traveled = 322.5nm. Distance to go 1833.5nm							
	-								
	-	Thruster #5 down for PM from 0800-1340. Speed reduced from 10 knts to 8 knts.							
24 hr Summary:									
In Transit. Begin A-60 door installations. Overhaul fluid end of mud pump #1. Continue performing PM on yellow pod. Terminate yellow mux cable.									
Projected Operations: Sail for Nova Scotia anchorage point A. Continue A-60 door project and Hell-fuel blast wall project for CNSOPB installation									
Safety Issues: Safety while under way. Accidents: NAR									
Daily Mud Cost: \$0.00		Daily Tangible Cost: \$0.00		Daily Drilling Cost: \$276,639.00		WBS Element No. (Drig) RWFEC-R1257-200			
Cum Mud Cost: \$0.00		Cum Tangible Cost: \$0.00		Cum Drilling Cost: \$2,909,658.00		WBS Element No. (Comp)			
Daily Comp Cost		Cum Completion Cost		Cum Well Cost: \$2,909,658.00		Total Appr:			
Bulk Gel, m ³ : 220.05		Cement, m ³ : 0.00		Fuel, m ³ : 5,134.41		Bulk Wt. m ³ : 88.48		Chevron % API Number:	
Country: Canada		Rig: DW Millennium		Rig Phone: 504-592-3316		Drilling Reps: T Robichaux / J Bruton / T Gilbert			
Field: Exploration		Lease: EL 2359		Well #: Chevron et al Newburn H-23		Date: 11-May-02			

Chevron Canada Resources

Drilling Activity Report (a)

Measured Depth: 0 m		TVD: 0 m		PBD: 0 m		Proposed MD: 0 m		Proposed TVD: 0 m	
DOL: 10		DFS: 0		Spud Date: 0		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque: 0		Drag: 0		Rot Wt: 0		P/U Weight: 0		S/O Wt: 0	
Last Casing Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Shoe Test: 0 m	
Cum Rot Hrs on Casing: 0.0		Cum Rot Hrs on Casing Since Last Caliper: 0.0		Whipstock Set @: 0.0		KOP: 0 m		Leakoff? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Liner Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Liner Top At: 0 m	
Mud Co: 0		Type: 0		Sample From: 0		WL: 0 kg/m ³		FV: 0	
WT API: 0		HTHP: 0		FC(1/32) API/HTHP: 0		Solids: 0		% Oil: 0	
Pm: 0		PI/M: 0		Carb: 0		Cl: 0		Ca/Mg: 0	
Engr Service: 0		Materials added last 24 hrs: 0		Bent: 0.00		Solids % HG/LG: 0		% DS/Bent: 0	
Drig Gas: 0		Max Gas: 0		Conn. Gas: 0		Trip Gas: 0		Trip Cl: 0	
Remarks: 0		Jets, mm: 0		TFA, cm ² : 0		MD In: 0 m		MD Out: 0 m	
Bit No. 0		IADC: 0		Size: 0		Manufacturer: 0		Serial Number: 0	
Type: 0		No. Size: 0		No. Size: 0		TFA, cm ² : 0		MD In: 0 m	
meters: 0		Hours: 0		WOB: 0		RPM: 0		I-Row: 0	
O-Row: 0		DC: 0		Loc: 0		B: 0		G: 0	
Char: 0		7Pull: 0		Cost/meter: 0		Total Length of BHA: 0 m		BHA Description: 0	
Bit Cost: 0		Row 1: 0		Row 2: 0		Rig\$ /hr: 0		\$0: 0	
Trip Time/hr: 0		DC Size, mm: 0		DP Size, mm: 0		Hours On Jars: 0		Hrs Since Last Inspection: 0	
Bit: 0		Liner, mm: 0		Stroke, meters: 0		m ³ /STK: 0		SPM: 0	
Press, bar: 0		liter/min: 0		Jet Vel, m/sec: 0		DP AV, m/min: 0		DC AV, m/min: 0	
Bit HHP: 0		BHHP/SQ. IN.: 0		Pump HHP: 0		Survey MD: 0.0 m		Angle: 0	
Direction: 0		TVD: 0		N/S Coordinate: 0		E/W Coordinate: 0		Vertical Section: 0	
DLS: 0		Hrs. (From - To) hh:mm: 0		Operations Covering 24 Hours Ending at Midnight: 0		6:00 0:00 - 6:00 In transit to Nova Scotia, Canada		6:00 6:00 - 12:00 Begin Work day. Continue working on installing A-60 doors. Have installed 5 of 27. R/U Swaco (50% complete). mud pumps.	
Overhaul fluid end of mud Pump #2. Inspect valves, seats, liners and swabs. Continue building frame for heli-fuel blast wall.		Position @ 1200 hrs: 24° 37.4' N 83°W, heading: 123° speed: 10.3kts, distance traveled: 445.5 nm. distance to go: 1710.5nm		6:00 12:00 - 18:00 BOP: Function ST locks. Begin stump test. Test upper BSR, UIK, LIK, LIC, MIC to 250 psi / 15,000 psi for 10 minutes		Test lower shear rams to 250 / 12,000 psi. Test pipe rams to 250 psi / 12,000 psi for 10 minutes on 5" and 6-5/8" DP. Annulars: 250 / 5,000 psi.		Replace all choke, kill, rigid conduit, mud boost and main riser mud seals on all joints to be used in riser string.	
6:00 18:00 - 24:00 Location @ 2400 hrs: 24° 18.2'N, 81° 16.5'W. Heading: 090°. Speed: 12.6 kts, Distance traveled: 625nm. Distance to go: 1531nm.		Work from 06:00 - 18:00		24 hr Summary: In Transit. Continue A-60 door replacement and heli-fuel blast wall erection. Stump test BOPE on 5" and 6-5/8" DP.		Projected Operations: Sail for Nova Scotia anchorage point A. Continue A-60 door replacement, heli-fuel wall construction and mud pump overhaul.		Safety Issues: Held Pre-tour safety meeting. Held Fire and Abandon Ship Drill. Hand Safety.	
Accidents: NAR		Daily Mud Cost: \$18,113.82		Daily Tangible Cost: \$0.00		Daily Drilling Cost: \$1,301,910.67		WBS Element No. (Drig) RWFECD-1257-200	
Cum Mud Cost: \$18,113.82		Cum Tangible Cost: \$0.00		Cum Drilling Cost: \$4,211,568.67		WBS Element No. (Comp)		Total Appr: 0	
Daily Comp Cost		Cum Completion Cost		Cum Well Cost: \$4,211,568.67		Bulk Gel, m ³ : 220.05		Cement, m ³ : 0.00	
Fuel, m ³ : 5,134.41		Bulk WL, m ³ : 88.48		Chevron %		API Number: 0		Country: Canada	
Rig: DW Millennium		Rig Phone: 504-592-3316		Drilling Reps: T Robichaux / J Bruton		Field: Exploration		Lease: EL 2359	
Well #: Chevron et al Newburn H-23		Date: 12-May-02							

Chevron Canada Resources

Drilling Activity Report (a)

Measured Depth: 0 m		TVD: 0 m		PBTD: 0 m		Proposed MD: 0 m		Proposed TVD: 0 m	
DOL: 11		DFS:		Spud Date:		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque:		Drag:		Rot Wt: 0		P/U Weight: 0		S/O Wt: 0	
Last Casing Size:		Set At: 0 m		MD: 0 m		TVD: 0 m		Shoe Test:	
Cum Rot Hrs on Casing: 0.0		Cum Rot Hrs on Casing Since Last Caliper: 0.0		Whipstock Set @:		KOP:		Leakoff? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Liner Size:		Set At: 0 m		MD: 0 m		TVD: 0 m		Liner Top At: 0 m	
Mud Co:		Type:		Sample From:		Wt. kg/m ³ :		FV: PV: YP: Gel:	
WL API:		HTHP:		FC(1/32) API/HTHP:		Solids: % Oil: % Water: % Sand:		MBT: pH:	
Pm:		P/Mt:		Carb: Cl:		Ca/Mg: Bent: 0.00		Solids % HG/LG: 0 % DS/Bent: 0	
Engr Service		Materials added last 24 hrs:							
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Cl:	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size No. Size		TFA, cm ²	MD In
						0 0.0 0 0.0			MD Out
						0 0.0 0 0.0			TVD Out
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G
									Char
									7Pull
									Cost/meter
Total Length of BHA: 0 m		BHA Description:							
Bit Cost	Row 1 0	Row 2 0	Rig \$ /hr	\$0	Trip Time/hr	DC Size, mm:	DP Size, mm:	Hours On Jars:	Hrs Since Last Inspection:
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press. bar	liter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
				0		0			
				0		0			
Survey MD		Angle	Direction	TVD	N/S Coordinate		E/W Coordinate	Vertical Section	
0.0 m									
0.0 m									
0.0 m									
Hrs.	(From - To) hh:mm	Operations Covering 24 Hours Ending at Midnight							
6:00	0:00 - 6:00	In transit to Nova Scotia. @ 0600 hrs 24° 59.6' N, 80° 02.4' W, heading 054°							
6:00	6:00 - 12:00	Replace electrical service loop on TDS. Remove Kelly hose. Continue replacing A-60 doors. 13 of 27 doors replaced.							
	-	Overhaul mud pump #3. Inspect all valves, seats, liners and swabs							
6:00	12:00 - 18:00	Strap 36" casing. Paint 36" shoe joint and LPH joint. R/U OES M/U & Breakout machine.							
	-	@ 1800 hrs 27° 46.3' N, 79° 40.2' W heading 003°							
	-	Stump testing BOP wing valves to 250 psi low / 12,000 psi high for 10 minutes each test.							
6:00	18:00 - 24:00	In transit to Nova Scotia. @ 2400 hrs 28° 50.8' N, 79° 35.7' W, heading 003°							
	-	Daily progress: 269 nm (avg speed 11.2 knts) Distance to go: 1260 nm							
	-								
	-	Held pre-spud meeting with all crews @ 19:30 hrs							
	-								
	-	Had First Aid incident: Dust got in eye of hot work fire watcher.							
	-								
	-	NUMBER 1 THRUSTER DOWN FOR REPAIRS @ 0700 HRS. MAKING WAY WITH 5 THRUSTERS.							
24 hr Summary:									
In Transit. Stump test BOPE. Continue working on PHM and overhauling fluid end of mud pumps. Continue installing A-60 doors for COF requirements									
Projected Operations: Sail for Nova Scotia anchorage point A									
Safety Issues: Held pre-tour safety meeting. Discussed PTW processes									Accidents: 1
Daily Mud Cost: \$0.00		Daily Tangible Cost: \$0.00		Daily Drilling Cost: \$364,266.60		WBS Element No. (Drig) RWFECC-1257-200			
Cum Mud Cost: \$18,113.82		Cum Tangible Cost: \$0.00		Cum Drilling Cost: \$4,575,835.27		WBS Element No. (Comp)			
Daily Comp Cost		Cum Completion Cost		Cum Well Cost: \$4,575,835.27		Total Appr:			
Bulk Gel, m ³ : 220.05		Cement, m ³ : 0.00		Fuel, m ³ : 5,134.41		Bulk Wt, m ³ : 88.48		Chevron % API Number:	
Country: Canada		Rig: DW Millennium		Rig Phone: 504-592-3316		Drilling Reps: T Robichaux / J Bruton / T Gilbert			
Field: Exploration		Lease: EL 2359		Well #: Chevron et al Newburn H-23		Date: 13-May-02			

Chevron Canada Resources

Drilling Activity Report (a)

Measured Depth: 0 m		TVD: 0 m		PBDT: 0 m		Proposed MD: 0 m		Proposed TVD: 0 m	
DOL: 12		DFS: 0		Spud Date: 0-Jan-00		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque: 0		Drag: 0		Rot Wt: 0		P/U Weight: 0		S/O Wt: 0	
Last Casing Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Shoe Test: 0 m	
Cum Rot Hrs on Casing: 0.0		Cum Rot Hrs on Casing Since Last Caliper: 0.0		Whipstock Set @: 0 m		KOP: 0 m		Leakoff? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Liner Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Liner Top At: 0 m	
Mud Co: 0		Type: 0		Sample From: 0		WT: 0 kg/m ³		FV: 0	
WL API: 0		HTHP: 0		FC(1/32) API/HTHP: 0		Solids: 0		% Oil: 0	
Pm: 0		P/Mt: 0		Clt: 0		Ca/Mg: 0		Bent: 0.00	
Engr Service: 0		Materials added last 24 hrs: 0		Solids % HGLG: 0		% DS/Bent: 0		pH: 0	
Drig Gas: 0		Max Gas: 0		Conn. Gas: 0		Tnp Gas: 0		Tnp Cl: 0	
Remarks: 0		Remarks: 0		Remarks: 0		Remarks: 0		Remarks: 0	
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jet Size, mm	No. Size	No. Size	TFA, cm ²
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
Total Length of BHA: 0 m		BHA Description: 0		BHA Description: 0		BHA Description: 0		BHA Description: 0	
Bit Cost	Row 1	0	Row 2	0	Rigs	\$0	Tnp	Time, hr	DC Size, mm
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
DP Size, mm	Hours On	Japs:	Hrs Since Last	Inspection:	DP AV, m/min	DC AV, m/min	Bit HHP	BHHP/SQ. IN.	Pump HHP
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
Survey MD	Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section	DLS		
0.0 m	0	0	0	0	0	0	0		
0.0 m	0	0	0	0	0	0	0		
0.0 m	0	0	0	0	0	0	0		
Hrs.	(From - To)	Operations Covering 24 Hours Ending at Midnight							
6:00	0:00 - 6:00	In transit to N.S. Canada.							
12:00	6:00 - 18:00	Work day begin. Install new kelly hose.							
-	-	Continue installation of A-60 doors. Have 18 of 27 doors completed. Begin installing panels to frame of heli-fuel blast wall.							
-	-	Overhaul Mud pump #4. Inspect all valves, seats, liners and swabs. All pumps complete. R/R 11 swabs, 9 valves and seats several liners in 4 pumps							
-	-	All 4 mud pumps dressed with 6-1/2" liners and new swabs.							
-	-	BOP: R/R diverter element. Stump test completed. Begin Shaffer PM on blue pod. So far identified 17 FCR sections, 8 DDV cables and 7 DDV							
-	-	needing replacement. Use Oceanengineering OTDR to test fiber optic cables.							
-	-	Work from 06:00 - 18:00 while under way.							
-	-								
-	-	@ 2400hrs - 32° 42' N, 77° 11.6' W Heading- 048°, Speed: 11.9 kts, Distance traveled: 1180nm, Distance to go: 976 nm							
-	-								
-	-	Thruster #1 down for repairs. Waiting on parts to arrive in Halifax.							
-	-	Thruster #2 down for PM from 0800 hrs to 1500 hrs							
-	-	One Medical Case: Contractor slipped on deck and hurt knee.							
24 hr Summary: In Transit. Complete stump test BOPE. Continue overhauling fluid end of mud pumps. Replace kelly hose. Remove diverter element for replacement									
Continue installing A-60 doors for COF requirements 18 of 27 doors complete									
Projected Operations: Sail for Nova Scotia anchorage point A									
Safety Issues: Held pre-tour safety meeting. Incident Free Operations philosophy. The importance of communicating									
Accidents: 1									
Daily Mud Cost:	\$2,050.00	Daily Tangible Cost:	\$0.00	Daily Drilling Cost:	\$284,830.00	WBS Element No. (Drig)	RWEC-R2251		
Cum Mud Cost:	\$20,163.82	Cum Tangible Cost:	\$0.00	Cum Drilling Cost:	\$4,860,665.27	WBS Element No. (Comp)			
Daily Comp Cost		Cum Completion Cost		Cum Well Cost	\$4,860,665.27	Total Appr:			
Bulk Gel, m ³ :	220.05	Cement, m ³ :	0.00	Fuel, m ³ :	4,691.84	Bulk Wt, m ³ :	88.48	Chevron %	API Number:
Country:	Canada	Rig:	DW Millennium	Rig Phone:	504-592-3316	Drilling Reps:	T Robichaux / A J Gilbert / J Bruton		
Field:	Exploration	Lease:	E L 2359	Well #:		Date:	14-May-02		

Chevron Canada Resources

Drilling Activity Report (s)

Measured Depth: 0 m		TVD: 0 m		PBD: 0 m		Proposed MD: 0 m		Proposed TVD: 0 m	
DOL: 13		DFS: 0		Spud Date: 0-Jan-00		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque: 0		Drag: 0		Rot Wt: 0		P/U Weight: 0		S/O Wt: 0	
Last Casing Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Shoe Test: 0.0	
Cum Rot Hrs on Casing: 0.0		Cum Rot Hrs on Casing Since Last Caliper: 0.0		Whipstock Set @: 0.0		KOP: 0.0		Leakoff? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Liner Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Liner Top At: 0 m	
Mud Co: M-I		Type: Water base spud mud		Sample From: pit		Wt, kg/m ³ : 1920.8		FV: 153	
WL API: 6.0		HTHP: -		FC(1/32) API/HTHP: -		Solids: 8.0		% Oil: 0.0	
Pm: 1.1		PVM: 0.4 / 0.6		Carb: 9.000		Ca/Mg: 180.0		Bent: 0.00	
Engr Service: 1		Materials added last 24 hrs: 919 sx Gel		Solids % HGALG: 0		% Water: 92.0		% Sand: tr	
MBT: 9.0		% DS/Bent: 0							
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Cl:	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jet, mm	No.	Size	No.
1						0	0.0	0	0.0
						0	0.0	0	0.0
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G
Total Length of BHA: 0 m		BHA Description:							
Bit Cost: Row 1 0		Row 2 0		Rig \$ /hr \$0		Trip Time, hr		DC Size, mm	
DP Size, mm		Hours On Jars:		Hrs Since Last Inspection:					
Bit	Liner, mm	Stroke, meters	m ² /STK	SPM	Press, bar	liter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
1				0		0			
				0		0			
Survey MD		Angle		Direction		TVD		N/S Coordinate	
0.0 m								E/W Coordinate	
0.0 m								Vertical Section	
0.0 m								DLS	
Hrs.	(From - To) hh:mm	Operations Covering 24 Hours Ending at Midnight							
6:00	0:00 - 6:00	In transit to anchorage point A outside Halifax Harbor. @ 0600: 33° 35.1' N 76° 08' W, heading 48° speed 12 knts							
6:00	6:00 - 12:00	Replace diverter element. Re-assemble diverter housing & assemble same w/ flex joint. Begin Shaffer PM on BOP blue pod. 17 failed FCR,							
		8 DDV cables failed visual inspection, 7 DDV's failed continuity test. Establish baseline data for newly installed yellow mux cable. Update drawings							
		for power and fiber optics from mux reel j-box to yellow pod power supplies to reflect change in mux line cable.							
		Examine slip jt, upper flex jt and intermediate flex jt for key-seating. None found.							
		@ 1200 hrs: : 34° 16.1' N 75° 08.1' W, heading 48° speed 12 knts							
6:00	12:00 - 18:00	Begin installing panels to helifuel blast wall frame. Continue w/ Swaco cuttings dryer installation. Spot frame for 414 centrifuge.							
		Estimate installation 65% complete. Preparing mud: begin pre-hydrating gel. Excessive dust getting in ships air intake. Suspend until							
		adjustments can be made to air intake. Move 1700 bbls of 16 ppg WBM from hull tanks to active system pits. Fill pit 1A w/ seawater for spud							
		MU 26" bit / 42" Hole Opener assembly to bit sub using OES buckle II. Have 4 TSF personnel trained in its use.							
6:00	18:00 - 24:00	@ 1800 hrs: : 34° 57.8' N 74° 10.8' W, heading 48° speed 11.8 knts							
6:00	18:00 - 24:00	Hold fall protection class in public space @ 1900 hrs							
		@ 2400 hrs: : 33° 37.1' N 73° 16.3' W, heading 48° speed 10.9 knts. Distance traveled: 1441 nm; Distance to go: 715 nm							
		Thruster #3 down for PM from 07:30 - 14:25. PM on all thrusters complete.							
24 hr Summary:		In Transit. Continue w/ BOP inspection: begin PM on Blue pod. Continue Swaco installation: 65% complete. Continue w/ helifuel blast wall installation and							
		Continue installing A-60 doors for COF requirements 23 of 27 doors complete							
Projected Operations:		Sail for Nova Scotia anchorage point A							
Safety Issues:		Held pre-tour safety meeting. Slippery decks, Being aware of overhead hazards.							
Accidents:		NAR							
Daily Mud Cost: \$8,465.00		Daily Tangible Cost: \$0.00		Daily Drilling Cost: \$291,245.00		WBS Element No. (Drig)		RWFECD-R2251	
Cum Mud Cost: \$26,578.82		Cum Tangible Cost: \$0.00		Cum Drilling Cost: \$4,867,080.27		WBS Element No. (Comp)			
Daily Comp Cost		Cum Completion Cost		Cum Well Cost: \$4,867,080.27		Total Appr:			
Bulk Gel, m ³ : 220.05		Cement, m ³ : 0.00		Fuel, m ³ : 4,691.84		Bulk Wt, m ³ : 88.48		Chevron %	
Country: Canada		Rig: DW Millennium		Rig Phone: 504-592-3316		Drilling Reps: T Robicheaux / A J Gilbert / J Bruton		API Number:	
Field: Exploration		Lesse: E L 2359		Well #: 504-592-3316		Date: 15-May-02			

Chevron Canada Resources

Drilling Activity Report (a)

Measured Depth: 0 m		TVD: 0 m		PBD: 0 m		Proposed MD: 0 m		Proposed TVD: 0 m	
DOL: 14		DFS:		Spud Date: 0-Jan-00		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque: 0		Drag: 0		Rot Wt: 0		P/U Weight: 0		S/O Wt: 0	
Last Casing Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Shoe Test: 0 m	
Cum Rot Hrs on Casing: 0.0		Cum Rot Hrs on Casing Since Last Caliper: 0.0		Whipstock Set @:		KOP:			
Liner Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Liner Top At: 0 m	
Mud Co: M-I		Type: Water base spud mud		Sample From: pit		Wt. 1920.8		FV: 153	
WL API: 6.0		HTHP: FC(1/32) API/HTHP:		Solids: 8.0		% Oil: 0.0		% Water: 92.0	
Pm: 1.1		P/U: 0.4 / 0.6		Carb: 0		Cl: 9.000		Ca/Mg: 180.0	
Engr Service: 1		Materials added last 24 hrs: 6400 sx gel		4000 sx barite		6000 bbl liquid mud		1200 bbl drill water	
Drig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Cl:	
Blt No. 1		IADC: 0		Size: 0		Manufacturer: 0		Serial Number: 0	
Type: 0		JTS, mm: 0		No. Size: 0		No. Size: 0		TFA, cm²: 0	
MD In: 0 m		MD Out: 0 m		TVD Out: 0 m					
meters: 0		Hours: 0		WOB: 0		RPM: 0		I-Row: 0	
O-Row: 0		DC: 0		Loc: 0		B: 0		G: 0	
Char: 0		?Pul: 0		Cost/meter: 0					
Total Length of BHA: 0 m		BHA Description:							
Blt Cost: 0		Row 1: 0		Row 2: 0		Rigs \$/hr: 0		\$0	
Trip Time, hr: 0		DC Size, mm: 0		DP Size, mm: 0		Hours On Jars: 0		Hrs Since Last Inspection: 0	
Blt: 1		Liner, mm: 0		Stroke, meters: 0		m³/STK: 0		SPM: 0	
Press. bar: 0		liter/min: 0		Jet Vel, m/sec: 0		DP AV, m/min: 0		DC AV, m/min: 0	
Blt HHP: 0		BHP/PSQ, IN: 0		Pump HHP: 0					
Survey MD: 0.0 m		Angle: 0		Direction: 0		TVD: 0		N/S Coordinate: 0	
E/W Coordinate: 0		Vertical Section: 0		DLS: 0					
Hrs. (From -To) 6:00 - 6:00		Operations Covering 24 Hours Ending at Midnight							
6:00 - 6:00		In transit to Anchor point A: Halifax, Nova Scotia. Position @ 0600 hrs: 36° 12.1' N 72° 29.0' W speed 9.9 knts hdg 48°.							
12:00 - 6:00		General house keeping and cleaning. Continue R/U Swaco. 65% complete. Waiting on centrifuge stand fabricated in town to get to rig. Evaluate plumbing needs for vacuum system to serve Duster drill cuttings dryer and function as cleaning vacuum for rig as well. All augers in place.							
		Continue installing A-60 doors. 22 of 27 complete. Continue bolting up panels for heli-fuel blast wall.							
		BOP: 80% complete with Shaffer PM on blue pod. Fill accumulator system with ~17% glycol per CNSOPB requirement.							
		More glycol need for future use.							
5:00 - 18:00		Work from 06:00 - 18:00 in transit							
		@ 23:00 clocks set forward to Atlantic Daylight Time (Halifax Time)							
		Location @ 23:00 (24:00) - 38° 16.1' N 69° 37.5' W. 224 nm from waypoint #10							
		Distance in last 23 (24) hrs: 237 nm. Avg speed 10.3 knts							
24 hr Summary:		In transit to anchor point A. Continue A-60 door replacement. Continue bolting panels to heli-fuel blast wall. Fill BOP accumulator w/ 17% Glycol							
Projected Operations:		Sail for Nova Scotia anchorage point A. Complete A-60 door installation. Begin painting same. Continue heli-fuel blast wall installation.							
Safety Issues:		Held pre-tour safety meeting.		Accidents:		NAR			
Daily Mud Cost: \$1,558,410.37		Daily Tangible Cost: \$0.00		Daily Drilling Cost: \$2,635,061.37		WBS Element No. (Orig) RWFECD-22251			
Cum Mud Cost: \$1,584,989.18		Cum Tangible Cost: \$0.00		Cum Drilling Cost: \$7,466,471.83		WBS Element No. (Comp)			
Daily Comp Cost		Cum Completion Cost		Cum Well Cost: \$7,466,471.83		Total Appr:			
Bulk Gel, m³: 220.05		Cement, m³: 0.00		Fuel, m³: 4,691.84		Bulk Wt, m³: 88.48		Chevron %	
Country: Canada		Rig: DW Millennium		Rig Phone: 504-592-3316		Drilling Reps: T Robichaux / A J Gilbert / J Bruton		API Number:	
Field: Exploration		Lease: E L 2359		Well #: 18-May-02					

Measured Depth: 0 m		TVD: 0 m		PBD: 0 m		Proposed MD: 0 m		Proposed TVD: 0 m	
DOL: 15		DFS:		Spud Date: 0-Jan-00		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque:		Drag:		Rot Wt: 0		P/U Weight: 0		S/O Wt: 0	
Last Casing Size:		Set At: 0 m		MD: 0 m		TVD: 0 m		Shoe Test:	
Cum Rot Hrs on Casing: 0.0		Cum Rot Hrs on Casing Since Last Caliper: 0.0		Whipstock Set @:		KOP:		Leakoff? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Liner Size:		Set At: 0 m		MD: 0 m		TVD: 0 m		Liner Top At: 0 m	
Mud Co: M-I		Type: Water base spud mud		Sample From: pit		Wt. 1920.8		FV: 153	
WL API: 6.0		HTHP: FC(1/32) APVHTHP:		Solids: 8.0		% Oil: 0.0		% Water: 92.0	
Pm: 1.1		P/M: 0.4 / 0.6		Carb: 9,000		Ca/Mg: 180.0		Bent: 0.00	
Engr Service: 1		Materials added last 24 hrs: 6400 sx gel		4000 sx barite		6000 bbl liquid mud		1200 bbl drill water	
Drig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Cl:	
Remarks:									
Bit No. 1		IADC:		Size:		Manufacturer:		Serial Number:	
Type:		No. Size:		No. Size:		TFA, cm²:		MD In:	
MD Out:		TVD Out:							
meters:		Hours:		WOB:		RPM:		I-Row:	
O-Row:		DC:		Loc:		B:		G:	
Char:		?Pull:		Cost/meter:					
Total Length of BHA: 0 m		BHA Description:							
Bit Cost:		Row 1: 0		Row 2: 0		Rg5/hr: \$0		Trip Time/hr:	
DC Size, mm:		DP Size, mm:		Hours On Jars:		Hrs Since Last Inspection:			
Bit:		Linear, mm:		Stroke, meters:		m³/STK:		SPM:	
Press, bar:		l/min:		Jet Vel, m/sec:		DP AV, m/min:		DC AV, m/min:	
BR HHP:		BHHP/SQ. IN.		Pump HHP:					
Survey MD:		Angle:		Direction:		TVD:		N/S Coordinate:	
E/W Coordinate:		Vertical Section:		DLS:					
Hrs. (From-To) hh:mm		Operations Covering 24 Hours Ending at Midnight							
6:00 - 0:00		In Transit to anchorage point A near Halifax Harbor. Position @ 06:00 38° 54.7' N 68° 39.3' W. heading 048°. Avg speed last 24 hrs: 10.2 knts							
12:00 - 6:00		Work day begin							
		Finish welding 27 A-60 doors. Finish putting up panels on helifuel fire wall. P/U 21 stds of 6-5/8" 27 lb/ft drill pipe. Hydraulic hard line on upper							
		arm of PHM developed hole. Replace hard line with hose.							
		Continue Swaco R/U (estimate work 70% done). BOP: Finish Shaffer PM on blue pod. Total bad FCR's=10. Replaced 38 DDV cables and 10 DDVs.							
		On yellow pod (PM done previously) found 10 bad FCR's. Replaced 38 bad DDV cables and 9 bad DDVs.							
		Replaced braided stainless steel bend restrictor on yellow mux cable and connected new mux cable to yellow SEA.							
		Work from 6:00 - 18:00 hrs while in transit.							
6:00 - 18:00		In Transit. Enter Canadian waters @ 21:10 hrs at 40°43' N 66° 04' W. Notified Canadian Authorities.							
		Location @ 24:00 - 41° 09.4' N 65° 42.4' W.							
		Distance in last 24 hrs: 255 nm. Avg speed 10.6 knts							
		Had 1 first aid. Galley personnel cut hand on cabinet when pulling it out of cabinet.							
24 hr Summary:		In transit to anchor point A. Finish welding 27 A-60 doors. Finish bolting panels to helifuel fire wall.							
Finish PM on BOP blue pod. Continue Swaco installation. P/U 21 stds of 6-5/8" 27 lb/ft drill pipe									
Projected Operations:		Sail for Nova Scotia anchorage point A. Meet work boats at anchorage point. Load drill ship for final leg of journey to Newburn H-23 location.							
Safety Issues:		Held pre-tour safety meeting.						Accidents: 1	
Daily Mud Cost: \$2,050.00		Daily Tangible Cost: \$0.00		Daily Drilling Cost: \$322,015.00		WBS Element No. (Drig)		RWFECD-22251	
Cum Mud Cost: \$1,587,039.18		Cum Tangible Cost: \$0.00		Cum Drilling Cost: \$7,788,486.83		WBS Element No. (Comp)			
Daily Comp Cost		Cum Completion Cost		Cum Well Cost: \$7,788,486.83		Total Appr:			
Bulk Gel, m³: 171.24		Cement, m³: 0.00		Fuel, m³: 4,326.05		Bulk Wt, m³: 88.48		Chevron %	
Country: Canada		Rig: DW Millennium		Rig Phone: 504-592-3316		Drilling Reps: T Robichaux / A J Gilbert / J Bruton			
Field: Exploration		Lease: E L 2359		Well #: Chevron et al Newburn H-23		Date: 17-May-02			

Chevron Canada Resources

Drilling Activity Report (a)

Measured Depth: 0 m		TVD: 0 m		PBD: 0 m		Proposed MD: 0 m		Proposed TVD: 0 m	
DOL: 16		DFS: 0		Spud Date: 0-Jan-00		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque: 0		Drag: 0		Rot Wt: 0		P/U Weight: 0		S/O Wt: 0	
Last Casing Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Shoe Test: 0	
Cum Rot Hrs on Casing: 0.0		Cum Rot Hrs on Casing Since Last Calliper: 0.0		Whipstock Set @: 0		KOP: 0		Leakoff? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Liner Size: 0 m		Set At: 0 m		MD: 0 m		TVD: 0 m		Liner Top At: 0 m	
Mud Co: M-I		Type: Water base spud mud		Sample From: pit		WL: 1920.8		FV: 134	
WL API: 6.0		HTHP: 0		FC(1/32) API/HTHP: 3.0		Solids: 8.0		% Oil: 0.0	
Pm: 0.6		PI/Mf: 0.11/0.2		Carb: 0		Cl: 8,100		Ca/Mg: 120.0	
Engr Service: 1		Materials added last 24 hrs: 0		Bent: 0.00		Solids % HGLG: 0		% DS/Bent: 0	
Orig Gas: 0		Max Gas: 0		Conn. Gas: 0		Trip Gas: 0		Trip Ct: 0	
Remarks: 0		Remarks: 0		Remarks: 0		Remarks: 0		Remarks: 0	
Bit No. 1		IADC: 0		Size: 0		Manufacturer: 0		Serial Number: 0	
Type: 0		Jets, mm: 0		No. Size: 0		TFA, cm²: 0		MD In: 0 m	
MD Out: 0 m		TVD Out: 0 m		TFA, cm²: 0		MD In: 0 m		MD Out: 0 m	
meters: 0		Hours: 0		WOB: 0		RPM: 0		I-Row: 0	
O-Row: 0		DC: 0		Loc: 0		B: 0		G: 0	
Char: 0		?Pull: 0		Cost/meter: 0		Cost/meter: 0		Cost/meter: 0	
Total Length of BHA: 0 m		BHA Description: 0		BHA Description: 0		BHA Description: 0		BHA Description: 0	
Bit Cost Row 1: 0		Row 2: 0		Rig \$ /hr: 0		\$0: 0		Trip Time, hr: 0	
DC Size, mm: 0		DP Size, mm: 0		Hours On Jags: 0		Hrs Since Last Inspection: 0		Hrs Since Last Inspection: 0	
Bit		Linear, mm		Stroke, meters		m/STK		SPM	
Press. bar		liter/min		Jet Vel, m/sec		DP AV, m/min		DC AV, m/min	
Bit HHP		BHP/PSQ, IN.		Pump HHP		Pump HHP		Pump HHP	
Survey MD		Angle		Direction		TVD		N/S Coordinate	
E/W Coordinate		Vertical Section		DLS		DLS		DLS	
0.0 m		0.0 m		0.0 m		0.0 m		0.0 m	
0.0 m		0.0 m		0.0 m		0.0 m		0.0 m	
0.0 m		0.0 m		0.0 m		0.0 m		0.0 m	
Hrs. (From -To) hh:mm		Operations Covering 24 Hours Ending at Midnight		Operations Covering 24 Hours Ending at Midnight		Operations Covering 24 Hours Ending at Midnight		Operations Covering 24 Hours Ending at Midnight	
6:00		0:00 - 6:00		In Transit to anchorage point A near Halifax Harbor. Position @ 06:00 42.05 N 65.4.6 W. Heading 027°. Avg speed last 24 hrs: 10.6 knts.		In Transit to anchorage point A near Halifax Harbor. Position @ 06:00 42.05 N 65.4.6 W. Heading 027°. Avg speed last 24 hrs: 10.6 knts.		In Transit to anchorage point A near Halifax Harbor. Position @ 06:00 42.05 N 65.4.6 W. Heading 027°. Avg speed last 24 hrs: 10.6 knts.	
18:00		6:00 - 24:00		Work day begin. Return to two tour work day.		Work day begin. Return to two tour work day.		Work day begin. Return to two tour work day.	
-		-		P/U 27.7# 6-5/8" DP and fix hydraulic leak on PHM.		P/U 27.7# 6-5/8" DP and fix hydraulic leak on PHM.		P/U 27.7# 6-5/8" DP and fix hydraulic leak on PHM.	
-		-		BOP work - inclement weather stopped work inside SEA's. Successfully tested the ST locks (lock operator chambers to 1500 psi for 5 min).		BOP work - inclement weather stopped work inside SEA's. Successfully tested the ST locks (lock operator chambers to 1500 psi for 5 min).		BOP work - inclement weather stopped work inside SEA's. Successfully tested the ST locks (lock operator chambers to 1500 psi for 5 min).	
-		-		In house modification on the flotation stops has been completed on ten joints of riser. R/D kelly hose, tighten, R/U same.		In house modification on the flotation stops has been completed on ten joints of riser. R/D kelly hose, tighten, R/U same.		In house modification on the flotation stops has been completed on ten joints of riser. R/D kelly hose, tighten, R/U same.	
-		-		Successfully tested the mud line and swivel packing to 5000 psi for 5 minutes. Successfully tested the upper and lower IBOP to 12000 psi for 5 minutes.		Successfully tested the mud line and swivel packing to 5000 psi for 5 minutes. Successfully tested the upper and lower IBOP to 12000 psi for 5 minutes.		Successfully tested the mud line and swivel packing to 5000 psi for 5 minutes. Successfully tested the upper and lower IBOP to 12000 psi for 5 minutes.	
-		-		Continue Swaco R/U (estimated work 70% completed).		Continue Swaco R/U (estimated work 70% completed).		Continue Swaco R/U (estimated work 70% completed).	
-		-		Note: Arrived at anchorage point A @ 2230 hrs.		Note: Arrived at anchorage point A @ 2230 hrs.		Note: Arrived at anchorage point A @ 2230 hrs.	
-		-		Note: Drew Taylor received verbal approval for the DPA and the ADW from the CNSOPB.		Note: Drew Taylor received verbal approval for the DPA and the ADW from the CNSOPB.		Note: Drew Taylor received verbal approval for the DPA and the ADW from the CNSOPB.	
-		-							
-		-							
-		-							
-		-							
24 hr Summary:		In transit to, and arrive at, anchor point A. Continue BOP PM work. P/U 6-5/8" DP - 38 stds total P/U and in derrick. Continue Swaco installation.		In transit to, and arrive at, anchor point A. Continue BOP PM work. P/U 6-5/8" DP - 38 stds total P/U and in derrick. Continue Swaco installation.		In transit to, and arrive at, anchor point A. Continue BOP PM work. P/U 6-5/8" DP - 38 stds total P/U and in derrick. Continue Swaco installation.		In transit to, and arrive at, anchor point A. Continue BOP PM work. P/U 6-5/8" DP - 38 stds total P/U and in derrick. Continue Swaco installation.	
Projected Operations:		Offload work boats and conduct personnel transfers at anchorage point. Sail to Newburn H-23 location.		Offload work boats and conduct personnel transfers at anchorage point. Sail to Newburn H-23 location.		Offload work boats and conduct personnel transfers at anchorage point. Sail to Newburn H-23 location.		Offload work boats and conduct personnel transfers at anchorage point. Sail to Newburn H-23 location.	
Continue to P/U DP as operations allow. Continue Swaco R/U. Continue BOP PM work.		Continue to P/U DP as operations allow. Continue Swaco R/U. Continue BOP PM work.		Continue to P/U DP as operations allow. Continue Swaco R/U. Continue BOP PM work.		Continue to P/U DP as operations allow. Continue Swaco R/U. Continue BOP PM work.		Continue to P/U DP as operations allow. Continue Swaco R/U. Continue BOP PM work.	
Safety Issues:		Held pre-tour safety meeting with both crews.		Held pre-tour safety meeting with both crews.		Held pre-tour safety meeting with both crews.		Held pre-tour safety meeting with both crews.	
Accidents:		NAR		NAR		NAR		NAR	
Daily Mud Cost: \$2,050.00		Daily Tangible Cost: \$25,739.36		Daily Drilling Cost: \$349,354.36		WBS Element No. (Drig) RWFECD-2251		WBS Element No. (Comp)	
Cum Mud Cost: \$1,589,089.18		Cum Tangible Cost: \$25,739.36		Cum Drilling Cost: \$8,137,841.19		Total Appr: \$8,137,841.19		Total Appr: \$8,137,841.19	
Daily Comp Cost		Cum Completion Cost		Cum Well Cost		Chevron %		API Number:	
Bulk Gel, m³: 171.24		Cement, m³: 0.00		Fuel, m³: 4,451.48		Bulk Wt, m³: 166.96		Rig Phone: (902) 496 3018	
Country: Canada		Rig: DW Millennium		Drilling Reps: Robichaux/Rutenschild/CDA/JGH-LB/BWL		Well #: Chevron et al Newburn H-23		Date: 18-May-02	
Field: Exploration		Lease: E L 2359		Well #: Chevron et al Newburn H-23		Date: 18-May-02		Date: 18-May-02	

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth:		TVD:		PBD:		Proposed MD:		Proposed TVD:	
DOL: 17		DFS:		Spud Date:		Daily meters:		Daily Rot Hrs: 6,400 m 6,315 m	
Torque: Nm		Drag: MT		Rot Wt: MT		P/U Weight: MT		S/O Wt: MT	
Last Casing Size:		Set At:		MD		TVD		Shoe Test, kg/m ³ :	
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Callper:		Whipstock Set @:		KOP:		POB: 129	
Liner Size:		Set At:		MD		TVD		Liner Top At: MD TVD	
Mud Co: M-I		Type: Water base spud mud		Sample From: Pit		Wt, kg/m ³ : 1032		FV: 116 PV: 28 YP: 31 Gel: 14/15	
WL API: NC		HTHP: 0.0		FC(1/32) API/HTHP: mm 2.4		Solids: 3.0 % Oil:		% Water: 93.0 % Sand: TR MBT, KgtL: 3.89 pH: 7.8	
Pm: 0.6		Pl/MF: 0.1/0.2		Carb: CI: 8,000		Ca/Mg: 120 Bent:		Solids % HG/LG: 24hr Avg SOC %:	
Engr Service 1		Materials added last 24 hrs:							
Drig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Cl:	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size No. Size	TFA, cm ²	MD In	MD Out
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G
Total Length of BHA:		BHA Description:							
Bit Cost \$	Row 1 0	Row 2 0	Rig \$ /hr	Trip Time, hr	DC Size, mm	DP Size, mm	Hours On Jars:	Hrs Since Last Inspection:	
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, KPa	liter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
Survey MD	Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m	DLS, °/30m		
Hrs.	(From -To) hh:mm	Operations Covering 24 Hours Ending at Midnight							
12:00	0:00 - 12:00	Maintain position w/ DP @ anchorage "A" - LAT: 44, 28.4 N LONG: 63, 25.6 W. Unload and backload Hebron Sea w/ full international trash skips - release HS @ 0615. Bring in Maersk Chancellor & take on Class "G" bulk cement. Continued to pick up 6 5/8", 27.7# DP - 42stds total picked up. ABS surveyor on rig conducting COF conditions survey. Continue to R/U Swaco, Anadril and Datalog equipment.							
12:00	12:00 - 24:00	Maintain position w/ DP @ anchorage "A" - LAT: 44, 28.9 N LONG: 63, 26.0 W. Continue to take on Class "G" cmt and drill water fr/ Chancellor. Unload containers and deck cargo, backload empty containers. P/U 32 stds of 6 5/8", 40.9# DP. Hi-Tech upgrading drawworks AHC. Continue with ABS survey plus Swaco, Anadril and Datalog rig up. Solocom / Aliant attempting to connect & troubleshoot comms gear.							
		BOP Work: Installed Bardex arm hydraulic hoses in moonpool. Completed stand for the SEA. P/T o-ring seals on FCR's 9 and 10 in the yellow SEA which were replaced earlier. Removed yellow SEA fr/ MUX pod and set it up in the engine room for repair of FCR's. Received replacement FCR and begin installing them on the yellow SEA. All spares ordered fr/ Schaffer have arrived on board Millennium.							
		Note: Drew Taylor received written authorization "No. 75531.3" for the DPA and ADW by J.E. Dickey of CNSOPB.							
24 hr Summary:									
Remain at anchorage unloading boats and conducting crew changes. P/U 6 5/8" DP. R/U Swaco, Anadril and Datalog equipment. Cont BOP work w/ WEST supervision. ABS conducting final COF survey. Attempting to connect & troubleshoot communication gear.									
Projected Operations: Cont off loading boats and P/U 6 5/8" DP. P/U 42" BHA. Connect and test communication gear. Set sail for Newburn H-23 location.									
Safety Issues: Held pre-tour safety meeting with both crews. No pollution sightings reported.									
Accidents: NAR									
Daily Mud Cost: \$2,800.00		Daily Tangible Cost: \$34,200.95		Daily Form Eval Cost:		Daily Drilling Cost: \$649,875.95			
Cum Mud Cost: \$1,591,889.18		Cum Tangible Cost: \$34,200.95		Cum Form Eval Cost:		Cum Drilling Cost: \$8,781,977.78			
						Total Appr: \$79,476,759.83			
Bulk Gel, m ³ : 173.4		Cement, m ³ : 371.2		Fuel, m ³ : 4,326.5		Bulk Wt, m ³ : 167.0		Chevron %: 66.7	
Country: Canada		Rig: DW Millennium		UWI:		Drilling Repe: Robicheaux/Rutenschild/CDA/AJG/H-LB/BWL			
Field: Exploration		Lease: EL 2359		Well: Chevron et al. Newburn H-23		Date: 19-May-02			

Measured Depth:		TVD:		PBTD:		Proposed MD:		Proposed TVD:		6,400 m		6,315 m	
DOL: 18		DFS:		Spud Date:		Daily meters:		Daily Rot Hrs:		HS Total Rot Hrs:			
Torque: Nm		Drag: MT		Rot Wt: MT		P/U Weight: MT		S/O Wt: MT		Last BOP Test:		POB: 126	
Last Casing Size:		Set At:		MD		TVD		Shoe Test, kg/m ³ :		Leakoff? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Calliper:		Whipstock Set @:		KOP:							
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD		TVD	
Mud Co: M-I		Type: Water base spud mud		Sample From: Pit		Wt. kg/m ³ : 1032		FV, s/qt: 110		PV, cP: 23		YP, lb/100ft ² : 43	
WL API, cc/30min: NC		HTHP: 0.0		FC(1/32) API/HTHP: 2.4		Solids: 3.0		% Oil: 97.0		% Sand: TR		MBT, Kg/L: 3.59	
Pm: 0.6		PI/Mt: 0.1/0.18		Carb: 8,000		Ca/Mg: 160		Bent:		Solids % HG/LG:		24hr Avg SOC %:	
Engr Service: 1		Materials added last 24 hrs:											
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:		Remarks:			
Bit No.		IADC		Size		Manufacturer		Serial Number		Type		Jets, mm No. Size No. Size	
meters		Hours		WOB		RPM		I-Row		O-Row		DC	
Total Length of BHA:		BHA Description:											
Bit Cost \$		Row 1 0		Row 2 0		Rig \$ /hr		Trip Time, hr		DC Size, mm		DP Size, mm	
Bit		Liner, mm		Stroke, meters		m ³ /STK		SPM		Press, kPa		liters/min	
Survey MD		Angle		Direction		TVD		N/S Coordinate		E/W Coordinate		Vertical Section, m	
Hrs.		(From - To) hr:mm		Code		Operations Covering 24 Hours Ending at Midnight							
6:00		0:00 - 06:00				Maintain position @ anchorage "A" w/ DP. LAT: 44-28.9N, LONG: 63-26.0 W. Cont to P/U 32 stds of 6 5/8", 40.9# DP. Organize 6 5/8"							
						27.7# in the derrick w/ PHM. Hi-Tech upgrading drawworks AHC. Offload Chancellor deck cargo, backload empty containers.							
6:00		6:00 - 12:00				P/U 36 stds of 6 5/8", 40.9# landing string. M/U cmt head w/ TIW's & MWD w/ 42" hole opener using pipe deck bucking machine.							
						Continue to R/U Swaco, Anadri & Datalog equipment. ABS surveyor on rig conducting COF conditions survey.							
6:00		12:00 - 18:00				Maintain position @ anchorage "A" w/ DP. LAT: 44-28.9N, LONG: 63-26.1 W. Cont to P/U 6 5/8", 40.9# landing string. P/U 5 stds of							
						6 5/8" HWDP w/ X/O. Fcn COM and floor saver. Continue to R/U Swaco, Anadri & Datalog equipment. Troubleshoot communications.							
6:00		18:00 - 24:00				P/U 1 std of 8 1/4" DC's w/ X/O. P/U 1 std of 9 1/2" DC's and 42" stab. P/U 5", 19.5# DP for cmt stinger. Communication functioning w/							
						5 analog lines. Conduct communication test spinning the rig 360 degree's - both dish's tracking. Hebron Sea on location @							
						22:30, bring on fisheries observer, send ABS surveyor back - released HS @ 23:15. Pull and secure fenders - prepare to depart							
						anchorage "A" for Newburn H-23 location. ETD is 00:30, May 21/02. Chancellor and Bonavista will follow DWM to location.							
						BOP work: Finished replacing FCR's in yellow SEA - all wiring in yellow pod returned to the original termination points. Replaced							
						wellbore temperature and pressure probe cables on the BOP. P/T o-ring seals on new FCR's to 4500 psi for 5mins. Replaced bell on							
						yellow SEA, secured SEA back on the yellow pod. Removed blue SEA, set up in engine room and begin replacing FCR's as required.							
						Since midnight: Sailed from anchorage location "A" at 00:30. Estimated ETA to Newburn H-23 location is 15:00.							
						Operations @ 0500 hrs: P/U 5" DP while sailing for Newburn H23 location.							
24 hr Summary:						Maintain position @ anchorage "A" w/ DP. P/U 6 5/8" DP, landing string, HWDP and DC's as required. Troubleshoot and connect communications gear. Cont to R/U Swaco, Anadri & Datalog equip. Prepare to depart location for Newburn H-23 location.							
Projected Operations:						Sail to Newburn H-23 location. Position and calibrate transponders w/ ROV. Conduct seabed survey. Confirm position w/ rig positioners. Spud well. Drill 42" hole to casing point, wiper trip as required.							
Safety Issues:						No incidents or accidents reported. No pollution sightings reported. Held pre-tour job safety and procedures meetings w/ both crews.				Accidents:		NAR	
Daily Mud Cost:		\$2,800.00		Daily Tangible Cost:		\$45,775.00		Daily Form Eval Cost:		Daily Drilling Cost:		\$3,607,318.00	
Cum Mud Cost:		\$1,594,689.18		Cum Tangible Cost:		\$79,975.95		Cum Form Eval Cost:		Cum Drilling Cost:		\$12,369,295.78	
Chevron %:		66.7								Total Appr:		\$79,476,759.83	
Bulk Gel, m ³ :		173.4		Cement, m ³ :		371.2		Fuel, m ³ :		3,920.5		Bulk Wt, m ³ :	
												167.0	
Country:		Canada		Rig:		DW Millennium		UWI:		Drilling Reqs:		Robicheaux/Rutenschild/CDA/AJG/H-LB/BWL	
Field:		Exploration		Lease:		EL 2359		Well:		Chevron et al. Newburn H-23		Date: 20-May-02	

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth:		TVD:		PBDT:		Proposed MD:		Proposed TVD:		6,400 m		6,315 m	
DOL: 19		DFS:		Spud Date:		Daily meters:		Daily Rot Hrs:		HS Total Rot Hrs:			
Torque: Nm		Drag: MT		Rot Wt: MT		PU Weight: MT		SO Wt: MT		Last BOP Test:		POB: 126	
Last Casing Size:		Set At:		MD		TVD		Shoe Test, kg/m ² :		Leakoff? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Caliper:		Whipstock Set @:		KOP:							
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD		TVD	
Mud Co: M-1		Type: Water base spud mud		Sample From:		Pit		Wt, kg/m ³ : 1032		FV, s/qt: 110		PV, cP: 23	
WL API, cc/30mi: NC		HTHP: 0.0		FC(1/32) API/HTHP: 2.4		Solids: 7.0		% Oil:		% Water: 93.0		% Sand: TR	
Pvc: 0.6		PI/MF: 0.1/0.18		Cl: 8,000		Ca/Mg: 160		Bent:		Solids % HGLG:		48hr Avg SOC %:	
Eng Service: 2		Materials added last 24 hrs:		3 ea 50 lb bag Polypac Re									
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:		Remarks:			
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size	No. Size	TFA, cm ²	MD In	MD Out	TVD Out		
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G	Char	?Pull	Cost/meter	
Total Length of BHA:		BHA Description:											
Bit Cost \$	Row 1 0	Row 2 0	Rig Str	Trip Time, hr	DC Size, mm	DP Size, mm	Hours On Jars:	Hrs Since Last Inspection:					
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, KPa	liters/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min	Bit HHP	SHHP/SG, IN	Pump HHP	
Survey MD		Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m	DLS, 100m					
Hrs.	(From -To) H:mm	Code	Operations Covering 24 Hours Ending at Midnight										
0:30	0:00 - 0:30	41	P/U 5" 19.5# DP while completing preparations to continue sail to Newburn H-23 location.										
13:30	0:30 - 14:00	41	In transit to Newburn H-23 location. Complete P/U 5" 19.5# DP, function COM and floor saver. M/U and R/B cement head.										
	-	41	Work on PHM. Continue R/U of Swaco equipment. Arrived on location @ 1400 hrs. Lat 43-12.2 N										
	-	41	Total distance run from Anchorage Point "A" - 139 nm. Long 060-48.3 W, heading 180.										
4:00	14:00 - 18:00	37	Surveyors reconfirm DW Millennium position. Install cursor reels for Oceaneering.										
2:00	18:00 - 20:00	37	ROV jump dive to set 5 beacons.										
3:00	20:00 - 23:00	07	With three beacons in place, P/U 26" x 42" hole opener assembly. Surface test MWD @1100 GPM w/ 650 psi.										
	-		Continue P/U and RIH w/ BHA on 6-5/8" DP to 959m. All 5 beacons in place.										
1:00	23:00 - 24:00	38	Position drillship over well location w/ ROV at seafloor.										
	-		Offline activities: Continue BOP work on blue pod and continue R/U for Swaco. Swaco work +/- 80% complete.										
	-		Since midnight: Spud well @ 0:30 hrs. Water depth determined to be 977.6m.										
	-		Operations @ 0400 hrs: Continuing to drill 42" hole section @ 1042m.										
	-		Performed 100m radius ROV seabed survey. Noted cobble size rocks at 100m NNE from well center.										
	-		DOL = 19 reflects rig on contract days to date, including GOM premob activities, transit to Canada and location prespud activities.										
24 hr Summary:		Complete sail to Newburn H-23 location. On location @ 1400 hrs. Position rig. P/U 42" BHA and trip to seafloor.											
		Heave: 0.5m; Pitch: 0.3 degrees; Roll: 0.4 degrees.											
Projected Operations:		R/U and run 36" casing. Cement same. Prepare to drill 26" hole section.											
Safety Issues:		No incidents or accidents reported. No pollution sightings reported. Held pre-tour job safety and procedures meeting w/ both crews. Perform Emergency Response Drill w/ office. Held fire and abandon drills.										Accidents:	NAR
												Safety Rep:	AJG/H-LB
Daily Mud Cost:		\$4,223		Daily Tangible Cost:		\$8,094		Daily Form Eval Cost:		Daily Drilling Cost:		\$283,899	
Cum Mud Cost:		\$1,598,912		Cum Tangible Cost:		\$88,070		Cum Form Eval Cost:		Cum Drilling Cost:		\$12,653,195	
Chevron %:		66.7								Total Appr:		\$79,476,760	
Bulk Gel, m ³ : 173.4		Cement, m ³ : 371.2		Fuel, m ³ : 3,920.5		Bulk Wt, m ³ : 167.0							
Country: Canada		Rig: DW Millennium		UW:		Drilling Reps: Robichaux/Rutenschild/Alworth/BL							
Field: Exploration		Lease: EL 2359		Well: Chevron et al. Newburn H-23		Date: 21-May-02							

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 1,068 m		TVD: 1,068 m		PBTD:		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 20		DFS: 1		Spud Date: 22-May-02		Daily meters: 123 m		Daily Rot Hrs: 14.5	
Torque: Nm 6.8		Drag: MT 1.8		Rot Wt: MT 152.0		S/O Wt: MT 153.8		Last BOP Test: 126	
Last Casing Size: Set At: MD		TVD		Shoe Test, kgm ³ :		Leakoff? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Calliper:		Whipstock Set @:		KOP:			
Liner Size: Set At: MD		TVD		Liner Top At: MD		TVD			
Mud Co: M-I		Water base spud mud		Sample From: Pit		Wt, kgm ³ 1032		FV, s/qt 150	
YPL API, cc/30mi NC		HTHP: 0.0		FC(1/32) API/HTHP: 2.4		Solids: 8.0		% Oil: % Water: 92.0	
Pwt: 0.4		PI/Mt: 0.05/0.11		Carb: Cl: 8,000		Ca/Mg: 100		Bent: Solids % HGLG: 24hr Avg SOC %:	
Engr Service 2		Materials added last 24 hrs:		4 ea. 50 lb bag Lime		7 ea. 50 lb bag Polypac Rag		328 ea. 100 lb bag M-I gel	
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size	TFA, cm ²	MD In	MD Out
1	115S	660	Reed Hycalog	W12672	Rock	3 22 1 25	16.706	1,001 m	
meters	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G
67	14.50								
Total Length of BHA: 215.15 m		BHA Description: 660mm Hycalog EMS11G (3x28, 1x32); 1067mm hole opener (4x20); bit sub w/ float; MWD		1067mm stabilizer; 3 jts 241mm DC; XO: 3 jts 210mm DC; XO: 15 jts 168mm HWDP					
Bit Cost \$	Row 1 0	Row 2 0	Rig \$/hr \$24,375	Trip Time, hr 4.0	DC Size, mm 241	DP Size, mm 168	Hours On Jars:	Hrs Since Last Inspection: 14.5	
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, KPa	Rev/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
1	165	0.3556	0.0228	238	8998	5426	52.5	16	18
Survey MD	Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m	DLS, °/30m		
1,043.09 m	0.30	305	1,043.09 m	-0.03	-0.19	0.20 m	0.97		
1,050.73 m	0.10	199.2	1,050.73 m	-0.02	-0.21	0.21 m	1.34		
1,056.37 m	0.15	291.1	1,056.37 m	-0.03	-0.22	0.22 m	0.97		
Hrs.	(From -To) hr:mm	Code	Operations Covering 24 Hours Ending at Midnight						
0:30	0:00 - 00:30	05	Cont to R/H to 959m. Monitor w/ ROV & tagged mud line @ 1001.6m RKB, water depth = 977.2m.						
5:00	0:30 - 05:30	02	Spud @ 00:30hrs, May 22/02. Drilled fr 1001.6 to 1058.7m. RPM 40-100, WOB = 0-2K, TORQ = 1-8K, ROP 40-140 fph. Surveyed every joint & pumped 100bbls sweeps twice a std. Inclination varied fr 2.7 deg @ 1008m, 1.93 deg @ 1023m and 2.85 deg @ 1043m.						
3:30	5:30 - 09:00	04	Attempted to straighten hole out reaming and washing through open hole section keeping the bit 10m below the mud line. Check shot surveys showed no improvement. Moved rig 3m NE (250') of well center, chk shot survey's showed increased inclination. Moved rig back 3m SW (2250') of well center, surveys showed increase ind again. Moved rig back to well center.						
1:00	9:00 - 10:00	04	Wash & ream to TD @ 1058.7m - no fill. Pumped 150bbl sweep at TD and chk shot surveyed again - no improvement.						
1:00	10:00 - 11:00	01	Circulate and condition hole. Service TDS.						
0:30	11:00 - 11:30	37	POOH to 14m above the ML. ROV conducted sea bed survey of re-spud location 40m due north (00) of original location. Held pre-job safety and procedures meeting w/ all personnel discussing re-spud plan.						
1:00	11:30 - 12:30	05	R/H & tag ML @ 1001m RKB, water depth = 977m. New coordinates confirmed by Thales - LAT: 430 12.2798° N, LONG: 600 48.3070° W						
2:00	12:30 - 14:30	24	Re-spud Newburn H-23 (coordinates above) at 12:30, May 22/2002. Jet in 42" drilling BHA fr 1001 to 1014m. Limit WOB to 0-2K, pump 700 to 1100 gpm - ROP varied fr 0 to 80 fph. Pump sweeps every 8m. Surveyed every 8m or less: @ 998m - 0.34 deg w/ 147.7 az.						
		24	@ 1008m - 0.31 deg w/ 312 az. Could not jet past 1014m.						
9:30	14:30 - 24:00	02	Drill ahead w/ 42" hole from 1014 to 1068m. RPM = 15-25, WOB = 0-2K, ROP = 10-40 fph. Pump sweeps & survey every 4-8m.						
			Operations @ 0500 hrs on May 23: TD 42" hole section at 1100m.						
			NOTE: At 10:30, May 22/2002 - John Connor (Chevron/Tasaco) received verbal approval fr Bob Hale (CHSOPB) to abandon this hole & re-spud Newburn H-23 at the new coordinates.						
			Coordinates at new location are preliminary until confirmed by Thales after the 36" casing is cemented in place.						
24 hr Summary:	Spud Newburn H-23 & drilled 42" hole fr 1001 to 1057m. Attempted to straighten 2+ deg inclination by washing, reaming & adjusting rig position - no improvement. Re-spud well & jet 42" drilling BHA fr 1001 to 1014m, drill ahead fr 1014 to 1068m. Heave: 0.5m, Pitch: 0.30, Roll: 0.40.								
Projected Operations:	Drill 42" hole to TD @ 1100m. Spot 12ppg pad mud, wiper trip, sweep, spot more pad mud & POOH. Run and cement 36" casing string. WOC holding 36" casing for 6 to 8 hours.								
Safety Issues:	No incidents or accidents reported. No pollution sightings reported. Held pre-tour job safety and procedures meetings w/ both crews. CHSOPB representative Dave Scratch on board. Discussed Shallow Flow Plan at the Pre-spud Meeting.							Accidents: NAR	Safety Reps: AJG/H-LB
Daily Mud Cost: \$4,223	Daily Tangible Cost: \$12,464	Daily Form Eval Cost:	Daily Drilling Cost: \$1,198,378						
Cum Mud Cost: \$1,603,135	Cum Tangible Cost: \$100,534	Cum Form Eval Cost:	Cum Drilling Cost: \$13,851,573						
Chevron %: 66.7			Total Appr: \$79,476,760						
Bulk Gel, m ³ 173.4	Cement, m ³ 371.2	Fuel, m ³ 3,920.5	Bulk Wt, m ³ 167.0						
Country: Canada	Rig: DW Millennium	UW: Robichaux/Ruitenschild/Ahworth/BL							
Field: Exploration	Lease: EL 2359	Well: Chevron et al. Newburn H-23	Date: 22-May-02						

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 1,100 m		TVD: 1,100 m		PSTD: 1,100 m		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 21		DFS: 2		Spud Date: 22-May-02		Daily meters: 32 m		Daily Rot Hrs: 5.0	
Torque: Nm		Drag: MT		Rot Wt: MT		PU Weight: MT		SOW: MT	
Last Casing Size: Set At		MD		TVD		Shoe Test, kgm ² :		Leakoff? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Calliper:		Whiplock Set @:		KOP:			
Liner Size: Set At		MD		TVD		Liner Top At:		MD	
Mud Co: M-I		Type: Water base spud mud		Sample From: Pit		Wt, kgm ³ : 1032		FV, s/qt: 145	
WT API, cc/30m: NC		HTHP: 0.0		FC(1/32) API/HTHP: mm		Solids: 2.4		% Oil: 8.0	
Pm: 0.4		PI/Mt: 0.03/0.08		Carb: Cl: 750		Car/Mg: 120		Bent: 92.0	
Engr Service: 2		Materials added last 24 hrs: 8 ea Polypac UL 50lb bag		250 ea M-I Gel 100lb bag		Sols % HG/LG:		24hr Avg SOC %:	
Drig Gas: 0		Max Gas: 0		Conn. Gas: 0		Trip Gas: 0		Trip Cl:	
Remarks:									
Bit No. 1		IADC 115S		Size 660		Manufacturer Reed Hycalog		Serial Number W12672	
Type EMS11G		Jets, mm No. Size 3 22 1 25		TFA, cm ² : 16,706		MD In: 1,001 m		MD Out: 1,100 m	
TVD Out: 1,100 m									
meters 99		Hours 14.50		WOB		RPM		I-Row	
O-Row		DC		Loc		B		G	
Char		?Pull		Cost/meter					
Total Length of BHA: 215.15 m		BHA Description: 660mm Hycalog EMS11G (3x28, 1x32); 1067mm hole opener (4x20); bit sub w/ float; MWD		1067mm stabilizer; 3 jts 241mm DC; XO; 3 jts 210mm DC; XO; 15 jts 168mm HWDP					
Bit Cost \$ 0		Row 1 0		Row 2 0		Rig \$/hr \$24,375		Trip Time/hr 4.0	
DC Size, mm: 241		DP Size, mm: 168		Hours On Jars:		Hrs Since Last Inspection: 14.5			
Bit Liner, mm: 165		Stroke, meters: 0.3556		m ³ /STK 0.0228		SPM 238		Press, KPa 8998	
liter/min 5426		Jet Vel, m/sec 52.5		DP AV, m/min 6.00		DC AV, m/min 6.00		Bit HHP 186	
BHPH/SQ. IN. 0.35		Pump HHP 1060							
Survey MD		Angle		Direction		TVD		N/S Coordinate	
E/W Coordinate		Vertical Section, m		DLS, °/30m					
1,074.42 m		0.18		344.7		1,074.42 m		0.03	
-0.26		0.26 m		0.29					
1,081.56 m		0.23		355.3		1,081.56 m		0.05	
-0.26		0.27 m		0.26					
1,088.58 m		0.04		329.9		1,088.58 m		0.07	
-0.26		0.27 m		0.83					
Hrs. (From -To) 5:00 - 05:00		Code 02		Operations Covering 24 Hours Ending at Midnight					
2:00 - 07:00		01		At TD pumped 200bbl hi-vis sweep + 900 bbl of 12ppg pad mud. Wiper trip to 1018m. RH - no fill. Pump 200 bbl hi-vis + 900 bbl of 12ppg pad mud again.					
4:00 - 11:00		05		POOH from 1100m prior to running 36" casing. No light spots on trip. Rack back 6 5/8" DP, HWDP & DC's. Laydown 42"stab, MWD and hole opener to be broken down offline with the bucking machine.					
2:00 - 11:00		08		Move the ship 100m from well center. RUJ floor to run 36" casing with FI Canada.					
0:30 - 13:30		62		Hold pre-job safety meeting with crew, toolpusher and Chevron/Texaco rep. Discuss running 36" casing, safe handling, pinch points, etc.					
4:30 - 13:30		08		Run 6 jts of 36" casing as follows: Shoe jt + 2 jts of 374ppf X-52 1" wall w/ RL-4f conn + 1 xjt of X-56 RL-4F x RL-4HC + 1 jt of 725ppf X-60 2" wall +1 jt of 725ppf X-60 2" wall w/ LPWH. Pick up LPWH using 8 5/8" handling sub and land in the rotary table. Remove CART handling tool and prepare to run 5" cementing stinger.					
1:30 - 18:00		08		Insert C-plate and run 78.52m of 5" inner string (2 stds and a double). Rig out FI equipment. Change out elevators inserts, pickup primary CART tool along with 32R handling joint & Darrin sub. NOTE: while picking up CART tool, the 5 5/8" handling pup slid through the elevators and fell -15' to rig floor.					
2:00 - 19:30		08		No injuries occurred but the potential was extremely high - the wrong inserts were installed. Shut down operations and discussed incident w/ all involved. Re-evaluated TSF THINK drill (contractor JSA) before continuing. All elevator bushings repainted per color code, signs to be placed on rig floor.					
2:00 - 21:30		08		PU CART tool again and latched LPWH. Run LPWH through the rotary table down to the mud mat. Installed beacon basket, snoride valve & bulls-eye sub.					
1:30 - 21:30		24 T		Discovered the 36" CART skirt did not isolate 4" ports on the LPWH because it was too short. Discussed potential alternatives with Halifax operations.					
1:00 - 23:00		08		Decision made to install 4" ball valves with 8 inch nipples that could be opened w/ ROV after 36" cmt job was completed.					
1:00 - 24:00		08		Installed 4" ball valves on each port. Latched gimbaled mud mat bowl and installed grouting hose for the Darrin sub. Re-latched slings holding mud mat to the gimbal bowl. Retracted BOP skate and prepared to RH with the 36" casing and LPWH.					
Operations @ 0500 hrs on May 24: Preparing to land out mud mat on seafloor.									
24 hr Summary:		Drilled fr 1068 to 1100m (TD). Wiper trip and spot 12ppg pad mud. POOH and RUJ to run 36" casing string. PU and run 36" casing. MAU gimbaled mud mat, snoride valve, beacon basket, bulls-eye sub and 4 - 4" ball valves for cement ports.		Heavy: 0.20m, Pitch: 0.3 deg, Roll: 0.5 deg.					
Projected Operations:		RH, land and cement 36" casing string w/ LPWH. WOC as required. POOH and PU 26" BHA. RH, stab LPWH and continue to run in the hole to cmt top. Drill out float equ. and drill 26" hole section.							
Safety Issues:		Near miss reported when handling pup slipped through elevators picking up CART - Chevron/Texaco incident report filed by HSE rep.		Accidents: Near Miss		Safety Reps: AJG			
Daily Mud Cost: -\$1,301,044		Daily Tangible Cost: \$13,936		Daily Form Eval Cost:		Daily Drilling Cost: -\$765,584			
Cum Mud Cost: \$302,091		Cum Tangible Cost: \$114,470		Cum Form Eval Cost:		Cum Drilling Cost: \$13,085,989			
Chevron %: 66.7				Total Appr: \$79,476,760					
Bulk Gel, m ³ : 173.4		Cement, m ³ : 366.3		Fuel, m ³ : 3,786.4		Bulk Wt, m ³ : 167.0			
Country: Canada		Rig: DW Millennium		UW:		Drilling Reps: Jones/Ruitenschild/Ahworth/BL			
Field: Exploration		Lease: EL 2359		Well: Chevron et al. Newburn H-23		Date: 23-May-02			

Drilling Activity Report (metric)

Rutenschild/Abrworth/BL

Drilling Activity Report (metric)

ns-Bulgarisch/Albanisch/Litauisch

Drilling Activity Report (metric)

[illegible]

Measured Depth		1,917 m		TVD		1,917 m		PSTD		Proposed MD		6,400 m		Proposed TVD:		6,315 m	
DOL		25		DFS		6		Spud Date		22-May-02		Daily meters		367 m		Daily Rot Hrs: 15.5	
Torque:		8135 Nm		Drag		22.2 kN		Rot Wt		1988 kN		P/U Weight:		2011 kN		S/O Wt: 1979 kN	
Last Casing Size:		914 mm		Set At:		1,083 m		MD		1,093 m		TVD		Shoe Test, kg/m ³ :		Leakoff? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Cum Rot Hrs on Casing:		36.0		Cum Rot Hrs on Casing Since Last Caliper:				Whipstock Set @:				KOP:					
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD		TVD					
Mud Co.		M-I		Type		Water base spud mud		Sample From:		Pg		Wt. kg/m ³		FV, s/qt		PV, cP	
WL API, cc/30mi		nc		HTHP:		FC(1/32) API/HTHP:		Solids:		2.0		% Oil:		% Water:		98.0	
Pm:		0.1		PVM:		0.030/0.06		Carb		Cl:		2,100		Ca/Mg:		220	
Bent:				Sols % HGLG:				24hr Avg SOC %:									
Engr Service		2		Materials added last 24 hrs:													
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Cl:		Remarks:							
Bit No.		IADC		Size		Manufacturer		Serial Number		Type		Jets, mm		TFA, mm ²		MD In	
2		115M		660		Security		756230		XT-1C		3 15 1 22		923,850		1,100 m	
meters		Hours		WOB, kN		RPM		I-Row		O-Row		DC		Loc		B	
817		36.00		44.5		80											
Total Length of BHA:		294.56 m		BHA Description:		660mm bit; 241mm motor with 1.15 AKO & 654mm NB Stab; Float sub; 654mm Stab; ARC 900;											
Powerpulse MWD; NMDC; 654mm Stab; 3 x 241mm DC; X/O; 3 x 210mm DC; X/O; 3 x 168mm HWDP; HE Jart; 17 x 168mm HWDP																	
Bit Cost \$		Row 1 48,240		Row 2 0		Rigs \$21,175		Trip Time, hr		5.0		DC Size, mm		241		DP Size, mm: 168	
Hours On Jars:		36		Hrs Since Last Inspection:		36											
Bit		Liner, mm		Stroke, meters		m ³ /STK		SPM		Press, KPa		H/min		Jet Vel, m/sec		DP AV, m/min	
2		165		0.3556		0.0221		257		19512		5692		102.4		18.00	
																19.00	
Survey MD		Angle		Direction		TVD		N/S Coordinate		EW Coordinate		Vertical Section, m		DLS, °/30m			
1,835.12 m		0.29		125.33		1,835.11 m		0.03		1.87		-1.46 m		0.12			
1,859.79 m		0.45		120.04		1,859.78 m		-0.06		2.01		-1.62 m		0.20			
1,889.77 m		0.29		104.33		1,889.76 m		-0.13		2.18		-1.81 m		0.19			
Hrs.		(From-To) hr, mm		Code		Operations Covering 24 Hours Ending at Midnight											
4:00		0:00 - 4:00		02		Drill ahead w/ 26" hole fr 1550-1663m. Avg ROP=28.3 mph, RPM=80, WOB=3-5k, Torque=5k, pump= 1500gpm @ 2830psi. Backream											
				02		& pump high vis sweep each stand. Survey every stand as required. Drilling break fr 1568-1604m. Flow chk @ 1575m - no flow.											
1:30		4:00 - 5:30		04		Backream conn @ 1663m. Torquing up from 1638-1631m w/ no overpull - torque 5-18k. Work through section, pumped hi-vis sweep.											
				04		ROV visibility becoming poor again. Suspected tidal shift stirring up seabed and drill cuttings approx every 12 hours.											
1:30		5:30 - 07:00		04		Cont to backream & work out high torque areas from 1628 to 1616m, no overpull. Work area several times before washing to TD.											
11:30		7:00 - 18:30		02		Drill ahead w/ 26" hole fr 1663-1917m (TD). Avg ROP=22.1 mph, RPM=80, WOB=3-20k, Torque=5-8k, pump= 1500gpm @ 2900psi.											
				02		Backream & pump high vis sweep each stand. Survey every stand as required. ROP decreased to 18 mph fr 1680 - 1917m (TD).											
2:00		18:30 - 20:30		01		Pumped 250bbl hi-vis sweep. Displaced out of the hole with seawater at 1250gpm.											
0:30		20:30 - 21:00		01		Spotted 65bbl (~30m) slug of 16.5ppg gel mud @ TD.											
1:30		21:00 - 22:30		01		Displaced well to 12ppg pad mud from 1890m to LPWH. Pumped 3100bbls (~100% OHE) @ 1250gpm / 2700 psi.											
1:30		22:30 - 24:00		05		Attempted to POOH to run 20" casing. Tight spots @ 1845-1807, 1780, 1716m. Work tight areas & dry backreamed several spots.											
				05		Max overpull 60K. Backreamed w/ sw 1690 to 1580m.											
						Present Operations @ 06:00: Wiper trip completed. Pumping hi-vis sweep. Preparing to displace well with 12ppg pad mud and POOH.											
24 hr Summary:		Drill 26" hole fr 1550 to 1917m, Avg daily ROP = 23.7 mph. Worked high torque connections as required. Sweep hole w/ hi-vis sweep @ TD & displaced to 12ppg pad mud before attempting to POOH prior to running 20" casg string.		Heave: 0.40m, Pitch: 0.30 deg, Roll: 0.40 deg.													
Projected Operations:		Wiper trip to the 36" casg shoe, RH to TD again. Pump hi-vis sweep & displace to 12ppg pad mud as before. POOH. RAU & run 20" casing string.															
Safety Issues:		No incidents or accidents reported. No pollution sightings reported. Held daily pre-tour and safety meetings w/ each crew - Chevron Drtg Supt & TO Rig Manager discussed recent incidents & prevention on Millennium. Standby vessel: Hebron Sea.		Accidents: NAR		Safety Reps: AJG											
Daily Mud Cost:		\$6,310		Daily Tangible Cost:		\$11,545		Daily Form Eval Cost:		\$11,800.00		Daily Drilling Cost:		\$508,806			
Cum Mud Cost:		\$393,192		Cum Tangible Cost:		\$439,561		Cum Form Eval Cost:		\$48,605.00		Cum Drilling Cost:		\$16,113,694			
Chevron %:		66.7										Total Appr:		\$79,476,780			
Bulk Gel, m ³		73.2		Cement, m ³		278.9		Fuel, m ³		3,644.9		Bulk Wt, m ³		163.8			
Country:		Canada		Rig:		DW Millennium		UWI:				Drilling Reps:		Jones/Pullenachild/Aworth/Luthus			
Field:		Exploration		Lease:		EL 2359		Well:		Chevron et al. Newburn H-23		Date:		27-May-02			

Drilling Activity Report (metric)Rutenschild/Atworth/Littus

Drilling Activity Report (metric)

Measured Depth		1,917 m		TVD		1,917 m		PSTD		Proposed MD:		6,400 m		Proposed TVD		6,315 m																																																																																																																																																																			
DOL		28		DPS		9		Spud Date:		22-May-02		Daily meters:		0 m		Daily Rot Hrs:		0.0																																																																																																																																																																	
Torque		Nm		Drag		kN		Rot Wt		kN		S/O Wt		kN		Last BOP Test:		POB:																																																																																																																																																																	
Last Casing Size:		508 mm		Set At:		1,902 m		MD		1,902 m		TVD		Shoe Test, kg/m ² :		Laskoff?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																																																																																																																																																																	
Cum Rot Hrs on Casing:				Cum Rot Hrs on Casing Since Last Caliper:				Whipstock Set @:				KOP:																																																																																																																																																																							
Liner Size:				Set At:				MD				TVD				Liner Top At:				MD				TVD																																																																																																																																																											
Mud Co:				M-I				Type:				Sample From:				WT, kg/m ³ :				FV, g/g:				PV, g/g:				YP, Pa:				Gel, Pa:																																																																																																																																																			
WL API, cc/30m:				HTHP:				FC(1/32) API/HTHP, mm:				0.0				Solids:				% Oil:				% Water:				% Sand:				MBT, Kg/L:				pH:																																																																																																																																															
Pm:				P/M:				Carb:				Cl:				Car/Mg:				Bent:				Solids % HGLG:				24hr Avg SOC %:																																																																																																																																																							
Engr Service:				2				Materials added last 24 hrs:																																																																																																																																																																											
Orig Gas:																				Max Gas:																				Conn. Gas:																				Trip Gas:																				Trip Cl:																				Remarks:																																																																															
Bit No		IADC		Size		Manufacturer				Serial Number				Type				Jets, mm				No.				Size				TFA, mm ²				MD In				MD Out				TVD Out																																																																																																																																									
meters		Hours		WOB, kN		RPM		I-Row		O-Row		DC		Loc		B		G		Char		7Pull		Cost/meter																																																																																																																																																											
						0																																																																																																																																																																													
Total Length of BHA:																				BHA Description:																																																																																																																																																															
Bit Cost \$																				Row 1 0																				Row 2 0																				R/g\$ /hr																				Trip Time, hr																				DC Size, mm:																				DP Size, mm:																				Hours On Jars:																				Hrs Since Last Inspection:																			
Bit		Liner, mm		Stroke, meters		m ³ /STK		SPM		Press, KPa		Rev/min		Jet Vol, m/sec		DP AV, m/min		DC AV, m/min		Bit HHP		BHHp/mm ²		Pump HHP																																																																																																																																																											
Survey MD				Angle				Direction				TVD				N/S Coordinate				E/W Coordinate				Vertical Section, m				DLS, °/30m																																																																																																																																																							
Hrs		(From-To) hr,mm		Code		Operations Covering 24 Hours Ending at Midnight																																																																																																																																																																													
4:00		0:00 - 4:00		06		Cont'd TH from 1026-1895m w/ 20" casing on 6 5/8", 40.9ppf landing string. Fill drilling every 5th stand. P/U = 730k lbs, S/O = 718k lbs.																																																																																																																																																																													
				06		Circulate test stand to bottom w/ 12ppg mud prior to landing HPWH, 450gpm @ 145psi. Ht ledge at 1898m. Wash down from																																																																																																																																																																													
				06		1896-1902m. Circulated a total of 1000bbls of 12ppg mud prior to landing HPWH. Land HPWH into LPWH. Bullseye 0.25 deg.																																																																																																																																																																													
				06		Set down 100k lbs. Bullseye 0.25 deg. Pull 50k lbs over - OK. HPWH @ 996.5mRT. Set down 100k lbs and prepare to cement casing.																																																																																																																																																																													
0:15		4:00 - 4:15		62		Held pre job safety meeting w/ cementers, nitrogen crew, rig crew and Chevron reps.																																																																																																																																																																													
0:45		4:15 - 5:00		09		Rig up cementing lines to side entry sub. Pump 200bbls of dual spacer w/ green dye @ 13ppg with rig pumps. P/T cementing lines to 5000psi, nitrogen lines to 6000psi.																																																																																																																																																																													
5:00		5:00 - 10:00		09		Mix and pump 5450bbls of lead foamed "G" + 0.08gal/lx Zonessant 2000 mixed w/ drillwater, 1355bbl tail "G" + 0.23 gal/lx CaCl2 mixed w/ seawater at 6.2 bpm. Displace w/ seawater at 11bpm. Final displacement pressure: 1625psi. CIP @ 9:53. Check floats - OK. Estimated																																																																																																																																																																													
				09		1373bbls circulated to mudline. Estimated open hole washout: +/- 55%.																																																																																																																																																																													
0:30		10:00 - 10:30		09		Bullseye 0.25 deg. Set down casing weight. Bullseye 0.25 deg. Release CART tool w/ 5 turns to the right. Rack cementing stand and break down lines.																																																																																																																																																																													
0:30		10:30 - 11:00		09		Circulate 1 1/2 times drillpipe capacity (325bbls) @ 650 gpm, 360psi.																																																																																																																																																																													
5:00		11:00 - 16:00		05		Heave ROV confirm that nominal seat protector is in place - OK. POOH w/ 6-5/8" landing string, CART and 5" cementing stinger.																																																																																																																																																																													
				05		Wash HPWH while POOH. LD CART tool to be broken down offline. Rack 5" stinger. LD cementing stand. Move rig 150m off location.																																																																																																																																																																													
3:30		16:00 - 19:30		13		Rig up to run BOP and riser. Position BOP in moonpool.																																																																																																																																																																													
0:30		19:30 - 20:00		62		Held pre job meeting. Discuss running and pressure testing of BOP's and riser.																																																																																																																																																																													
4:00		20:00 - 24:00		13		Make up first riser joint and lower BOP's into water. Rig up to pressure test choke and kill lines to 250psi low / 12000psi high for 5 minutes.																																																																																																																																																																													
						NOTE: Thales Provisional Final Position for Newburn H-23 is Latitude N43o 12' 16.728" Longitude W80o 48' 18.442"																																																																																																																																																																													
						Present operations @ 0500 hrs: Running riser.																																																																																																																																																																													
24 hr Summary:		Run 20" casing to 1902m. Land HPWH and cement casing. POOH w/ 6-5/8" landing string, CART and 5" cementing stinger. Rig up to and run BOP's and riser. Heave: 0.40m, Pitch: 0.30 deg, Roll: 0.40 deg.																																																																																																																																																																																	
Projected Operations:		Run BOP's and riser. Test BOP's to 250psi low and 12000psi high.																																																																																																																																																																																	
Safety Issues:		No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings.																																																																																																																																																																																	
		Accidents: NAR																																																																																																																																																																																	
		Safety Raps:																																																																																																																																																																																	
Daily Mud Cost				\$9,530				Daily Tangible Cost				\$521,417				Daily Form Eval Cost				\$15,560.00				Daily Drilling Cost				\$1,130,199																																																																																																																																																							
Cum Mud Cost				\$442,761				Cum Tangible Cost				\$388,052				Cum Form Eval Cost				\$80,505.00				Cum Drilling Cost				\$18,391,142																																																																																																																																																							
Chevron %:				66.7																Total Appr:				\$78,478,780																																																																																																																																																											
Bulk Gel, m ³				40.2				Cement, m ³				172.2				Fuel, m ³				3,536.4				Bulk WL, m ³				127.1																																																																																																																																																							
Country:				Canada				Rig:				DW Millennium				UWI:				300H-234320080450				Drilling Reps:				Jones/Cumani/Alworth/Lubus																																																																																																																																																							
Field:				Exploration				Lease:				EL 2359				Well:				Chevron et al. Newburn H-23				Date:				30-May-02																																																																																																																																																							

Drilling Activity Report *(metric)*Jones/Curtin/Alexworthy/Littus

Drilling Activity Report *(metric)*

ones/Cutler/Aworth/Lucas

Drilling Activity Report (public)Field: Exploration

Measured Depth		1,917 m		TVD		1,917 m		PBD:		Proposed MD:		6,400 m		Proposed TVD:		6,315 m	
DOL		32		DFS		13		Spud Date		22-May-02		Daily meters		0 m		Daily Rot Hrs:	
Torque		Nm		Drag		kN		Rot Wt		kN		P/U Weight		kN		S/O Wt	
Last Casing Size		508 mm		Set At:		1,902 m		MD		1,902 m		TVD		Shoe Test, kg/m ³		Leakoff?	
Cum Rot Hrs on Casing				Cum Rot Hrs on Casing Since Last Caliper:				Whipstock Set @:				KOP:					
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD		TVD					
Mud Co		M-I		Type:		Synthetic-based		Sample From:		Pits		WL		kg/m ³		1092	
WL API		cc/30m		HTHP:		7.4		FC(1/32) API/HTHP:		1.6		Solids:		6.0		% Oil:	
Pm:		3.3		PVMF:				Carb:		Cl:		42,000		Ca/Mg:		Bent:	
Engr Service		2		Materials added test		24 hrs:		719m ³ Paradril Mud		5 ea 25kg bag Kalzan XCD							
Orig Gas:				Max Gas:				Conn. Gas:				Trip Gas:				Remarks:	
Bit No		IADC		Size		Manufacturer		Serial Number		Type		Jets, mm		No. Size		TFA, mm ²	
3		S222		432		STC-Geodiamond		JS-7947		S91VPX		9		13		0	
meters		Hours		WOB, kN		RPM		I-Row		O-Row		DC		Loc		B	
0				0													
Total Length of BHA:		322.97 m		BHA Description:		PDC Bit, Slick XP 5/8 motor, float sub, 429mm Stab, ARC 900, Powerpulse MWD, X/O, NMDC (w/ Tolco ring)											
429mm Stab, 3 - 241mm DC's, X/O, 3 - 210mm DC's, X/O, 3 - 168mm HWDP, Jar, 20 - 168mm HWDP																	
Bit Cost		Row 1		0		Row 2		0		Rigs		\$24,000		Trip		Time, hr	
3		165		0.3556		0.0221											
Survey MD		Angle		Direction		TVD		N/S Coordinate		EW Coordinate		Vertical Section, m		DLS, °/30m			
Hrs.		(From - To)		hh:mm		Code		Operations Covering 24 Hours Ending at Midnight									
1:00		0:00 - 1:00		14		Pressure test boost line to 1750/35000 kPa for 10 mins. No bleed off observed.											
2:00		1:00 - 3:00		16		POOH and L/D mule shoe.											
1:30		3:00 - 4:30		24		Pick up and rack Velco EDPHOT on a double in the derrick.											
5:00		4:30 - 9:30		07		P/U PDC bit: STC - S91VPX (5 bladed w/ 19mm cutters) and M/U BHA. R/H and shallow test MWD at HWDP.											
2:30		9:30 - 12:00		05		P/U remaining 24 js of 168mm DP and R/H. Cont'd R/H above BOP's at 847mTRT.											
4:00		12:00 - 18:00		24		Offload all remaining SBM from workboats prior to displacing wellbore. Surface vol = 700 m ³ of 1090kg/m ³ SBM. Build 30m ³ of Dual V/s spacer.											
2:30		18:00 - 18:30		05		R/H w/ 168mm DP. Wash test stand to bottom and tag top of cement at 1891mRT.											
0:30		18:30 - 19:00		82		Hold pre job meeting prior to displacing to SBM. Discuss Paradril mud system and PPE issues.											
3:00		19:00 - 22:00		24		Displace booster line to SBM. Pump 25m ³ of Dual V/s spacer down drillstring. Displace choke line and kill line to SBM.											
		22:00 - 23:00				Displace well to SBM down drillstring w/ +/- 13,700stk. Interface to surface approximately 16m ³ early. All seawater and WBM returns directed overboard.											
1:00		23:00 - 0:00		24		Clean sandtrap and prepare mud tanks to drill out cement.											
						Present Operations @ 0500 hrs: Drilling out cement.											
24 hr Summary:		POOH and L/D mule shoe. R/H w/ BHA to the top BOP's, offload all remaining SBM from workboats and prepare to and displace well to SBM.				Heave: 0.40m, Pitch: 0.20 deg, Roll: 0.20 deg.											
Projected Operations:		Drill out cement shoe track and float equipment. Clean out rat hole to 1917m and drill 2m of new formation. Perform FIT to 1309 kg/m ³ .				Drill ahead in 432mm hole section.											
Safety Issues:		No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings.				Conducted Environmental drill. Simulated oil spill at port bulk manifold.				Accidents:		NAR		Safety Reqs:			
Daily Mud Cost:		\$808,656		Daily Tangible Cost:		\$2,425		Daily Form Eval Cost:		\$17,865.00		Daily Drilling Cost:		\$1,505,847			
Cum Mud Cost:		\$1,318,780		Cum Tangible Cost:		\$1,019,471		Cum Form Eval Cost:		\$142,545.00		Cum Drilling Cost:		\$21,622,761			
Chevron %:		66.7										Total Appr:		\$79,478,780			
Bulk Gel, m ³		39.2		Cement, m ³		172.2		Fuel, m ³		3,412.8		Bulk Wt, m ³		111.4			
Country:		Canada		Rig:		DW Millennium		UWI:		3001-234320080450		Drilling Reqs:		Jones/Curtain/Aworth/Lubus			
Field:		Exploration		Lease:		EL 2359		Well:		Chevron et al. Newburn H-23		Date:		3-Jun-02			

Drilling Activity Report (metric)

Measured Depth		2,019 m		2,019 m		P8TD		Proposed MD:		6,400 m		Proposed TVD:		6,315 m																							
DOL		33		DFS		14		Spud Date:		22-May-02		Daily meters		102 m		Daily Rot Hrs:		8.0		HS Total Rot Hrs:		8.0															
Torque:		Nm		4067		Drag		kdaN		0.0		Rot Wt		kdaN		207		P/U Weight		kdaN		208		S/O Wt		kdaN		208		Last BOP Test:		02-Jun-02		POB:		123	
Last Casing Size		508 mm		Set At:		1,902 m		MD		1,902 m		TVD		Shoe Test, kg/m²		1309		Leshoff?		<input checked="" type="checkbox"/> Yes		<input checked="" type="checkbox"/> No															
Cum Rot Hrs on Casing		8.0		Cum Rot Hrs on Casing Since Last Caliper:				Whelpshot Set @:				KOP:																									
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD		TVD																									
Mud Co		M-I		Type:		Synthetic-based		Sample From:		Pits		WT, kg/m³		1152		PV, m/qt		180		PV, cP		31		YP, Pa		10		Gel, Pa		11/18							
WL API, sec/30m		HTHP:		FC(1/32) API/HTHP:		mm		Solids:		10.0		% Oil:		67.0		% Water:		23.0		% Sand:				MBT, Kg/L		0.00		pH:									
Pm:		2.8		PVM:				Cat:		Ci:		40,000		Car/Mg:				Bent:				Solids % HG/L:				24hr Avg SOC %:		3.95									
Engr Service		2		Materials added last 24 hrs:		2657 ea 45kg bag Barite		18 ea 22.5kg bag PulPro10																													
Drig Gas:		240		Mar Gas:		252		Conn. Gas:		0		Trp Gas:		0		Trp Ci:		0		Remarks:																	
Bit No		IADC		Size		Manufacturer		Serial Number		Type		Jets, mm		No. Size		No. Size		TFA, mm²		MD In		MD Out		TVD Out													
3		S222		432		STC-Geodiamond		JS-7947		S91VPX		9		13		0		1140		1,917 m																	
meters		Hours		WOB, kdaN		RPM		I-Row		O-Row		DC		Loc		B		G		Char		7Pull		Cost/meter													
102		8.00		0.9		180																		\$4,656.86													
Total Length of BHA:		322.97 m		BHA Description:		PDC Bit, Stick XP 5/8 motor, float sub, 429mm Stab, ARC 900, Powerpulse MWD, X/O, NMDC (w/ Torco Ring)																															
429mm Stab, 3 - 241mm DC's, X/O, 3 - 210mm DC's, X/O, 3 - 168mm HWDP, Jar, 20 - 168mm HWDP																																					
Bit Cost \$		Row 1		139,000		Row 2		0		Rigs/hr		\$24,000		Trip Time, hr		6.0		DC Size, mm		241		DP Size, mm		168		Hours On Jars:		44		Hrs Since Last Inspection:		44					
Bit		Liner, mm		Stroke, meters		m/YSTK		SPM		Press, KPa		liters/min		Jet Vel, m/sec		DP AV, m/min		DC AV, m/min		BR HHP		Breakdown		Pump HHP													
3		165		0.3556		0.0221		210		17237		4651		67.8		37.00		46.00		306		870.78		1792													
Survey MD		Angle		Direction		TVD		N/S Coordinate		E/W Coordinate		Vertical Section, m		OLS, °/30m																							
1,966.53 m		0.41		331.06		1,966.53 m		38.75		0.80		23.07 m		0.06																							
1,994.85 m		0.41		331.23		1,994.85 m		38.93		0.70		23.25 m		0.00																							
2,024.00 m		0.29		317		2,024.00 m		39.08		0.80		23.42 m		0.05																							
Hrs.		(From-To) hh:mm		Code		Operations Covering 24 Hours Ending at Midnight																															
1:00		0:00 - 1:00		01		Cont'd cleaning sand trap and prepare mud tanks to drill out cement. Close and lock all overboard dump valves.																															
0:30		1:00 - 1:30		62		Held pre job safety meeting w/ Swaco, mud engineer and rig crew. Discuss Paradri mud system and PPE issues. Discuss operation of Swaco cuttings drying and solids control equipment.																															
3:00		1:30 - 4:30		01		Take SCR's, and choke and kill line frictions w/ 1090kg/m³ SBM. Locate tool joint on upper annular.																															
3:00		4:30 - 7:30		15		Drill cement & 508mm shoe from 1890-1902m. Drilled hard cement in rat hole from 1902-1908m. Ream & wash rat hole from 1908-1917m. Work bit & bottom stab through shoe several times, no problems.																															
0:30		7:30 - 8:00		02		Drill 2m of 432mm hole for FIT (1917-1919m).																															
2:30		8:00 - 10:30		17		Circulate and condition mud to perform FIT. Circulate up static pressure survey with PWD = 1115 kg/m² EMW. Spot 7m³ LCM pill on bottom and pull bit back into casing prior to performing FIT.																															
1:30		10:30 - 12:00		17		Flush and pressure test Hellburtion lines to 13750 kPa. Close upper annular and perform FIT to 1300 kg/m² EMW (3620kPa applied surface pressure).																															
0:30		12:00 - 12:30		02		Drill ahead 432mm hole from 1919-1934m with reduced parameters until the DC's are buried. WOB=1k daN, 180RPM, 3m³/min.																															
1:30		12:30 - 14:00		24 T		Work on swaco equipment. Feed auger plugging off and centrifuge down. Rig in vacuum system while working on auger.																															
3:00		14:00 - 17:00																																			

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 2,279 m		TVD: 2,279 m		PBD: 22-May-02		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 34		DFS: 15		Spud Date: 22-May-02		Daily meters: 260 m		Daily Rot Hrs: 18.0	
Torque: Nm 4067		Drag: kdaN 0.0		Rot Wt: kdaN 207		S/O Wt: kdaN 206		Last BOP Test: 02-Jun-02	
Last Casing Size: 508 mm		Set At: 1,902 m		MD: 1,902 m		Shoe Test, kg/m ³ : 1309		Leakoff? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Cum Rot Hrs on Casing: 26.0		Cum Rot Hrs on Casing Since Last Caliper: 26.0		Whipstock Set @: 26.0		KOP: 26.0		POB: 123	
Liner Size: 26.0		Set At: MD		TVD		Liner Top At: MD		TVD	
Mud Co: M-I		Type: Synthetic-based		Sample From: 1152		FV, s/qt: 175		PV, cP: 30	
WLAPI, cc/30min		HTHP: 7.8		FC(1/32) API/HTHP: 1.6		Solids: 8.0		% Oil: 66.0	
Pam: 2.2		ES, volts: 1475		Carb: 49,000		Ca/Mg: 3.60		Solids % HGLG: 73 / 27	
Engr Service: 2		Materials added last 24 hrs: 568 ea 45kg bag Barite		280 cu meters Paradril SBM		24hr Avg SOC %: 4.83			
Orig Gas: 240		Max Gas: 252		Conn. Gas: 0		Trip Gas: 0		Trip Ct: 0	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm	No. Size	No. Size	TFA, mm ²
3	S222	432	STC-Geodiamond	JS-7947	S91VPX	9	13	0	0
1140	1,917 m								
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
362	26.00	0.9	180						
Total Length of BHA: 322.97 m		BHA Description: PDC Bit, Stick XP 5/6 motor, float sub, 429mm Stab, ARC 900, Powerpulse MWD, X/O, NMDC (w/ Totco ring)							
429mm Stab, 3 - 241mm DC's, X/O, 3 - 210mm DC's, X/O, 3 - 168mm HWDP, Jar, 20 - 168mm HWDP									
Bit Cost \$	Row 1 139,000	Row 2 0	Rgs \$/hr \$24,000	Trip Time, hr 6.0	DC Size, mm: 241	DP Size, mm: 168	Hours On Jars: 62	Hrs Since Last Inspection: 62	
Bit	Liner, mm	Stroke, meters	m/STK	SPM	Press, KPa	Rev/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
3	165	0.3556	0.0221	204	24476	4518	65.9	36.00	45.00
Survey MD		Angle	Direction	TVD	N/S Coordinate		E/W Coordinate		Vertical Section, m
2,195.21 m		0.29	345.16	2,195.20 m	1.19		1.83		-0.33 m
2,223.50 m		0.27	322.13	2,223.50 m	1.32		1.28		-0.21 m
2,251.31 m		0.17	321.71	2,251.30 m	1.40		1.21		-0.10 m
Hrs.	(From-To) h:m	Code	Operations Covering 24 Hours Ending at Midnight						
1:30	0:00 - 1:30	02	Drill 1/ 2019 m - 2057 m (avg rop = 25.3 m/hr)						
0:30	1:30 - 2:00	24 T	Work on SWACO cuttings dryer. Circulate at 60 spm and work pipe while working on unit.						
5:30	2:00 - 7:30	02	Drill 1/ 2057 m - 2149 m (avg rop = 16.7 m/hr). Drill at reduced ROP in attempt to prevent SWACO unit from plugging.						
1:00	7:30 - 8:30	24 T	SWACO duster unit torquing up and stalling out causing cuttings to back up at unit. Circulate hole at 60 spm while working on equipment						
1:00	8:30 - 9:30	02	Drill 1/ 2149 m - 2158 m (ROP = 9 m/hr) at controlled ROP while monitoring SWACO equipment						
3:30	9:30 - 13:00	24 T	SWACO duster unit cont. to load up & stall. Consult w/ M-I office in Halifax & Houston, TX for solutions. Circ @ 90 spm & work pipe while working.						
2:00	13:00 - 15:00	02	Drill 1/ 2158 m - 2177 m (avg rop = 9.5 m/hr) at controlled ROP while monitoring SWACO equipment.						
0:30	15:00 - 15:30	24 T	Work on SWACO cuttings dryer						
0:30	15:30 - 16:00	02	Drill 1/ 2177 m - 2185 m (Avg ROP = 16 m/hr) @ controlled ROP while monitoring SWACO equipment.						
0:30	16:00 - 16:30	24 T	Work on SWACO cuttings dryer						
7:30	16:30 - 0:00	02	Drill 1/ 2185 m - 2279 m (avg ROP = 12.5 m/hr) while monitoring SWACO cuttings dryer.						
Operations @ 0500 hrs: Drill to 2321 m (AVG ROP = 21 m/hr). SWACO equip down @ 0200 hrs. Working on SWACO									
24 hr Summary: Drill from 2019 m to 2279 m. Shut down 5 different times (total NPT = 6 hrs) working on SWACO duster cuttings dryer.									
Projected Operations: Drill to 2450 m, increase MW to 1222 kg/cubic meters according to weight-up schedule and make short trip.									
Safety Issues: No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings.								Accidents: NAR	
Standby Vessel is the m/v Hebron Sea.								Safety Rep: Belasch	
Daily Mud Cost: \$319,746		Daily Tangible Cost: \$2,425		Daily Form Eval Cost: \$14,095.00		Daily Drilling Cost: \$866,682			
Cum Mud Cost: \$1,656,757		Cum Tangible Cost: \$1,024,321		Cum Form Eval Cost: \$173,705.00		Cum Drilling Cost: \$23,155,151			
Chevron %: 68.7						Total Appr: \$79,476,760			
Bulk Gel, m ³ : 28.3		Cement, m ³ : 172.2		Fuel, m ³ : 3,558.8		Bulk Wt, m ³ : 162.7			
Country: Canada		Rig: DW Millennium		UWI: 300H234320060450		Drilling Reqs: Jones / Curran / Bruton			
Field: Exploration		Lease: EL 2359		Well: Chevron et al. Newburn H-23		Date: 5-Jun-02			

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 2,444 m		TVD: 2,444 m		PBTD:		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 35		DFS: 16		Spud Date: 22-May-02		Daily meters: 165 m		Daily Rot Hrs: 11.5	
Torque: 6779 Nm		Drag: 2.7 kdaN		Rot Wt: 221 kdaN		P/U Weight: 223 kdaN		S/O Wt: 219 kdaN	
Last Casing Size: 508 mm		Set At: 1,902 m		MD		1,902 m		TVD	
Cum Rot Hrs on Casing: 37.5		Cum Rot Hrs on Casing Since Last Casing: 37.5		Whipstock Set @:		KOP:			
Liner Size: 508 mm		Set At: 1,902 m		MD		TVD		Liner Top At: 1,902 m	
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		WT, kg/m ³ : 1152		FV, g/qt: 178	
WL API, cc/30min: 2.4		HTHP: 7.8		FC(1/32) API/HTHP: 1.6		Solids: 8.3		% Oil: 68.0	
ES, volts: 2.4		Carb: 852		Cl: 41,000		Ca/Mg: 3.70		Solids % HG/LG: 76 / 24	
Engr Service: 2		Materials added last 24 hrs: 80 sx Barite		46 sx Lime		12 pail Clean-up			
Drig Gas: 240		Max Gas: 252		Conn. Gas: 0		Trip Gas: 0		Trip Ct: 0	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No.	Size	TFA, mm ²	MD In
3	S222	432	STC-Geodiamond	JS-7947	S91VPX	9	13	0	0
1140	1,917 m								
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
527	37.50	2.2	173						
Total Length of BHA: 322.97 m									
BHA Description: PDC Bit, Slick XP 5/6 motor, float sub, 429mm Stab, ARC 900, Powerpulse MWD, X/O, NMDC (w/ Tolcoo ring)									
429mm Stab, 3 - 241mm DC's, X/O, 3 - 210mm DC's, X/O, 3 - 168mm HWDP, Jar, 20 - 168mm HWDP									
Bit Cost \$	Row 1	139,000	Row 2	0	Rig \$ /hr	\$24,000	Trip Time, hr	6.0	DC Size, mm:
241	DP Size, mm:	168	Hours On Jars:	73.5	Hrs Since Last Inspection:	73.5			
Bit	Liner, mm	Stroke, meters	m ³ STK	SPM	Press, KPa	Rev/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
3	165	0.3556	0.0221	205	19512	4540	66.2	37.00	45.00
285	810.05	1980							
Survey MD	Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m	DLS, %30m		
2,365.94 m	0.14	36.73	2,365.93 m	1.70	1.18	0.11 m	0.08		
2,394.79 m	0.12	52.53	2,394.78 m	1.75	1.22	0.10 m	0.04		
2,423.60 m	0.08	64.94	2,423.59 m	1.77	1.26	0.08 m	0.05		
Hrs.	(From - To) hr:mm	Code	Operations Covering 24 Hours Ending at Midnight						
2:00	0:00 - 2:00	02	Drill @ 2279 m - 2320 m (avg ROP = 20.5 m/hr) at reduced rate while monitoring SWACO equipment						
11:00	2:00 - 13:00	24 T	SWACO duster unit plugged. SWACO Vacuum lines plugged. Repair same. Circulate @ reduced rate (55 spm) and continue working pipe.						
1:30	13:00 - 14:30	24 T	Clean SWACO duster unit work area						
9:30	14:30 - 0:00	02	Drill @ 2320 m - 2444 m (avg ROP = 13.8 m/hr) at reduced rate while monitoring SWACO duster equipment.						
Operations @ 0500 hrs: Circulating @ 2476 m increasing MW to 1222 kg/cubic metres									
24 hr Summary: Drill @ 2279 - 2320 m. Repair SWACO duster cuttings dryer. Drill at controlled ROP @ 2320 m - 2444m									
Projected Operations: Drill to 2476 m. Increase MW per MW schedule to 1222 kg / cubic m. Make wiper trip to 20" Csg shoe. Resume drilling.									
Safety Issues: No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings. Standby Vessel is the m/v Hebron Sea. Held mud weight-up drill.									
Accidents: NAR									
Safety Rep: Balasch									
Daily Mud Cost: \$9,716		Daily Tangible Cost: \$2,425		Daily Form Eval Cost: \$14,095.00		Daily Drilling Cost: \$577,427			
Cum Mud Cost: \$1,666,473		Cum Tangible Cost: \$1,026,746		Cum Form Eval Cost: \$187,800.00		Cum Drilling Cost: \$23,732,578			
Chevron %: 66.7						Total Appr: \$79,476,760			
Bulk Gel, m ³ : 28.3		Cement, m ³ : 172.2		Fuel, m ³ : 3,526.2		Bulk Wt, m ³ : 161.0			
Country: Canada		Rig: DW Millennium		UWT: 300H234320060450		Drilling Reps: Jones / Curran / Bruton			
Field: Exploration		Lease: EL 2359		Well: Chevron et al. Newburn H-23		Date: 6-Jun-02			

Measured Depth: 2,547 m		TVD: 2,547 m		PBD: 22-May-02		Proposed MD: 6,400 m		Proposed TVD: 8,315 m	
DOL: 36		DFS: 17		Spud Date: 22-May-02		Daily meters: 103 m		Daily Rot Hrs: 8.0	
Torque: Nm 6779		Drag: kdaN 2.7		Rot Wt: kdaN 221		P/U Weight: kdaN 223		S/O Wt: kdaN 219	
Last Casing Size: 508 mm		Set At: 1,902 m		MD: 1,902 m		TVD: 1,309		Shoe Test, kg/m ³ : 1309	
Cum Rot Hrs on Casing: 45.5		Cum Rot Hrs on Casing Since Last Caliper: 45.5		Whipstock Set @:		KOP:		Leakoff? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Liner Size: Set At: MD		TVD		Liner Top At: MD		TVD			
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		Wt, kg/m ³ : 1224		FV, s/qt: 173	
WL API, cc/30min: 7.4		HITHP: FC(1/32) API HITHP: 1.6		Solids: 8.4		% Oil: 65.0		% Water: 26.6	
Pam: 1.4		ES, volts: 913		Carb: 43,000		Ca/Mg: 4.10		SOLIDS % HG/LG: 73 / 27	
Engr Service: 2		Materials added last 24 hrs: 1200 sx Barite		4 cu m base oil		40 sx Lime		24hr Avg SOC %: 4.35	
Orig Gas: 406		Max Gas: 554		Conn. Gas: 0		Trip Gas: 0		Trip Ct: 0	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size No. Size	TFA, mm ²	MD In	MD Out
3	S222	432	STC-Geodiamond	JS-7947	S91VPX	9 13 0 0	1140	1,917 m	
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
630	45.50	2.2	173						
Total Length of BHA: 322.97 m		BHA Description: PDC Bit, Slick XP 5/6 motor, float sub, 429mm Stab, ARC 900, Powerpulse MWD, X/O, NMDC (w/ Totco ring)							
429mm Stab, 3 - 241mm DC's, X/O, 3 - 210mm DC's, X/O, 3 - 168mm HWDP, Jar, 20 - 168mm HWDP									
Bit Cost \$	Row 1 139,000	Row 2 0	Rigs /hr \$24,000	Trip Time, hr 6.0	DC Size, mm 241	DP Size, mm 168	Hours On Jars: 81.5	Hrs Since Last Inspection: 81.5	
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, kPa	Feed/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
3	165	0.3556	0.0221	205	21994	4540	66.2	37.00	45.00
Survey MD		Angle	Direction	TVD	N/S Coordinate		E/W Coordinate		Vertical Section, m
2,509.46 m		0.15	214.22	2,509.45 m	1.69		1.32		-0.01 m
2,538.40 m		0.17	218.75	2,538.39 m	1.63		1.27		-0.01 m
2,566.94 m		0.29	223.33	2,566.93 m	1.54		1.19		0.00 m
Hrs.	(From - To) hr:mm	Code	Operations Covering 24 Hours Ending at Midnight						
0:30	0:00 - 0:30	2	Drill / 2444 m - 2451 m (avg ROP = 14 m/hr) at reduced rate while monitoring SWACO equipment.						
0:30	0:30 - 1:00	24 T	Work on SWACO equipment. Continue to work pipe and circulate @ 55 spm.						
1:30	1:00 - 2:30	2	Drill / 2451 m - 2476 m (avg ROP = 16.7 m/hr).						
4:30	2:30 - 7:00	1	Circulate btm up. Increase MW to 1222 kg/m ³ . Flush choke and kill lines.						
2:00	7:00 - 9:00	5	POOH / 2476 m - 2336 m. Check for flow. None. Pump slug and POOH / 2336 m - 1878 m. Maximum drag 2.5 dN						
4:30	9:00 - 13:30	24 T	Work on SWACO equipment. Replace dried cuttings hopper w/ cuttings chute. Replace auger drive belt. Install grate over end of auger.						
2:00	13:30 - 15:30	24 T	TIH w/ 2 stds DP to 1933 m. Break circulation @ 800 gpm to reduce drain on MWD batteries. Estimated remaining battery life 20 hrs.						
			Continue w/ SWACO repairs while circulating.						
0:30	15:30 - 16:00	5	TIH / 1933 m - 2193 m. Fill DP						
1:30	16:00 - 17:30	5	TIH / 2193 m - 2476 m. No fill on bottom						
1:30	17:30 - 19:00	2	Drill / 2476 m - 2499 m (avg ROP = 11.5 m/hr) at reduced ROP while monitoring SWACO equipment.						
0:30	19:00 - 19:30	24 T	Work on SWACO equipment.						
4:30	19:30 - 0:00	2	Drill / 2499 m - 2547 m (avg ROP = 10.7 m / hr) at reduced ROP while monitoring SWACO equipment.						
Operations @ 0500 hrs: Drilling @ 2625 m (Avg ROP since midnite = 15.6 m/hr)									
24 hr Summary:		Drill / 2444 m - 2476 m. Circulate and increase MW to 1222 kg/m ³ . Make wiper trip to 508 mm csg shoe. Repair SWACO equipment. TIH and resume drilling / 2476 m - 2547 m.							
Projected Operations:		Drill							
Safety Issues:		No accidents, 1 incident. No pollution sightings reported. Held daily pre-tour & safety meetings. Standby Vessel is the m/v Hebron Sea. ROV inspect riser and BOP. Held well control drill @ 23:10 hrs. Response time 46 sec							
		Accidents: NAR							
		Safety Rep: Balasch							
Daily Mud Cost: \$23,089		Daily Tangible Cost: \$2,425		Daily Form Eval Cost: \$263,782.50		Daily Drilling Cost: \$819,712			
Cum Mud Cost: \$1,689,562		Cum Tangible Cost: \$1,029,171		Cum Form Eval Cost: \$451,582.50		Cum Drilling Cost: \$24,552,290			
Chevron %: 66.7						Total Appr: \$79,476,760			
Bulk Gel, m ³ : 28.3		Cement, m ³ : 172.2		Fuel, m ³ : 3,474.0		Bulk Wt, m ³ : 157.2			
Country: Canada		Rig: DW Millennium		UW: 300H234320060450		Drilling Reps: Jones / Curran / Bruton			
Field: Exploration		Lease: EL 2359		Well: Chevron et al. Newburn H-23		Date: 7-Jun-02			

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 2,867 m		TVD: 2,867 m		PBD: 22-May-02		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 37		DFS: 18		Spud Date: 22-May-02		Daily meters: 320 m		Daily Rot Hrs: 24.0	
Torque: Nm 6779		Drag: kdaN 2.7		Rot Wt: kdaN 234		P/U Weight: kdaN 237		S/O Wt: kdaN 234	
Last Casing Size: 508 mm		Set At: 1,902 m		MD: 1,902 m		TVD: 1,902 m		Shoe Test, kg/m ³ : 1309	
Cum Rot Hrs on Casing: 69.5		Cum Rot Hrs on Casing Since Last Caliper: 69.5		Whipstock Set @: 69.5		KOP: 69.5		Leakoff? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Liner Size: 69.5		Set At: MD		MD: MD		Liner Top At: MD		TVD: MD	
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		WT, kg/m ³ : 1224		FV, s/qt: 165	
WLAPI, cc/30min: 7.6		HTHP: 7.6		FC(1/32) API/HTHP: 2.4		Solids: 11.0		% Oil: 66.0	
Psm: 1.9		ES, volts: 910		Carb: Cl: 42,000		Ca/Mg: ASG: 4.10		% Water: 23.0	
Engr Service: 2		Materials added last 24 hrs: 715 sx barite		22.6 m ³ base oil		80 sx lime		12 pail Clean-up	
6 sx Caustic Soda		Drig Gas: 242		Max Gas: 874		Conn. Gas: 0		Trip Gas: 0	
Bit No. 3		IADC: S222		Size: 432		Manufacturer: STC-Geodiamond		Serial Number: JS-7947	
Type: S91VPX		Jets, mm: 9		No. Size: 13		No. Size: 0		No. Size: 0	
TFA, mm ² : 1140		MD In: 1,917 m		MD Out: 1,917 m		TVD Out: 1,917 m		TVD Out: 1,917 m	
meters: 950		Hours: 69.50		WOB, kdaN: 4.4		RPM: 193		I-Row: 0	
O-Row: 0		DC: 0		Loc: 0		B: 0		G: 0	
Char: 0		?Pull: 0		Cost/meter: \$2,053.68					
Total Length of BHA: 322.97 m		BHA Description: PDC Bit, Slick XP 5/8 motor, float sub, 429mm Stab, ARC 900, Powerpulse MWD, X/O, NMDC (w/ Totco ring)		429mm Stab, 3 - 241mm DC's, X/O, 3 - 210mm DC's, X/O, 3 - 168mm HWDP, Jar, 20 - 168mm HWDP					
Bit Cost \$: 139,000		Row 1: 0		Row 2: 0		Rig \$ /hr: \$24,000		Trip Time, hr: 6.0	
DC Size, mm: 241		DP Size, mm: 168		Hours On Jars: 105.5		Hrs Since Last Inspection: 105.5			
Bit: 3		Liner, mm: 165		Stroke, meters: 0.3556		m ³ /STK: 0.0221		SPM: 240	
Press, KPa: 29647		Ist/min: 5316		Jet Vel, m/sec: 77.5		DP AV, m/min: 43.00		DC AV, m/min: 53.00	
Bit HHP: 486		St+P/mm ² : 1381.06		Pump HHP: 3523					
Survey MD: 2,794.95 m		Angle: 0.55		Direction: 160.44		TVD: 2,794.93 m		N/S Coordinate: 0.55	
E/W Coordinate: 1.02		Vertical Section, m: -0.47 m		DLS, 730m: 0.10					
Survey MD: 2,823.00 m		Angle: 0.64		Direction: 163.18		TVD: 2,822.98 m		N/S Coordinate: 0.27	
E/W Coordinate: 1.11		Vertical Section, m: -0.71 m		DLS, 730m: 0.10					
Survey MD: 2,852.06 m		Angle: 0.73		Direction: 157.73		TVD: 2,852.04 m		N/S Coordinate: -0.06	
E/W Coordinate: 1.22		Vertical Section, m: -1.00 m		DLS, 730m: 0.11					
Hrs. (From To) 0:00 - 0:00		Code: 2		Operations Covering 24 Hours Ending at Midnight		Drill 1/ 2547 m - 2867 m (avg ROP = 13.3 m/hr). Monitor SWACO equipment closely.			
24 hr Summary: Drill 1/ 2547 m - 2867 m		Projected Operations: Continue drilling 432 mm hole section to planned TD of 3500 m.		Safety Issues: No accidents, no incident. No pollution sightings reported. Held daily pre-tour & safety meetings.		Accidents: NAR			
Standby Vessel is the m/v Hebron Sea. Held well control drill @ 1430 hrs. Took 41 seconds.		Safety Rep: Balasch		Daily Mud Cost: \$51,896		Daily Tangible Cost: \$2,425		Daily Form Eval Cost: \$14,095.00	
Cum Mud Cost: \$1,741,258		Cum Tangible Cost: \$1,031,596		Cum Form Eval Cost: \$465,677.50		Cum Drilling Cost: \$25,189,475		Total Appr: \$79,476,760	
Chevron %: 66.7		Bulk Gel, m ³ : 28.3		Cement, m ³ : 172.2		Fuel, m ³ : 3,474.0		Bulk Wt, m ³ : 157.2	
Country: Canada		Rig: DW Millennium		UWT: 300H234320060450		Drilling Reps: Jones / Curran / Bruton			
Field: Exploration		Lease: EL 2359		Well: Chevron et al. Newburn H-23		Date: 8-Jun-02			

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 3,074 m		TVD: 3,074 m		PBDT:		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 38		DFS: 19		Spud Date: 22-May-02		Daily meters: 207 m		Daily Rot Hrs: 14.5	
Torque: Nm 6779		Drag: kdaN 0.9		Rot Wt: kdaN 245		P/U Weight: kdaN 246		S/O Wt: kdaN 243	
Last Casing Size: 508 mm		Set At: 1,902 m		MD		1,902 m		TVD	
Cum Rot Hrs on Casing: 84.0		Cum Rot Hrs on Casing Since Last Caliper:		Whipstock Set @:		KOP:		POB: 125	
Liner Size: Set At: MD		TVD		Liner Top At: MD		TVD			
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		Wt, kg/m ³ 1224		FV, s/qt 161	
WLAP, cc/30min		HTHP: 7.2		FC(1/32) API/HTHP: mm 2.4		Solids: 9.6		% Oil: 65.0	
Psm: 2.3		ES, volts 923		Carb: Ct: 43,000		Ca/Mg: ASG: 4.10		% Water: 25.4	
Engr Service 2		Materials added last 24 hrs: 715 sx barite		22.8 m ³ base oil		24hr Avg SOC %: 4.04			
Drig Gas: 800		Max Gas: 1,306		Conn. Gas: 0		Trip Gas: 0		Trip Ct: 0	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size	TFA, mm ²	MD In	MD Out
3	S222	432	STC-Geodiamond	JS-7947	S91VPX	9 13 0 0	1140	1,917 m	
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
1157	84.00	4.4	320						
Total Length of BHA: 322.97 m		BHA Description: PDC Bit, Slick XP 5/6 motor, float sub, 429mm Stab, ARC 900, Powerpulse MWD, X/O, NMDC (w/ Totco ring)							
429mm Stab, 3 - 241mm DC's, X/O, 3 - 210mm DC's, X/O, 3 - 168mm HWDP, Jar, 20 - 168mm HWDP									
Bit Cost \$	Row 1 139,000	Row 2 0	Rig\$ /hr \$24,000	Trip Time, hr 6.0	DC Size, mm 241	DP Size, mm 168	Hours On Jars 120	Hrs Since Last Inspection: 120	
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, KPa	Star/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
3	165	0.3556	0.0221	239	29647	5294	77.2	43.00	53.00
Survey MD		Angle	Direction	TVD	NS Coordinate		EW Coordinate		Vertical Section, m
3,022.78 m		0.90	144.26	3,022.74 m	-2.02		2.41		-3.15 m
3,052.39 m		0.86	152.77	3,052.35 m	-2.41		2.65		-3.57 m
3,080.93 m		0.77	145.51	3,080.89 m	-2.76		2.86		-3.95 m
Hrs.	(From-To) hr:mm	Code	Operations Covering 24 Hours Ending at Midnight						
0:30	00:00 - 0:30	2	Drill / 2867 m - 2888 m						
7:30	0:30 - 8:00	24 T	Repair SWACO duster equipment while circulating at 55 spm and moving pipe.						
6:30	8:00 - 14:30	2	Drill / 2888 - 2974 m (avg ROP = 13.2 m / hr). Increase rotary to 80 rpm to get angle to drop.						
0:30	14:30 - 15:00	14	Function test BOP on yellow pod from driller's console.						
1:00	15:00 - 16:00	24 T	Repair SWACO duster equipment while circulating at 55 spm and moving pipe.						
5:00	16:00 - 21:00	2	Drill / 2974 m - 3046 m (avg ROP = 14.4 m / hr)						
0:30	21:00 - 21:30	24 T	Repair SWACO duster equipment while circulating at 55 spm and moving pipe.						
2:30	21:30 - 24:00	2	Drill / 3046 m - 3074 m (avg ROP = 11.2 m / hr). Drig break @ 3022 m (no flow on check). Max gas 1306 units. Max mud cut 12 kg/m ³ .						
24 hr Summary:		Drill / 2867 m - 3074 m. Down for SWACO duster system repairs 3 times (total time=9 hrs). Perform BOP function test.							
Projected Operations:		Drill and survey 17 inch hole to section TD of 3515 m.							
Safety Issues:		No accidents, no incident. No pollution sightings reported. Held daily pre-tour & safety meetings. Standby Vessel is the m/v Hebron Sea. Held well control drill @ 2046 hrs. Took 42 seconds.							
Accidents:		NAR							
Safety Rep:		Balasch							
Daily Mud Cost: \$51,696		Daily Tangible Cost: \$2,425		Daily Form Eval Cost: \$14,095.00		Daily Drilling Cost: \$596,632			
Cum Mud Cost: \$1,792,954		Cum Tangible Cost: \$1,034,021		Cum Form Eval Cost: \$479,772.50		Cum Drilling Cost: \$25,788,107			
Chevron %: 66.7						Total Appr: \$79,476,760			
Bulk Gel, m ³ 28.3	Cement, m ³ 318.9	Fuel, m ³ 4,603.2	Bulk Wt, m ³ 186.7	Rig Heave, m 0.5	Pitch, deg 0.4	Roll, deg 0.3			
Country: Canada	Rig: DW Millennium	UWT: 300H234320060450	Drilling Reps: Jones / Curran / Bruton						
Field: Exploration	Lease: EL 2359	Well: Chevron et al. Newburn H-23	Date: 9-Jun-02						

Drilling Activity Report (metric)

Measured Depth:		3,376 m		TVD:		3,376 m		PBD:		Proposed MD:		6,400 m		Proposed TVD:		6,315 m																					
DOL:		39		DFS:		20		Spud Date:		22-May-02		Daily meters:		302 m		Daily Rot Hrs:		23.5		HS Total Rot Hrs:		107.5															
Torque:		Nm		6779		Drag:		kdaN		1.3		Rot Wt:		kdaN		260		P/U Weight:		kdaN		262		S/O Wt:		kdaN		259		Last BOP Test:		02-Jun-02		POB:		126	
Last Casing Size:		508 mm		Set At:		1,902 m		MD		1,902 m		TVD		Shoe Test, kg/m ³ :		1309		Leakoff?		<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No															
Cum Rot Hrs on Casing:		107.5		Cum Rot Hrs on Casing Since Last Calliper:				Whipstock Set @:				KOP:																									
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD		TVD																									
Mud Co:		M-I		Type:		Synthetic-based		Sample From:		Pits		Wt, kg/m ³ :		1224		FV, s/qt:		180		PV, cP:		28		YP, Pa:		12		Gel, Pa:		19/20							
WL API, cc/30min:		HTHP:		7.2		FC(1/32) API/HTHP:		mm		2.4		Solids:		11.0		% Oil:		66.0		% Water:		23.0		SWR:		74 / 26		MBT, Kg/L:		0.00		pH:					
Psm:		2.0		ES, volts:		974		Carb:		Ct		41,000		Ca/Mg:		ASG:		4.03		Solids % HG/LG:				24hr Avg SOC %:		3.03											
Engr Service		2		Materials added last		24 hrs:		587 sx Barite		14 m ³ base oil		80 sx Lime																									
Orig Gas:		384		Max Gas:		1,360		Conn. Gas:		0		Trip Gas:		0		Trip Ct:		0		Remarks:																	
Bit No.		IADC		Size		Manufacturer		Serial Number		Type		Jets, mm		No.		Size		No.		TFA, mm ²		MD In		MD Out		TVD Out											
3		S222		432		STC-Geodiamond		JS-7947		S91VPX		9		13		0		0		1140		1,917 m															
meters		Hours		WOB, kdaN		RPM		I-Row		O-Row		DC		Loc		B		G		Char		?Pull		Cost/meter													
1459		107.50		4.4		220																		\$2,061.00													
Total Length of BHA:		322.97 m		BHA Description:		PDC Bit, Slick XP 5/8 motor, float sub, 429mm Stab, ARC 900, Powerpulse MWD, X/O, NMDC (w/ Totco ring)																															
429mm Stab, 3 - 241mm DC's, X/O, 3 - 210mm DC's, X/O, 3 - 168mm HWDP, Jar, 20 - 168mm HWDP																																					
Bit Cost \$		Row 1		139,000		Row 2		0		Rig \$ /hr		\$24,000		Trip Time, hr		12.0		DC Size, mm:		241		DP Size, mm:		168		Hours On Jars:		143.5		Hrs Since Last Inspection:		143.5					
Bit		Liner, mm		Stroke, meters		m ³ /STK		SPM		Press, KPa		liter/min		Jet Vel, m/sec		DP AV, m/min		DC AV, m/min		Bit HHP		BHP/m ²		Pump HHP													
3		165		0.3556		0.0221		237		27682		5249		76.5		42.00		52.00		468		1329.91		3248													
Survey MD		Angle		Direction		TVD		N/S Coordinate		E/W Coordinate		Vertical Section, m		DLS, °/30m																							
3,338.09 m		0.33		130.63		3,338.04 m		-4.00		4.29		-5.84 m		0.14																							
3,366.69 m		0.19		127.66		3,366.64 m		-4.09		4.39		-5.97 m		0.15																							
3,395.72 m		0.20		191.53		3,395.67 m		-4.17		4.42		-6.05 m		0.21																							
Hrs.		(From-To) hh:mm		Code		Operations Covering 24 Hours Ending at Midnight																															
4:00		00:00 - 4:00		2		Drill f/ 3074 m - 3125 m (avg ROP = 12.75 m/hr).																															
0:30		4:00 - 4:30		24 T		Work on SWACO duster equipment. Continue to circulate @ 55 stk / min and move pipe.																															
19:30		4:30 - 24:00		2		Drill f/ 3125 m - 3376 m (avg ROP = 12.9 m/hr).																															
Note: A Roustabout cut the pad of his thumb with a pocket knife while attempting to scribe a line on a wooden board. Cleaned, Examined and bandaged thumb. Expected to return to duty 11-June.																																					
P.O. @ 05:00 (08:00 GMT) 11-June: Drilling @ 3432 m (avg ROP = 11.2 m/hr)																																					
24 hr Summary:		Drill f/ 3074 m - 3376 m.																																			
Projected Operations:		Drill to hole section TD of 3515 m. POOH and R/U to log.																																			
Safety Issues:		No accidents, no incident. No pollution sightings reported. Held daily pre-tour & safety meetings.		Accidents:		1 first aid																															
Standby Vessel is the m/v Hebron Sea. Held well control drill @ 0400 hrs. Took 43 seconds.		Safety Rep:		Balasch																																	
Daily Mud Cost:		\$37,002		Daily Tangible Cost:		\$2,425		Daily Form Eval Cost:		\$80,770.00		Daily Drilling Cost:		\$1,083,838																							
Cum Mud Cost:		\$1,829,957		Cum Tangible Cost:		\$1,036,446		Cum Form Eval Cost:		\$560,542.50																											

Drilling Activity Report *(metric)*

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 3,515 m		TVD: 3,515 m		PBD: 22-May-02		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 41		DFS: 22		Spud Date: 22-May-02		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		P/U Weight: kdaN		S/O Wt: kdaN	
Last Casing Size: 508 mm		Set At: 1,902 m		MD		1,902 m		TVD	
Cum Rot Hrs on Casing: 119.0		Cum Rot Hrs on Casing Since Last Caliper: 119.0		Whipstock Set @:		KOP:		POB: 126	
Liner Size: 508 mm		Set At: 1,902 m		MD		1,902 m		TVD	
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		WL: 1236		FV: 189	
WL API: cc/30min		HTHP: 7.2		FC(1/32) API/HTHP: 2.4		Solids: 9.7		% Oil: 66.0	
Pam: 2.3		ES, volts: 903		Carb: 41,000		Ca/Mg: 4.20		ASG: 4.20	
Engr Service: 2		Materials added last 24 hrs: 150 sx Barite		24 hr Avg SOC %: No Cuttings lost 24 hr		24 hr Avg SOC %: No Cuttings lost 24 hr		24 hr Avg SOC %: No Cuttings lost 24 hr	
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:	
Remarks:		Remarks:		Remarks:		Remarks:		Remarks:	
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size	TFA, mm²	MD In	MD Out
3	S222	432	STC-Geodiamond	JS-7947	S91VPX	9 13 0 0	1140	1,917 m	3,515 m
meters		Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B
1598	119.00	4.4	220	2	1	CT	N	X	I
Total Length of BHA: 322.97 m		BHA Description: PDC Bit, Slick XP 5/6 motor, float sub, 429mm Stab, ARC 900, Powerpulse MWD, X/O, NMDC (w/ Totco ring)		429mm Stab, 3 - 241mm DC's, X/O, 3 - 210mm DC's, X/O, 3 - 168mm HWDP, Jar, 20 - 168mm HWDP		429mm Stab, 3 - 241mm DC's, X/O, 3 - 210mm DC's, X/O, 3 - 168mm HWDP, Jar, 20 - 168mm HWDP		429mm Stab, 3 - 241mm DC's, X/O, 3 - 210mm DC's, X/O, 3 - 168mm HWDP, Jar, 20 - 168mm HWDP	
Bit Cost \$	Row 1 139,000	Row 2 0	Rig \$ /hr \$24,000	Trip Time, hr 12.0	DC Size, mm: 241	DP Size, mm: 168	Hours On Jars: 155	Hrs Since Last Inspection: 155	
Bit	Liner, mm	Stroke, meters	m/STK	SPM	Press, KPa	lit/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
3	165	0.3556	0.0221	237	29992	5249	76.5	42.00	52.00
Survey MD		Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m	DLS, 730m	
Hrs.	(From - To) hh:mm	Code	Operations Covering 24 Hours Ending at Midnight						
0:30	00:00 - 0:30	1	Continue to circulate bottoms up @3515 m.						
3:30	0:30 - 4:00	5	Check flow. P.O.O.H. @ 3515 m - 3365 m. Slug pipe and continue to P.O.O.H. @ 3365 m inside csg shoe @ 1902 m. Check Flow.						
2:30	4:00 - 6:30	5	Continue to P.O.O.H. to B.H.A.						
2:00	6:30 - 8:30	5	P.O.O.H. w/ B.H.A.						
0:30	8:30 - 9:00	20 T	Repair rotating head on top drive						
1:30	9:00 - 10:30	5	Finish P.O.O.H. w/ B.H.A.						
0:30	10:30 - 11:00	25	R/U Schlumberger Wireline operations. Hold pre-job safety meeting w/ CCR, TSF and Schlumberger personnel						
1:30	11:00 - 12:30	25	MU quad-combo tools in rotary table.						
9:00	12:30 - 21:30	25	Log Run #1: Quad Combo						
2:30	21:30 - 0:00	25	L/D Quad Combo tools						
			P.O. @ 05:00 13-June: Running VSP Log						
24 hr Summary:		P.O.O.H. to log. Log Run #1: Quad Combo.							
Projected Operations:		Continue formation evaluation program utilizing VSP log and rotary sidewall core tools.							
Safety Issues:		No accidents, no incident. No pollution sightings reported. Held daily pre-tour & safety meetings.							
		Standby Vessel is the m/v Bona Vista.							
		Accidents: NAR							
		Safety Rep: HL Batasch							
Daily Mud Cost: \$9,083		Daily Tangible Cost: \$14,815		Daily Form Eval Cost: \$32,973.33		Daily Drilling Cost: \$688,636			
Cum Mud Cost: \$1,868,482		Cum Tangible Cost: \$1,103,137		Cum Form Eval Cost: \$626,489.16		Cum Drilling Cost: \$27,773,163			
Chevron %: 66.7						Total Appr: \$79,476,760			
Bulk Gel, m³: 28.3		Cement, m³: 318.9		Fuel, m³: 4,430.2		Bulk Wt, m³: 164.7		Rig Heave, m: 0.3	
Country: Canada		Rig: DW Millennium		UWT: 300H234320060450		Drilling Reps: Robicheaux / Curran / Bruton			
Field: Exploration		Lease: EL 2359		Well: Chevron et al Newburn H-23		Date: 12-Jun-02			

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth:	3,515 m	TVD:	3,515 m	PBD:		Proposed MD:	6,400 m	Proposed TVD:	6,315 m
DOL:	42	DFS:	23	Spud Date:	22-May-02	Daily meters:	0 m	Daily Rot Hrs:	0.0
HS Total Rot Hrs:	119.0	Torque:	Nm	Drag:	kdaN	Rot Wt:	kdaN	P/U Weight:	kdaN
S/O Wt:	kdaN	Last BOP Test:	02-Jun-02	PCB:	126				
Last Casing Size:	508 mm	Set At:	1,902 m	MD	1,902 m	TVD	Shoe Test, kg/m ³ :	1309	Leakoff?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No								
Cum Rot Hrs on Casing:	119.0	Cum Rot Hrs on Casing Since Last Caliper:		Whipstock Set @:		KOP:			
Liner Size:	Set At:	MD	TVD	Liner Top At:	MD	TVD			
Mud Co:	M-I	Type:	Synthetic-based	Sample From:	Pits	Wt, kg/m ³ :	1236	FV, a/qt:	192
PV, cP:	26	YP, Pa:	14	Gel, Pa:	17/22				
WL API, cc/30min:	HTHP:	7.2	FC(1/32) API/HTHP:	mm	2.4	Solids:	9.7	% Oil:	65.0
% Water:	25.3	SWR:	73 / 27	MBT, Kg/L:	0.00	pH:			
Psm:	2.3	ES, volts:	904	Carb:		Cl:	41,000	Ca/Mg:	ASG:
4.20	Solids % HGLG:		24hr Avg SOC %:	No Cuttings SSR 24 hr					
Engr Service:	2	Materials added last 24 hrs:							
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:	Remarks:
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size	TFA, mm ²	MD In	MD Out
						0	0		
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
		0							
Total Length of BHA:	BHA Description:								
Bit Cost \$	Row 1	0	Row 2	0	Rig \$ /hr	\$24,000	Trip Time, hr	DC Size, mm:	241
DP Size, mm:	168	Hours On Jars:	155	Hrs Since Last Inspection:	155				
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, KPa	liters/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
	165	0.3556	0.0221						
Survey MD	Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m	DLS, °/30m		
Hrs.	(From - To) hh:mm	Code	Operations Covering 24 Hours Ending at Midnight						
13:30	00:00 - 13:30	25	Continue Log run #2: VSP						
1:30	13:30 - 15:00	25	L/D VSP logging tools. P/U rotary sidewall coring tools.						
7:30	15:00 - 22:30	25	Log run #3: Rotary Sidewall cores. Recover 25 of 25 cores.						
1:30	22:30 - 24:00	25	R/D Schulmberger logging tools.						
Since midnight: RIH w/ WBRRT. Wash BOP and SSWH.									
P.O. @ 05:00 14-June: POOH w/ NBP									
24 hr Summary:	Log Run #2: VSP and Log Run #3: rotary sidewall cores.								
Projected Operations:	Retrieve NBP and run 13-5/8" casing								
Safety Issues:	No accidents, no incident. No pollution sightings reported. Held daily pre-tour & safety meetings.							Accidents:	NAR
	Standby Vessel is the m/v Bona Vista. Held well control drill. Took 50 seconds.							Safety Rep:	HL Balasch
Daily Mud Cost:	\$8,025	Daily Tangible Cost:	\$51,876	Daily Form Eval Cost:	\$29,523.33	Daily Drilling Cost:	\$609,559		
Cum Mud Cost:	\$1,867,424	Cum Tangible Cost:	\$1,140,198	Cum Form Eval Cost:	\$623,039.16	Cum Drilling Cost:	\$27,694,086		
Chevron %:	66.7					Total Appr:	\$79,476,760		
Bulk Gel, m ³ :	28.3	Cement, m ³ :	318.9	Fuel, m ³ :	4,389.9	Bulk Wt, m ³ :	164.7	Rig Heave, m	0.3
Pitch, deg	0.3	Roll, deg	0.3						
Country:	Canada	Rig:	DW Millennium	UWT:	300H234320060450	Drilling Reps:	Robichaux / Curran / Bruton		
Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	13-Jun-02		

Drilling Activity Report *(metric)*

Drilling Activity Report (metric)

Measured Depth: 3,515 m		TVD: 3,515 m		PBD: 22-May-02		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 27		DFS: 26		Spud Date: 22-May-02		Daily meters: 0 m		Daily Rot Hrs: 119	
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		P/U Weight: kdaN		S/O Wt: kdaN	
Last Casing Size: 346 mm		Set At: 3,502 m		MD: 3,502 m		TVD: 3,502 m		Shoe Test, kg/m ³ : 119	
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Calliper:		Whipstock Set @:		KOP:		Leakoff? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Liner Size:		Set At: MD		TVD		Liner Top At: MD		TVD	
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		Wt, kg/m ³ : 1236		FV, s/qt: 188	
WL API, cc/30min		HTHP: 7.2		FC(1/32) API/HTHP: mm		Solids: 9.4		% Oil: 65.0	
Psm: 2.3		ES, volts		Carb: 900		Cl: 41,000		CaMg: 4.20	
Engr Service: 2		Materials added last 24 hrs: 337 sx Barite		73 sx gel		SWR: 73 / 27		MBT, Kg/L: 0.00	
24hr Avg SOC %:		9.2 / 0.2		No Cuttings 188 24 hr					
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm	TFA, mm ²	MD In	MD Out
						No. Size No. Size			
						0 0			
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	8	G
			0						Char
									?Pull
									Cost/meter
Total Length of BHA:		BHA Description:							
Bit Cost \$		Row 1 0	Row 2 0	Rigs \$/hr	\$24,000	Trip Time, hr	DC Size, mm:	241	DP Size, mm:
Hours On Jars:		155		Hrs Since Last Inspection:		155			
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, KPa	liters/min	Jet Val, m/sec	DP AV, m/min	DC AV, m/min
	140	0.3556	0.0159						
Survey MD		Angle	Direction	TVD	N/S Coordinate	E/W Coordinate		Vertical Section, m	
								DLS, °/30m	
Hrs.	(From-To) hh:mm	Code	Operations Covering 24 Hours Ending at Midnight						
1:00	00:00 - 1:00	9	Finish mixing and pumping cement for 346 mm casing. Drop dart and displace w/ Halliburton. Dart landed @ 14 m ³ and sheared w/ 29.65 Mpa.						
			1330 sx Lead cement: (class G+3.3% pre-hydrated gel+10.0 L/tonne SCR100L+12.0 L/tonne Halad-344L) @ 1560 kg/cu m.						
			500 sx Tail cement: (class G+7.0 L/tonne SCR100L+14.0 L/tonne Halad-344L) @ 1896 kg/cu m						
			Final circulating pressure 10.2 MPa.						
2:00	1:00 - 3:00	9	Switch disp. to rig pump & pump 189.7 m ³ . Plug did not bump. Pump additional 1.5 m ³ (1/2 of shoe track) & shut down. Chk floats. Floats held.						
2:00	3:00 - 5:00	9	Set packoff and test same to 37.2 MPa						
1:00	5:00 - 6:00	9	Release running tool. Stand back cement stand.						
2:00	6:00 - 8:00	5	POOH & L/D running tool						
2:00	8:00 - 10:00	8	Change out Franks casing bails & L/D cement stand.						
3:00	10:00 - 13:00	5	MU ABB-VG wash sub, 3 stds HWDP and wear bushing on WBRRT and TIH to 998 m.						
0:30	13:00 - 13:30	8	Wash SSWH and set wear bushing.						
2:30	13:30 - 16:00	5	POOH to HWDP						
1:30	16:00 - 17:30	14	P/U BOP ITT and TIH						
2:30	17:30 - 20:00	14	Test 346 mm casing to 37.2 MPa w/ 1224 kg/m ³ mud for 15 minutes. Test BSR to 1.7 MPa and 37.2 Mpa.						
0:30	20:00 - 20:30	5	Finish TIH and set BOP ITT in SSWH.						
3:30	20:30 - 0:00	14	Test BOPE to CT & CNSOPB specs. Test 1.7 MPa low / 37.9 Mpa high on Rams, Annulars, chk and kill valves, choke manifold on yellow pod.						
			P.O. @ 06:00 17-June: POOH w/ BOP ITT						
24 hr Summary:		Finish cementing casing. Set wear bushing. Test BOPE							
Projected Operations:		Finish Testing surface BOPE. P/U BHA, TIH and drill out 13-3/8" casing.							
Safety Issues:		No accidents, no incident. No pollution sightings reported. Held daily pre-tour & safety meetings.							Accidents: NAR
		Standby Vessel is the m/v Hebron Sea. Held well control drill. Took 70 seconds. Held Fire and Abandon ship drills.							Safety Rep: HL Belasch
Daily Mud Cost: \$10,910		Daily Tangible Cost: \$993,395		Daily Form Eval Cost: \$16,945.00		Daily Drilling Cost: \$1,565,256			
Cum Mud Cost: \$2,042,723		Cum Tangible Cost: \$3,163,125		Cum Form Eval Cost: \$1,048,615.99		Cum Drilling Cost: \$33,015,906			
Chevron %: 66.7						Total Appr: \$79,476,760			
Bulk Gel, m ³	24.9	Cement, m ³	233.1	Fuel, m ³	4,280.6	Bulk Wt, m ³	129.2	Rig Heave, m	Pitch, deg
Country:	Canada	Rig:	DW Millennium	UWT:	300H234320060450	Drilling Reps:	Robichaux / Curran / Bruton		
Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	16-Jun-02		

Drilling Activity Report (metric)

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 3,620 m		TVD: 3,620 m		PBD: 3,620 m		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 29	DFS: 28	Spud Date: 22-May-02		Daily meters: 105 m		Daily Rot Hrs: 9.0		HS Total Rot Hrs: 9.0	
Torque: Nm 10847	Drag: kdaN 3.6	Rot Wt: kdaN 261	P/U Weight: kdaN 265	S/O Wt: kdaN 257	Last BOP Test: 17-Jun-02		POB: 122		
Last Casing Size: 346 mm		Set At: 3,502 m		MD 3,502 m		TVD		Shoe Test, kg/m ² : 1621	
Cum Rot Hrs on Casing: 15.5		Cum Rot Hrs on Casing Since Last Caliper: 15.5		Whpstock Set @:		KOP:			
Liner Size: Set At: MD		MD		TVD		Liner Top At: MD		TVD	
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		WL: 1236	FV: 153	PV: 23	YP: 14
WL API, cc/30min	HTHP: 7.2	FC (mm) API/HTHP: 2.4	Solids: 10.4	% Oil: 65.0	% Water: 24.6	SWR: 73 / 27	MBT: 0.00	pH: 3.39	Gel: 17/22
Psm: 2.8	ES, volts: 695	Carb: 41,000	Ca/Mg: 3.90	ASG: 8.6 / 1.8	24hr Avg SOC %:				
Engr Service: 2		Materials added last 24 hrs: 30 sx Pulpro							
Orig Gas: 62		Max Gas: 84		Conn. Gas: 0		Trip Gas: 0		Trip Ct: 0	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size	TFA, mm ²	MD In	MD Out
4	M422	311	Hycalog	200600	DS 163	1 14 5 13	794	3,515 m	
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
105	9.00	4.4	150						
Total Length of BHA: 289.91 m									
BHA Description: PDC Bit, Bias unit, Ext Sub, Control Collar, Non-Mag X/O, Stabilizer, Non-Mag Flex collar, Float sub,									
ARC 900, Powerpulse MWD, 308 mm ILS Stabilizer, Isonic, X/O, 3 - 210 mm DC, X/O, 3 - 168 mm HWDP, Jars, 20 - 168 mm HWDP (Bit to sensor: APWD 15.28m,									
Res 15.89m, GR 15.97m, D&I 23.52m, Sonic 33.17m)									
Bit Cost \$	Row 1 0	Row 2 0	Rigs \$/hr \$24,000	Trip Time, hr 12.0	DC Size, mm: 241	DP Size, mm: 168	Hours On Jars: 15.5	Hrs Since Last Inspection: 170.5	
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, KPa	lit/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
4	140	0.3556	0.0159	262	22753	4156	87.0	77.00	137.00
								484	2648.79
									2114
Survey MD		Angle	Direction	TVD	N/S Coordinate		E/W Coordinate		Vertical Section, m
3,541.51 m		0.04	266.4	3,541.46 m	-4.72		4.48		-6.51 m
3,569.90 m		0.09	83.1	3,569.85 m	-4.71		4.50		-6.44 m
3,598.55 m		0.03	110.2	3,598.50 m	-4.71		4.53		-6.46 m
Hrs.	(From-To) h:mm	Code	Operations Covering 24 Hours Ending at Midnight						
4:00	00:00 - 4:00	05	Continue to TIH @ 1711m - 3447m. Tag cement (17 m high, 1.3m ³ on top of float collar)						
1:30	4:00 - 5:30	01	Flush choke and kill lines. Take slow circulating pump rates and choke line frictions.						
1:00	5:30 - 6:30	15	Drill cement from 3447m - 3461m.						
2:00	6:30 - 8:30	15	Drill wiper plugs and float collar from 3461m - 3464m.						
2:00	8:30 - 10:30	15	Drill shoe track from 3464m - 3501m.						
1:00	10:30 - 11:30	15	Drill float shoe from 3501m - 3502m.						
0:30	11:30 - 12:00	15	Drill +/- 2 m cement below shoe, ream and wash rat hole from 3504m - 3515m. Work bit & stabilizers through shoe track, no problems.						
0:30	12:00 - 12:30	02	Drill 3 m new formation for FIT from 3515m to 3518m.						
1:00	12:30 - 13:30	17	Circulate hole clean & flush choke line prior to FIT.						
1:00	13:30 - 14:30	17	Rack 1 stand & pull bit back inside casing & pump up static mud weight from PWD (1263 kg/m ³).						
1:00	14:30 - 15:30	17	Perform FIT to 12.2 MPa w/1262 kg/m ³ DH mud weight. FIT=1620 kg/m ³ equiv downhole MW, no leak-off. Pumped 1.67 m ³ mud, bled back same.						
8:30	15:30 - 24:00	02	Drill 311mm hole from 3518m - 3620m, Avg ROP = 12.0 m/hr. Back ream & survey each connection.						
P.O. @ 05:00 19-June: Drilling 311mm hole @ 3730m, Avg ROP 21.6 m/hr.									
24 hr Summary:		TIH and drill out 346mm casing. Perform 1620 kg/m ³ EMW FIT. Drill from 3517m - 3620m							
Projected Operations:		Continue to Drill and Survey 311mm hole section to KOP @ 4200m.							
Safety Issues:		No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings.							Accidents: NAR
		Standby Vessel is the m/v Hebron Sea. Held pit drill, took 75 seconds. Function floor & crown savers. Held weight up drill.							Safety Rep: HL Balasch
Daily Mud Cost: \$8,239		Daily Tangible Cost: \$69,230		Daily Form Eval Cost: \$23,595.00		Daily Drilling Cost: \$789,068			
Cum Mud Cost: \$2,058,987		Cum Tangible Cost: \$2,310,256		Cum Form Eval Cost: \$1,133,614.27		Cum Drilling Cost: \$33,585,973			
Chevron %: 66.7						Total Appr: \$79,476,780			
Bulk Gel, m ³	24.9	Cement, m ³	233.1	Fuel, m ³	4,209.8	Bulk Wt, m ³	135.5	Rig Heave, m	Pitch, deg
Country: Canada		Rig: DW Millennium		UWT: 300H234320060450		Drilling Raps: Robichaux / Curran / Bruton		Roll, deg	0.4
Field: Exploration		Lease: EL 2359		Well: Chevron et al Newburn H-23		Date: 18-Jun-02			

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 4,042 m		TVD: 4,042 m		PBDT:		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 30		DFS: 29		Spud Date: 22-May-02		Daily meters: 422 m		Daily Rot Hrs: 21.5	
Torque: Nm 13558		Drag: kdaN 4.9		Rot Wt: kdaN 285		P/U Weight: kdaN 287		S/O Wt: kdaN 280	
Last Casing Size: 346 mm		Set At: 3,502 m		MD		3,502 m		TVD	
Cum Rot Hrs on Casing: 37.0		Cum Rot Hrs on Casing Since Last Caliper: 37.0		Whipstock Set @:		Shoe Test, kg/m ³ : 1621		Leakoff? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Liner Size: Set At: MD		MD		TVD		Liner Top At: MD		TVD	
Mud Co: M-J		Type: Synthetic-based		Sample From: Pits		Wt. kg/m ³ : 1261		FV, s/qt: 181	
WL API, cc/30min		HTHP: 7.2		FC(mm) API/HTHP: 2.4		Solids: 10.7		% Oil: 65.0	
Psm: 2.5		ES, volts: 1120		Carb: Ct: 41,000		Car/Mg: ASG: 4.20		Solids % HG/LG: 10.1 / 0.3	
Engr Service: 2		Materials added last 24 hrs: 263.1 cubic meters liquid mud		991 sx barite		4 drum Novamul		2 drum EMI-157	
20 pails Cleanup									
Orig Gas: 60		Max Gas: 130		Conn. Gas: 164		Trip Gas: 0		Trip Ct: 0	
Remarks: Connection 164 / Background 108									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size No. Size	TFA, mm ²	MD In	MD Out
4	M422	311	Hycalog	200600	DS 163	1 14 5 13	794	3,515 m	
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
527	30.50	6.2	150						
Cost/meter									
\$2,233.40									
Total Length of BHA: 289.91 m									
BHA Description: PDC Bit, Bias unit, Ext Sub, Control Collar, Non-Mag X/O, Stabilizer, Non-Mag Flex collar, Float sub,									
ARC 900, Powerpulse MWD, 308 mm ILS Stabilizer, Isonic, X/O, 3 - 210 mm DC, X/O, 3 - 168 mm HWDP, Jars, 20 - 168 mm HWDP (Bit to sensor: APWD 15.28m,									
Res 15.89m, GR 15.97m, D&I 23.52m, Sonic 33.17m)									
Bit Cost \$	Row 1 109,000	Row 2 0	Rgs /hr \$24,000	Trip Time, hr 14.0	DC Size, mm: 241	DP Size, mm: 168	Hours On Jars: 15.5	Hrs Since Last Inspection: 170.5	
Bit	Linear, mm	Stroke, meters	m ³ /STK	SPM	Press, KPa	liter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
4	140	0.3556	0.0159	264	24476	4188	87.7	78.00	138.00
Bit HHP 505									
BHP/PMm ² 2762.53									
Pump HHP 2291									
Survey MD	Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m	DLS, *30m		
3,942.74 m	0.10	265.1	3,942.69 m	-4.83	4.40	-6.43 m	0.06		
3,970.73 m	0.12	237.1	3,970.68 m	-4.84	4.35	-6.40 m	0.06		
3,999.94 m	0.10	311.4	3,999.89 m	-4.84	4.30	-6.36 m	0.14		
Hrs.	(From - To) hh:mm	Code	Operations Covering 24 Hours Ending at Midnight						
12:00	00:00 - 12:00	02	Drill from 3620m - 3860m (Avg ROP=20.0 m/hr). Survey and back ream each connection.						
2:30	12:00 - 14:30	01	Circulate & raise mud weight from 1235 kg/m ³ to 1260 kg/m ³ .						
9:30	14:30 - 0:00	02	Drill from 3860m - 4042m (Avg ROP=19.1 m/hr). Survey and back ream each connection.						
P.O. @ 05:00 20-June: Ran wiper trip at 4052m to 346mm shoe. Circulate out trip gas & increase mud weight to 1310 kg/m ³ prior to drilling ahead.									
24 hr Summary: Drilled 311mm hole from 3620 - 4042m. Increased mud weight from 1235 kg/m ³ to 1260 kg/m ³ @ 3860m.									
Projected Operations: Drill 311mm hole to 4052m. Circulate hole clean & wiper trip to 346mm casing shoe. Circulate out trip gas & increase mud weight to 1310 kg/m ³ prior to drilling ahead.									
Safety Issues: No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings. Accidents: NAR									
Standby Vessel is the m/v Hebron Sea. Held pit drill, took 73 seconds. Function floor & crown savers. Safety Rep: HL Balasch									
Daily Mud Cost: \$317,459		Daily Tangible Cost: \$2,425		Daily Form Eval Cost: \$23,595.00		Daily Drilling Cost: \$925,569			
Cum Mud Cost: \$2,376,446		Cum Tangible Cost: \$2,283,376		Cum Form Eval Cost: \$1,157,209.27		Cum Drilling Cost: \$34,482,237			
Chevron %: 66.7						Total Appr: \$79,476,760			
Bulk Gel, m ³	24.9	Cement, m ³	230.1	Fuel, m ³	4,171.8	Bulk Wt, m ³	114.7	Rig Heave, m	0.3
Country: Canada	Rig: DW Millennium	UWI: 300H234320060450	Drilling Reps: Robicheaux / Curran / Bruton						
Field: Exploration	Lease: EL 2359	Well: Chevron et al Newburn H-23	Date: 19-Jun-02						

Drilling Activity Report *(metric)*

Measured Depth:		4,309 m		TVD:		4,309 m		PBTD:		Proposed MD:		8,400 m		Proposed TVD:		8,315 m																			
DOL:		31		DFS:		30		Spud Date:		22-May-02		Daily meters:		267 m		Daily Rot Hrs:		18.0		HS Total Rot Hrs:		46.5													
Torque:		Nm		Drag:		kdaN		3.6		Rot Wt:		kdaN		290		P/U Weight:		kdaN		292		S/O Wt:		kdaN		287		Last BOP Test:		17-Jun-02		POB:		116	
Last Casing Size:		346 mm		Set At:		3,502 m		MD		3,502 m		TVD		Shoe Test, kg/m ³ :		1621		Leakoff?		<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No													
Cum Rot Hrs on Casing:		53.0		Cum Rot Hrs on Casing Since Last Caliper:		53.0		Whipstock Set @:		KOP:																									
Liner Size:		Set At		MD		TVD		Liner Top At:		MD		TVD																							
Mud Co:		M-I		Type:		Synthetic-based		Sample From:		Wt, kg/m ³ :		1309		FV, s/qt:		184		PV, cP:		19		YP, Pa:		20		Gel, Pa:		20/24							
WL API, cc/30min:		HTHP:		FC(mm) API/HTHP:		Solids:		% Oil:		63.0		% Water:		SWR:		73 / 27		MBT, Kg/L:		0.00		pH:													
Psm:		3.4		ES, volts:		995		Carb:		Ct:		50,000		Ca/Mg:		ASG:		4.00		Solids % HG/LG:		10.7 / 1.3		24hr Avg SOC %:		5.07									
Engr Service:		2		Materials added last 24 hrs:		17.3 cubic meters base oil		1026 sx barite		80 sx lime		80 sx calcium chloride																							
8 drum Novamul		8 drum EMI157		Orig Gas:		1.00		Max Gas:		1.28		Conn. Gas:		-		Trip Gas:		0.42		Trip Ct:		Remarks:													
Bit No.		IADC		Size		Manufacturer		Serial Number		Type		Jets, mm No. Size No. Size		TFA, mm ²		MD In		MD Out		TVD Out															
4		M422		311		Hycalog		200600		RS 163		1 14 5 13		794		3,515 m																			
meters		Hours		WOB, kdaN		RPM		I-Row		O-Row		DC		Loc		B		G		Char		?Pull		Cost/meter											
794		46.50		6.2		150																		\$1,965.99											
Total Length of BHA:		289.91 m		BHA Description:		PDC Bit, Bias unit, Ext Sub, Control Collar, Non-Mag X/O, Stabilizer, Non-Mag Flex collar, Float sub,																													
ARC 900, Powerpulse MWD, 308 mm ILS Stabilizer, Isonic, X/O, 3 - 210 mm DC, X/O, 3 - 168 mm HWDP, Jars, 20 - 168 mm HWDP (Bit to sensor: APWD 15.28m,																																			
Res 15.89m, GR 15.97m, D&I 23.52m, Sonic 33.17m)																																			
Bit Cost \$		Row 1		109,000		Row 2		0		Rigs \$/hr		\$24,000		Trip Time/hr		14.0		DC Size, mm:		241		DP Size, mm:		168		Hours On Jars:		31.5		Hrs Since Last Inspection:		186.5			
Bit		Liner, mm		Stroke, meters		m ³ /STK		SPM		Press, KPa		liter/min		Jet Vel, m/sec		DP AV, m/min		DC AV, m/min		Bit HHP		SHHP/mm ²		Pump HHP											
4		140		0.3556		0.0159		262		27303		4156		87.0		77.00		137.00		512		2803.08		2537											
Survey MD		Angle		Direction		TVD		N/S Coordinate		E/W Coordinate		Vertical Section, m		DLS, °30m																					
4,198.98 m		3.36		316.8		4,198.87 m		-2.85		2.52		-3.73 m		1.06																					
4,227.15 m		4.37		316.3		4,226.98 m		-1.47		1.21		-1.86 m																							

Drilling Activity Report (metric)

Accidents:	NAR
Safety Rep:	AJ Gilbert

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 4,418 m		TVD: 4,418 m		PBD: 22-May-02		Proposed MD: 6,400 m		Proposed TVD: 6,315 m		
DOL: 33	DFS: 32	Spud Date: 22-May-02		Daily meters: 52 m		Daily Rot Hrs: 5.5		HS Total Rot Hrs: 56.5		
Torque: Nm 13558	Drag: kdaN 2.2	Rot Wt: kdaN 302	P/U Weight: kdaN 305	S/O Wt: kdaN 300	Last BOP Test: 17-Jun-02		POB: 116			
Last Casing Size: 346 mm		Set At: 3,502 m		MD 3,502 m		TVD		Shoe Test, kg/m ³ : 1621		
Cum Rot Hrs on Casing: 63.0		Cum Rot Hrs on Casing Since Last Caliper: 63.0		Whipstock Set @:		KOP: 4,110 m				
Liner Size: Set At: MD		TVD		Liner Top At: MD		TVD				
Mud Co: M-I	Type: Synthetic-based	Sample From: Pits		WT, kg/m ³ : 1453	FV, a/gl: 156	PV, cP: 25	YP, Pa: 21	Gel, Pa: 20/24		
WL API, cc/30min	HTHP: 7.2	FC(mm) API/HTHP: mm 2.4	Solids: 20.0	% Oil: 59.0	% Water: 21.0	SWR: 74 / 26	MBT, Kg/L: 0.00	pH: 4.25		
Psm: 3.1	ES, volts: 860	Carb: Ct: 42,000	Ca/Mg: ASG: 4.00	Solids % HG/LG: 16.5 / 1.9		24hr Avg SOC %:		4.25		
Engr Service: 2	Materials added last 24 hrs: 106.8 tonne barite		14.1 m ³ base oil		120 sx Lime					
Orig Gas: 1.09	Max Gas: 12.61	Conn. Gas: -	Trp Gas: 12.61	Trp Ct:	Remarks:					
Bit No. 4	IADC M422	Size 311	Manufacturer Hycalog	Serial Number 200600	Type RS 163	Jets, mm No. Size 1 14 5 13	TFA, mm ² 794	MD In 3,515 m	MD Out	TVD Out
meters 903	Hours 56.50	WOB, kdaN 6.2	RPM 150	I-Row	O-Row	DC	Loc 8	G	Char	?Pull
										Cost/meter \$1,994.46
Total Length of BHA: 289.91 m BHA Description: PDC Bit, Bias unit, Ext Sub, Control Collar, Non-Mag X/O, Stabilizer, Non-Mag Flex collar, Float sub,										
ARC 900, Powerpulse MWD, 308 mm ILS Stabilizer, Isonic, X/O, 3 - 210 mm DC, X/O, 3 - 168 mm HWDP, Jars, 20 - 168 mm HWDP (Bit to sensor: APWD 15.28m,										
Res 15.89m, GR 15.97m, D&I 23.52m, Sonic 33.17m)										
Bit Cost \$ 109,000	Row 1 0	Row 2 0	Rigs \$ /hr \$24,000	Trip Time, hr 14.0	DC Size, mm: 241	DP Size, mm: 168	Hours On Jars: 41.5	Hrs Since Last Inspection: 196.5		
Bit 4	Liner, mm 140	Stroke, meters 0.3556	m ³ /STK 0.0159	SPM 234	Press, KPa 24821	Iter/min 3712	Jet Vel, m/sec 77.7	DP AV, m/min 69.00	DC AV, m/min 122.00	
								Bit HHP 405	BHP/m ² 2216.86	
									Pump HHP 2059	
Survey MD		Angle	Direction	TVD	N/S Coordinate		E/W Coordinate		Vertical Section, m	
4,313.09 m		5.98	306.6	4,312.56 m	3.46		-4.83		5.93 m	
4,343.63 m		6.48	309	4,342.92 m	5.50		-7.44		9.22 m	
4,371.21 m		7.35	312.8	4,370.30 m	7.68		-9.94		12.49 m	
DLS, °/30m 0.45										
0.55										
1.07										
Hrs. (From - To) hh:mm	Code	Operations Covering 24 Hours Ending at Midnight								
0:30 00:00 - 0:30	01 T	continue to Circulate and increase MW to 1476 kg/m ³ . Flush choke and kill lines. Simulate connection. No flow								
3:00 0:30 - 3:30	01 T	Circulate bottoms up								
1:00 3:30 - 4:30	05 T	Make short trip. POOH w/ 3 stds. Hole not taking proper fill. TIH. No fill on bottom.								
1:30 4:30 - 6:00	01 T	Circulate bottoms up								
1:00 6:00 - 7:00	01 T	Continue to circulate bottoms up. Flow check half way to SSWH and at SSWH. No flow.								
2:30 7:00 - 9:30	01 T	Circulate and increase MW to 1500 kg/m ³ . Flush choke and kill lines.								
1:00 9:30 - 10:30	01 T	Record slow circulating rate pressure and choke / kill line friction pressures.								
0:30 10:30 - 11:00	01 T	Make connection. Circulate to down link set up data to Anadriil Powerdrive.								
1:00 11:00 - 12:00	02	Drill at controlled rate from 4366 m - 4376 m (avg ROP=10 m/hr).								
0:30 12:00 - 12:30	01 T	Circulate 10 minutes. Simulate connection								
2:30 12:30 - 15:00	02	Drill at controlled rate from 4376m - 4395m (avg ROP=7.6 m/hr) ensuring that there is only one circulating connection in the hole at one time.								
1:00 15:00 - 16:00	01 T	Circulate connection out.								
1:30 16:00 - 17:30	02	Drill at controlled rate // 4395m - 4411m (avg ROP=10.7 m/hr).								
0:30 17:30 - 18:00	01 T	Circulate 10 minutes. Simulate connection								
4:30 18:00 - 22:30	24 T	Attempt to record MWD survey. No success. Re-program MWD to change downhole tool attenuation. Downlink Powerdrive tool.								
0:30 22:30 - 23:00	02	Drill at controlled rate // 4411m - 4418m (avg ROP=14 m/hr).								
1:00 23:00 - 24:00	01 T	Circulate 10 minutes. Simulate connection. Circulate bottoms up.								
Since midnite: finish CBU. Increase MW to 1524 kg/m ³ . Make short trip.										
P.O. @ 05:00 23-June: POOH on short trip										
24 hr Summary:		Circulate and increase MW // 1476 kg/m ³ to 1500 kg/m ³ . Control drill // 4366m - 4411m. Re-program MWD and drill // 4411m - 4418m.								
Projected Operations:		Make short trip to casing shoe. POOH to log.								
Safety Issues:		No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings. Standby Vessel is the m/v Hebron Sea. Held pit drill, took 65 seconds. Function floor & crown savers.								
Accidents:		NAR								
Safety Rep:		AJ Gilbert								
Daily Mud Cost: \$51,053		Daily Tangible Cost: \$2,425		Daily Form Eval Cost: \$33,509.00		Daily Drilling Cost: \$655,507				
Cum Mud Cost: \$2,525,707		Cum Tangible Cost: \$2,290,651		Cum Form Eval Cost: \$1,237,908.27		Cum Drilling Cost: \$36,507,828				
Chevron %: 66.7						Total Appr: \$79,476,760				
Bulk Gel, m ³ 24.9	Cement, m ³ 87.1	Fuel, m ³ 4,058.8	Bulk Wt, m ³ 70.4	Rig Heave, m 0.2	Pitch, deg 0.2	Roll, deg 0.3				
Country: Canada	Rig: DW Millennium	UWT: 300H234320060450	Drilling Reps: Robichaux / Ruitenschild / Bruton							
Field: Exploration	Lease: EL 2359	Well: Chevron et al Newburn H-23	Date: 22-Jun-02							

Measured Depth: 4,418 m		TVD: 4,418 m		PBD: 22-May-02		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 34		DFS: 33		Spud Date: 22-May-02		Daily meters: 17-Jun-02		Daily Rot Hrs: 56.5	
Torque: 13558 Nm		Drag: 2.2 kdaN		Rot Wt: 302 kdaN		P/U Weight: 305 kdaN		S/O Wt: 300 kdaN	
Last Casing Size: 346 mm		Set At: 3,502 m		MD: 3,502 m		TVD: 3,502 m		Shoe Test, kg/m ³ : 1621	
Cum Rot Hrs on Casing: 63.0		Cum Rot Hrs on Casing Since Last Casing: 63.0		Whipstock Set @: 63.0		KOP: 4,110 m		Leakoff? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Liner Size: 63.0		Set At: MD		TVD		Liner Top At: MD		TVD	
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		Wt, kg/m ³ : 1525		FV, s/qt: 190	
WL API, cc/30min: 7.2		HTHP: FC(mm) API/HTHP: 2.4		Solids: 18.4		% Oil: 59.0		% Water: 22.6	
Psm: 3.3		ES, volts: 880		Carb: 41,000		Ca/Mg: 4.20		ASG: 18 / 0.4	
Engr Service: 2		Materials added last 24 hrs: 1100 sx barite							
Orig Gas: 1.65		Max Gas: 8.52		Conn. Gas: 1.82		Trip Gas: 8.52		Trip Ct: 794	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size	TFA, mm ²	MD In	MD Out
4	M422	311	Hycalog	200600	RS 163	1 14 5 13	794	3,515 m	
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
903	56.50	6.2	150						
Total Length of BHA: 289.91 m		BHA Description: PDC Bit, Bias unit, Ext Sub, Control Collar, Non-Mag X/O, Stabilizer, Non-Mag Flex collar, Float sub,							
ARC 900, Powerpulse MWD, 308 mm ILS Stabilizer, Isonic, X/O, 3 - 210 mm DC, X/O, 3 - 168 mm HWDP, Jars, 20 - 168 mm HWDP (Bit to sensor: APWD 15.28m,									
Res 15.89m, GR 15.97m, D&I 23.52m, Sonic 33.17m)									
Bit Cost \$	Row 1 109,000	Row 2 0	Rig \$ /hr 24,000	Trip Time, hr 14.0	DC Size, mm: 241	DP Size, mm: 168	Hours On Jars: 41.5	Hrs Since Last Inspection: 196.5	
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, KPa	liters/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
4	140	0.3556	0.0159	150	12411	2380	49.8	44.00	78.00
Survey MD		Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m	DLS, 730m	
Hrs.		(From - To) hh:mm	Code	Operations Covering 24 Hours Ending at Midnight					
1:00	00:00 - 1:00	01	Continue to circulate bottoms up						
3:00	1:00 - 4:00	01 T	Circulate and increase MW to 1524 kg/m ³ . Flush choke and kill lines						
2:00	4:00 - 6:00	05	Pump slug and POOH // 4418m to 4226m. Hole not taking proper fill. TIH.						
3:00	6:00 - 9:00	01 T	Circulate bottoms up. Check flow halfway to SSWH and at SSWH.						
2:00	9:00 - 11:00	05	POOH // 4418m to 4111m. Hole not taking proper fill. TIH						
3:00	11:00 - 14:00	01 T	Circulate bottoms up. Check flow halfway to SSWH and at SSWH.						
6:00	14:00 - 20:00	04 T	Back ream out of hole // 4418m to casing shoe @ 3502m.						
0:30	20:00 - 20:30	14	Function test BOP on blue pod from driller's console						
0:30	20:30 - 21:00	05	POOH // 3502m to 3225m. Hole taking proper fill.						
3:00	21:00 - 24:00	05	TIH to 4418m. No fill on bottom.						
			Note: Held fire and abandon ship drill						
			Since midnite: Circulate bottoms up. Back ream OOH.						
			P.O. @ 05:00 24-June: Back reaming out of hole to log.						
24 hr Summary:		Attempt to make short trip prior to log. Hole not taking proper fill. Back ream out of open hole. Function test BOP. TIH. Circulate blms up.							
Projected Operations:		POOH and log well.							
Safety Issues:		No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings. Standby Vessel is the m/v Hebron Sea. Held pit drill, took 60 seconds. Function floor & crown savers.						Accidents: NAR Safety Rep: AJ Gilbert	
Daily Mud Cost: \$16,955		Daily Tangible Cost: \$3,230		Daily Form Eval Cost: \$33,509.00		Daily Drilling Cost: \$622,215			
Cum Mud Cost: \$2,542,662		Cum Tangible Cost: \$2,293,881		Cum Form Eval Cost: \$1,271,417.27		Cum Drilling Cost: \$37,130,043			
Chevron %: 66.7						Total Appr: \$79,476,760			
Bulk Gel, m ³ : 24.9		Cement, m ³ : 87.1		Fuel, m ³ : 4,025.4		Bulk Wt, m ³ : 45.4		Rig Heave, m: 0.3	
Country: Canada		Rig: DW Millennium		UWT: 300H234320060450		Drilling Reqs: Robichaux / Ruitenschild / Bruton		Pitch, deg: 0.3	
Field: Exploration		Lease: EL 2359		Well: Chevron et al Newburn H-23		Date: 23-Jun-02		Roll, deg: 0.4	

Drilling Activity Report (metric)

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Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth		4,418 m		TVD		4,417 m		PSTD:		Proposed MD		6,400 m		Proposed TVD:		6,315 m	
DOL		37		DFS		36		Spud Date		22-May-02		Daily meters:		Daily Rot Hrs:		HS Total Rot Hrs: 56.5	
Torque Nm		Drag: kdaN		Rot Wt: kdaN		PU Weight: kdaN		S/O Wt: kdaN		Last BOP Test:		17-Jun-02		POB:		124	
Last Casing Size:		346 mm		Set At:		3,502 m		MD		3,502 m		TVD		Shoe Test, kg/m ³ :		1621	
Cum Rot Hrs on Casing:		63.0		Cum Rot Hrs on Casing Since Last Caliper:		63.0		Whipstock Set @:				KOP:		4,110 m			
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD		TVD					
Mud Co:		M-1		Type:		Synthetic-based		Sample From:		Pits		WT, kg/m ³ :		1525		FV, s/qt: 122	
WT API, cc/30min		HTHP:		FC(mm) API/HTHP:		2.4		Solids:		% Oil:		81.0		% Water:		20.0	
Psm:		ES, volts:		Cate:		CI:		CaMg:		ASG:		4.20		Solids % HGLG:		17 / 0.4	
Engr Service:		2		Materials added last 24 hrs:		48 m ³ of IA 35 base oil		120 ea 22.5kg bag CaCl ₂									
Orig Gas:		Max Gas:		42.50		Conn. Gas:		Trip Gas:		Trip Cl:		Remarks:		Max gas after wiper trip - 54 hrs without pumping.			
Bit No		IADC		Size		Manufacturer		Serial Number		Type		Jets, mm		TFA, mm ²		MD In	
4 RR1		M422		311		Hycalog		200600		RS 163		1 14 5 13		794		4,418 m	
																4,418 m	
meters		Hours		WOB, kdaN		RPM		I-Row		O-Row		DC		Loc		B	
0				0													
Total Length of BHA:		255.07 m		BHA Description:		RS 163 Bit / Bit sub w/ float / 3 x 209mm DC's / 3 x 168mm HWDP / Jars / 20 x 168mm HWDP											
Bit Cost \$		Row 1		108,000		Row 2		0		Rig \$ / hr		\$24,000		Trip Time, hr		14.0	
DC Size, mm:		241		DP Size, mm:		168		Hours On Jars:		41.5		Hrs Since Last Inspection:		198.5			
Bit		Liner, mm		Strokes, meters		m ³ /STK		SPM		Press, KPa		Iters/min		Jet Vel, m/sec		DP AV, m/min	
4 RR1		140		0.3556		0.0159		116		11859		1840		36.5		34.00	
																44.00	
Survey MD		Angle		Direction		TVD		N/S Coordinate		E/W Coordinate		Vertical Section, m		DLS, °/30m			
Hrs.		(From-To) hr:mm		Code		Operations Covering 24 Hours Ending at Midnight											
2:30		00:00 - 2:30		25		Continue logging run #3 - OBM / GR. L/D tools and R/D logging equipment.											
17:00		2:30 - 19:30		05		MU 311mm BHA and RH for wiper trip. Safety wash last 10 slots w/ flowcheck each connection - well static. No fill.											
2:00		19:30 - 21:30		01		Circulate and condition mud until MW in = MW out. Adding 4% base oil for mud treatment. Pump 8 m ³ slug of 1920 kg/m ³ mud. Displace slug and spot on bottom while backreaming first stand. 1920 kg/m ³ mud in place from 4386m to 4418m. Max gas on BU = 42.5%.											
2:30		21:30 - 0:00		04		Backream from 4386m to 3900m. Hole condition good. PU wt 316 kdaN. PU wt rotating 307 kdaN.											
						Operations at 0500 hrs 6/27: Continue POOH.											
24 hr Summary:						Complete logging run #3. Conduct wiper trip.											
Projected Operations:						Complete wiper trip. RAU and conduct logging run #4. RAU to run casing.											
Safety Issues:						No accidents, no incidents. One first aid - Casing hand received eye wash from medic to remove debris from eyes. ROV inspect riser & BOP. No pollution sightings reported. Held daily pre-tour & safety meetings. Standby Vessel is the m/v Habron Sea. Function floor & crown savers.										Accidents: First Aid	
																Safety Rep: AJ Gilbert	
Daily Mud Cost:		\$92,183		Daily Tangible Cost:		\$38,989		Daily Form Eval Cost:		\$44,657.00		Daily Drilling Cost:		\$719,894			
Cum Mud Cost:		\$2,661,550		Cum Tangible Cost:		\$2,367,708		Cum Form Eval Cost:		\$1,388,140.27		Cum Drilling Cost:		\$38,085,170			
Chevron %:		66.7										Total Appr:		\$79,476,780			
Bulk Gel, m ³ :		24.9		Cement, m ³ :		221.6		Fuel, m ³ :		3,910.8		Bulk Wt, m ³ :		205.4		Rig Heave, m	
Country:		Canada		Rig:		DW Millennium		UWI:		300H234320080450		Drilling Reps:		Robichaux / Ruttenchild / Alworth			
Field:		Exploration		Lease:		EL 2359		Well:		Chevron et al Newburn H-23		Date:		26-Jun-02			

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 4,418 m		TVD: 4,417 m		PBD:		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 38		DFS: 37		Spud Date: 22-May-02		Daily meters:		Daily Rot Hrs:	
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		P/U Weight: kdaN		S/O Wt: kdaN	
Last Casing Size: 346 mm		Set At: 3,502 m		MD: 3,502 m		TVD:		Shoe Test, kg/m ² : 1621	
Cum Rot Hrs on Casing: 63.0		Cum Rot Hrs on Casing Since Last Calliper: 63.0		Whipstock Set @:		KOP: 4,110 m		HS Total Rot Hrs: 56.5	
Liner Size:		Set At:		MD:		TVD:		Liner Top At:	
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		Wt, kg/m ³ : 1525		FV, g/qt: 158	
WL API, cc/30m:		HTHP: 6.8		FC(mm) API/HTHP: 2.4		Solids: 19.5		% Oil: ###	
Psm: 2.4		ES, volts: 792		Carb:		Cl: 40,000		Ca/Mg:	
Engr Service: 2		Materials added last 24 hrs:		ASG: 4.10		Solids % HGLG: 17.2/0.7		24hr Avg SOC %: No cuttings last 24 hrs	
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Remarks:	
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm	TFA, mm ²	MD In	MD Out
4 RR1	M422	311	Hycalog	200600	RS 163	1 14 5 13	794	4,418 m	4,418 m
meters		Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B
0			0						
Total Length of BHA: 255.07 m		BHA Description: RS 163 Bit / Bit sub w/ float / 3 x 209mm DC's / xo / 3 x 168mm HWDP / Jars /							
20 x 168mm HWDP									
Bit Cost \$	Row 1	109,000	Row 2	0	Rig \$/hr	24,000	Trip Time, hr	14.0	DC Size, mm
Bit	Liner, mm	Stroke, meters	m ² /STK	SPM	Press, KPa	liters/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
4 RR1	140	0.3556	0.0159	155	10687	2459	51.5	46.00	59.00
Survey MD		Angle	Direction	TVD	N/S Coordinate		E/W Coordinate		Vertical Section, m
									DLS, °/30m
Hrs.	(From -To) m/min	Code	Operations Covering 24 Hours Ending at Midnight						
2:30	00:00 - 2:30	04	Continue backreaming and pumping out of the hole from 3900m to csg shoe @ 3500m. MW in = MW out.						
0:30	2:30 - 3:00	14	Function test BOPE from bridge console. Flow check - OK.						
7:00	3:00 - 10:00	05	Pump slug and POOH. Flow checked prior to pulling the BHA through the BOP stack - OK. R/B BHA in derrick.						
0:30	10:00 - 10:30	07	R/B cmt stand for 251mm casing.						
10:30	10:30 - 21:00	26	M/U and RIH w/ logging run #4. Conduct logging run #4 - SWC, cutting 24 side wall cores at required depths. POOH w/ logging tools and verify core recovery (100%). R/D logging equipment.						
2:30	21:00 - 23:30	05	M/U WBRRT w/ 1 std of 127mm DP and teflon jet sub below WBRRT. RIH on 168mm landing string to top of BOP.						
0:30	23:30 - 24:00	14	Wash down across WH. Latched WB w/ 4kdaN down. Pulled WB free w/ 45kdaN overpull. Wash wellhead area again while pulling WBRRT clear of BOP's.						
Present Operations @ 0500hrs 6/28: R/U to run 251mm casing.									
24 hr Summary: Complete wiper trip. Function test BOPE from bridge console. Conduct logging run #4 - SWC. Retrieve the WB.									
Projected Operations: POOH w/ 346mm WB. R/U and run 251mm casing.									
Safety Issues: No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings. ROV inspect rear & BOP. Standby Vessel is the m/vi Hebron Sea.									
Accidents: NAR									
Safety Rep: AJ Gilbert									
Daily Mud Cost: \$7,600		Daily Tangible Cost: \$25,186		Daily Form Eval Cost: \$33,357		Daily Drilling Cost: \$589,044			
Cum Mud Cost: \$2,669,150		Cum Tangible Cost: \$2,392,894		Cum Form Eval Cost: \$1,422,497		Cum Drilling Cost: \$39,684,215			
Chevron %: 66.7						Total Appr: \$79,476,760			
Bulk Gel, m ³ : 24.9	Cement, m ³ : 221.6	Fuel, m ³ : 3,880.7	Bulk Wt, m ³ : 188.3	Rig Heave, m: 0.5	Pitch, deg: 0.4	Roll, deg: 0.6			
Country: Canada		Rig: DW Millennium		UWI: 300H234320060450		Drilling Raps: Robicheaux / Ruitenschild / Alworth			
Field: Exploration		Lease: EL 2359		Well: Chevron et al Newburn H-23		Date: 27-Jun-02			

Drilling Activity Report (metric)

aux / Ruitenschild / Alworth

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 4,418 m		TVD: 4,417 m		PSTD:		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 40		DFS: 39		Spud Date: 22-May-02		Daily meters:		Daily Rot Hrs:	
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		PU Weight: kdaN		SO Wt: kdaN	
Last Casing Size: 346 mm		Set At: 3,502 m		MD: 3,502 m		TVD: 3,502 m		Shoe Test, kg/m ² : 1621	
Cum Rot Hrs on Casing: 63.0		Cum Rot Hrs on Casing Since Last Caliper: 63.0		Whipstock Set @:		KOP: 4,110 m		POB: 124	
Liner Size: Set At: MD		TVD		Liner Top At: MD		TVD			
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		Vt, kg/m ³ : 1525		FV, s/qt: 147	
IWL API, cc/30mi		HTHP: 6.8		FC(mm) API/HTHP: 2.4		Solids: 20.0		% Synt: 60.0	
Parr: 2.6		ES, volts		Carb: 679		Cl: 39,000		Ca/Mg: 4.20	
Engr Service: 2		Materials added last 24 hrs: 40 ea 45.34kg bag barite							
Orig Gas:		Max Gas: 57.70		Conn. Gas:		Trip Gas: 57.70		Trip Ct:	
Remarks:		Trip gas while circ on btm.							
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size	TFA, mm ²	MD In	MD Out
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
Total Length of BHA:		BHA Description:							
Bit Cost \$	Row 1	Row 2	Rig \$/hr	Trip Time/hr	DC Size, mm	DP Size, mm	Hours On Jars	Hrs Since Last Inspection:	
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, kPa	liters/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
								Bit HHP	BHP/m ²
									Pump HHP
Survey MD		Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m		DLS, °/30m
Hrs.	(From -To) hr:mm	Code	Operations Covering 24 Hours Ending at Midnight						
11:30	00:00 - 11:30	08	Cont to RIH w/ 251mm csg str. Fill every jt, brk circ every 30jts. Monitor full mud returns.						
1:30	11:30 - 13:00	08	P/U & M/U Vetco MS700 Fullbore 251mm casing hanger. R/D Franks csg equipment, R/U 453.5 tonne DP elevators.						
5:30	13:00 - 18:30	08	Cont to RIH w/ 251mm csg str on 168mm DP landing string. Final S/O wt = 436kdaN. Flush hanger w/ kill line before landing.						
			Land hanger w/ 4kdaN down (landing str wt = 144kdaN), chk index - good. Total of 251 jts 251mm casing shoe set @ 4404m.						
3:30	18:30 - 22:00	09	Brk circ slowly. Circ casing @ 943Lpm/5998kPa while boosting the riser w/ full returns.						
0:30	22:00 - 22:30	09	Held pre-job safety meeting w/ all personal. Pumped 12.7m ³ of 1621kg/m ³ dual spacer w/ rig pump.						
1:30	22:30 - 24:00	09	P/T cmt lines to 35mPa - good. Dropped btm dart. Mix & pump 575 sxs (18.4m) of Class "G" lead cmt + 35% SSA-1 + 0.2% Super CBL + 0.26Lps SCR-100L + 0.68Lps Halad-344 mixed @ 1873kg/m ³ , yield=0.03m ³ /sx, DW= 17.9Lps. Btm plug sheared w/ 11mPa. Followed w/ 100 sxs (15.9m) of Class "G" tail cmt + 35% SSA-1 + 0.26Lps SCR-100L + 0.68Lps Halad-344 mixed @ 1873kg/m ³ . Drop top dart & displaced 15.9m ³ of 1525kg/m ³ MOBM shearing top plug w/ 1700psi. Cont displacement w/ rig pumps, monitor full mud returns. Did not bump plug.						
			NOTE: Final casing string as follows 1 - 251mm, 93.5kg/m Weatherford double valve float shoe						
			3 - 251mm, 93.5kg/m P110 VAMTOP csg jts (Bakerlocked)						
			1 - 251mm, 93.5kg/m Weatherford double valve float collar (4360m)						
			76 - 251mm, 93.5kg/m P110 VAMTOP csg jts						
			1 - 251mm, 93.5kg/m P110 VAMTOP csg pup jt (3310m)						
			171 - 251mm, 93.5kg/m C110 VAMTOP csg jts						
			1 - 251mm Vecto MS700 Fullbore casing hanger w/ MS-E seal						
			Present Operation @ 0500hrs, 6/30 - L/D cement stand, cmt in place @ 0115, June 30/02.						
24 hr Summary:	Cont to RIH w/ 251mm csg str, land hanger setting csg shoe at 4404m, circ & cement csg as per program.								
Projected Operations:	Complete cmt job, set MS-E seal & test, POOH w/ Vetco PADPRT & L/D, RIH & set 251mm wear bushing, RIH w/ isolation test tool and test BOP's.								
Safety Issues:	No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings. ROV inspect riser & BOP. Standby Vessel is the m/v Habron Sea.							Accidents:	NAR
								Safety Rep:	AJ Gilbert
Daily Mud Cost:	\$7,607	Daily Tangible Cost:	\$1,080,615	Daily Form Eval Cost:	\$4,495	Daily Drilling Cost:	\$1,607,912		
Cum Mud Cost:	\$2,692,505	Cum Tangible Cost:	\$3,512,337	Cum Form Eval Cost:	\$1,704,044	Cum Drilling Cost:	\$42,142,803		
Chevron %:	66.7					Total Appr:	\$79,476,760		
Bulk Gel, m ³	24.9	Cement, m ³	140.7	Fuel, m ³	3,805.2	Bulk Wt, m ³	276.4	Rig Heave, m	0.5
Country:	Canada	Rig:	DW Millennium	UWT:	300H234320060450	Drilling Reps:	Robicheaux / Ruitenschild / Ahworth		
Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	29-Jun-02		

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 4,418 m		TVD: 4,417 m		PBD: 22-May-02		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 41		DFS: 40		Spud Date: 22-May-02		Daily meters: 30-Jun-02		HS Total Rot Hrs: 120	
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		P/U Weight: kdaN		S/O Wt: kdaN	
Last Casing Size: 251 mm		Set At: 4,404 m		MD: 4,403 m		TVD: 4,403 m		Shoe Test, kgm ² : 120	
Cum Rot Hrs on Casing: 4,404 m		Cum Rot Hrs on Casing Since Last Caliper: 4,403 m		Whipstock Set @: 4,110 m		KOP: 4,110 m			
Liner Size: 251 mm		Set At: 4,404 m		MD: 4,403 m		TVD: 4,403 m		Liner Top At: 4,110 m	
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		Wt. kg/m ³ : 1525		FV, s/qt: 148	
WL API, cc/30m: 2.6		HTHP: 6.8		FC(mm) API/HTHP: 2.4		Solids: 18.5		% Synt: 60.0	
ES, volts: 655		Carb: 39,000		Ca/Mg: 4.20		Solids % HG/LG: 18.2/0.3		24hr Avg SOC %: 0.00	
Engr Service: 2		Materials added test 24 hrs: 549 ea 45.36kg bag barite		95 ea 0.15m ³ IA 35 Base Oil					
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Remarks:	
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size	TFA, mm ²	MD in	MD Out
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
Total Length of BHA:		BHA Description:							
Bit Cost \$	Row 1	Row 2	Rig \$/hr	Trip Time, hr	DC Size, mm	DP Size, mm	Hours On Jars	Hrs Since Last Inspection:	
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, KPa	liters/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
Survey MD		Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m	DLS, °/30m	
Hrs.	(From - To) m/hr	Code	Operations Covering 24 Hours Ending at Midnight						
1:00	00:00 - 1:00	09	Continue to displace w/ the rig pump. Pump 125m ³ @ 2385Lpm/8.96MPa. Observed pressure increase when cement turned corner at 96m ³ pumped. Slowed pumps to 318Lpm/3MPa. Pumped additional half shoe track, plug did not bump. Cement in place at 0115 hrs. Check floats - ok. Bled back 0.3m ³ .						
1:30	1:00 - 2:30	12	Set MS-E casing packoff w/ 4-1/2 turns. Pressure set with 20.68MPa. Pressure test to 55.16MPa. Bled off 0.97MPa in 10min w/ 0.04m ³ bled off. Observed returns on the DP.						
2:30	2:30 - 5:00	05	Release PADPRT and POOH. L/D PADPRT. Lead indication shows full seal set.						
1:00	5:00 - 8:00	07	Change out casing bits and L/D Nodeco cement head. P/U and R/B dual entry test sub.						
3:30	6:00 - 9:30	05	P/U and RIH w/ 251mm wear bushing on WBRRT w/ jet sub. Wash across WH. Land wear bushing.						
0:30	9:30 - 10:00	12	Pressure test MS-E casing seal to 55.16MPa. Bled off 0.59MPa in 5min. Observed returns on the DP.						
3:00	10:00 - 13:00	05	POOH. L/D WBRRT.						
3:00	13:00 - 16:00	14	M/U and RIH w/ Isolation Test Tool assembly. Set tool w/ 18kdaN down.						
0:30	16:00 - 16:30	14	Hold prejob safety meeting.						
6:00	16:30 - 22:30	14	Test BOP's on blue pod II bridge console. Test to 1.75/34.5/41.25/55.25MPa for 10min per CNSOPB and Chevron regs. Function test BOP's from yellow pod from the dog house panel.						
1:30	22:30 - 0:00	14	POOH w/ Isolation Test Tool.						
24 hr Summary:			Complete 251mm cement job. Set and test 251mm MS-E casing packoff. Test BOPE.						
Projected Operations:			M/U 216mm BHA and TIH. Drill out float equipment and 2m of new hole. Conduct FIT. W/U to 1561kg/m ³ mud and drill ahead.						
Safety Issues:			No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings. ROV inspect rear & BOP. Held weekly fire and abandon ship drills with safety meeting following. Standby Vessel is the m/v Habron Sea.						
Daily Mud Cost: \$7,607			Daily Tangible Cost: \$2,425		Daily Form Eval Cost: \$16,795		Daily Drilling Cost: \$601,622		
Cum Mud Cost: \$2,700,112			Cum Tangible Cost: \$3,514,762		Cum Form Eval Cost: \$1,720,839		Cum Drilling Cost: \$42,744,425		
Chevron %: 66.7							Total Appr: \$79,476,760		
Bulk Gel, m ³ : 24.9		Cement, m ³ : 265.6		Fuel, m ³ : 3,766.2		Bulk Wt, m ³ : 264.0		Rig Heave, m: 0.4	
Country: Canada		Rig: DW Millennium		UW: 300H234320080450		Drilling Reps: Robichaux / Ruitenschild / Alworth			
Field: Exploration		Lease: EL 2359		Well: Chevron et al Newburn H-23		Date: 30-Jun-02			

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth:		4,418 m		TVD:		4,417 m		PBDT:		Proposed MD:		6,400 m		Proposed TVD:		6,315 m	
OOL:		42		DFS:		41		Spud Date:		22-May-02		Daily meters:		Daily Rot Hrs:		HS Total Rot Hrs:	
Torque:		Nm		Drag:		kdaN		Rot Wt:		kdaN		P/U Weight:		kdaN		Last BOP Test:	
Last Casing Size:		251 mm		Set At:		4,404 m		MD		4,403 m		TVD		Shoe Test, kgm ² :		Leakoff?	
Cum Rot Hrs on Casing:				Cum Rot Hrs on Casing Since Last Caliper:				Whipstock Set @:				KOP:		4,110 m		TVD	
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD		TVD					
Mud		Cor:		M-I		Type:		Synthetic-based		Sample From:		Pits		1525		FV, a/qt	
WL API, cc/30m		HTHP:		6.8		FC(mm) API/HTHP:		2.4		Solids:		18.0		% Synt:		61.0	
Parr:		2.8		ES, volts		568		Carb		Cl:		41,000		Ca/Mg:		ASG:	
Engr Service		2		Materials added last 24 hrs:		176 ea 45.35kg bag barite		109 ea 0.16m ³ IA35 base oil		80 ea 22.68kg bag CaCl							
Drig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Cl:		Remarks:							
Bit No.		IADC		Size		Manufacturer		Serial Number		Type		Jets, mm No. Size		TFA, mm ²		MD In	
5		M322		216		Hycalog		201608		RS162		1 11 5 10		515		4,418 m	
meters		Hours		WOB, kdaN		RPM		I-Row		O-Row		DC		Loc		B	
0																	
Total Length of BHA:		226.74 m		BHA Description:		216mm Hycalog "RS162" bit, PD675 bias unit, PD675 Extension sub, PD675 Control unit,											
213mm NM stab, Float sub, ARC675, MWD (w/ 213mm stab), Isonic, X/O, 210mm stab, 15 - 127mm HWDP, HE Jars, 5 - 127mm HWDP.																	
Weight of BHA - 13.3kdaN; weight below jars - 10kdaN.																	
Bit Cost \$		Row 1		70,000		Row 2		Rig \$/hr		25,000		Trip Time, hr		10.0		DC Size, mm	
127		DP Size, mm		127		Hours On Jars:		0		Hrs Since Last Inspection:		0					
Bit		Liner, mm		Strokes, meters		m ³ /STK		SPM		Press, KPa		liter/min		Jet Vel, m/sec		DP AV, m/min	
5		140		0.3556		0.0159		132		30199		2095		67.6		87.00	
Survey MD		Angle		Direction		TVD		N/S Coordinate		E/W Coordinate		Vertical Section, m		DLS, °/30m			
Hrs.		(From - To) from		Code		Operations Covering 24 Hours Ending at Midnight											
1:00		00:00 - 1:00		14		Continue to POOH w/ Isolation Test Tool. L/D tool and R/B 4 stds of HWDP below tool.											
1:00		1:00 - 2:00		16		Pressure test casing to 52MPa for 15min. Pressure bled 0.8MPa to 51.25MPa and stable for last 8min - test OK.											
0:30		2:00 - 2:30		24		Change out TDS saver sub to 140mm.											
0:30		2:30 - 3:00		21		Rig repair - repair bent IBOP actuator arm damaged while breaking out saver sub.											
1:30		3:00 - 4:30		07		P/U and test 216mm Powerdrive w/ "RS162" bit - OK, P/U remaining Anadri BHA equipment.											
1:00		4:30 - 5:30		07		Pull back & replace stand of 127mm HWDP which fell across derrick while the PHM picked up the first stand of HWDP.											
1:00		5:30 - 6:30		07		M/U 1st std of HWDP and shallow test MWD @ 1893lph/9.49MPa.											
10:00		6:30 - 16:30		05		RIH with 216mm BHA on 127mm DP, circ for 15min at 3000m, 3500m and 4000m while RIH to cool MWD/LWD tools.											
						Tag TOC @ 4273m. 2.54m ³ high. Take SCR's, CLF and locate tool joint in annular for space out.											
7:30		16:30 - 24:00		15		Drill and clean out cement frt 4273 to 4290m. Work pipe & attempt to optimize drilling parameters. ROP is averaging 1 to 12m/h, unable to get consistent torque or ROP drilling cmt.											
						Present Operations @ 0500hrs, 7/2: POOH to chk bit.											
						Note: Barbara Carleton, CCR, received verbal approval on 6/28/2002 from Carl Makrides, CNSOPB, to modify the coring program from 4418m - 4693m as follows: If there is a drilling break with a gas show, continue drilling through the sand and review the LWD logs. At the next drilling break with a gas show, 1) if the previous sand is less than 15m thick and poor quality sand, continue drilling without coring and perform the same LWD review on the new sand; 2) if the previous sand is approximately 15m thick with clean sand indications on GR, be prepared to conventionally core on the next drilling break that has a gas show and one 5m drill cutting sample that is predominately sandstone.											
24 hr Summary:		POOH w/ Isolation Test Tool. Test casing to 52MPa - ok. P/U 216mm BHA and RIH to TOC @ 4273m. Clean out cmt frt 4273 to 4290m.															
Projected Operations:		Cont to drill & clean out csg shoe / rat hole, drill 3m of new hole, FIT to 1861kg/m ² EMW, drill ahead as per program.															
Safety Issues:		No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings. ROV inspect riser & BOP. Standby Vessel is the m/v Habron Sea.														Accidents: NAR	
																Safety Rep: AJ Gilbert	
Daily Mud Cost:		\$41,357		Daily Tangible Cost:		\$2,425		Daily Form Eval Cost:		\$63,595		Daily Drilling Cost:		\$776,062			
Cum Mud Cost:		\$2,741,469		Cum Tangible Cost:		\$3,517,187		Cum Form Eval Cost:		\$1,784,434		Cum Drilling Cost:		\$43,520,487			
Chevron %:		66.7										Total Appr:		\$79,476,760			
Bulk Gel, m ³		24.9		Cement, m ³		204.6		Fuel, m ³		3,844.8		Bulk Wt, m ³		348.5		Rig Heave, m	
Country:		Canada		Rig:		DW Millennium		UWT:		300H234320080450		Drilling Reps:		Robichaux / Ruilenschild / Ahworth			
Field:		Exploration		Lease:		EL 2359		Well:		Chevron et al Newburn H-23		Date:		1-Jul-02			

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 4,418 m		TVD: 4,417 m		PBTD:		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 43		DFS: 42		Spud Date: -22-May-02		Daily meters:		Daily Rot Hrs:	
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		PAU Weight: kdaN		S/O Wt: kdaN	
Last Casing Size: 251 mm		Set At: 4,404 m		MD: 4,403 m		TVD		Shoe Test, kg/m ² :	
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Calliper:		Whipstock Set @:		KOP: 4,110 m		POB: 122	
Liner Size: Set At: MD		TVD		Liner Top At: MD		TVD			
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		WL, kg/m ³ : 1525		FV, s/qt: 112	
WL API, cc/30m: 6.0		HTHP: FC(mm) API/HTHP: 2.4		Solids: 18.4		% Synt: 60.0		% Water: 20.0	
Parr: 2.6		ES, volts: 577		Carb: 41,000		Ca/Mg: 4.20		Solids % HGLG: 18.1/0.3	
Engr Service: 2		Materials added last 24 hrs: 15 ea 22.67kg bag VG Plus		188 ea 0.16m ³ IA35 base oil					
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Cl:	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No. Size No. Size	TFA, mm ²	MD In	MD Out
5	M322	216	Hycalog	201608	RS162	1 11 5 10	515	4,418 m	4,418 m
6	117	216	Hughes	J23DH	MX-1	3 ### 0 0	481	4,418 m	
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
0		8.0	80	1	1	NO	A	X	I
Total Length of BHA: 226.74 m		BHA Description: 216mm Hughes MX-1 Bit, PD675 bias unit, PD675 Extension sub, PD675 Control unit,							
213mm NM stab, Float sub, ARC675, MWD (w/ 213mm stab), Isonic, X/O, 210mm stab, 15 - 127mm HWDP, HE Jars, 5 - 127mm HWDP.									
Weight of BHA - 13.3kdaN; weight below jars - 10kdaN.									
Bit Cost \$	Row 1 70,000	Row 2 20,000	Rig \$/hr 25,000	Trip Time, hr 10.0	DC Size, mm 127	DP Size, mm 127	Hours On Jars: 0	Hrs Since Last Inspection: 0	
Bit	Liner, mm	Strokes, meters	m ³ /STK	SPM	Press, KPa	Iter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
5	140	0.3556	0.0159	132	30199	2095	67.6	87.0	87.0
6	140	0.3556	0.0164	132	33302	2165	72.4	87.0	87.0
Survey MD		Angle	Direction	TVD	N/S Coordinate	EW Coordinate	Vertical Section, m	DLS, °00m	
Hrs.		(From -To) hr:mm	Code	Operations Covering 24 Hours Ending at Midnight					
1:00	00:00 - 1:00	15	Continue to clean out casing shoe // 4290m to 4297m attempting to optimize parameters. ROP 1 to 9m/h. After connection, ROP declined to 0.33 to 3m/h. Pumped 3.2m ³ hi-vis sweep, no change in ROP.						
1:00	1:00 - 2:00	20 T	Rig repair - Pumps 1 & 2 had valves unseat following fast mixing of CaCl ₂ and suction lines plug after pumping hi-vis sweep. Repair same.						
1:30	2:00 - 3:30	15	Continue to clean out csg shoe // 4297m to 4300m. All attempts to increase ROP failed. Decision made to POOH & check bit.						
0:30	3:30 - 4:00	01 T	C&CM while preparing to POOH.						
9:00	4:00 - 13:00	05 T	Pump slug and POOH. R/B BHA. Bit has some pieces of aluminum stuck in and around the cutters, good condition otherwise.						
2:30	13:00 - 15:30	07 T	Loose seal observed on Powerdrive Bias section. Replace same. M/U 216mm MX-1 bit. Reconfigure and downlink MWD/ARC tools. Surface test MWD.						
8:30	15:30 - 24:00	05 T	RIH w/ 251mm BHA. Break circulation at 3000m, 3500m, and 4000m. Circulated 152mm piece of 19mm aluminum across shakers. Appears to be component of SSR plug.						
			Present operations @ 0500hrs, 7/3. Repairing oil seal leak on top drive.						
24 hr Summary:		Continue cleaning out 251mm float equipment. Decision to POOH based on ROP. POOH. M/U new bit to BHA. RIH.							
Projected Operations:		Resume cleanout of 251mm casing. Drill 3m of new formation. Conduct FIT to 1861kg/m ³ EMW. Weight up to 1561kg/m ³ MW. Drill ahead.							
Safety Issues:		No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings. ROV inspect riser & BOP. Standby Vessel is the m/v Hebron Sea.						Accidents: NAR	
								Safety Rep: AJ Gilbert	
Daily Mud Cost: \$80,749		Daily Tangible Cost: \$2,425		Daily Form Eval Cost: \$45,295		Daily Drilling Cost: \$721,237			
Cum Mud Cost: \$2,802,218		Cum Tangible Cost: \$3,519,612		Cum Form Eval Cost: \$1,829,729		Cum Drilling Cost: \$44,241,724			
Chevron %: 68.7						Total Apr: \$79,476,760			
Bulk Gel, m ³ : 24.9	Cement, m ³ : 204.6	Fuel, m ³ : 3,697.7	Bulk Wt, m ³ : 348.5	Rig Heave, m: 0.3	Pitch, deg: 0.4	Roll, deg: 0.4			
Country: Canada		Rig: DW Millennium		UW: 300H234320060450		Drilling Reps: Robichaux / Ruitenschild / Alworth			
Field: Exploration		Lease: EL 2359		Well: Chevron et al Newburn H-23		Date: 2-Jul-02			

Drilling Activity Report *(metric)*

Drilling Activity Report *(metric)*

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Drilling Activity Report *(metric)*

Field:	Exploration
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Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 4,603 m		TVD: 4,592 m		PBD:		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 47		DFS: 46		Spud Date: 22-May-02		Daily meters: 162 m		Daily Rot Hrs: 14.5	
Torque: Nm 8135		Drag: kdaN 3.6		Rot Wt: kdaN 220		P/U Weight: kdaN 232		S/O Wt: kdaN 229	
Last Casing Size: 251 mm		Set At: 4,404 m		MD 4,402 m		TVD		Shoe Test, kgm ³ : 1861	
Cum Rot Hrs on Casing: 18.5		Cum Rot Hrs on Casing Since Last Casing: 18.5		Whipstock Set @:		KOP: 4,110 m		POB: 121	
Liner Size:		Set At:		MD		TVD		Liner Top At:	
Mud Co: M-I		Type: Synthetic-based		Sample From:		Pits: 1561		FV, s/qt 109	
WL API, cc/30mi		HTHP: 5.6		FC(mm) API/HTHP: 0.0		Solids: 22.0		% Synt: 59.0	
Parr: 3.0		ES, volts 825		Carb:		Cl: 36,000		Ca/Mg: 4.10	
Engr Service: 2		Materials added last 24 hrs: 160 ea 22.7kg bg Lime		120 ea 22.7kg bg CaCl ₂		16 ea 208L dm Novamu		8 ea 208L dm EMI-157	
Orig Gas: 0.25		Max Gas: 0.54		Conn. Gas: 0.00		Trip Gas: 0.35		Trip Cl:	
Remarks: Max gas at 4554m									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jet, mm No.	Size	No. Size	TFA, mm ²
5 RR2	M322	216	Hycalog	201608	RS162	2	8.7	4	10.3
MD in	MD Out	TVD Out							
4,441 m									
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
162									
Char	?Pull	Cost/meter							
#VALUE!									
Total Length of BHA: 283.24 m									
BHA Description: 216mm RS162 Hycalog Bit, PD675 bias unit, PD675 Extension sub, PD675 Control unit, 213mm NM stab, Float sub, ARC675, MWD, Isonic, X/O, 210mm stab, 15 - 127mm HWDP, HE Jars, 5 - 127mm HWDP.									
Weight of BHA - 13.3kdaN; weight below jars - 10kdaN.									
Bit Cost \$	Row 1	70,000	Row 2	Rig \$/hr	25,000	Trip Time, hr	14.0	DC Size, mm	127
DP Size, mm	127	Hours On Jars	18.5	Hrs Since Last Inspection	18.5				
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, KPa	liter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
5 RR2	140	0.3556	0.0159	137	33991	2174	79.6	91.0	91.0
Bit HHP	BHHP/m ²	Pump HHP							
267	3033.61	1652							
Survey MD	Angle	Direction	TVD	NS Coordinate	EW Coordinate	Vertical Section, m	DLS, °/30m		
4,569.24 m	22.84	304.82	4,560.69 m	39.27	-55.15	64.80 m	2.77		
4,598.75 m	23.88	305.23	4,587.78 m	45.99	-61.13	76.50 m	1.07		
4,626.69 m	23.54	304.54	4,613.36 m	52.41	-70.35	87.72 m	0.47		
Hrs.	(From - To) Hrs	Code	Operations Covering 24 Hours Ending at Midnight						
8:00	00:00 - 8:00	05 T	Continue RIH w/ 5" DP to 4404m. Break circulation at 3000m, 3500m and 4000m to cool MWD tools.						
1:30	8:00 - 9:30	25	Wash in the hole from 4404m to 4441m to relog previously drilled section.						
14:30	9:30 - 24:00	02	Drill ahead and survey from 4441m to 4603m Avg ROP = 10-15m/hr. WOB = 4.5kdaN, RPM = 150, Pumps = 2177Lpm/ 33991KPa.						
Operations at 0500hrs, 7/7: Drilling ahead at 4680m. Avg ROP = 18.9mph									
24 hr Summary: RIH to 4404m. Wash and relog from 4404m to 4441m. Drill ahead.									
Projected Operations: Drill ahead.									
Safety Issues: 1 LTA. Cook burned arm and shin with hot grease in galley. No pollution sightings reported. Held daily pre-tour & safety meetings. Accidents: 1 LTA									
ROV inspect riser & BOP. Standby Vessel is the m/v Hebron Sea. Safety Rep: A.J. Gilbert									
Daily Mud Cost: \$47,323		Daily Tangible Cost: \$2,425		Daily Form Eval Cost: \$75,510		Daily Drilling Cost: \$723,939			
Cum Mud Cost: \$2,890,318		Cum Tangible Cost: \$3,541,437		Cum Form Eval Cost: \$2,013,025		Cum Drilling Cost: \$46,758,027			
Chevron %: 66.7						Total Appr: \$79,476,760			
Bulk Gel, m ³	24.9	Cement, m ³	204.6	Fuel, m ³	3,631.7	Bulk Wt, m ³	329.7	Rig Heave, m	Pitch, deg
Roll, deg	0.3	Roll, deg	0.3	Roll, deg	0.3	Roll, deg	0.3	Roll, deg	0.3
Country: Canada	Rig: OW Millennium	UW: 300H234320060450	Drilling Reps: Jones / Ruitenschild / Ahworth						
Field: Exploration	License: EL 2359	Well: Chevron et al Newburn H-23	Date: 6-Jul-02						

Drilling Activity Report (metric)

Date: 7-Jul-02

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth:		5,219 m		TVD:		5,167 m		PSTD:		Proposed MD:		6,400 m		Proposed TVD:		6,315 m																					
DOL:		49		DFS:		48		Spud Date:		22-May-02		Daily meters:		281 m		Daily Rot Hrs:		18.0		HS Total Rot Hrs:		59.5															
Torque:		Nm		13558		Drag:		kdaN		16.5		Rot Wt:		kdaN		242		PU Weight:		kdaN		258		SO Wt:		kdaN		249		Last BOP Test:		30-Jun-02		POB:		122	
Last Casing Size:		251 mm		Set At:		4,404 m		MD		4,402 m		TVD		Shos Test, kg/m ³ :		1861		Leakoff?		NO																	
Cum Rot Hrs on Casing:		59.5		Cum Rot Hrs on Casing Since Last Calliper:		59.5		Whipstock Set @:				KOP:		4,110 m																							
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD		TVD																									
Mud Co:		M-I		Type:		Synthetic-based		Sample From:		Pits		Wt, kg/m ³ :		1621		FV, s/qt:		86		PV, cP:		20		YP, Pa:		13		Gel, Pa:		12/15							
WL API, cc/30mi:		HTHP:		3.4		FC(mm) API/HTHP:		0.0		Solids:		21.6		% Synt:		59.0		% Water:		18.5		SWR:		77/23		MBT, Kg/L:		0.00		pH:							
Psm:		3.4		ES, volts:		734		Carb:		Cl:		37,000		Ca/Mg:		ASG:		4.20		Solids % HGLG:		21.2/0.4		24hr Avg SOC %:		4.57											
Engr Service:		2		Materials added last 24 hrs:		80 ea 22.67kg bg Lime		40 ea 22.67kg bg CaCl ₂		776 ea 45.36kg bg Barit																											

Drilling Activity Report (metric)

Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	9-Jul-02
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Drilling Activity Report (metric)

Measured Depth:		5,405 m		TVD:		5,324 m		P&TD:		Proposed MD:		Proposed TVD:		8,315 m																	
DOL:		51		DFS:		50		Spud Date:		22-May-02		Daily meters:		0 m		Daily Rot Hrs:		0.0		HS Total Rot Hrs:		73.5									
Torque:		Nm		Drag:		kdaN		Rot Wt:		kdaN		PAU Weight:		kdaN		S/O Wt:		kdaN		Last BOP Test:		30-Jun-02		POB:		118					
Last Casing Size:		251 mm		Set At:		4,404 m		MD		4,402 m		TVD		Shoe Test, kg/m ² :		1861		Leakoff?		NO											
Cum Rot Hrs on Casing:		73.5		Cum Rot Hrs on Casing Since Last Calliper:		73.5		Whiplock Set @:				KOP:		4,110 m																	
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD		TVD																			
Mud Co:		M-I		Type:		Synthetic-based		Sample From:		Pits		Wt, kg/m ³ :		1777		FV, gal/qt:		84		PV, cP:		23		YP, Pa:		12		Gel, Pa:		10/13	
W/L API, cc/30m:		HTHP:		FC(mm) API/HTHP:		mm		Solids:		27.0		% Syt:		56.0		% Water:		15.5		SWR:		78/22		MBT, Kg/L:		0.00		pH:			
Psm:		ES, volts		Carb:		Cl:		Ca/Mg:		ASG:		4.10		Solids % HGLG:		25.1/1.8		24hr Avg SOC %:		No cuttings last 24 hours											
Engr Service:		2		Materials added last 24 hrs:		6 ea 208.2L dm Novamul		80 ea 22.67kg bg Lime		3301 ea 45.36kg bg Bar																					
Drig Gas:		Max Gas:		36.00		Conn. Gas:		Trip Gas:		Trip Cl:		Remarks:																			
Bit No.		IADC		Size		Manufacturer		Serial Number		Type		Jets, mm		No.		Size		No.		TFA, mm ²		MD In		MD Out		TVD Out					
5 RR2		M322		216		Hycalog		201608		RS162		2		8.7		4		10.3		454		4,441 m									
measured		Hours		WOB, kdaN		RPM		I-Row		O-Row		DC		Loc		Pits		G		Char		7Pull		Cost/meter							
964		73.50																										\$2,341.80			
Total Length of BHA:		283.24 m		BHA Description:		216mm RS162 Hycalog Bit, PD675 bias unit, PD675 Extension sub, PD675 Control unit,																									
213mm NM stab, Float sub, ARC675, MWD, Isonic, X/O, 210mm stab, 15 - 127mm HWDP, HE Jars, 5 - 127mm HWDP.																															
Weight of BHA - 13.3kdaN; weight below jars - 10kdaN.																															
Bit Cost \$		Row 1		70,000		Row 2		Rig \$/hr		25,000		Trip Time, hr		14.0		DC Size, mm:		127		DP Size, mm:		127		Hours On Jars:		73.5		Hrs Since Last Inspection:		73.5	
Bit		Liner, mm		Stroke, meters		m ³ /STK		SPM		Press, KPa		liters/min		Jet Vel, m/sec		DP AV, m/min		DC AV, m/min		Bit HHP		BHHP/mmm ²		Pump HHP							
5 RR2		140		0.3556		0.0159																									
Survey MD		Angle		Direction		TVD		N/S Coordinate		E/W Coordinate		Vertical Section, m		DLS, °/100m																	
Hrs.		(From - To) H:mm		Code		Operations Covering 24 Hours Ending at Midnight																									
3:30		00:00 - 3:30		23 T		Circulate influx out at 20spm. Partial returns - choke plugging. Shut down pumps and check for trapped pressure.																									
7:30		3:30 - 11:00		23 T		Circulate influx out through choke line at 20spm using driller's method. Partial returns, choke plugging, re-establish full returns. Lost a total of 49.12m ³ to hole while circulating theoretical hole volume of 166.94m ³ .																									
10:00		11:00 - 21:00		23 T		Displace 1657kg/m ³ mud with 1777kg/m ³ kill weight mud at 20spm. Pumped theoretical displacement.																									
3:00		21:00 - 0:00		23 T		Continue to circulate 1777kg/m ³ mud. Gained 13																									

Drilling Activity Report (metric)

Field:	Expiration:
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Drilling Activity Report (metric)

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Measured Depth		5,422 m		TVD:		5,343 m		P8 TD:		Proposed MD:		6,400 m		Proposed TVD:		6,315 m	
DOL		55		DFS:		54		Spud Date:		22-May-02		Daily meters:		17 m		Daily Rot Hrs:	
Torque:		Nm		8135		Drag:		kdaN		8.0		Rot Wt:		kdaN		250	
P/U Weight:		kdaN		258		S/O Wt:		kdaN		252		Last BOP Test:		30-Jun-02		POB:	
Last Casing Size		251 mm		Set At:		4,404 m		MD		4,402 m		TVD		Shoe Test, kg/m ³ :		1861	
Cum Rot Hrs on Casing		81.5		Cum Rot Hrs on Casing Since Last Calliper		81.5		Whipstock Set @:				KOP:		4,110 m			
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD		TVD					
Mud Co:		M-I		Type:		Synthetic-based		Sample From:		Pits		WL, kg/m ³ :		1789		FV, a/qt:	
HTHP:		4.0		FC(mm) API/HTHP:		0.0		Solids:		27.2		% Syn:		58.0		% Water:	
ES, volts		914		Circ:		Ci:		34,000		Ca/Mg:		ASG:		4.10		Solids % HGLG:	
2.5																24hr Avg SOC %:	
Engr Service		2		Materials added last 24 hrs:		109 ea 45.4kg bg Barite										No cuttings last 24 hours	
Drig Gas:		Max Gas:		80.40		Conn. Gas:		19.50		Trip Gas:		Trip Ct:		Remarks:			
Bit No.		IADC		Size		Manufacturer		Serial Number		Type		Jets, mm		TFA, mm ²		MD In	
5 RR2		M322		216		Hycalog		201608		RS182		2 8.7 4 10.3		454		4,441 m	
meters		Hours		WOB, kdaN		RPM		I-Row		O-Row		DC		Loc		B	
981		81.50		6.7		100											
Total Length of BHA:		283.24 m		BHA Description:		216mm RS182 Hycalog Bt, PD675 Extension sub, PD675 Control unit,											
213mm NM stab, Float sub, ARC675, MWD, Isopic, X/O, 210mm stab, 15 - 127mm HWDP, HE Jars, 5 - 127mm HWDP.																	
Weight of BHA - 13.3kdaN; weight below jars - 10kdaN.																	
Bit Cost / Row 1		70,000		Row 2		Rigs / hr		25,000		Trip Time, hr		14.0		DC Size, mm:		127	
DP Size, mm:		127		Hours On Jars:		81.5		Hrs Since Last Inspection:		81.5							
Bit		Liner, mm		Stroke, meters		m ³ /STK		SPM		Press, KPa		liter/min		Jet Vel, m/sec		DP AV, m/min	
5 RR2		140		0.3556		0.0159		80		13189		952		34.8		40.0	
Survey MD		Angle		Direction		TVD		N/S Coordinate		E/W Coordinate		Vertical Section, m		DLS, °/30m			
Hrs.		(From-To) hh:mm		Code		Operations Covering 24 Hours Ending at Midnight											
1:30		00:00 - 1:30		01 T		Continue to circulate and condition mud at 4441m. MW out 1789kg/m ³ , gas 85 units. Flow check well - 5.88m ³ gained while returns slowing down indicating well is ballooning.											
5:00		1:30 - 6:30		04 T		Wash and ream in hole at 3minvstd to 5378m.											
9:30		6:30 - 18:00		01 T		Circulate bottoms up. Max gas 3020 units, gas out mud wt 1621kg/m ³ . Circulate and condition mud. Gas 500 units, MW prior to degasser 1765kg/m ³ , after degasser 1789kg/m ³ . PVT steady. Obtain SCR's.											
8:00		18:00 - 24:00		02		Wash to bottom and drill ahead from 5405 to 5422m.											
						Operations at 0500hrs, 7/15: Completed drilling to 5425m. Following C&CM, flow check well.											
24 hr Summary:						Circulate and condition mud at shoe. Wash and ream to 5378m. Circulate and condition mud. Drill ahead to 5422m.											
Projected Operations:						Circulate and condition mud. POOH. Conduct logging run.											
Safety Issues:						No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings. Held weekly fire and abandon drills. Held weekly safety meeting with all onboard. ROV inspected riser & BOP. Standby Vessel is the m/v Bone Vista.										Accidents: NAR	
																Safety Rep: H-L Balasch	
Daily Mud Cost:		\$10,318		Daily Tangible Cost:		\$3,625		Daily Form Eval Cost:		\$50,115		Daily Drilling Cost:		\$824,462			
Cum Mud Cost:		\$3,132,749		Cum Tangible Cost:		\$3,568,037		Cum Form Eval Cost:		\$2,325,205		Cum Drilling Cost:		\$52,258,359			
Chevron %:		68.7										Total Appr:		\$79,476,760			
Bulk Gal, m ³ :		24.9		Cement, m ³ :		204.6		Fuel, m ³ :		4,441.1		Bulk Wt, m ³ :		208.3		Rig Heave, m	
																Pitch, deg	
																Rot, deg	
Country:		Canada		Rig:		DW Millennium		UW:		300H-234320080450		Drilling Reps:		Jones / Curran / Alworth			
Field:		Exploration		Lease:		EL 2359		Well:		Chevron et al Newburn H-23		Date:		14-Jul-02			

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 5,425 m		TVD: 5,345 m		PBD: 22-May-02		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 56		DFS: 55		Spud Date: 22-May-02		Daily meters: 3 m		Daily Rot Hrs: 1.0	
Torque Nm: 8135		Drag: 8.9		Rot Wt: 250		P/U Weight: 250		S/O Wt: 252	
Last Casing Size: 251 mm		Set At: 4,404 m		MD: 4,402 m		TVD: 4,402 m		Shoe Test, kg/m ² : 1881	
Cum Rot Hrs on Casing: 82.5		Cum Rot Hrs on Casing Since Last Caliper: 82.5		Whipstock Set @: 4,110 m		KOP: 4,110 m		POB: 120	
Liner Size: 251 mm		Set At: 4,404 m		MD: 4,402 m		TVD: 4,402 m		Liner Top At: 4,110 m	
Mud Co: M-I		Type: Synthetic-based		Sample From: P18		Wt: 1789		FV: 94	
WL AP: 0.00mm		HTHP: 3.6		FC(mm) API/HTHP: 0.0		Solids: 27.1		% Syn: 56.5	
Psm: 2.2		ES, volts: 855		Ct: 35,000		Car/kg: 4.10		ASG: 28/1.1	
Engr Service: 2		Materials added last 24 hrs: 738 ea 45.4kg by Barite		24hr Avg SOG %: 4.72		24hr Avg SOG %: 4.72		24hr Avg SOG %: 4.72	
Orig Gas: 55.70		Conn. Gas: 55.70		Trip Gas: 55.70		Trip Ct: 55.70		Remarks: 55.70	
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jet, mm	TFA, mm ²	MD In	MD Out
5 RR2	M322	216	Hycalog	201808	RS162	2 8.7 4 10.3	454	4,441 m	
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
984	82.00	8.7	60						
Total Length of BHA: 283.24 m									
BHA Description: 216mm RS162 Hycalog Bit, PD675 bias unit, PD675 Extension sub, PD675 Control unit.									
213mm NM stab, Floet sub, ARC675, MWD, Iscon, XO, 210mm stab, 15 - 127mm HWDP, HE Jars, 5 - 127mm HWDP.									
Weight of BHA - 13.3kdaN; weight below jars - 10kdaN.									
Bit Cost	Row 1	Row 2	Rig	25,000	Trip	14.0	DC Size	127	DP Size, mm
5	70,000	25,000	14.0	127	127	127	Hours On	82.5	Hrs Since Last Inspection: 82.5
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, KPa	liter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
5 RR2	140	0.3556	0.0159	80	12500	952	34.8	40.0	40.0
Survey MD	Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m	DLS, °/30m		
Hrs.	(From-To) hh:mm	Code	Operations Covering 24 Hours Ending at Midnight						
1:00	00:00 - 1:00	02	Drilling ahead from 5422 to 5425m.						
3:30	1:00 - 4:30	01	Circulate and condition mud.						
4:30	4:30 - 9:00	01 T	Flow check and evaluate well status. Total gain 64.9m ³ while returns slowing down indicating well is ballooning.						
2:00	9:00 - 11:00	01 T	Continue to circulate and condition mud. Max gas 2830, gas out MW 1717kg/m ³ .						
4:30	11:00 - 15:30	01 T	Return flow became erratic and mud flowed above rotary. Closed diverter and shut in on lower annular. Circulate riser with boost pump						
			while monitoring shut in pressures - no build up. Continue to circulate riser.						
1:30	15:30 - 17:00	01 T	Open diverter and continue to circulate the riser. Lower annular closed, monitoring pressure - no build up.						
0:30	17:00 - 17:30	01 T	Observed pieces of the diverter packer coming across shakers - diverter packer failed. Continue to circulate while preparing to repair diverter.						
5:30	17:30 - 23:00	20 T	Change out diverter packer while circulating through the choke and monitoring well on mini trip tank.						
1:00	23:00 - 24:00	01 T	Continue circulating up choke and kill lines w/ lower annular closed.						
			Since midnight Flow check well - well static.						
			Operations at 0500 hrs, 7/16; Circulate and condition mud.						
			Note: John Connor, CCR, received verbal approval from Bob Hale, CNSOPB, to extend the 14 day BOP test requirement until after the 7-3/4" liner is cemented in place.						
			Note: While circulating mud up the riser, mud flowed above the rotary, overflowing the rig floor catchments and spilling into the moonpool.						
			A <0.5bbl spill was reported to the Canadian Coast Guard at 15:45hrs and to the CNSOPB at 16:15hrs.						
24 hr Summary:			Drill ahead to 5425m. Circulate and condition mud. Change out diverter packer. Continue to circulate.						
Projected Operations:			Circulate and condition mud. POOH to run wireline logs.						
Safety Issues:			1 spill - see note above. No pollution sightings reported. Held daily pre-tour & safety meetings. ROV inspected riser & BOP.						
Accidents:			Spill						
Safety Rep:			H-L Balesch						
Daily Mud Cost: \$15,758		Daily Tangible Cost: \$107,855		Daily Form Eval Cost: \$52,914		Daily Drilling Cost: \$735,198			
Cum Mud Cost: \$3,148,507		Cum Tangible Cost: \$3,675,083		Cum Form Eval Cost: \$2,378,119		Cum Drilling Cost: \$52,993,566			
Chevron %: 66.7						Total Appr: \$79,476,760			
Bulk Gel, m ³ : 24.9	Cement, m ³ : 204.6	Fuel, m ³ : 4,413.8	Bulk Wt, m ³ : 278.9	Rig Heave, m: 0.4	Pitch, deg: 0.2	Roll, deg: 0.2			
Country: Canada	Rig: DW Millennium	UWI: 3008-234320080460	Drilling Rate: Jones / Curran / Alworth						
Field: Exploration	Lease: EL 2358	Well: Chevron et al Newburn H-23	Date: 15-Jul-02						

Drilling Activity Report (metric)

Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	16-Jul-02
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Drilling Activity Report (metric)

Accidents:	NAR
Safety Rep:	H-L Balasch

Measured Depth: 5,425 m		TVD: 5,345 m		PSTD:		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 59		DFS: 58		Spud Date: 22-May-02		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		PU Weight: kdaN		S/O Wt: kdaN	
Last Casing Size: 251 mm		Set At: 4,404 m		MD: 4,402 m		TVD: 4,402 m		Shoe Test, kg/m ² : 1881	
Cum Rot Hrs on Casing: 82.5		Cum Rot Hrs on Casing Since Last Calliper: 82.5		Whipstock Set @:		KOP: 4,110 m		POB: 128	
Liner Size: 251 mm		Set At: 4,404 m		MD: 4,402 m		TVD: 4,402 m		Liner Top At: 4,110 m	
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		Wt, kg/m ³ : 1789		PV, cP: 98	
WAPI, cc/30min		HTHP: 3.2		FC(mm) APIVHTHP: 2.4		Solids: 26.8		% Syn: 56.0	
Pam: 2.3		ES, volts: 560		Carb: 37,000		Ca/Mg: 4.20		ASG: 26.4 / 0.1	
Engr Service: 2		Materials added last 24 hrs:						24hr Avg SOC %: No cuttings last 24 hrs	
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:	
Remarks:									
Bit No. 5 RR2		IADC M322		Size 216		Manufacturer Hycalog		Serial Number 201608	
Type RS162		Jets, mm No. 2		Size 8.7		TFA, mm ² 454		MD In 4,441 m	
MD Out		TVD Out							
meters 984		Hours 82.00		WOB, kdaN		RPM		I-Row 1	
O-Row 1		DC NO		Loc A		B X		G I	
Char NO		?Pull TD		Cost/meter \$2,510.18					
Total Length of BHA:		BHA Description:							
Bit Cost \$ 70,000		Row 2		Rig \$ /hr 25,000		Trip Time, hr 14.0		DC Size, mm: 0	
DP Size, mm: 0		Hours On Jars: 82.5		Hrs Since Last Inspection: 82.5					
Bit 5 RR2		Liner, mm 140		Stroke, meters 0.3556		m ³ /STK 0.0159		SPM	
Press, KPa		liter/min		Jet Vel, m/sec		DP AV, m/min		DC AV, m/min	
Bit HHP		BHP/m ²		Pump HHP					
Survey MD		Angle		Direction		TVD		N/S Coordinate	
EW Coordinate		Vertical Section, m		DLS, *30m					
Hrs. (From -To) hh:mm		Code		Operations Covering 24 Hours Ending at Midnight					
2:00 00:00 - 2:00		05		Break down Powerdrive BHA in sections. Move to pipe rack to break out tools off line using deck mounted breakout machine. Grade bit.					
6:00 2:00 - 8:00		25		Clear rig floor. Hold pre-job safety meeting w/ Schlumberger, TSF and CT personnel. RU Schlumberger.					
14:00 8:00 - 22:00		25		RIH w/ log run #1: GR-OBMI-CNL-LDT-CMR. Log down. Got down to 5407 m. Unable below 5407 m (ELM).					
2:00 22:00 - 24:00		25		Pass #1: Log up to 5407 m - 4404 m MD (ELM) w/ GR-OBMI-CNL-LDT.					
		25		Pass #2: Drop back down to 5406 m and turn on CMR log.					
		25		POOH w/ Schlumberger wireline. Hole swabbing to 3400m. Swab in 1.5-2 bbl.					
				After getting out of hole discovered the rubber logging tool centralizers very swollen (to approximately twice normal size), soft and spongy.					
24 hr Summary:		Finish POOH w/ BHA. Hold Pre-job safety meeting for wireline logging. Wireline log run #1: GR-OBMI-CNL-LDT-CMR. Unable to get below 5407m.							
Projected Operations:		TIH to make cleanout / wiper trip.							
Safety Issues:		No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings.		Accidents: NAR		Safety Rep: H-L. Balasch			
Daily Mud Cost: \$7,600		Daily Tangible Cost: \$15,163		Daily Form Eval Cost: \$66,139		Daily Drilling Cost: \$692,627			
Cum Mud Cost: \$3,173,500		Cum Tangible Cost: \$3,776,590		Cum Form Eval Cost: \$2,562,335		Cum Drilling Cost: \$55,044,619			
Chevron %: 37						Total Appr: \$79,476,760			
Bulk Gel, m ³ 24.9		Cement, m ³ 204.6		Fuel, m ³ 4,342.7		Bulk Wt, m ³ 276.7		Rig Heave, m 0.8	
Country: Canada		Rig: DW Millennium		UWT: 300H234320080450		Drilling Reps: Jones / Curran / Bruton		Pitch, deg 0.5	
Field: Exploration		Lease: EL 2359		Well: Chevron et al Newburn H-23		Date: 18-Jul-02		Roll, deg 0.3	

Drilling Activity Report *(metric)*

Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	19-Jul-02
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Drilling Activity Report (metric)Jones / Curran / Burton

Drilling Activity Report (metric)

Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	21-Jul-02
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Drilling Activity Report (metric)

Measured Depth:		5,425 m		TVD:		5,345 m		PBD:		Proposed MD:		6,400 m		Proposed TVD:		6,315 m															
DOL:		63		DFS:		62		Spud Date:		22-May-02		Daily meters:		0 m		Daily Rot Hrs:		0.0		NS Total Rot Hrs:		82.5									
Torque:		Nm		Drag:		kdaN		Rot Wt:		kdaN		PU Weight:		kdaN		S/O Wt:		kdaN		Last BOP Test:		30-Jun-02		POB:		124					
Last Casing Size:		251 mm		Set At:		4,404 m		MD		4,402 m		TVD		Shoe Test, kg/m ² :		1861		Leakoff?		NO											
Cum Rot Hrs on Casing:		82.5		Cum Rot Hrs on Casing Since Last Caliper:		82.5		Whipstock Set @:				KOP:		4,110 m																	
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD		TVD																			
Mud Co:		M-I		Type:		Synthetic-based		Sample From:		Pits		Wt, gpm ³ :		1789		FV, a/qt:		117		FV, cP:		26		YP, Pa:		6		Gel, Pa:		5/10	
WL API, co/30min		HTHP:		3.5		FC(mm) API/HTHP:		2.4		Solids:		26.9		% Syn:		55.0		% Water:		18.1		SWR:		76/24		MBT, Kg/L:		0.00		pH:	
Pam:		4.0		ES, volts:		420		Carb:		Cl:		35,000		Ca/Mg:		ASG:		4.20		Solids % HG/LG:		26.3 / 0.3		24hr Avg SOC %:		No cuttings last 24 hrs					
Engr Service		2		Materials added last 24 hrs:		15 sx lime		1 drum Novathin																							
Orig Gas:		Max Gas:		2.60		Conn. Gas:		Trip Gas:		Trip Ct:		Remarks:																			
Bit No.		IADC		Size		Manufacturer		Serial Number		Type		Jets, mm		No.		Size		No.		Size		TFA, mm ²		MD In		MD Out		TVD Out			
6 RR		117		216		Hughes		J93DH		MXC1		3		14.3		0		0.0		481		5,425 m		5,425 m		5,345 m					
meters		Hours		WOB, kdaN		RPM		I-Row		O-Row		DC		Loc		B		G		Char		?Pul		Cost/meter							
0				40		2		1		BT		A		E		I		NO		LOG											
Total Length of BHA:		257.11 m		BHA Description:		216 mm mill tooth bit, 213 mm Near-bit Stabilizer (w/ float), 1 - 127 mm HWDP, 1 - 213 Stabilizer,																									
20 - 127 mm HWDP, drilling jars, 5 - 127 mm HWDP																															
Bit Cost \$		Row 1		0		Row 2		Rig\$ /hr		25,000		Trip Time, hr		14.0		DC Size, mm:		127		DP Size, mm:		127		Hours On Jars:		82.5		Hrs Since Last Inspection:		82.5	
Bit		Liner, mm		Strokes, meters		m ³ /STK		SPM		Press, KPa		liter/min		Jet Vel, m/sec		DP AV, m/min		DC AV, m/min		Bit HHP		BHP/mmm ²		Pump HHP							
6 RR		140		0.3556		0.0159																									
Survey MD		Angle		Direction		TVD		N/S Coordinate		E/W Coordinate		Vertical Section, m		DLS, 730m																	
Hrs.		(From -To) hh:mm		Code		Operations Covering 24 Hours Ending at Midnight																									
3:00		00:00 - 3:00		01		Continue circulating @ 5401m @ 20 spm w/ 3450 kPa. max gas 218 units. No mud cut.																									
6:30		3:00 - 9:30		04		Pump out of open hole from 5401m - 4375m. No drag. Hole taking proper fill.																									
0:30		9:30 - 10:00		05		Flow check, well static. Hold pre-job safety meeting regarding the use of pipe spinner.																									
8:00		10:00 - 18:00		05		POOH w/ wet string l/ 4375m - 4211m. Hole taking proper fill. Slug pipe and POOH to 1296m.																									
1:00		18:00 - 19:00		05		Flow check well @ 1296m (BHA below BOP's), static 15 mins. Continue POOH l/ 1296m to 949m (1 stand above BOP's).																									
1:00		19:00 - 20:00		01		Flush choke & kill lines. Flush riser w/ 100 spm down drillpipe, 220 spm on boost. No change in gas & no mud cut.																									
1:30		20:00 - 21:30		05		Flow check well @ 949m, static 10 mins. Continue POOH l/ 1296m to BHA.																									
1:00		21:30 - 22:30		05		Continue POOH BHA & break out bit.																									
0:30		22:30 - 23:00		62		Clean rig floor. Held pre-job safety meeting regarding logging operations &																									

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 5,425 m		TVD: 5,345 m		PBD:		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 64		DFS: 83		Spud Date: 22-May-02		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		P/U Weight: kdaN		S/O Wt: kdaN	
Last Casing Size: 251 mm		Set At: 4,404 m		MD		4,402 m		TVD	
Cum Rot Hrs on Casing: 82.5		Cum Rot Hrs on Casing Since Last Caliper: 82.5		Whipstock Set @:		KOP: 4,110 m		POB: 123	
Liner Size:		Set At:		MD		TVD		Liner Top At: MD	
Mud Co: M-I		Type: Synthetic-based		Sample From:		Pits: 1789		FV, s/qt: 85	
WL API, cc/30min		HTHP: 3.4		FC(mm) API/HTHP: 1.6		Solids: 26.6		% Syn: 55.0	
Pam: 2.6		ES, volts: 450		Carb:		Cl: 35,000		Ca/Mg:	
Engr Service: 2		Materials added last 24 hrs:		ASG: 4.20		Solids % HG/LG: 26.3 / 0.3		24hr Avg SOC %: No cuttings test 24 hrs	
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:	
Remarks:		Bit No.		IADC:		Size:		Manufacturer:	
Serial Number:		Type:		Jets, mm No. Size No. Size		TFA, mm²		MD In	
MD Out		TVD Out		meters		Hours		WOB, kdaN	
RPM		I-Row		O-Row		DC		Loc	
B		G		Char		?Pull		Cost/meter	
#VALUE!		Total Length of BHA:		BHA Description:		Bit Cost \$		Row 1: 0	
Row 2:		Rig \$ /hr: 25,000		Trip Time, hr: 14.0		DC Size, mm: 127		DP Size, mm: 127	
Hours On Jars: 82.5		Hrs Since Last Inspection: 82.5		Bit		Liner, mm		Stroke, meters	
m³/STK		SPM		Press, KPa		liter/min		Jet Vel, m/sec	
DP AV, m/min		DC AV, m/min		BR HHP		BHP/mmin²		Pump HHP	
Survey MD		Angle		Direction		TVD		N/S Coordinate	
E/W Coordinate		Vertical Section, m		DLS, °30m		Hrs.		(From -To) hh:mm	
Code		Operations Covering 24 Hours Ending at Midnight		0:30		00:00 - 0:30		25	
Continue RIH Log Run #2: GR-LDT-CNL to 1300m.		0:30		0:30 - 1:00		25 T		LDT not responding. POOH and inspect. Discover mud in tool (O-Ring missing).	
1:00		1:00 - 2:00		25 T		Change out LDT and CNL.		0:30	
2:00		2:00 - 2:30		25 T		RIH GR-LDT-CNL to 1300m.		2:30	
2:30		2:30 - 5:00		25		Log run #2: GR-LDT-CNL. Log from 5425m to 5350m (ELM)		2:30	
5:00 - 7:30		25		POOH & lay down GR-LDT-CNL.		3:00		7:30 - 10:30	
25 T		P/U MCST-GR. RIH to 4000m. Tools not responding.		2:00		10:30 - 12:30		25 T	
POOH MCST-GR.		0:30		12:30 - 13:00		25 T		Change out MCST.	
1:00		13:00 - 14:00		25 T		RIH MCST-GR to 1700m.		1:30	
14:00 - 15:30		25 T		Tools not responding. POOH MCST & adjust coring motor settings (to compensate for heavy mud).		8:30		15:30 - 24:00	
25		RIH MCST-GR. Attempt to cut 25 sidewall cores. Begin POOH.		Note: On 22-July J Connor received written approval from Bob Hale (CNSOPB) to test BOP after cementing 197 mm liner.		Operations @ 0500hrs, 7/24: Hold pre-job safety meeting. Rig up to run 197mm liner.		24 hr Summary: Complete logging run #2 (GR-LDT-CNL) & run #3 (MCST-GR).	
Projected Operations: POOH wireline & rig down Schlumberger. Rig up & begin running 197mm liner.		Safety Issues: No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings. Standby Vessel is the m/v Hebron Sea.		Accidents: NAR		Safety Rep: H-L. Balasch		Daily Mud Cost: \$7,600	
Daily Tangible Cost: \$16,662		Daily Form Eval Cost: \$58,664		Daily Drilling Cost: \$598,687		Cum Mud Cost: \$3,245,899		Cum Tangible Cost: \$3,832,219	
Cum Form Eval Cost: \$2,604,338		Cum Drilling Cost: \$57,812,882		Chevron %: 37		Total Appr: \$79,476,760		Bulk Gel, m³: 24.9	
Cement, m³: 204.6		Fuel, m³: 4,122.9		Bulk Wt, m³: 351.4		Rig Heave, m: 0.3		Pitch, deg: 0.2	
Roll, deg: 0.2		Country: Canada		Rig: DW Millennium		UWI: 300H234320060450		Drilling Rep: Jones / Curran / Bruton	
Field: Exploration		Lease: EL 2359		Well: Chevron et al Newburn H-23		Date: 23-Jul-02			

Drilling Activity Report (metric)

Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	24-Jul-02
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Drilling Activity Report (metric)

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 5,425 m		TVD: 5,345 m		PSTD:		Proposed MD: 6,400 m		Proposed TVD: 6,315 m	
DOL: 67		DFS: 66		Spud Date: 22-May-02		Daily meters: 0 m		Daily Rot Hrs: 0.0	
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		P/U Weight: kdaN		S/O Wt: kdaN	
Last Casing Size: 251 mm		Set At: 4,404 m		MD: 4,402 m		TVD: 1861		Shoe Test, kg/m ² : 1861	
Cum Rot Hrs on Casing: 82.5		Cum Rot Hrs on Casing Since Last Calliper: 82.5		Whipstock Set @:		KOP: 4,110 m		POB: 115	
Liner Size: 197 mm		Set At: 5,403 m		MD: 5,324 m		TVD: 4,224 m		MD: 4,230 m	
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		Wt, kg/m ³ : 1789		FV, s/qt: 117	
HTHP: 3.4		FC(mm) API/HTHP: 1.6		Solids: 26.6		% Syn: 54.0		% Water: 19.4	
Psm: 3.0		ES, volts: 300		Carb: Ct: 35,000		Ca/Mg: 4.20		Solids % HG/LG: 26.2 / 0.5	
Engr Service: 2		Materials added last 24 hrs: 40 sx Lime		1001 sx Barite					
Orig Gas:		Max Gas: 63.40		Conn. Gas:		Trip Gas:		Trip Ct:	
Remarks:									
Bt No.		IADC		Size		Manufacturer		Serial Number	
Type		Jets, mm		No. Size		TFA, mm ²		MD In	
MD Out		TVD Out							
meters		Hours		WOB, kdaN		RPM		I-Row	
O-Row		DC		Loc		B		G	
Char		?Pul		Cost/meter					
#VALUE!									
Total Length of BHA:		BHA Description:							
Bt Cost \$		Row 1 0		Row 2		Rig \$ /hr 25,000		Trip Time, hr 14.0	
DC Size, mm: 127		DP Size, mm: 127		Hours On Jars: 82.5		Hrs Since Last Inspection: 82.5			
Bit		Liner, mm		Stroke, meters		m ³ /STK		SPM	
Press, kPa		liter/min		Jet Vel, m/sec		DP AV, m/min		DC AV, m/min	
Bt HHP		BHPH/mm ²		Pump HHP					
Survey MD		Angle		Direction		TVD		N/S Coordinate	
E/W Coordinate		Vertical Section, m		DLS, °/30m					
Hrs.		(From -To) hh:mm		Code		Operations Covering 24 Hours Ending at Midnight			
1:30		00:00 - 01:30		08T		Attempt to work casing past 5404m. Slacking off 20-33 daN with 0.6 to 0.8 m ³ /min & 9501 kPa. No progress.			
1:30		1:30 - 3:00		11		Lay down 2 singles & P/U cementing stand. Rig up cement line to low torque valve on Nodoco cement head.			
1:00		3:00 - 4:00		10		P/U 1m off bottom, drop and pump down ball at 0.5 m ³ /min. Set hanger w/ 15180 kPa. Top of hanger at 4224m. Shear out ball and release running tool. Break circulation with 0.6m ³ /min w/ 9500 kPa.			
0:30		4:00 - 4:30		62		Held pre-job safety meeting w/ CT, Halliburton, Import Tool and rig crew prior to cementing liner.			
3:00		4:30 - 7:30		11		Pressure test cement lines to 35 MPa. Pump 9.54m ³ of 1824kg/m ³ tuned spacer followed by 10.2m ³ of Class "G" + 35% SSA-1 at 0.8m ³ /min & 13317 kPa. Finish pumping cement, drop dart and displace w/ SBM @ 0.8m ³ /min & 14221 kPa w/ partial returns. After 12.7m ³ pumped, reduce pump rate to 0.64m ³ /min & 10868 kPa w/ slight losses. Shear dart through HyFlo valve w/ 27600 kPa, shear plug w/ 29325 kPa. Slow down pump rate to 0.32m ³ /min & 5520 kPa and land the plug on the landing collar at 61.4m ³ (0.95m ³ early). Pressure up to 21MPa. Total of 15.6m ³ of losses throughout the cement job. Maximum calculated amount of cement on top of hanger 0.3 to 0.5m ³ . Top of liner at 4224m.			
1:00		7:30 - 8:30		11		Check floats - holding. Pickup and set ZXP Packer with 35.6kdaN. Close upper annular and test the packer to 27600kPa surface applied pressure.			
1:00		8:30 - 9:30		05		R/D cement line and rack back cementing stand. POOH 10 stds to 3931m. First stand pulled wet, all others pulled dry.			
3:00		9:30 - 12:30		01		Circulate bottoms up @ 100 spm, boost riser w/ 200 spm.			
1:00		12:30 - 13:30		07		L/D cementing stand (to be broken down offline using the deck mounted bucking machine).			
6:30		13:30 - 20:00		05		POOH from 3870m.			
1:00		20:00 - 21:00		07		L/D liner hanger running tool.			
1:00		21:00 - 22:00		20		Change out diverter element & function test same.			
1:00		22:00 - 23:00		14		Change out balls and hang cementing line in derrick.			
1:00		23:00 - 24:00		14		P/U & RIH wash sub, 3 stands of 127mm HWDP, BOP isolation test tool and test jt (102mm x 127mm).			
						Operations @ 0500hrs, 7/27: Testing BOPE			
24 hr Summary:		Wash liner to 5404m. Set hanger and cement liner. Set & test packer. POOH 10 stds and circ bottoms up. POOH & lay down running tool. RIH to test BOP's.							
Projected Operations:		Pressure test BOP's. POOH and lay down test tool. P/U 165mm bit and BHA to drillout liner.							
Safety Issues:		No accidents, no incidents. No pollution sightings reported. Held daily pre-tour & safety meetings. Standby Vessel is the m/v Hebron Sea.		Accidents: NAR		Safety Rep: H-L Balasch			
Daily Mud Cost: \$14,915		Daily Tangible Cost: \$13,487		Daily Form Eval Cost: \$34,036		Daily Drilling Cost: \$574,368			
Cum Mud Cost: \$3,276,606		Cum Tangible Cost: \$3,883,975		Cum Form Eval Cost: \$3,062,126		Cum Drilling Cost: \$59,891,980			
Chevron %: 37						Total Appr: \$79,478,760			
Bulk Gel, m ³ : 24.9		Cement, m ³ : 220.3		Fuel, m ³ : 4,002.8		Bulk Wt, m ³ : 330.4		Rig Heave, m: 0.5	
Country: Canada		Rig: DW Millennium		UWT: 300H234320060450		Drilling Raps: Robichaux / Curran / Bruton / Liutkus		Pitch, deg: 0.3	
Field: Exploration		Lease: EL 2359		Well: Chevron et al Newburn H-23		Date: 26-Jul-02			

Drilling Activity Report (metric)

Field:	Exploration
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Drilling Activity Report (metric)

Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	28-Jul-02
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Drilling Activity Report (metric)

Field: Exploration

Drilling Activity Report (metric)

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Drilling Activity Report (metric)

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Drilling Activity Report *(metric)*

Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	1-Aug-02
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Drilling Activity Report (metric)

Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	2-Aug-02
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Drilling Activity Report (metric)

Drilling Activity Report (metric)

Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	4-Aug-02
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Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth: 5,786 m		TVD: 5,700 m		PBD: 22-May-02		Proposed MD: 6,400 m		Proposed TVD: 6,315 m			
DOL: 77		DFS: 76		Spud Date: 22-May-02		Daily meters: 34 m		Daily Rot Hrs: 8.5			
Torque: Nm 6101		Drag: kdaN 6.7		Rot Wt: kdaN 223		PU Weight: kdaN 230		S/O Wt: kdaN 222			
Last Casing Size: 251 mm		Set At: 4,404 m		MD 4,402 m		TVD		Shoe Test, kg/m ² : 2041			
Cum Rot Hrs on Casing: 145.5		Cum Rot Hrs on Casing Since Last Caliper: 145.5		Whipstock Set @:		KOP: 4,110 m		TVD			
Liner Size: 197 mm		Set At: 5,403 m		MD 5,324 m		TVD		Liner Top At: 4,224 m			
Mud Co: M-I		Type: Synthetic-based		Sample From: Pits		WL, kg/m ³ : 1837		FV, s/qt: 126			
WL API, cc/30min		HTHP: 3.2		FC (mm) API/HTHP: 1.8		Solids: 28.7		% Syn: 52.0			
Psm: 3.7		ES, volts: 500		Ct: 34,000		Ca/Mg: 4.10		Solids % HG/LG: 27 / 1.7			
Engr Service: 2		Materials added last 24 hrs: 80 sx Lime									
Orig Gas:		Max Gas: 1.10%		Conn. Gas: 1.00		Trip Gas:		Trip Ct:			
Remarks:											
Bit No. IADC		Size		Manufacturer		Serial Number		Type			
8RR1 M433		165		Security DBS		702953		FM2643i			
Jets, mm No. Size		No. Size		TFA, mm ²		MD In		MD Out			
3 15.9		0 0.0		594		5,480 m		5,786 m			
0 0.0						5,786 m					
meters		Hours		WOB, kdaN		RPM		I-Row			
306		51.50		3558.6		80		3			
O-Row		DC		Loc		B		G			
3		WT		N		X		I			
Char		7Pul		Cost/meter							
ROP		\$6,413.40									
Total Length of BHA: 393.93 m		BHA Description: 165mm PDC Bit, A475M4560XP Motor (w/ 162mm Sleeve), Float Sub (w/ float), 162mm Stab, IMPulse MWD, APWD, 162mm Stab, Filter Sub, 9 x 121mm DC's, XO, 18 x 102mm HWDP, 121mm Jars, 11 x 102mm HWDP Bit to - Resistivity: 12.38m, D&I: 13.96m, Gamma: 14.63m									
Bit Cost \$		Row 1 25,000		Row 2		Rig \$ /hr 25,000		Trip Time, hr 26.0			
DC Size, mm: 121		DP Size, mm: 102		Hours On Jars: 63.0		Hrs Since Last Inspection: 63.0					
Bit		Linear, mm		Stroke, meters		m ³ /STK		SPM			
8RR1		140		0.3556		0.0159		55			
Press, KPa		liter/min		Jet Vel, m/sec		DP AV, m/min		DC AV, m/min			
873		24.4		66.0		87.0		12			
Bit HHP		BHP/mm ²		Pump HHP							
231.19		592									
Survey MD		Angle		Direction		TVD		N/S Coordinate			
5,710.35 m		4.86		306.6		5,623.01 m		247.24			
5,738.60 m		3.58		318.61		5,651.18 m		248.62			
5,767.64 m		2.73		337		5,680.18 m		249.94			
E/W Coordinate		Vertical Section, m		DLS, °/30m							
-387.74		459.81 m		1.62							
-389.29		461.85 m		1.64							
-390.16		463.28 m		1.35							
Hrs. (From-To) hh:mm		Code		Operations Covering 24 Hours Ending at Midnight							
8:30 00:00 8:30		02		Drill @ 5752m - 5786m (avg ROP=4.0 m/hr). Survey and backream before each connection. TD torque increasing while losing motor diff. pressure.							
3:00 8:30 11:30		01		Circulate bottoms up. Check flow. Well static.							
2:00 11:30 13:30		05		POOH (wet string) @ 5786m - 5403m. Check flow for 10 minutes. Well static.							
3:30 13:30 17:00		05		Pump slug & continue to POOH @ 5403m - 3014m w/ 127 mm DP.							
5:00 17:00 22:00		05		Change inserts in elevators and continue to POOH @ 3014m - 395m w/ 102mm DP.							
1:30 22:00 23:30		05		POOH w/ BHA, L/D mud motor.							
0:30 23:30 24:00		07		Monitor well while P/U new mud motor.							
24 hr Summary:		Drill @ 5752m-5786m. POOH for new bit.									
Projected Operations:		TIH w/ new 165mm bit. Continue drilling 165mm hole.									
Safety Issues:		No accidents. No incidents. No pollution sightings. Held daily pre-tour & safety meetings. Standby Vessel is the m/v Hebron Sea.		Accidents: NAR		Safety Rep: Gilbert					
Daily Mud Cost: \$9,417		Daily Tangible Cost: \$2,425		Daily Form Eval Cost: \$37,459		Daily Drilling Cost: \$567,735					
Cum Mud Cost: \$3,526,650		Cum Tangible Cost: \$4,171,986		Cum Form Eval Cost: \$3,578,115		Cum Drilling Cost: \$66,302,531					
Chevron %: 37				Total Appr: \$79,476,760							
Bulk Gel, m ³ : 24.9		Cement, m ³ : 224.2		Fuel, m ³ : 3,666.4		Bulk Wt, m ³ : 269.1		Rig Heave, m: 0.3			
Country: Canada		Rig: DW Millennium		UWI: 300H234320060450		Drilling Reps: Robichaux / Ruitenschild / Bruton / Luitkus					
Field: Exploration		Lease: EL 2359		Well: Chevron et al Newburn H-23		Date: 5-Aug-02					

Drilling Activity Report (metric)

Field: Exploration

Drilling Activity Report (metric)Field: Exploration

Drilling Activity Report (metric)

Richeux / Rullenschild / Alwori

Drilling Activity Report (metric)

Use: Exploration	Lease: EL 2359	Well: Chevron et al Newburn H-23	Date: 9-Aug-02
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Drilling Activity Report (metric)Field: Exploration

Drilling Activity Report (metric)icheux / Rollenschild / Alworth

Drilling Activity Report (master)

Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	12-Aug-02
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Drilling Activity Report (metric)

ichaux / Rullenschild / Alworth Date: 13-Aug-02	
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Measured Depth		TVD		PBD		Proposed MD		Proposed TVD	
6,070 m		5,983 m		5,332 m		6,400 m		6,315 m	
DOL 86		DFS 85		Spud Date: 22-May-02		Daily meters:		Daily Rot Hrs:	
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		P/U Weight: kdaN		S/O Wt: kdaN	
Last Casing Size: 251 mm		Set At: 4,404 m		MD 4,402 m		TVD		Shoe Test, kg/m ² : 2101	
Cum Rot Hrs on Casing: 82.5		Cum Rot Hrs on Casing Since Last Caliper: 82.5		Whipstock Set @: 4,110 m		KOP: NO		Last BOP Test: 27-Jul-02	
Liner Size: 197 mm		Set At: 5,403 m		MD 5,324 m		TVD		Liner Top At: 4,224 m	
Mud Co: M-1		Type: Synthetic-based		Sample From: Pits		WL, kg/m ³ : 1887		PV, cP: 150	
WT API, sec/30min		HTHP: 3.2		FC(mm) API/HTHP: 1.6		Solids: 31.0		% Syn: 51.0	
Psm: 3.6		ES, volts: 471		Cts: 32,000		Ca/Mg: ASG: 4.20		Solids % HG/LG: 29.8/0.1	
Engr Service: 2		Materials added last 24 hrs: 200 ea 45.36kg bg bits		24 hr Avg SOC %: No discharge test 24 hrs					
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm	No. Size	TFA, mm ²	MD in
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
Total Length of BHA:		BHA Description:							
Bit Cost \$	Row 1	Row 2	Rigs /hr	Trp Time, hr	DC Size, mm	DP Size, mm	Hours On Jars:	Hrs Since Last Inspection:	
Bit	Liner, mm	Stroke, meters	m/STK	SPM	Press, KPa	liter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
Survey MD	Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m	DLS, °/30m		
Hrs.	(From-To) hr:mm	Code	Operations Covering 24 Hours Ending at Midnight						
2:00	00:00 - 2:00	19 T	Continue to TIH w/ retainer stringer.						
0:30	2:00 - 2:30	19	PAU cement stand and sting into retainer at 5332m. Set down 26.7kdaN.						
0:30	2:30 - 3:00	19	Hold pre-job safety meeting.						
2:00	3:00 - 5:00	19	RUJ cement unit and test lines to 34474kPa. Establish injection rate at 476L/m with 18616KPa. Pump 1.59m ³ of 1897kg/m ³ SBM. Pump 1.59m ³ of 1897kg/m ³ tuned spacer. Mix and pump 122 sds (3.95m ³) of 1921kg/m ³ cement with 41.6L Healed 344EXP, 30.2L SCR100, 45.4L HR-25 and 22.7L CFR3. Follow cement w/ 0.32m ³ of 1897kg/m ³ tuned spacer. Displace with 31.6m ³ of SBM. Sting into retainer and squeeze cement below retainer w/ 6.52m ³ of 1897kg/m ³ mud. Sting out of retainer. Pump 0.32m ³ of 1897kg/m ³ mud. Top of cement @ 5302m.						
1:00	5:00 - 6:00	19	R/D cement hose. POOH 5 stds.						
2:30	6:00 - 6:30	19	Circulate bottoms up.						
2:00	8:30 - 10:30	19	POOH to 4250m. MUJ cement stand to 4270m.						
0:30	10:30 - 11:00	19	Hold pre-job safety meeting.						
1:00	11:00 - 12:00	19	RUJ cement unit and test lines to 34474kPa. Pump 1.59m ³ of 1897kg/m ³ tuned spacer. Mix and pump 96s (2.17m ³) of 1921kg/m ³ cement with 34.1L Healed 344EXP, 26.5L SCR-100 and 18.9L CFR3. Follow with 0.32m ³ of 1897kg/m ³ tuned spacer. Displace 28m ³ of 1897kg/m ³ SBM to balance. R/D cement hose. POOH 5 stds. Cement plug spotted from 4270m to 4170m.						
2:30	12:00 - 14:30	19	Circulate bottoms up.						
3:30	14:30 - 18:00	19	POOH to 2633m.						
0:30	18:00 - 18:30	19	Hold pre-job safety meeting.						
5:30	18:30 - 0:00	19	POOH L/D 102mm DP.						
			NOTE: Prior to establishing injection rate for squeeze job, conducted LOT. LO @ 197mm shoe = 2101kg/m ² . Pressure stabilized at 6757KPa. Operations @ 0500 hrs, 8/15: Continue L/D 102mm DP while POOH.						
24 hr Summary:	Run in hole w/ DP stringer and land in cmt retainer. Squeeze 50s below 197mm shoe. Spot 30m cement plug on top. POOH to 197mm liner top at 4275m and set a 100m cement plug. POOH and L/D 102mm DP.								
Projected Operations:	RRH with dripble and recover 251mm WB. POOH w/ WB. TIH w/ retainer/guns BHA and set 251mm retainer at 1109m. Perform and check for pressure. Perform squeeze job on 251mm x 346mm annulus. Displace well to 1345kg/m ³ MW. POOH.								
Safety Issues:	No accidents. No incidents. Held daily pre-tour & safety meetings. Standby Vessel is the m/v Hebron Sea.							Accidents:	NAR
								Safety Rep:	GBart
Daily Mud Cost:	\$8,940	Daily Tangible Cost:	\$68,167	Daily Form Eval Cost:	\$8,121	Daily Drilling Cost:	\$547,541		
Cum Mud Cost:	\$3,702,208	Cum Tangible Cost:	\$4,258,553	Cum Form Eval Cost:	\$4,073,128	Cum Drilling Cost:	\$72,008,795		
Chevron %:	37					Total Appr:	\$78,478,780		
Bulk Gel, m ³	24.9	Cement, m ³	110.5	Fuel, m ³	3,350.8	Bulk WL, m ³	33.1	Rig Heave, m	0.3
								Pitch, deg	0.3
								Roll, deg	0.3
Country:	Canada	Rig:	DW Millennium	UW:	300-1234320080450	Drilling Reps:	Jones / Rullenschild / Alworth		
Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	14-Aug-02		

Measured Depth:		6,070 m		TVD		5,963 m		PSTD		5,332 m		Proposed MD:		6,400 m		Proposed TVD:		6,315 m	
DOL:		87		DFS:		86		Spud Date:		22-May-02		Daily meters:				Daily Rot Hrs:		HS Total Rot Hrs:	
Torque:		Nm		Drag:		kdaN		Rot Wt:		kdaN		P/U Weight:		S/O Wt:		Last BOP Test:		27-Jul-02	
Last Casing Size:		251 mm		Set At:		4,404 m		MD		4,402 m		TVD		Shoe Test, kg/m ² :		1345		Leakoff?	
Cum Rot Hrs on Casing:		82.5		Cum Rot Hrs on Casing Since Last Caliper:		82.5		Whipstock Set @:				KOP:		4,110 m					
Liner Size:		197 mm		Set At:		5,403 m		MD		5,324 m		TVD		Liner Top At:		4,224 m		MD	
Mud Co:		M-1		Type:		Synthetic-based		Sample From:		Pits		WL, kg/m ³ :		1867		FV, s/qt:		150	
WL API, sec/30m:		HTHP:		FC(mm) API/HTHP:		3.2		Solids:		31.0		% Syn:		51.0		% Water:		18.0	
Psm:		3.6		ES, volts:		482		Cels:		CI:		32,000		CaMg:		ASG:		4.20	
Engr Service:		2		Materials added last 24 hrs:		60 ea 0.16m ³ IACS base oil													
Orig Gas:				Max Gas:				Conn. Gas:				Trip Gas:				Trip Ct:			
Remarks:																			
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm	TFA, mm ²	MD In	MD Out	TVD Out									
						No. Size No. Size													
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	S	G	Char	?Pull	Cost/meter							
												#VALUE!							
Total Length of BHA:												BHA Description:							
Bit Cost \$	Row 1	Row 2	Rigs/hr	Trip Time, hr	DC Size, mm	DP Size, mm	Hours On Jars	Hrs Since Last Inspection:											
Bit	Liner, mm	Strokes, meters	m ³ /STK	SPM	Press, kPa	liters/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min	Bit HHP	area/m ²	Pump HHP							
Survey MD		Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m	DLS, °/30m											
Hrs.	(From -To) hh:mm	Code	Operations Covering 24 Hours Ending at Midnight																
8:00	00:00 - 9:00	19	Continue to POOH LD 102mm DP, RH w/ 8 sds 102mm HWDP, LD same, RH w/ 3 sds 121mm DC, LD same.																
8:30	9:00 - 15:30	19	MU 251mm WBRRT assembly and RH to 996m. Wash across wellhead w/ 80epm @ 5450kPa. Latch wear bushing w/ 13.3kdaN down.																
			Pulled wear bushing free w/ 44.5kdaN overpull. POOH and LD wear bushing.																
0:30	15:30 - 16:00	19	Hold prejob safety meeting.																
4:00	16:00 - 20:00	19	MU 251mm cement retainer and perforating gun assembly. RH w/ retainer to 1106m. Set upper retainer slips.																
0:30	20:00 - 20:30	19	Hold prejob safety meeting.																
0:30	20:30 - 21:00	19	Break circulation with Halliburton down choke line. Test above retainer to 3450kPa.																
1:30	21:00 - 22:30	19	RUU cement lines and test lines to 24,100kPa. Pressure up to 17,200kPa down DP attempting to perforate 251mm casing - guns failed to fire.																
1:30	22:30 - 24:00	19	Unlatching from retainer and POOH.																
			Operations at 0500hrs, 8/16: Circulating out any possible gas from below 251mm seal assembly.																
24 hr Summary:																			LD 102mm DP, 102mm HWDP, 121mm DC. Retrieve 251mm wear bushing. Set cement retainer @ 1106m and attempt to perforate below retainer - no success. POOH.
Projected Operations:																			MU251mm cutting assembly and RH. Cut and pull 251mm casing @ 1106m. RH w/ 346mm cement retainer and set @ 1066m.
Safety Issues:																			No accidents. No incidents.
Held daily pre-tour & safety meetings. Standby Vessel is the m/v Hebron Sea.																			Accidents: NAR
Daily Mud Cost: \$21,849																			Daily Tangible Cost: \$10,856
Cum Mud Cost: \$3,724,058																			Cum Tangible Cost: \$4,270,408
Chevron %: 37																			Daily Form Eval Cost: \$8,121
																			Daily Drilling Cost: \$582,695
																			Cum Form Eval Cost: \$4,082,247
																			Cum Drilling Cost: \$72,802,480
																			Total Appr: \$78,478,780
Bulk Gel, m ³	24.9	Cement, 102.4	Fuel, 3,314.9	Bulk WL, 33.1	Rig Heave, m	Pitch, 0.4 deg	Roll, 0.4 deg												
Country:	Canada	Rig:	DW Millennium	UWI:	300H234320080450	Drilling Reps:	Jones / Rullenschild / Alworth												
Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	15-Aug-02												

Drilling Activity Report (mda):2

Drilling Activity Report *(metric)*

Field:	Exploration	Lease:	EL 2350	Well:	Chevron et al Newburn H-23	Date:	17-Aug-02
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Measured Depth		TVD		PSTD		Proposed MD		Proposed TVD	
6,070 m		5,983 m		1,023 m		6,400 m		6,315 m	
DOL		DFS		Spud Date		Daily meters		HS Total Rot Hrs:	
90		88		22-May-02				108	
Torque		Drag		Rot Wt		P/U Weight		S/O Wt	
Nm		kdaN		kdaN		kdaN		kdaN	
Last Casing Size:		Set At:		MD		TVD		Shoe Test, kg/m ³	
251 mm		4,404 m		4,402 m		2041		NO	
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Calliper		Whipstock Set @:		KOP:		4,110 m	
82.5		82.5							
Liner Size:		Set At:		MD		TVD		Liner Top At:	
197 mm		5,403 m		5,324 m		4,224 m		4,224 m	
Mud Co:		Type		Sample From:		P/S		Wt, kg/m ³	
M-I		Synthetic-based		1345		82		26	
WT AP, kg/30min		HTHP:		FC(mm) AP/HTHP		Solids:		% Syn:	
4.4		2.4		12.9		55.0		31.0	
Psm:		ES, volts		Csk		Cl:		Ca/Mg:	
2.2		135		31,000		4.10		12,500.5	
Engr Service		Materials added last		59 ea 0.16m ³ IACS base oil		993 ea 0.16m ³ 35% CaCl ₂		24 hrs	
2		24 hrs							
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:	
Remarks:									
Bit No		IADC		Size		Manufacturer		Serial Number	
Type		Jets, mm		No. Size		No. Size		TFA, mm ²	
MD In		MD Out		TVD Out					
meters		Hours		WOB, kdaN		RPM		I-Row	
O-Row		DC		Loc		S		G	
Char		7Pull		Cost/meter					
#VALUE!									
Total Length of BHA:		BHA Description:							
Bit Cost		Row 1		Row 2		Rigs		Trip	
\$		Time, hr		DC Size, mm		DP Size, mm		Hours On	
		Jars:		Hrs Since Last Inspection:					
Bit		Liner, mm		Stroke, meters		m ³ /STK		SPM	
Press, KPa		liter/min		Jet Vel, m/sec		DP AV, m/min		DC AV, m/min	
Bit HHP		Borehole		Pump HHP					
Survey MD		Angle		Direction		TVD		N/S Coordinate	
E/W Coordinate		Vertical Section, m		DLS, %30m					
Hrs.		(From - To) hr:mm		Code		Operations Covering 24 Hours Ending at Midnight			
8:30		00:00 - 6:30		19		Continue to T1H w/ 346mm casing cutting assembly to 1083m. Cut casing at 1083m Latch up casing spear and POOH w/ 127mm DP. LD casing			
						spear and swivel assembly, R/S cutter.			
0:30		6:30 - 7:00		19		Hold pre-job safety meeting - laying down casing.			
3:00		7:00 - 10:00		19		LD 8 joints 346mm casing. R/D casing equipment.			
0:30		10:00 - 10:30		19		RH with open ended 127mm DP.			
0:30		10:30 - 11:00		20 T		Rig repair - Repair drill line cable guide.			
1:30		11:00 - 12:30		19		Continue to RH with open ended 127mm DP to 1014m.			
0:30		12:30 - 13:00		19		Hold pre-job safety meeting - cement job.			
1:30		13:00 - 14:30		19		R/U cement lines and test to 20700kPa. Close annular. Pump 9.5m ³ of 1897kg/m ³ tuned spacer. Mix and pump 702lbs (23m ³) of 1909kg/m ³ Class			
						G neat cement w/ 6 lt CFR-3, 30M CaCl ₂ and 0.42m ³ seawater. Displace cement w/ 12.87m ³ of freshwater. Cement in place at 1430hrs.			
7:00		14:30 - 21:30		19		Strip through annular from 1014m to 1004m while finishing displacement. Wait on cement. Backpressure increased 100psi on DP.			
1:00		21:30 - 22:30		19		Bleed down pressure to Halliburton unit - 0.25m ³ bleed back - 15min negative test OK. Open annular. Flow check well 15min - no flow.			
1:30		22:30 - 24:00		19		Displace C&K lines, boost line and riser with seawater.			
						Operations at 0500hrs, 8/19: Displacing well with seawater.			
24 hr		Summary:		Cut and retrieve 83m of 346mm casing. Place cement plug across 346mm casing stub. Start displacement of well to seawater.					
Projected		Operations:		Finish displacement of well to seawater. Pull riser and retrieve BOP.					
Safety		Issues:		No accidents. No incidents. Held weekly fire and abandon drills. Held weekly rig safety meeting.		Accidents:		NAR	
				Held daily pre-tour & safety meetings. Standby Vessel is the m/v Hebron Sea.		Safety Rep:		Gilbert	
Daily Mud Cost:		\$87,258		Daily Tangible Cost:		\$10,858		Daily Form Eval Cost:	
								\$350	
Cum Mud Cost:		\$3,885,254		Cum Tangible Cost:		\$4,291,614		Cum Form Eval Cost:	
								\$4,089,767	
Chevron %:		37		Total Appr:		\$79,476,780			
Bulk Gel		Cement		Fuel		Bulk Wt		Rig Heave, m	
m ³		m ³		m ³		m ³		Pitch, deg	
24.9		68.9		3,222.3		18.7		0.4 deg	
Country:		Rig:		UWI:		Drilling Rep:		Jones / Rutenschild / Alworth	
Canada		DW Millennium		300-0234320080450					
Field:		Lease:		Well:		Date:		18-Aug-02	
Exploration		EL 2369		Chevron et al Newburn H-23					

Chevron Canada Resources

Chevron et al. Newburn H-23

Drilling Activity Report (metric)

Measured Depth:		6,070 m		TVD:		5,963 m		PSTD:		1,023 m		Proposed MD:		8,400 m		Proposed TVD:		6,315 m	
DOL:		91		DFS:		90		Spud Date:		22-May-02		Daily meters:				Daily Rot Hrs:		HS Total Rot Hrs:	
Torque:		Nm		Drag:		kdaN		Rot Wt:		kdaN		PIU Weight:		kdaN		S/O Wt:		kdaN	
Last BOP Test:		27-Jul-02		POB:		108													
Last Casing Size:		251 mm		Set At:		4,404 m		MD		4,402 m		TVD		Shoe Test, kg/m ³ :		2041		Leakoff?	
Cum Rot Hrs on Casing:				Cum Rot Hrs on Casing Since Last Caliper:				Whipstock Set @:				KOP:		4,110 m					
Liner Size:		197 mm		Set At:		5,403 m		MD		5,324 m		TVD		Liner Top At:		4,224 m		MD	
Liner Top At:		4,224 m		MD		4,224 m		TVD											
Mud Co:		M-I		Type:		Sea Water		Sample From:		WL		FV:		PV:		YP:		Gel:	
WL API:		cc/30mm		HTHP:		FC(mm) API/HTHP:		0.0		Solids:		% Syn:		% Water:		SWR:		MBT:	
Psm:		ES, volts		Cw:		Ct:		Cn/kg:		ASG:		Solids % HGLG:		24hr Avg SOC %:		No discharge test		24 hrs	
Engr Service:		2		Materials added last		24 hrs:													
Orig Gas:				Max Gas:				Conn. Gas:				Trip Gas:				Trip Ct:		Remarks:	
Bit No.		IADC		Size		Manufacturer		Serial Number		Type		Jets, mm		TFA, mm ²		MD In		MD Out	
No.		Size		No.		No.		No.		No.		No.		No.		No.		No.	
meters		Hours		WOB, kdaN		RPM		I-Row		O-Row		DC		Loc		B		G	
Char		?Pull		Cost/meter															
#VALUE!																			
Total Length of BHA:				BHA Description:															
Bit Cost		Row 1		Row 2		Rigs		Trip		DC Size		DP Size, mm		Hours On		Hrs Since Last Inspection:			
\$		Liner, mm		Strokes, meters		m ³ STK		SPM		Press, KPa		liter/min		Jet Vel, m/sec		DP AV, m/min		DC AV, m/min	
Bit																Bit HHP		Pump HHP	
Survey MD		Angle		Direction		TVD		N/S Coordinate		E/W Coordinate		Vertical Section, m		DLS, °/30m					
Hrs.		(From-To) hh:mm		Code		Operations Covering 24 Hours Ending at Midnight													
1:00		00:00 - 1:00		19		Displace riser until XCD spacer at surface.													
4:00		1:00 - 5:00		19		Pump out sand trap & process tanks. Clean sand trap & continue laying down drillpipe from derrick.													
1:30		5:00 - 6:30		19		Circulate riser w/ sea water.													
2:30		6:30 - 9:00		19		POOH 36 stands 127mm drillpipe.													
5:00		9:00 - 14:00		19		Rig up to pull riser.													
0:30		14:00 - 14:30		19		Held pre-job safety meeting - Pulling riser.													
1:30		14:30 - 16:00		19		Prepare to unlatch BOP from SSWH. Unlatch BOP @ 15:00 hrs & move rig 50m due south of location. Hang off KT ring.													
4:30		16:00 - 20:30		19		Lay down diverter housing, intermediate joint, slip joint and 2 x 12.19m riser pup joints.													
3:30		20:30 - 24:00		19		POOH laying down riser (10 of 33 joints laid out at midnight).													
						Operations @ 0500hrs, 8/20: Continue pulling riser - 25 of 33 joints laid out.													
24 hr Summary:						Displace riser, unlatch BOP & begin pulling riser.													
Projected Operations:						Continue pulling riser & BOP. R/H MOST tool to out and recover SSWH.													
Safety Issues:						No accidents. No incidents.										Accidents:		NAR	
						Held daily pre-tour & safety meetings. Standby Vessel is the m/v Hebron Sea.										Safety Rep:		Gilbert	
Daily Mud Cost:		\$8,200		Daily Tangible Cost:		\$2,425		Daily Form Eval Cost:		\$350		Daily Drilling Cost:		\$508,904					
Cum Mud Cost:		\$3,901,454		Cum Tangible Cost:		\$4,294,038		Cum Form Eval Cost:		\$4,090,137		Cum Drilling Cost:		\$75,021,505					
Chevron %:		37										Total Appr:		\$79,478,780					
Bulk Gel, m ³		0.0		Cement, 10.1		Fuel, 3,189.3		Bulk Wt, m ³		0.0		Rig Heave, m		0.4		Pitch, deg		Roll, deg	
Country:		Canada		Rig:		DW Millennium		UWI:		3004234320080450		Drilling Raps:		Jones / Curran / Alworth					
Field:		Exploration		Lease:		EL 2359		Well:		Chevron et al Newburn H-23		Date:		19-Aug-02					

Drilling Activity Report (metric)

Country:	Canada	Ref:	DW Millennium	URN:	300H234320080450	Submitting Repro:	Jones / Curran / Alworth
Field:	Exploration	Lease:	PL 2158	Well:	Chevron et al Newbourn H-23	Date:	20-Aug-02

Measured Depth:		6,070 m		TVD:		5,983 m		PBD:		1,023 m		Proposed MD:		6,400 m		Proposed TVD:		6,315 m	
DOL: 93		DFS: 92		Spud Date: 22-May-02		Daily meters:		Daily Rot Hrs:		HS Total Rot Hrs:									
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		P/U Weight: kdaN		S/O Wt: kdaN		Last BOP Test: 27-Jul-02		POB: 92							
Last Casing Size: 251 mm		Set At: 4,404 m		MD: 4,402 m		TVD: 4,402 m		Shoe Test, kg/m ³ : 2041		Leakoff? No									
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Calliper:		Whipstock Set @:		KOP: 4,110 m													
Liner Size: 197 mm		Set At: 5,403 m		MD: 5,324 m		TVD: 5,324 m		Liner Top At: 4,224 m		MD: 4,224 m									
Mud Co: M-I		Type: Sea Water		Sample From:		Wt, kg/m ³ :		PV, a/qt:		PV, cP:		YP, Pa:		Gel, Pa:					
WL API, cc/30min:		HTHP:		FC(mm) API/HTHP:		Solids:		% Synt:		% Water:		SWR:		MBT, Kg/L:		pH:			
Perm:		ES, volts:		Crb:		Ct:		Ca/Mg:		ASG:		Solids % HG/LG:		24hr Avg SOC %:		No discharge last 24 hrs			
Engr Service: 1		Materials added last 24 hrs:																	
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:		Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No.	Jets, mm Size	Jets, mm No.	Jets, mm Size	TFA, mm ²	MD In	MD Out	TVD Out						
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G	Char	?Pull	Cost/meter							
Total Length of BHA: 96.64 m		BHA Description: 203mm Rubber Bulnose, M24 Casing Cutter (dressed w/ 2436 knives for 1118mm sweep), MOST tool & motor w/ integral 444.5mm stabilizer, 9 x 210mm DC's, crossover.																	
Bit Cost \$	Row 1	Row 2	Rig\$/hr	Trip Time/hr	DC Size, mm:	DP Size, mm:	Hours On Jank:	Hrs Since Last Inspection:											
Bit	Liner, mm	Stroke, meters	mYSTK	SPM	Press, KPa	Iter/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min	Bit HHP	BHHP/mm ²	Pump HHP							
Survey MD		Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m	DLS, °30m											
Hrs.	(From -To) Hrs:mm	Code	Operations Covering 24 Hours Ending at Midnight																
1:30	0:00 - 01:30	19	Continue cutting 508mm and 914mm casings. Final cut at 1003m (2.0m BML).																
3:00	1:30 - 04:30	19	Lock MOST tool to SSWH & pull free w/ 22k daN overpull. POOH with SSWH & mud mat. Dry weight of entire assembly 62k daN. Recover beacons & complete seabed survey w/ ROV.																
13:00	4:30 - 17:30	19	Clean sediment & loose cement off mud mat in moonpool, dry weight of entire assembly 40k daN. Land mud mat on BOP transporter & attempt to remove hard cement. Secure SSWH & mud mat on transporter. Release & lay out MOST tool assembly. Make up 476mm CART tool to SSWH. Attempt to release gimbal, no success. Cut gimbal and locking ring from 914mm conductor. Lay out SSWH & backload same.																
6:30	17:30 - 24:00	19	Continue backloading workboats & cleaning mud pits.																
			Operations @ 0500 hrs on Aug 22: Rig in transit from Newburn H-23 location to GoM. Departed location @ 03:30 hrs August 22, 2002.																
24 hr Summary:		Recover SSWH and mud mat. Complete final backload & clean mud pits. Prepare for transit to GoM.																	
Projected Operations:		Commence transit to GoM.																	
Safety Issues:		No incidents. No accidents. Held pre-tour job safety and procedures meetings. Standby Vessel is the m/v Hebron Sea.																Accident:	NAR
																		Safety Rep:	Gilbert
Daily Mud Cost: \$5,450		Daily Tangible Cost: \$2,425		Daily Form Eval Cost: \$0		Daily Drilling Cost: \$581,013													
Cum Mud Cost: \$3,912,354		Cum Tangible Cost: \$4,296,889		Cum Form Eval Cost: \$4,090,487		Cum Drilling Cost: \$76,158,835													
Chevron %: 37						Total Appr: \$79,476,760													
Bulk Gel, m ³ : 0.0		Cement, m ³ : 0.0		Fuel, m ³ : 3,127.8		Bulk Wt, m ³ : 0.0		Rig Heave, m		Pitch, deg		Roll, deg							
Country: Canada		Rig: DW Millennium		UW: 300H234320080450		Drilling Rep: Jones / Curran / Alworth													
Field: Exploration		Lease: EL 2359		Well: Chevron et al Newburn H-23		Date: 21-Aug-02													

Chevron Canada Resources

Chevron et al Newburn H-23

Drilling Activity Report (metric)

Measured Depth		TVD		PBD		Proposed MD		Proposed TVD	
6,070 m		5,983 m		1,023 m		6,400 m		6,315 m	
DOL		DFS		Spud Date		Daily meters		Daily Rot Hrs	
94		93		22-May-02					
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		P/U Weight: kdaN		S/O Wt: kdaN	
Last Casing Size:		Set At:		MD		TVD		Shoe Test, kg/m ²	
								Leakoff? No	
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Calliper		Whipstock Set @:		KOP:			
Liner Size:		Set At:		MD		TVD		Liner Top At:	
								MD	
Mud Co:		Type:		Sample From:		Wt, kg/m ³		PV, cP	
M-I		Sea Water							
WL API, cc/30min		HTHP:		FC(mm) API/HTHP:		Solids:		% Syn:	
Perm:		ES, volts		Carb:		Cl:		Ca/Mg:	
								ASG:	
Engr Service		Materials added last 24 hrs:		Solids % HGLG:		24hr Avg SOC %:			
1									
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:	
								Remarks:	
Bit No.		IADC		Size		Manufacturer		Serial Number	
Type		Jets, mm		No. Size		TFA, mm ²		MD In	
								MD Out	
TVD Out									
meters		Hours		WOB, kdaN		RPM		I-Row	
								O-Row	
DC		Loc		B		G		Char	
								7Pull	
Coal/meter									
Total Length of BHA:		BHA Description:							
Bit Cost \$		Row 1		Row 2		Rig\$ /hr		Trip Time, hr	
DC Size, mm:		DP Size, mm:		Hours On Jars:		Hrs Since Last Inspection:			
Bit		Liner, mm		Stroke, meters		m ³ /STK		SPM	
								Press, KPa	
Bed/min		Jet Vel, m/sec		DP AV, m/min		DC AV, m/min		Bit HHP	
								Bit HHP/mm ²	
Pump HHP									
Survey MD		Angle		Direction		TVD		NS Coordinate	
								E/W Coordinate	
								Vertical Section, m	
DLS, 730m									
Hrs.		(From -To) hrs:mm		Code		Operations Covering 24 Hours Ending at Midnight			
3:30		0:00 - 3:30		19		Continue backloading workboats & complete cleaning mud pits.			
20:30		3:30 - 24:00				Rig in transit to GoM. Commence laying down drillpipe from derrick while underway, 30 stds 6-5/8" & 3 stds 8-1/4" collars remain.			
						Starboard engine room down to change out cooling water valve, running 5 of 6 thrusters. Bring starboard engine room and thruster #5 back online at 17:41 hrs. Continue transit running 6 thrusters at 88%.			
						Captain notified CCG @ departure from location. Continue CCG notification every 6 hrs of transit. Final notification to CCG @ 24:00 hrs.			
						Position at 24:00 hrs Lat: 40° 54.75', Long 63° 46.97'. Heading 224°.			
						Daily Progress: 199nm (average speed 9.7 kts).			
						Distance Remaining: 1795nm			
						ETA KMG Atwater Valley 261 Location: 12:00 hrs August 31, 2002.			
						Rig Contact Numbers:			
						ChevronTexaco: 504-592-6393 (phone), 504-592-6381 (fax)			
						Transocean: 713-232-8409 (main), 713-232-8411 (OIM office), 713-232-8410 (fax)			
						Inmarsat (bridge): 874-335-746-310 (voice), 874-335-746-311 (fax)			
						Operations @ 0500 hrs on Aug 23: Rig in transit to GoM. Lat: 40° 17.13', Long 64° 32.40'. Heading 224° (average speed since midnight 10 kts).			
24 hr Summary:		Complete backloading workboats & cleaning mud pits. Commence transit for GoM @ 03:30hrs August 22, 2002.							
Projected Operations:		Rig in transit to GoM.							
Safety Issues:		No incidents. No accidents. Held pre-tour job safety and procedures meetings.		Accidents:		NAR		Safety Rep:	
Daily Mud Cost:		\$4,700		Daily Tangible Cost:		\$2,425		Daily Form Eval Cost:	
								\$9,500	
Cum Mud Cost:		\$3,917,054		Cum Tangible Cost:		\$4,301,314		Cum Form Eval Cost:	
								\$4,099,987	
Chevron %:		37		Total Appr:		\$79,476,760			
Bulk Gel, m ³		0.0		Cement, m ³		0.0		Fuel, m ³	
								3,041.3	
Country:		Canada		Rig:		DW Millennium		UWI:	
								300H234320060450	
Field:		Exploration		Lease:		EL 2359		Well:	
								Chevron et al Newburn H-23	
Curran / Treadway		Date:		22-Aug-02					

Measured Depth:		TVD		PBD		0 m		Proposed MD		Proposed TVD	
DOL		DFS		94		Spud Date:		22-May-02		Daily meters	
Torque Nm		Drag kdaN		Rot Wt: kdaN		PU Weight: kdaN		S/O Wt: kdaN		Last BOP Test:	
Last Casing Size:		Set At:		MD		TVD		Shoe Test, kg/m ² :		Leakoff?	
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Caliper:		Whipstock Set @:		KOP:		POB:		92	
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD	
Mud Co:		Type:		Sample From:		Wt, kg/m ³ :		FV, g/gt:		PV, g/gt:	
WL API, cc/30min		HTHP:		FC(mm) API/HTHP:		Solids:		% Syn:		% Water:	
Pam:		ES, volts		Carb:		Cl:		Ca/Mg:		ASG:	
Engr Service		Materials added last 24 hrs:		Ca/Mg:		ASG:		Solids % HG/LG:		24hr Avg SOC %:	
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:		Remarks:	
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No.	Jets, mm Size	TFA, mm ²	MD in	MD Out	TVD Out
meters	Hours	WOB, kdaN	RPM	I-Flow	O-Flow	DC	Loc	B	G	Char	?Pull
Total Length of BHA:		BHA Description:									
Bit Cost \$	Row 1	Row 2	Rig \$ /hr	Trip Time, hr	DC Size, mm:	DP Size, mm:	Hours On Jars:	Hrs Since Last Inspection:			
Bit	Liner, mm	Stroke, meters	m ³ /STK	SPM	Press, KPa	liters/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min	Bit HHP	Bit+Pump HHP
Survey MD		Angle	Direction	TVD	N/S Coordinate		E/W Coordinate		Vertical Section, m		DLS, °/30m
Hrs.	(From -To) Hrs:mm	Code	Operations Covering 24 Hours Ending at Midnight								
1:00	0:00 - 01:00		Rig in transit to GoM. Continue laying down drillpipe from derrick while underway. Final notification to CCG at 0:00 hrs.								
			Set clocks back 1 hour to Eastern Time, 25 hours reported on today's report.								
24:00	0:00 - 24:00		Rig in transit to GoM. Complete laying down drillpipe from derrick while underway. Running 6 thrusters at 91%.								
			Rig outside of Canadian territorial waters @ 00:30 hrs, resume deballast @ 05:30 hrs.								
			Position at 24:00 hrs Lat: 38° 11.22', Long 67° 08.20'. Heading 224°.								
			Daily Progress: 228nm (average speed 9.1 kts).								
			Distance Remaining to Alwater Valley 261 Location: 1570nm								
			ETA CPA Miami (for Coast Guard boarding): 15:00 hrs August 28, 2002.								
			ETA KMG Alwater Valley 261 Location: 12:00 hrs August 31, 2002.								
			Rig Contact Numbers:								
			Chevron/Texaco: 504-592-6393 (phone), 504-592-6381 (fax)								
			Transocean: 713-232-8409 (main), 713-232-8411 (OIM office), 713-232-8410 (fax)								
			Inmarsat (bridge): 011-874-335-746-310 (voice), 011-874-335-746-311 (fax)								
			Operations @ 06:00 hrs on Aug 24: Rig in transit to GoM. Lat: 37° 32.80', Long 67° 54.7'. Heading 224° (average speed since midnight 9.3 kts).								
24 hr Summary:		Rig in transit to GoM.									
Projected Operations:		Rig in transit to GoM.									
Safety Issues:		No incidents. No accidents.									Accidents:
		Held pre-tour job safety and procedures meetings.									Safety Rep:
Daily Mud Cost:		-\$400,000		Daily Tangible Cost:		\$1,338,338		Daily Form Eval Cost:		\$983,509	
Cum Mud Cost:		\$3,506,904		Cum Tangible Cost:		\$5,634,802		Cum Form Eval Cost:		\$5,073,996	
Chevron %:		37						Total Appr:		\$79,476,760	
Bulk Gel, m ³		0.0		Cement, m ³		0.0		Fuel, m ³		2,935.2	
Country:		Canada		Rig:		DW Millennium		UWT:		300H234320060450	
Field:		Exploration		Lease:		EL 2359		Well:		Chevron et al Newburn H-23	
								Drilling Rep:		Curran / Treadway	
								Date:		23-Aug-02	

Drilling Activity Report (metric)

Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	24-Aug-02
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Drilling Activity Report (metric)

Measured Depth		TVD:		PSTD:		0 m		Proposed MD:		Proposed TVD:	
OOL		DFS:		Spud Date:		Daily meters:		Daily Rot Hrs		HS Total Rot Hrs	
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		P/U Weight: kdaN		S/O Wt: kdaN		Last BOP Test:	
Last Casing Size		Set At:		MD		TVD		Shoe Test, kg/m ²		Leakoff? No	
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Callip:		Whipstock Set @:		KOP:					
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD TVD	
Mud Co:		Type:		Sample From:		Wt, kg/m ³		FV, g/qt		PV, cP	
WL API, cc/30min		HTHP:		FC(mm) API/HTHP: mm		Solids: %		Syn: %		% Water: SWR:	
Perm:		ES, volts		Cet:		Ct		Ca/Mg: ASG:		Solids % HQLG: 24hr Avg SOC %:	
Engr Service		Materials added last 24 hrs:									
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct		Remarks:	
Bit No.		IADC		Size		Manufacturer		Serial Number		Type	
Jets, mm No.		Size		TFA, mm ²		MD in		MD Out		TVD Out	
meters		Hours		WOB, kdaN		RPM		I-Flow		O-Flow	
DC		Loc		B		G		Char		?Pull	
Cost/meter											
Total Length of BHA		BHA Description:									
Bit Cost \$		Row 1		Row 2		Rig\$ /hr		Trip Time, hr		DC Size, mm:	
Bit		Liner, mm		Stroke, meters		m ³ STK		SPM		Press, KPa	
liters/min		Jet Vel, m/sec		DP AV, m/min		DC AV, m/min		Bit Ht-IP		Bit-IP/mm ²	
Pump Ht-IP											
Survey MD		Angle		Direction		TVD		N/S Coordinate		E/W Coordinate	
Vertical Section, m		DLS, °/30m									
Hrs.		(From -To) Hr:mm		Code		Operations Covering 24 Hours Ending at Midnight					
24:00		0:00 - 24:00				Rig in transit to GoM. Continue changing out travelling block.					
						Position at 24:00 hrs Lat: 32° 34.93 N, Long 073° 42.23 W. Heading 224°					
						Daily Progress: 236nm (average speed 9.8 kts)					
						Total Distance Travelled: 878nm (average speed 9.5 kts)					
						Distance Remaining to Alwater Valley 261 Location: 1119nm					
						ETA CPA Miami (for Coast Guard boarding): 15:00 hrs August 28, 2002					
						ETA KMG Alwater Valley 261 Location: 12:00 hrs August 31, 2002					
						Rig Contact Numbers:					
						Chevron/Texaco: 504-592-6393 (phone), 504-592-6381 (fax)					
						Transocean: 713-232-8409 (main), 713-232-8411 (OIM office), 713-232-8410 (fax)					
						Inmarsat (bridge): 011-874-335-746-310 (voice), 011-874-335-746-311 (fax)					
						Operations @ 06:00 hrs on Aug 25: Rig in transit to GoM. Lat: 31° 51.7N, Long 074° 32.3W. Heading 224° (average speed since midnight 10 kts).					
24 hr Summary:		Rig in transit to GoM.									
Projected Operations:		Rig in transit to GoM.									
Safety Issues:		No incidents. No accidents. Held pre-tour job safety and procedures meetings.								Accidents: NAR Safety Rep:	
Daily Mud Cost: \$0		Daily Tangible Cost: \$0		Daily Form Eval Cost: \$0		Daily Drilling Cost: \$434,887					
Cum Mud Cost: \$3,506,904		Cum Tangible Cost: \$5,634,802		Cum Form Eval Cost: \$5,073,996		Cum Drilling Cost: \$79,426,563					
Chevron %: 37						Total Appr: \$79,476,760					
Bulk Gel, m ³		Cement, m ³		Fuel, m ³		Bulk Wt, m ³		Rig Heave, m		Pitch, deg	
Country: Canada		Rig: DW Millennium		UWI: 300H234320060450		Drilling Rep:		Curran / Treadway			
Field: Exploration		Lease: EL 2359		Well: Chevron et al Newburn H-23		Date: 25-Aug-02					

Measured Depth		TVD		PBD		0 m		Proposed MD		Proposed TVD	
OOL		OFS		97		Spud Date		22-May-02		Daily meters	
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		PAU Weight: kdaN		S/O Wt: kdaN		Last BOP Test:	
Last Casing Size:		Set At:		MD		TVD		Shoe Test, kg/m ²		Leakoff? No	
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Caliper:		Whipstock Set @:		KOP:					
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD TVD	
Mud Co:		Type:		Sample From:		Wt, kg/m ³		PV, cP		YP, Pa	
WL API, cc/30min		HTHP:		FC(mm) API/HTHP, mm		Solids		% Synt		% Water	
Perm:		ES, volts		Carb:		Ct		Ca/Mg		ASG:	
Engr Service		Materials added last 24 hrs:								24hr Avg SOC %:	
Drig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:		Remarks:	
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jet, mm No	Size	No. Size	TFA, mm ²	MD In	MD Out
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G	Char	7Pull
											Cost/meter
Total Length of BHA:		BHA Description:									
Bit Cost \$	Row 1	Row 2	Rig \$ /hr	Trip Time, hr	DC Size, mm	OP Size, mm	Hours On Jars	Hrs Since Last Inspection:			
Bit	Liner, mm	Stroke, meters	m/STK	SPM	Press, KPa	lit/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min	Bit HHP	Pump HHP
Survey MD		Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m		DLS, %30m		
Hrs.	(From -To) hr:min	Code	Operations Covering 24 Hours Ending at Midnight								
24:00	0:00 - 24:00		Rig in transit to GoM. Continue changing out travelling block.								
			Position at 24:00 hrs Lat: 29° 35.6 N', Long 077° 02.8 W'. Heading 224°								
			Daily Progress: 248nm (average speed 10.3 kts)								
			Total Distance Travelled: 1128 nm (average speed 9.58 kts)								
			Distance Remaining to Atwater Valley 261 Location: 867 nm								
			ETA CPA Miami (for Coast Guard boarding): 11:00 hrs August 28, 2002								
			ETA KMG Atwater Valley 261 Location: 12:00 hrs August 31, 2002								
			ETA Potential Venice Flight Location (approximate position Lat: 26° 54', Long: 86° 43'): 05:00 hrs August 31, 2002								
			Rig Contact Numbers:								
			ChevronTexaco: 504-592-6393 (phone), 504-592-6381 (fax)								
			Transocean: 713-232-8409 (main), 713-232-8411 (OIM office), 713-232-8410 (fax)								
			Inmarsat (bridge): 011-874-335-746-310 (voice), 011-874-335-746-311 (fax)								
			Operations @ 06:00 hrs on Aug 27: Rig in transit to GoM. Lat: 28° 56.2N', Long 077° 48.4W'. Heading 224° (average speed since midnight 9.1kts).								
24 hr Summary:		Rig in transit to GoM.									
Projected Operations:		Rig in transit to GoM.									
Safety Issues:		No incidents. No accidents. Held pre-tour job safety and procedures meetings.									Accidents: NAR
											Safety Rep:
Daily Mud Cost:		\$0		Daily Tangible Cost:		\$0		Daily Form Eval Cost:		\$0	
Cum Mud Cost:		\$3,517,054		Cum Tangible Cost:		\$5,639,652		Cum Form Eval Cost:		\$5,063,496	
Chevron %:		37						Daily Drilling Cost:		\$434,887	
								Cum Drilling Cost:		\$81,403,940	
								Total Appr:		\$79,476,760	
Bulk Gel, m ³	0.0	Cement, m ³	0.0	Fuel, m ³	2,543.3	Bulk Wt, m ³	0.0	Rig Heave, m	Pitch, deg	Roll, deg	
Country:	Canada	Rig:	DW Millennium	UWT:	300H234320060450	Drilling Rep:	Curran / Treadway				
Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	26-Aug-02				

Drilling Activity Report (metric)

Field	Exploration	Lease	EL 2359	Well	Chevron et al Newburn H-23	Date	27-Aug-02
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Drilling Activity Report (metric)

Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	28-Aug-02
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Measured Depth:		TVD		PSTD		0 m		Proposed MD:		Proposed TVD:	
DOL		DFS		100		Spud Date:		22-May-02		Daily meters:	
Torque: Nm		Drag: kdaN		Rot Wt: kdaN		P/U Weight: kdaN		S/O Wt: kdaN		Last BOP Test:	
Last Casing Size:		Set At:		MD		TVD		Shoe Test, kg/m ² :		Leakoff?	
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Calliper:		Whipstock Set @:		KOP:		No		92	
Liner Size:		Set At:		MD		TVD		Liner Top At:		MD	
Mud Co:		Type:		Sample From:		Wt, g/m ³ :		FV, a/qt:		PV, cP:	
WL API, cc/30min		HITHP:		FC(mm) API/HITHP:		Solids:		% Syn:		% Water:	
Perm:		ES, volts		Carb:		Cl:		Ca/Mg:		ASG:	
Engr Service		Materials added last		24 hrs.		Solids % HGL/G:		24hr Avg SOC %:		MBT, Kg/L	
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:		Remarks:	
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm	TFA, mm ²	MD In	MD Out	TVD Out	
						No. Size	No. Size				
meters	Hours	WOB, kdaN	RPM	I-Flow	O-Flow	DC	Loc	B	G	Char	?Pull
Total Length of BHA:		BHA Description:									
Bit Cost \$	Row 1	Row 2	Rigs /hr	Trip Time, hr	DC Size, mm	DP Size, mm	Hours On Jars	Hrs Since Last Inspection:			
Bit	Linear, mm	Stroke, meters	m/STK	SPM	Press, KPa	liters/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min	Bit HHP	Pump HHP
Survey MD		Angle	Direction	TVD	N/S Coordinate	E/W Coordinate	Vertical Section, m		DLS, °/30m		
Hrs.	(From -To) hr:mm	Code	Operations Covering 24 Hours Ending at Midnight								
1:00	0:00 - 01:00		Rig in transit to GoM. Continue on course 250° to Waypoint #4. Note: Change ship's time from Eastern Time to Central Time.								
1:45	0:00 - 01:45		Rig in transit to GoM. Make course change @ 01:45 from 250° to 270° at Waypoint #4.								
7:45	1:45 - 09:30		Rig in transit to GoM. Make course change @ 09:30 from 270° to 290° at Waypoint #5. Enroute to Garden Banks 877.								
1:30	9:30 - 11:00		Rig in transit to GoM. Notified change in rig release location to Atwater Valley 261. Make course change @ 11:00 from 290° to 312°.								
4:00	11:00 - 15:00		Rig in transit to GoM. Notified change in rig release location to Atwater Valley 485. Make course change @ 15:00 from 312° to 296°.								
2:00	15:00 - 17:00		Rig in transit to GoM. Notified change in rig release location to Garden Banks 877. Make course change @ 17:00 from 296° to 288°.								
7:00	17:00 - 24:00		Rig in transit to GoM. Continue on course 288° to rig release location enroute to Garden Banks 877.								
			Position at 24:00 hrs Lat: 025° 05.2' N, Long: 084° 59.2' W. Course 288°								
			Daily Progress: 227 nm (average speed 9.08 kts)								
			Total Distance Travelled: 1786 nm (average speed 9.38 kts)								
			Distance Remaining to Garden Banks 877 Location: 393 nm (Lat: 27° 07.0' N, Long: 091° 55.0' W)								
			ETA Rig Release Location (Calculated Rig Release Position - Lat: 026° 40.0' N, Long: 090° 24.0' W - Walker Ridge 297): 12:00 hrs August 31, 2002								
			ETA KMG Garden Banks 877 Location: 22:00 hrs August 31, 2002								
			Rig Contact Numbers (dish currently unrepairable, KU band will be down until rig on location):								
			Inmarsat (bridge): 011-874-335-746-310 (voice), 011-874-335-746-311 (fax)								
			Operations @ 08:00 hrs on Aug 30: Rig in transit to GoM. Lat: 025° 18.6' N, Long: 085° 45.5' W. Course 288° (average speed since midnight 7.3 kts).								
			Note: Changed ship's time at 01:00 hrs August 29, 2002 from Eastern Time to Central Time, 25 hours recorded on today's report.								
24 hr Summary:		Rig in transit to GoM. Continue rig maintenance.									
Projected Operations:		Rig in transit to GoM.									
Safety Issues:		No incidents. No accidents. Held pre-tour job safety and procedures meetings.									
Daily Mud Cost:		Daily Tangible Cost:		Daily Form Eval Cost:		Daily Drilling Cost:					
\$0		\$0		\$0		\$434,887					
Cum Mud Cost:		Cum Tangible Cost:		Cum Form Eval Cost:		Cum Drilling Cost:					
\$3,517,054		\$5,639,652		\$5,083,496		\$82,708,601					
Chevron %:						Total Appr:					
37						\$79,478,760					
Bulk Gel, m ³	0.0	Cement, m ³	0.0	Fuel, m ³	2,116.8	Bulk Wt, m ³	0.0	Rig Heave, m	Pitch, deg	Roll, deg	
Country:	Canada	Rig:	DW Millennium	UWT:	300H234320060450	Drilling Reps:	Curran / Treadway				
Field:	Exploration	Lease:	EL 2359	Well:	Chevron et al Newburn H-23	Date:	29-Aug-02				

Drilling Activity Report (metric)

30-Aug-02

Measured Depth		TVD		PBD: 0 m		Proposed MD		Proposed TVD	
DOL		DFS		102		Spud Date: 22-May-02		Daily meters:	
Torque Nm		Drsg: kdaN		Rot Wt: kdaN		P/U Weight: kdaN		S/O Wt: kdaN	
Last Casing Size		Set At:		MD		TVD		Shoe Test, kg/m ²	
Cum Rot Hrs on Casing:		Cum Rot Hrs on Casing Since Last Caliper:		Whipstock Set @:		KOP:		POB: 92	
Liner Size:		Set At:		MD		TVD		Liner Top At: MD	
Mud Co:		Type:		Sample From:		WI, kg/m ³		PV, s/qt	
WL API, psi/30min		HTHP:		FC (mm) API/HTHP: mm		Solids:		% Syn	
Perm:		ES, volts		Carb:		Cl:		Ca/Mg:	
Engr Service		Materials added last 24 hrs:		ASG:		Solids % HGLG:		24hr Avg SOC %:	
Orig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Ct:	
Remarks:									
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets, mm No.	Jets, mm Size	TFA, mm ²	MD In
meters	Hours	WOB, kdaN	RPM	I-Row	O-Row	DC	Loc	B	G
Total Length of BHA:		BHA Description:							
Bit Cost \$		Flow 1		Flow 2		Rig\$ /hr		Trip Time, hr	
DC Size, mm:		DP Size, mm:		Hours On Jan:		Hrs Since Last Inspection:			
Bit	Liner, mm	Stroke, meters	mYSTK	SPM	Press, KPa	lit/min	Jet Vel, m/sec	DP AV, m/min	DC AV, m/min
Survey MD		Angle		Direction		TVD		N/S Coordinate	
								E/W Coordinate	
								Vertical Section, m	
								DLS, °/30m	
Hrs.	(From-To) h:m	Code	Operations Covering 24 Hours Ending at Midnight						
5:00	0:00 - 5:00		Rig in transit to GoM. Continue on course 288° to rig release location (enroute to KMG Garden Banks 877 location).						
3:00	5:00 - 8:00		Rendezvous with Doreen McCall (crew boat) 19 nm prior to rig release location. Offload remaining CT equipment.						
1:30	8:00 - 9:30		Deepwater Millennium at calculated rig release location (Lat: 026° 40.0' N, Long: 090° 24.0' W - Walker Ridge 297)						
			Final Report: Rig Released to Kerr McGee @ 09:30 hrs August 31, 2003						
			Final Bulk Survey:						
			Cement: 0 sx (empty)						
			Barite: 0 sx (empty)						
			Gel: 0 sx (empty)						
			Potable Water: 6504 bbls						
			Drill Water: 6614 bbls						
			Base Oil: 0 bbls (empty)						
			Liquid Mud: 0 bbls (empty)						
			Brine: 0 bbls (empty)						
			Fuel: 12563 bbls						
			Helicopter Fuel: 1137 US gals						
			Total Distance Travelled: 2094 nm (average speed 9.46 kts).						
			ETA KMG Garden Banks 877 Location (Lat: 27° 07.0' N, Long: 091° 55.0' W): 18:00 hrs August 31, 2002						
24 hr Summary:		Rig in transit to GoM. Offload remaining CT equipment & Canadian crew to Doreen McCall. Survey bulk inventory & release rig to Kerr McGee at mutually agreed location.							
		Walker Ridge 297 (Lat: 026° 40.0' N, Long: 090° 24.0' W). Rig Released @ 09:30 hrs August 31, 2002.							
Projected Operations:									
Safety Issues:		No incidents. No accidents.							Accidents: NAR
		Held pre-tour job safety and procedures meetings.							Safety Rep: -
Daily Mud Cost:		\$0		Daily Tangible Cost:		\$0		Daily Form Eval Cost:	
								\$212,968	
Cum Mud Cost:		\$3,517,054		Cum Tangible Cost:		\$5,639,652		Cum Form Eval Cost:	
								\$5,083,496	
Chevron %:		37						Total Appr:	
								\$79,476,760	
Bulk Gel, m ³		0.0		Cement, m ³		0.0		Fuel, m ³	
								1,997.4	
Country:		Canada		Rig:		DW Millennium		UWI:	
								300H234320060450	
Field:		Exploration		Lease:		EL 2359		Well:	
								Chevron et al Newburn H-23	
								Date: 31-Aug-02	

Appendix C

Hole Section Summary

Appendix C
Hole Section Summary

Chevron et al Newburn H-23 Hole Section Summary

1067mm Hole / 914mm Casing (1001.6-1100m)

The Deepwater Millennium spud the Chevron et al Newburn H-23 well at 00:30 hrs on May 22nd, 2002 in 977.2 m of water. The well was drilled from 1001.6m (KB-ML) to 1056.7m with increasing deviation (2.85 degrees at 1043m). The decision was made to abandon this first well due to excessive deviation. The Deepwater Millennium was moved 40m to the North and the well respudded.

The Chevron et al Newburn H-23 well was respud at 12:30 hrs. May 22nd, 2002. A 1067mm hole was jetted with the drilling BHA to approximately 13m BML in order to ensure vertical hole. A hard layer was encountered at 1014m and the drilling BHA had to be rotated to make further progress. The 1067mm hole was drilled with controlled rpm (20-25 rpm) and minimal WOB (0-2 klbs) to maintain a vertical hole. Viscous sweeps were pumped every 8m drilled to clean the hole. Inclination surveys with MWD were also taken every 8m. The 1067mm hole reached total depth of 1100m at 05:00 hrs May 23rd after 14.5 rotating hours. The hole was displaced to 12 ppg pad mud and a wiper trip to the mud line made. The hole was circulated again over to 12 ppg pad mud and the BHA pulled to run casing.

Six joints of 914mm casing were run complete with 914mm LPWH and 127mm inner cementing string. The bottom of cementing string was placed 18.9m from the casing shoe. It was discovered that the inner skirt of the ABB Vetco LPWH Running tool did not cover and isolate the 4 circulating ports on the LPWH. To rectify this, four 8" nipples with 4" ball valves were installed and closed on the circulating ports prior to running the casing below the waterline. The casing string was run and landed at 1093m on a 168mm, 40.9 ppf landing string.

The 914mm casing was cemented in place with 452 bbls of Lafarge Class "G" cement with 0.23 gal/sk CaCl₂ @ 15.9 ppg (200% excess). Cement returns were noted after 169 bbls of cement was pumped. Based on good cement returns to surface the contingency to grout the casing (top up job) was cancelled. The casing was supported with the landing string for a 13 hr period before releasing the running tool. The planned WOC time was 12 hrs. The WOC time was extended due to the ROV's failure to cut the grouting hose with a grinding wheel on the first attempt. There was no indication of casing subsidence after releasing from the 914mm structural pipe.

660mm Hole / 508mm Casing (1100-1917m)

The 660mm BHA (including 660mm Security XT-1C Tooth Bit and 241mm GT Motor set at 1.15 deg) was made up and RIH. The top of cement in the 914mm pipe was tagged at 1087m (5m cement inside shoe as per plan). The 660mm hole was drilled from 1100m to 1917m in 36 rotating hours at an AROP of 23 m/hr. Difficulty with observing mud returns at the wellhead required numerous drilling shutdowns to allow visibility at the mudline to improve so the ROV could monitor possible shallow flows. Visibility problems were attributed to tidal shifts. Wiper trips were performed during periods of reduced ROV visibility to check hole conditions. Every stand was backreamed and a 100 bbl high viscosity sweep was pumped prior to connections while drilling. A tight section requiring additional torque and backreaming was experienced from 1631m to 1638m.

At the 660mm hole section TD of 1917m a 250 bbl high viscosity sweep was circulated out of the well. A 65 bbl heavy weight pill (16.5 ppg) was spotted on bottom and the well displaced to 12 ppg pad mud prior to the wiper trip to the 914mm shoe. Numerous tight spots were noted on the wiper trip requiring washing and reaming. Back on bottom a second – 250 bbl high viscosity sweep was pumped out of the hole, a 65 bbl, 16.5 ppg pill spotted on bottom and the rest of the well displaced to 12 ppg pad mud. The hole was in good shape POOH to run 508mm casing.

The ROV noted excessive inclination on the bullseye mounted to the 914mm Housing extension. To confirm this inclination reading the 914mm Vetco CART tool was made up and RIH with a drillpipe mounted bullseye and a MWD tool at 18:00, May 28, 2002. This run indicated the Structural pipe had not moved and that the bullseye mounted to the 914mm Housing extension was reading improperly, potentially due to the shifting of a shim.

The 508mm casing was run (72 jts – 508mm, 169 ppf, X-56, RL-4S) on the 168mm, 40.9 ppf landing string complete with 127mm inner cementing string. The HPWH was run with the NSP in place. The bottom of cementing string was placed 36.8m from the casing shoe. The 508mm casing was landed at 1902m (15m overhole) and cemented in place by Halliburton. The casing was cemented using 5450 sxs (1096 bbls) of 1550 kg/m³ lead foamed Lafarge Class “G” cement + 0.8 gal/sk Zonesalant 2000 mixed with drill water and 1355 sxs (280 bbls) of 1900kg/m³ tail of Lafarge Class “G” cement + 0.23 gal/sk CaCl₂ mixed with seawater. This equates to 100% of annular volume. An estimated 1373 sks of cement were circulated to the mudline.

Following cementing, the HPWH CART tool was released and the running string/ inner cementing string pulled to surface. The HPWH was washed on the trip out with the inner cementing string. The rig was then moved 150m off location to prepare to run the BOP stack.

Run BOP / Riser

The BOP stack was stump tested to 12,000 psi and function tested prior to running subsea. BOP running operations commenced at 16:00 hrs on May 30th, 2002. The BOP and 12 joints of riser were run by 05:30 hrs May 31st, 2002. The hose used to fill the choke line with seawater while running the BOP was inadvertently dropped down the choke line. The hose separated at the crow's foot connection and 1.5m of 1" hose was dropped. This necessitated pulling 12 joints of riser to recover the hose at the kick-out on top of the coflex hose connection at the LMRP.

The BOP stack and riser was rerun. The choke and kill lines were pressure tested to 12,000 psi, and the boost line, rigid conduit lines to 5000 psi after picking up riser jt #1, riser jt #18 and riser jt #35. The lower boost coflex hose on the intermediate flex joint was changed out. The choke and kill lines were pressure tested again after making up the KT Ring to the slip joint. The BOP was landed and latched to the HPWH at 16:00 hrs June 1st, 2002 (48 hrs from starting riser running operations, including 16.5 hrs trouble time).

Following running of the BOP stack and latch up, an attempt was made to pressure test the 508mm casing/blind shear rams/wellhead connector to 1800 psi with water. This was not possible without unacceptable bleed-offs. Approximately 1200 bbls of 10 ppg WBM was mixed while pressure testing the BOP stack with the Vetco BOPITT to 250/12000psi for 10 minutes. A mule shoe was run on 168mm drillpipe to the top of cement inside 508mm casing at 1891m (11m from float shoe). The casing was circulated over to the 10 ppg WBM. The circulating string was pulled above the BOP stack and the blind shear rams closed. The 508mm casing and Blind Shear rams were then successfully pressure tested to 1800 psi. (Lost time to retest 508mm casing 11.5 hrs). The circulating string was then recovered from the well.

432mm Hole / 346mm Casing (1917-3515m)

The 432mm BHA (432mm Smith S91VPX PDC Bit & straight – slick A962XP 5/6 Motor) was run and drilled out the 508mm casing shoe and 2m of new hole prior to performing an FIT to 10.9 ppg. Prior to drilling out the casing shoe the well was displaced over to 9.1 ppg Paradril SBM. The 432mm hole was drilled from 1917m to 3515m in 119 hrs with an AROP of 13.4 m/hr. Penetration rate was controlled due to ongoing problems with Swaco Duster cuttings dryer plugging up. Total downtime due to cuttings dryer/auger problems was 39.5 hrs, not including lost ROP efficiency.

The Paradril SBM was weighted up as per mud weight schedule (9.6 ppg at 1950m and 10.2 ppg at 2475m). A wiper trip was performed at 2476m to check hole conditions. No problems or tight hole reported. A weekly scheduled function test of BOP equipment was performed.

The 432mm hole reached section TD at 12:30 hrs June 11th with a final mud weight of 10.3 ppg and the bit was dull graded as (2-1-CT-N-X-I-NO-TD). A short trip to 2500m was performed prior to the drilling BHA being pulled from the well and Schlumberger rigging up to perform three logging descents. Logging run #1: Quad Combo, logging run #2: VSP, and logging run #3: rotary sidewall cores (100% recovery - 25 of 25 cores).

Prior to running casing, RIH with a wash tool and WBRRT to wash the BOP and SSWH and recovered the NSP. The 346mm casing was run (195jts -346mm, 88.2lb/ft, P-110, TC-II) on the 168mm, 40.9 ppf landing string. The casing was landed at 3501m (14m overhole) and cemented in place by Halliburton. The casing was cemented using 1330 sks (474bbls) of 12.9ppg lead cement + 3.3% BWOC prehydrated gel, 0.14gal/sk Halad-344L, 0.11gal/sk SCR100L and 500 sks (102bbls) of 15.9ppg tail cement + 0.16gal/sk Halad-344L, 0.08gal/sk SCR100L. This equates to 10% in excess of the caliper volume. Began losing returns while circulating the casing prior to cementing, an estimated 1100 bbls of SBM was lost to the formation during cementing and displacement operations. Displaced cement with the rig pumps to theoretical top of float collar, plug did not bump. Pumped an additional volume equal to half of the shoe track and shut down. Set the packoff and tested same to 5400psi. Released the running tool and POOH. RIH with wash tool and WBRRT and washed SSWH and set the wear bushing. Tested BSR's and the casing to 250/5400 psi for 15 minutes. TIH with ITT and tested BOP's to 250/5500psi for 5 minutes.

311mm Hole / 251mm Casing (3515-4418m)

The 311mm BHA (311mm Hycalog RS163 PDC Bit & Powerdrive Rotary Steerable BHA, ARC 900 and ISonic LWD) was run and tagged the top of cement at 3447m, 17m high or 8.3bbls short of bumping the plug. The 346mm casing shoe was drilled out and 3m of new hole prior to performing an FIT to 13.5 ppg with 10.3ppg mud in the wellbore.

The 311mm hole was drilled from 3515-4366m, to an inclination of 7 degrees, in 51 hrs with an AROP of 16.7 m/hr. The wellbore was kicked off at 4110m, 100m high, as a result of the 432mm VSP log interpretation indicating increased transit times, which resulted in a +/- 200m upwards shift in the expected formation tops. The required build up rates of the programmed S-curve profile were increased from 1deg/100ft to 2.8deg/100ft to meet target objectives. There was also a correction to the pore pressure prediction which resulted in changes to the weight up schedule. The Paradril SBM was weighted up as per the new mud weight schedule (10.5ppg at 3860m and 10.9 at 4052m).

A drilling break occurred while drilling in a suspected fractured limestone section at 4366m. The well was flow checked and circulated bottoms up. The background gas increased from 1.5% to 15% while circulating. Weighted up to 11.4ppg as per the weight up schedule, background gas remained high at +/- 5%. The mud weight was then increased to 12.3ppg in 4 stages, while simulating connections to determine the required overbalance. The background gas was reduced to 1.1% at 12.3ppg. A 3 stand short trip was attempted, but the hole would not take the required fill up volume. TIH and circulated bottoms up and raised the mud weight to 12.5ppg. (Total of 30hrs spent weighting up the system to 12.5ppg and conditioning the mud)

The well was drilled ahead at a controlled, reduced penetration rate from 4366-4418m with 1.1% background gas and an AROP of 9.5m/hr. While drilling, the resistivity values steadily decreased and there was an increase in torque and interpreted formation drillability indicating that the well had penetrated a transition zone of significant pore pressure increase. Knowledge Systems Inc. estimated the pore pressure at 4400m to be 12.3ppg. The hole section was TD'd at 4418m as a result of fracture gradient limitations. The 311mm hole section reached TD at 23:00 hrs June 22nd, 2002. the wellbore inclination at the 311mm TD was 10.8 degrees and the actual build rates realized were +/- 1 deg/30m approximately half way through the build section.

The mud weight was increased to 12.7ppg in preparation for the logging program. An attempt was made to short trip into the casing prior to logging but the well would not take the correct fill up volume. TIH and circulated bottoms up with the maximum gas level at 4%. Attempted to short trip a second time, but again

the well would not take the correct fill up volume. TIH again and circulated bottoms up, maximum gas level at 4%. The decision was made to backream and circulate out of the hole to the casing shoe in order to keep the well from swabbing in the open hole.

Backreamed and to the casing shoe and then POOH to log the 311mm hole section. Logging run #1: AIT-DSI-LDT-CNL-MGS-EMS, logging run #2: MDT (failed - could not get a proper seat on the formation at various depths), logging run #3: OBMI-GR. TIH for a conditioning trip prior to the final logging run in order to evaluate the amount of gas that was in the wellbore. Washed the last 10 stands to bottom, flow checking on every connection. Maximum gas level while washing to bottom was 42.5%. Conditioned the mud and spotted a 16ppg pill on bottom. Backreamed to the casing shoe and POOH for the 4th logging run. Logging run #4: rotary sidewall cores (96% recovery – 24 of 25 cores). The logging data revealed that the suspected fractured limestone at 4366m that required the mud weight to be increased to 12.5ppg was actually calcareous sandstone.

Prior to running casing, RIH with a wash tool and WBRRT to wash the BOP and SSWH and recovered the wear bushing. The 251mm casing was run (251jts -251mm, 62.8lb/ft, P-110/C-110, VAM TOP) on the 168mm, 40.9 ppf landing string. The casing was landed at 4404m (14m overhole) with the MS700 Fullbore 251mm casing hanger and cemented in place by Halliburton. The casing was cemented using 575 sks (117bbl) of 15.6ppg lead Lafarge Class "G" cement + 35%SSA + 0.2% Super CBL + 0.18 gal/sk Halad-344L, 0.07 gal/sk SCR100L mixed at 15.6ppg and 100 sks (20 bbls) of 15.6ppg tail Lafarge Class "G" cement + 35% SSA 0.18 gal/sk Halad-344L, 0.07 gal/sk SCR-100L mixed at 15.6ppg. Full returns were achieved while running and cementing the 251mm casing in place. Displaced the cement with the rig pumps to theoretical top of float collar, plug did not bump. Pumped an additional volume equal to half of the shoe track and shut down.

Set packoff and attempted to test same to 8000psi. The pressure bled off and returns were observed up the drill pipe. Released the running tool and POOH. Lead indication showed full seal set. RIH with wash tool and WBRRT and washed SSWH and set the wear bushing. Re-tested the seal to 8000psi and bled of 85psi in 5 minutes, observed slight returns up the drill pipe. RIH and test BOP's to 250/8000psi with ITT for 10 minutes as per the CNSOPB Drilling Regulations. Pressure test the casing and BSR's to 250/7550psi for 15 minutes.

Did not bump the plug while cementing the 251mm casing leaving 75m (16bbls) of cement on top of the float collar.

216mm Hole / 197mm Liner (4418-5425m)

The 216mm BHA (216mm Hycalog RS 162 PDC Bit & Powerdrive Rotary Steerable BHA, ARC 900 and ISonic LWD) was run and tagged the top of cement at 4273m, 75m high or 16 bbls short of bumping the plug. Drilled cement from 4290-4300m at 0.3-3 m/hr. POOH to check the bit. The bit looked good, so TIH with tooth bit and attempt to drill suspected junk. While TIH, 2 pieces of aluminum from the SSR plug were circulated out of the hole. (One piece of aluminum fit perfectly into the throat of the PDC bit and would have been the prime cause for the problems drilling the cement). The 216mm casing shoe was drilled out and 3m of new hole prior to performing an FIT to 15.5 ppg with 12.7ppg mud in the wellbore.

Drilled ahead from 4421-4424m with an ROP of 2m/hr prior to tripping the mill tooth bit for slow ROP (1-1-NO-A-E-I-NO-PR). TIH with the rerun Hycalog RS 162 PDC Bit. Lost the MWD signal at 4000m while breaking circulation to cool the MWD tools. Drilled ahead from 4424-4441m with no MWD signal prior to POOH for MWD. Total UE time for the MWD failure: 26.5 hours.

The 216mm hole was directionally drilled from 4441-5405m MD in 69.5 hours at an average ROP of 13.9m/hr. The Paradril SBM was weighted up to 13.8ppg at 5219m MD as a result of a drilling break and associated background gas increase at 5219m MD.

A drilling break occurred at 5404m MD while drilling ahead. The well was flow checked and shut in with a 1.5 bbl volume increase. The well was killed using the Driller's Method and a mud weight of 14.8ppg.

While circulating the influx out of the hole, returns were partially lost as a result of a plugged choke. A total of 309bbls were lost prior to regaining full circulation. A total of 119 hours was spent circulating and conditioning mud to 14.8-14.9ppg after the initial well kill as a result of severely gas cut mud. The well was drilled ahead without real time MWD/LWD data from 5404-5425m at a reduced ROP in order to get sufficient overhole for logs to see the sand at 5404m before calling TD at an angle of approximately 16 degrees in the drop section of the directional profile. The well appeared to be ballooning as it would give back significant amounts of fluid on flow checks while circulating and after a short trip.

Circulated and conditioned mud prior to POOH for logging operations (total of 37.5 hours spent circulating including 2 hrs of WOW for tropical storm Arthur). Logging run #1: GR-OBMI-CNL-LDT. Logs bridged at 5407m. Dropped back down to 5406m for the second pass with logging run #1: CMR. The hole was swabbing while pulling out of the hole with the logging tools. It was discovered that the rubber logging tool centralizers had swelled to twice their normal size possibly as a result of a reaction between the rubber and CO2 gas in the wellbore. The decision was made to TIH for a cleanout trip prior to attempting logging run #2 (total of 91.5hrs spent on cleanout trip). Logging run #2: LDT-CNL-GR. Tools failed while TIH at 1300m. POOH to replace LDT and CNL. Logged section from 5425-5350m. Logging run #3: MSCT-GR. Tools failed while TIH at 1700m. The coring motor settings had to be adjusted to the maximum setting to compensate for the heavy mud. 88% recovery of rotary sidewall cores (recovered 22 of 25).

The 197mm liner was run (85jts – 46.1ppf, HC-Q125 SLSF) on 127mm drill pipe with a Hyflo valve in place. The liner tagged out at 5350m while TIH. Closed the Hyflo valve and converted the autofill float equipment and washed down from 5350-5404m. Attempted to work the liner past 5404m with 30-70k-lbs slack off. Spotted a 20 bbl weighted tuned spacer pill to break down any suspected filter cake with no success. Decision was made to set the liner at 5403m. The liner was cemented in place with Halliburton using 229 sxs (64.1bbls) of 15.6ppg Lafarge Class “G” + 35% SSA-1 with slight losses throughout the entire job. The plug was bumped at the theoretical displacement volume. A total of 98bbls were lost throughout the entire cement job. The ZXP liner top packer was set with 80k lbs and pressure tested to 4000psi surface applied pressure as per the CNSOPB requirements.

TIH with BOP isolation test tool and test joint (102mm x 127mm) and test BOP's to 250/10 000psi for 5 minutes as per the CNSOPB Drilling Regulations. Pressure test BSR's and casing to 250/4000psi.

165mm Hole (5425-6070m)

The decision was made to run a 165mm drillout BHA with a tooth bit as it was anticipated that there would be no competent cement on top of the liner and only 2m of new formation would be drilled prior to POOH for the VSP log. A 165mm mill tooth bit on a 102mm by 127mm tapered drill string was run in the hole to 4261m and circulated bottoms up from inside the liner top while simultaneously raising the mud weight to 15.1ppg. Tuned spacer and contaminated cement returns were noted while circulating. TIH and tagged the wiper plug at 5363m and continued to circulate and raise the mud weight to 15.1ppg. Rotated on the wiper plug/landing collar for 12 hours, adjusting parameters attempting to drill the wiper plug/landing collar. Drilled the shoe track and 2m of new formation (5.5hrs) to 5427m and spotted a LCM pill on bottom.

POOH and rigged up Schlumberger and ran a cased hole VSP log. Upon completion of the VSP log, a FIT was performed to 16.5ppg from surface prior to RIH. This was done in order to determine whether a cement squeeze or drill ahead BHA was needed, as 16.5ppg was the minimum acceptable FIT required to drill ahead. The 165mm packed BHA (165mm Security DBS FM2643i PDC Bit, straight A475M4560XP motor with 162mm NB sleeve, Impulse MWD and APWD) was run to 5427m and a FIT was conducted to 17.0ppg. While RIH at 4200m the MWD failed. The decision was made to TIH and drill ahead. A waiver was granted by the CNSOPB to drill ahead 300m without a directional survey. Drilled ahead from 5427-5480m at an AROP of 5.6m/hr. Trouble shot a stalled motor at 5480m prior to POOH to change out a failed motor and MWD. TIH and drilled ahead from 5480-5786m with rerun Security DBS FM2643i at an AROP of 5.6m/hr with the inclination of the wellbore dropping at a rate of 1-1.5deg/30m. Circulated and raised the density to 15.3ppg at 5750m as per the program. Bit tripped for slowed ROP (3-3-WT-N-X-I-NR-PR) at 5786m and TIH with new PDC bit (STC – MA32), mud motor and Impulse tool. Drilled ahead

from 5786-6070m MD at an AROP of 5.1m/hr with the inclination of the well dropping at 1 deg/30m. At 6070m the MWD failed and TD was subsequently called. The final inclination at 6070m was 1.73 degrees. The Paradril SBM was weighted up as per the mud weight schedule while drilling (15.5ppg at 6021m and 15.8ppg at 6049m to prepare for logging operations).

The well reached TD on Aug 9th at 04:00. Circulated bottoms up, POOH and rigged up Schlumberger to perform three logging descents. Logging run #1: EMS-GR-DSI-AIT. Logging run #2: GR-CNL-LDT. Logging run #3: GR-MCST. GR failed on the first 3 runs prior to cutting any cores and failed after cutting 8 cores on the fourth run. (100% recovery - 8 of 8 cores recovered). The tool head failed on the fifth attempt and the logging program was terminated.

Abandonment

Upon completion of the formation evaluation program, the decision was made to abandon the well. A waiver to not set any open hole abandonment plugs was granted by the CNSOPB. M/U and TIH with a 197mm EZSV and attempted to set the retainer at 5332m but could not get a set. Attempted to set the retainer at 5320 and 5363m with no success. POOH and rigged up Schlumberger to run the EZSV on wireline. RIH and set the retainer at 5332m, rigged up Halliburton and pressure tested the retainer to 2000psi. RIH with stinger assembly on 102mm and 127mm drill pipe and stung into the retainer. Established an injection rate at 3bbls/min with 2700psi (leak off at 197mm shoe was 17.5ppg). Mixed and pumped 122sxs (23 bbls) of 16ppg Lafarge Class "G" + 11 gal Halad 344EXP + 8 gal SCR100 + 12 gal HR-25 + 6 gal CFR3. Squeezed 50 sxs of slurry below the retainer and spotted 30m of slurry on top of the retainer. Pulled 5 stands wet and circulated bottoms up to ensure any contaminated cement was out of the hole. POOH to 4270m and spotted a 100m balanced plug across the 197mm liner top with 96sxs (19bbls) of 16.0ppg Lafarge Class "G" + 9 gal Halad 344EXP + 7 gal SCR-100 + 5 gal CFR3 to 4170m.

TIH with the 251mm retainer and perforating gun assembly on drill pipe to abandon the 251mm casing. Set the retainer at 1109m, rigged up Halliburton and pressure tested the retainer to 500psi. Attempted to fire the perforating guns with 2500psi, but the guns would not fire. Pulled out of the retainer and POOH. TIH with the WBRRT and retrieved the 251mm wear bushing. TIH with the 251mm seal retrieval tool and pulled the 251mm seal. Prior to POOH, pumped across the BOP to clear any trapped gas – no gas to surface on bottoms up. M/U and TIH with 251mm casing cutting assembly to 1104m and cut the casing. POOH to the casing spear, rigged up FI casing handling equipment and L/D 251mm casing.

TIH with the 346mm retainer on drill pipe to abandon the 346mm casing. Set the retainer at 1086m after numerous attempts, rigged up Halliburton and pressure tested the retainer to 500psi. Established an injection rate at 4bpm with 1720psi (estimated leak off at 346mm shoe was 14.9ppg). Mixed and pumped 158sxs (33bbls) of Lafarge Class "G" + 0.17gal/sk Halad 344 + 0.11gal/sx CaCl₂ + 0.07gal/sx CFR-3L + 4.76gal/sx seawater and squeezed below the 346mm retainer. Pulled out of the retainer and circulated bottoms up and displaced the well to 11.2ppg mud. TIH with the 346mm seal retrieval tool, shut the annular and pulled the 346mm seal. Circulate down the drillpipe and up the choke line with partial returns. Shut down and closed the pipe rams and circulated across the wellhead to check for gas in the 346mm x 508mm annulus. Filled the riser, opened the annulus and observed mud losses. Top filled the well with 45 bbls of base oil followed by seawater. POOH with the 346mm seal and top filled the well with seawater. M/U and TIH with 346mm casing cutting assembly to 1083m and cut the casing. POOH to the casing spear, rigged up FI casing handling equipment and L/D 346mm casing. TIH with open ended 127mm drillpipe and set a cement plug across the 346mm casing stub with Halliburton. Mixed and pumped 702sxs (145bbls) of 15.9ppg Lafarge Class "G" + 0.07gal/sx CFR-3 + 0.33gal/sx CaCl₂ + 4.76gal/sx seawater. Displaced the cement with fresh water, shut the annular and squeezed the cement across the 346mm casing stub and held pressure on the cement for 7 hours. Bled the pressure off and performed a 15 minute negative pressure test with seawater in the drillstring.

The Riser was displaced to seawater and the BOP's were unlatched from the SSWH at 15:00 on August 19, 2002. Pulled and laid down 37 joints of riser and recovered the BOP to surface. Rigged up the Weatherford MOST tool on 168mm drill pipe to cut the 508mm and 914mm casing and the recover the SSWH. Latched the MOST tool onto the HPWH and cut the casings at 1003m (2m below the mudline)

2:30 Aug 21, 2002. Recovered the SSWH and the gimbaled mudmat to surface (mudmat was covered in cement). The mud pits were cleaned, all equipment was back loaded and the Deepwater Millenium was released from Newburn H-23 location at 03:30 on August 22, 2002.

Appendix D

Bit Record

Appendix D

Bit Record

Appendix E

BHA Summary

Appendix E
BHA Summary



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This well was spudded as planned, the BHA drilled to 1057m but inclination was higher than expected. Stopped drilling and oved the rig 40m due North from original coordinates. Re-spud well and jetted the first 13 meters and then rotated 10-20 rpm and increased gpm's as need from 700gpm to 1200gpm. The key objective for this section was achieved since the well remained vertical. TD for this section was 1100m as planned. Water depth is 977m, rig high is 24m (for future reference).

[illegible]



Bit to D&I survey
Bit to Gamma Ray
Bit to Resistivity
Bit to APWD
Bit to Delta T
Bit to Stabilizers

JSO#	630415171	Depth in:	1917	Depth out:	3515	Mtr. Drlg	1598	BHA #	4	
Well Name:	Newburn H-23	Date In:	3-Jun-02	Date Out:	12-Jun-02	Days:	10	Hole Size:	17.0	
Operator:	ChevronTexaco	Slide Dist.:	0.0	Slide Hrs.:	0.00	Hrs.	Steering %	0%	PDM Run #:	1
Field:	Newburn Deepwater	Rotate Dist.:	1598.0	Rot. Hrs.:	109.92	Hrs.	Rotate %	100%	Drlg Hrs:	109.92
Province:	Nova Scotia	R/S config:	5/6 XP	Volume:	1453.0	gpm	Slide ROP:	N/A	Circ. Hrs:	35.94
Rig:	Millenium	ABH Set:	0.00	RPM S/DH:	100	145.3	Rot. ROP:	14.5	Tot. D&C:	145.86
DD:	Shane Vercammen	Vendor	SLB	Avg. WOB:	5.5	klbf	Avg. ROP:	499.4	Inc. In:	0.33
DD:		Reac. Torq.:	N/A	SPP Off/On:	4200	4350	Bit to Svy:	16.21	Azm. In:	324.90
MWD:	Muyiwa Akinpelu	Mud Type:	PARADRIL	PV/YP:	23	12	Sand%	-	Inc. Out:	0.29
MWD:	Marcus Turner	Mud Wt:	12	Chlorides:	840		Solid cont:	15.00%	Azm. Out:	159.40
Co. Rep:	Tom Jones	Mud Vis:	61	WL:	7.3		Oil/Water :	85/15	MWD BHT:	
String Wt:	606.0	P/U WL:		S/O Wt.:			BHA Wt.:		Rot. Torq:	7
Motor RPM	TFA / Nozzles	BIT RECORD							FAILED	
Rev / gal		INNER	OUTER	MAJOR	LOC	BEARING	GAUGE	OTHER	REASON	YES / NO
0.1										
Item	Description	Vendor	Serial #	FN L / OD	OD	ID	B. Conn	T. Conn	Length	Cum Len
1	17" PDC, Type: S91VPX	Smith-Geodiamond	JS-7947	Jets: 10 x 16	17"	N/A		7 5/8 RP	0.33	0.33
2	Motor A962 Slick	Anadrill	004	0.42/241	9 1/2"	N/A	7 5/8 RB	7 5/8 RB	9.19	9.52
3	Float	Anadrill	SD-2262	0.91/241	9 1/2"	3.0"	7 5/8 RP	7 5/8 RB	0.91	10.43
4	16 7/8" String Stabilizer	Anadrill	SD-13441	0.86/216	9 11/16	2 13/16"	7 5/8 RP	7 5/8 RB	2.32	12.75
5	ARC 900	Anadrill	9021	1.93/230	9 1/16"	N/A	7 5/8 RP	7 5/8H90 LTB	6.32	19.07
6	Powerpulse MWD	Anadrill	19773-FC	0.18/244	9 1/2"	5"	7 5/8H90 LTP	6 5/8 FHP	8.44	27.51
7	X/O	Anadrill	962002	0.49/291	9 9/16"	3 1/4"	6 5/8 FH B	7 5/8 R B	0.83	28.34
8	NMDC w/ Totco ring	Anadrill	31340-01		9 1/2"	3 1/4"	7 5/8 RP	7 5/8 RB	9.07	37.41
9	16 7/8" String Stabilizer	Anadrill	SD-13309	0.88/216	9 11/16"	2 15/16"	7 5/8 RP	7 5/8 RB	2.22	39.63
10	3 x 9 1/2" DCs	TransOcean			9 1/2"	3 1/2"	7 5/8 RP	7 5/8 RB	28.07	67.70
11	X/O	TransOcean	9330	1.15/210	9 1/2"	3.0"	7 5/8 RP	6 5/8 RB	1.34	69.04
12	3 x 8 1/4" DCs	TransOcean			8 3/16"	3 1/16'	6 5/8 RP	6 5/8 RB	27.71	96.75
13	X/O	TransOcean	53302-1	1.53/210	8 1/4"	3.0"	6 5/8 RP	6 5/8 FHB	0.94	97.69
14	3 x HWDP	TransOcean			6 5/8"	4 1/2"	6 5/8 FHP	6 5/8 FHB	28.11	125.80
15	Jar		DAH-03781	0.57/205	8 1/16'	3.0"	6 5/8 FHP	6 5/8 FHB	9.92	135.72
16	20 x HWDP	TransOcean					6 5/8 FHP	6 5/8 FHB	187.25	322.97
17										
18										
19										
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28										
29										
30										
BOTTOM HOLE ASSEMBLY (OBJECTIVES vs RESULTS)							BIT TO KEY ITEM (STBS. TO MIDPOINT)			
Assembly will be used drill to the 13 5/8" csg point making corrections as required to keep the well vertical. All directional and MWD/LWD requirements met. High stick slip was seen in places during the run. Quite a bit of down time waiting on SWACO to work on their equipment. Overall a good run.							APWD	15.00		
							Resistivity	15.61		
							Gamma Ray	15.69		
							D&I survey	23.37		
							Mid. Stab.	11.59		
							Top Stab.	38.52		



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[illegible]

BIT TO KEY ITEM (STBS. TO MIDPOINT)

[illegible]

JSO#	630415171	Depth in:	4418	Depth out:	4418	Mtr. Drlg	0	BHA #	6	
Well Name:	Newburn H-23	Date In:	1-Jul-02	Date Out:	2-Jul-02		Days:	2	Hole Size:	8.5
Operator	ChevronTexaco	Slide Dist.:		Slide Hrs.:		Hrs.	Steering %	N/A	PDM Run #:	N/a
Field:	Newburn Deepwater	Rotate Dist.:		Rot. Hrs.:	1.74	Hrs.	Rotate %	N/A	Drlg Hrs:	1.74
Province:	Nova Scotia	R/S config:		Volume:	350-630	gpm	Slide ROP:	N/A	Circ. Hrs:	3.83
Rig:	Millenium	ABH Set:		RPM S/DH:	30/70		Rot. ROP:	N/A	Tot. D&C:	12.23
DD:	Victor Medina	Vendor		Avg. WOB:	37547	klbf	Avg. ROP:	0.0	Inc. In:	8.90
DD:	James Cockroft	Reac. Torq.:		SPP Off/On:	5100/5100		Bit to Svy:		Azm. In:	316.00
MWD:	Bruno Lima	Mud Type:	Paradrill	PV/YP:	17/28		Sand%		Inc. Out:	8.90
MWD:	Marcus Turner	Mud Wt:	12.7	Chlorides:	41000		Solid cont:	20.00%	Azm. Out:	316.00
Co. Rep:	Todd Robichaux	Mud Vis:	112	WL:	6.0@250		Oil/Water :		MWD BHT:	38.5
String Wt:		P/U Wt.:		S/O Wt.:			BHA Wt.:		Rot. Torq:	2000-5000
Motor RPM	TFA / Nozzles			BIT RECORD				FAILED		
Rev / gal	0.798 / 1x14, 5x13	INNER	OUTER	MAJOR	LOC	BEARING	GAUGE	OTHER	REASON	YES / NO
		1	1	WT	S	X	I	CT	ROP	N/a
Item	Description	Vendor	Serial #	FN L / OD	OD	ID	B. Conn	T. Conn	Length	Cum Len
1	8 1/2" DS162 1X14, 5X13	SLB	201533		8 1/2"	-		4 1/2 Reg P	0.22	0.22
2	PD675 Bias Unit	Anadrill	60278		6 11/16"	tool	4 1/2 Reg B	4 1/2 IF B	0.71	0.93
3	PD675 Extension Sub	Anadrill	60166		6 11/16"	tool	4 1/2 IF P	4 1/2 IF P	0.32	1.25
4	PD675 CC w/CU	Anadrill	60028 / 30		6 11/16"	tool	4 1/2 IF B	4 1/2 IF B	2.95	4.20
5	8 3/8" NM IBS	SD	13062	0.69 / 6 15/16"	6 15/16"	2 13/16"	4 1/2 IF P	4 1/2 IF B	1.26	5.46
6	Float Sub	SLB	SD 2537		6 15/16"	2 13/16"	4 1/2 IFP	4 1/2 IF B	0.73	6.19
7	ARC675	SLB	035	0.45 / 6 3/4"	6 3/4"	tool	4 1/2 IFP	5 1/2 FHB	5.87	12.06
8	8 3/8" MWD w/ stabilizer	SLB	335	0.03 / 6 3/4	6 7/8"	tool	5 1/2 FHP	5 1/2 FH P	8.34	20.40
9	Isonic	SLB	634		6 3/4"	tool	5 1/2 FHB	5 1/2 FH B	7.23	27.63
10	X-O	SLB	36175-5		6 3/4"	3 15/16"	5 1/2 FH P	4 1/2 IFB	0.42	28.05
11	8 1/4" String Stab	SD	12608		6 5/8"	3"	4 1/2 IFP	4 1/2 IFB	1.43	29.48
12	15 HWDP	Transocean			5"	3"	4 1/2 IFP	4 1/2 IFB	140.68	170.16
13	Jars				6 5/8"	4 3/4"	4 1/2 IFP	4 1/2 IFB	9.76	179.92
14	5 HWDP	Transocean			5"	3"	4 1/2 IFP	4 1/2 IFB	46.82	226.74
15										
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30										
BOTTOM HOLE ASSEMBLY (OBJECTIVES vs RESULTS)								BIT TO KEY ITEM (STBS. TO MIDPOINT)		
This BHA was intended to drill out cement, plug , shoe and formation where some directional work was going to be performed but due to very low ROP , it was pulled out. Some worn teeth were found as well as chipped ones. PowerDrive was found with one seal slightly worn out and is going to be changed for next run as well as the bit, a mill tooth one will be used.								Btm. Stab.	4.26	
								APWD	7.93	
								Resistivity	8.54	
								Gamma Ray	8.62	
								D&I survey	16.18	
								Mid. Stab.	20.20	
								Delta T	24.57	
								Top Stab.	28.56	



JSO#	630415171	Depth in:	4418	Depth out:	4424		Mtr. Drlg	6	BHA #	7
Well Name:	Newburn H-23	Date In:	2-Jul-02	Date Out:	4-Jul-02		Days:	3	Hole Size:	8.5
Operator	ChevronTexaco	Slide Dist.:		Slide Hrs.:	0.00	Hrs.	Steering %	N/A	PDM Run #:	N/a
Field:	Newburn Deepwater	Rotate Dist.:	6.0	Rot. Hrs.:	1.74	Hrs.	Rotate %	100%	Drlg Hrs:	1.74
Province:	Nova Scotia	R/S config:		Volume:	575.0	gpm	Slide ROP:	N/A	Circ. Hrs:	3.83
Rig:	Millenium	ABH Set:		RPM S/DH:	80/0	0	Rot. ROP:	2.5	ToL D&C:	24.72
DD:	Victor Medina	Vendor		Avg. WOB:	15	klbf	Avg. ROP:	N/A	Inc. In:	8.90
DD:	James Cockroft	Reac. Torq.:		SPP Off/On:	5070/5070		Bit to Svr:	16.18	Azm. In:	316.00
MWD:	Bruno Lima	Mud Type:	Paradrill	PV/YP:	17/28		Sand%		Inc. Out:	8.90
MWD:	Marcus Turner	Mud Wt:	12.7	Chlorides:	41000		Solid cont:	20.00%	Azm. Out:	316.00
Co. Rep:	Todd Robichaux	Mud Vis:	112	WL:	6.0@250		Oil/Water :		MWD BHT:	
String Wt:		P/U Wt.:		S/O Wt.:			BHA Wt.:		Rot. Torq:	1800-4500

[illegible]

Btm. Stab.	4.26
APWD	7.93
Resistivity	8.54
Gamma Ray	8.62
D&I survey	16.18
Mid. Stab.	20.20
Delta T	24.57
Top Stab.	28.56



Schlumberger
Drilling and Measurements

BHA DataSheet

ChevronTexaco

JSO#	630415171	Depth in:	4424	Depth out:	4441	Mtr. Drig	17	BHA #	8	
Well Name:	Newburn H-23	Date In:	4-Jul-02	Date Out:	5-Jul-02	Days:	2	Hole Size:	8.5	
Operator	ChevronTexaco	Slide Dist.:	N/A	Slide Hrs.:	N/A	Hrs.	Steering %	N/A	PDM Run #:	N/A
Field:	Newburn Deepwater	Rotate Dist.:	17.0	Rot. Hrs.:	1.74	Hrs.	Rotate %	100%	Drig Hrs:	1.74
Province:	Nova Scotia	R/S config:	N/A	Volume:	575.0	gpm	Slide ROP:	N/A	Circ. Hrs:	3.83
Rig:	Millenium	ABH Set:	N/A	RPM S/DH:	80/150	0	Rot. ROP:	9.8	Tot. D&C:	5.57
DD:	Victor Medina	Vendor	N/A	Avg. WOB:	8-10	klbf	Avg. ROP:	9.8	Inc. In:	8.90
DD:	James Cockroft	Reac. Torq.:	N/A	SPP Off/On:	5045/5070		Bit to Svy:	16.2	Azm. In:	316.00
MWD:	Bruno Lima	Mud Type:	Paradrill	PV/YP:	18/24		Sand%		Inc. Out:	8.90
MWD:	Marcus Turner	Mud Wt:	13	Chlorides:	39000		Solid cont:	21.00%	Azm. Out:	316.00
Co. Rep:	Todd Robichaux	Mud Vis:	104	WL:	6.8		Oil/Water :	77/23	MWD BHT:	
String Wt:		P/U Wt.:		S/O Wt.:			BHA Wt.:	27k	Rot. Torq:	3-5k
Motor RPM	TFA / Nozzles	BIT RECORD							FAILED	
Rev / gal	0.704 / 2x11,4x13	INNER	OUTER	MAJOR	LOC	BEARING	GAUGE	OTHER	REASON	YES / NO
		1	1	WT	A	X	I	CT	DTF	NO
Item	Description	Vendor	Serial #	FN L / OD	OD	ID	B. Conn	T. Conn	Length	Cum Len
1	8 1/2" DS162 2X11, 4X13	SLB	201533		8 1/2"	-		4 1/2 Reg P	0.22	0.22
2	PD675 Bias Unit	Anadrill	60057		6 11/16"	tool	4 1/2 Reg B	4 1/2 IF B	0.71	0.93
3	PD675 Extension Sub	Anadrill	60034		6 11/16"	tool	4 1/2 IF P	4 1/2 IF P	0.31	1.24
4	PD675 CC w/CU	Anadrill	60028 / 30		6 11/16"	tool	4 1/2 IF B	4 1/2 IF B	2.95	4.19
5	8 3/8" NM IBS	SD	13062	0.69 / 6 15/16"	6 15/16"	2 13/16"	4 1/2 IF P	4 1/2 IF B	1.26	5.45
6	Float Sub	SLB	SD 2537		6 15/16"	2 13/16"	4 1/2 IFP	4 1/2 IF B	0.73	6.18
7	ARC675	SLB	55	0.45 / 6 3/4"	6 3/4"	tool	4 1/2 IFP	5 1/2 FHB	5.85	12.03
8	8 3/8" MWD w/ stabilizer	SLB	335	0.03 / 6 3/4"	6 7/8"	tool	5 1/2 FHP	5 1/2 FH P	8.34	20.37
9	Isonic	SLB	649		6 3/4"	tool	5 1/2 FHB	5 1/2 FH B	7.22	27.59
10	X-O	SLB	36175-5		6 3/4"	3 15/16"	5 1/2 FH P	4 1/2 IFB	0.42	28.01
11	8 1/4" String Stab	SD	12608		6 5/8"	3"	4 1/2 IFP	4 1/2 IFB	1.43	29.44
12	21 HWDP	Transocean			5"	3"	4 1/2 IFP	4 1/2 IFB	197.21	226.65
13	Jars	Drilco	233480		6 5/8"	4 3/4"	4 1/2 IFP	4 1/2 IFB	9.76	236.41
14	5 HWDP	Transocean			5"	3"	4 1/2 IFP	4 1/2 IFB	46.82	283.23
15										
16										
17										
18										
19										
20										
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22										
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25										
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30										
BOTTOM HOLE ASSEMBLY (OBJECTIVES vs RESULTS)							BIT TO KEY ITEM (STBS. TO MIDPOINT)			
The BHA was expected to build and turn right, but due to MWD failure we couldn't see how it was performing since it was impossible to get a survey. The pipe was worked up and down to clear a possible jamming at the MWD turbine but these operations were unsuccessful.							Btm. Stab.	4.25		
							APWD	7.94		
							Resistivity	8.55		
							Gamma Ray	8.63		
							D&I survey	16.20		
							Mid. Stab.	20.22		
							Delta T	24.57		
							Top Stab.	28.56		

**Schlumberger**

Drilling and Measurements

BHA DataSheet**ChevronTexaco**

JSO#	630415171	Depth in:	4441	Depth out:	5425	Mtr. Drig	984	BHA #	9	
Well Name:	Newburn H-23	Date In:	5-Jul-02	Date Out:	18-Jul-02		Days:	14	Hole Size:	8.5
Operator:	ChevronTexaco	Slide Dist.:	0.0	Slide Hrs.:	0.00	Hrs.	Steering %	0%	PDM Run #:	N/A
Field:	Newburn Deepwater	Rotate Dist.:	984.0	Rot. Hrs.:	62.40	Hrs.	Rotate %	100%	Drig Hrs:	62.40
Province:	Nova Scotia	R/S config:	N/A	Volume:	525.0	gpm	Slide ROP:	N/A	Circ. Hrs:	109.70
Rig:	Millenium	ABH Set:	N/A	RPM S/DH:	150	0	Rot. ROP:	15.8	Tot. D&C:	172.10
DD:	Victor Medina	Vendor	N/A	Avg. WOB:	13	klbf	Avg. ROP:	307.5	Inc. In:	15.00
DD:	James Cockroft	Reac. Torq.:	N/A	SPP Off/On:	5450	5450	Bit to Svy:	16.21	Azm. In:	308.10
MWD:	Bruno Lima	Mud Type:	Paradril	PV/YP:	21	21	Sand%	-	Inc. Out:	18.70
MWD:	Marcus Turner	Mud Wt:	14.9	Chlorides:			Solid cont:	28.50%	Azm. Out:	292.30
Co. Rep:	Tom Jones	Mud Vis:	95	WL:	4		Oil/Water :		MWD BHT:	85.0
String Wt:	543.0	P/U Wt.:	590.0	S/O Wt.:	553.0		BHA Wt.:		Rot. Torq:	N/A
Motor RPM	TFA / Nozzles		BIT RECORD							FAILED
Rev / gal	0.704 / 2x11,4x13	INNER	OUTER	MAJOR	LOC	BEARING	GAUGE	OTHER	REASON	YES / NO
		1	1	NO	-	X	IN	NO	TD	NO
Item	Description	Vendor	Serial #	FN L / OD	OD	ID	B. Conn	T. Conn	Length	Cum Len
1	8 1/2" DS162 2X11, 4X13	SLB	201533		8 1/2"	-		4 1/2 Reg P	0.22	0.22
2	PD675 Bias Unit	Anadrill	60057		6 11/16"	tool	4 1/2 Reg B	4 1/2 IF B	0.71	0.93
3	PD675 Extension Sub	Anadrill	60034		6 11/16"	tool	4 1/2 IF P	4 1/2 IF P	0.31	1.24
4	PD675 CC w/CU	Anadrill	60081/137		6 11/16"	tool	4 1/2 IF B	4 1/2 IF B	2.95	4.19
5	8 3/8" NM IBS	SD	13062	0.69 / 6 15/16"	6 15/16"	2 13/16"	4 1/2 IF P	4 1/2 IF B	1.26	5.45
6	Float Sub	SLB	SD 2537		6 15/16"	2 13/16"	4 1/2 IFP	4 1/2 IF B	0.73	6.18
7	ARC675	SLB	55	0.45 / 6 3/4"	6 3/4"	tool	4 1/2 IFP	5 1/2 FHB	5.85	12.03
8	8 3/8" MWD	SLB	F 765		6 7/8"	tool	5 1/2 FHP	5 1/2 FH P	8.34	20.37
9	Isonic	SLB	649		6 3/4"	tool	5 1/2 FHB	5 1/2 FH B	7.23	27.60
10	X-O	SLB	36175-5		6 3/4"	3 15/16"	5 1/2 FH P	4 1/2 IFB	0.42	28.02
11	8 1/4" String Stab	SD	12608		6 5/8"	3"	4 1/2 IFP	4 1/2 IFB	1.43	29.45
12	21 HWDP	Transocean			5"	3"	4 1/2 IFP	4 1/2 IFB	197.21	226.66
13	Jars	Drilco	233480		6 5/8"	4 3/4"	4 1/2 IFP	4 1/2 IFB	9.76	236.42
14	5 HWDP	Transocean			5"	3"	4 1/2 IFP	4 1/2 IFB	46.82	283.24
15										
16										
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29										
30										
BOTTOM HOLE ASSEMBLY (OBJECTIVES vs RESULTS)							BIT TO KEY ITEM (STBS. TO MIDPOINT)			
Build to 25 degrees at a rate of 2.4 per 30m while intersecting two targets along an azimuth 307 degrees. Initially the PowerDrive was put into and 80% build setting to achieve the desired BUR's. The tool setting was then reduced to 60 - 20% for subsequent sets, while the toolface was directed at an average 300 degrees to compensate for a strong right hand walk tendency. Once the inclination was built the tool settings ranged between 20 - 80% with most of the sets in the left to upper left portion of the map. This was done to drill a short tangent section and then control the drop rate in a 2 degree per 30m range. The tool performed well and all downlinks were received. The BHA was POOH for well control issues (the powerdrive was replaced with a conventional rotary assembly).							Btm. Stab.	4.25		
							APWD	7.94		
							Resistivity	8.55		
							Gamma Ray	8.63		
							D&I survey	16.21		
							Mid. Stab.	20.22		
							Delta T	24.58		
							Top Stab.	28.56		



Schlumberger
Drilling and Measurements

BHA DataSheet

ChevronTexaco

JSO#	630415171	Depth in:	5425	Depth out:	5425	Mtr. Drlg	0	BHA #	10	
Well Name:	Newburn H-23	Date In:	19-Jul-02	Date Out:	22-Jul-02	Days:	4	Hole Size:	8.5	
Operator	ChevronTexaco	Slide Dist.:	0.0	Slide Hrs.:	0.00	Hrs.	Steering %	#DIV/0!	PDM Run #:	
Field:	Newburn Deepwater	Rotate Dist.:	0.0	Rot. Hrs.:	0.00	Hrs.	Rotate %	#DIV/0!	Drig Hrs:	0.00
Province:	Nova Scotia	R/S config:	N/A	Volume:		gpm	Slide ROP:	N/A	Circ. Hrs:	50.00
Rig:	Millenium	ABH Set:	N/A	RPM S/DH:		0	Rot. ROP:	N/A	Tot. D&C:	50.00
DD:	Shane Vercammen	Vendor	N/A	Avg. WOB:		klbf	Avg. ROP:	0.0	Inc. In:	18.70
DD:		Reac. Torq.:	N/A	SPP Off/On:			Bit to Svy:	N/A	Azm. In:	292.30
MWD:	Muyiwa Akinpelu	Mud Type:	Paradrill	PV/YP:	29/11		Sand%		Inc. Out:	18.70
MWD:	Marcus Turner	Mud Wt:	14.9	Chlorides:	39000		Solid cont:	26.60%	Azm. Out:	292.30
Co. Rep:	Tom Jones	Mud Vis:	114	WL:	3.2		Oil/Water:		MWD BHT:	N/A
String Wt:		P/U Wt.:		S/O Wt.:			BHA Wt.:		Rot. Torq:	
Motor RPM	TFA / Nozzles	BIT RECORD							FAILED	
Rev / gal		INNER	OUTER	MAJOR	LOC	BEARING	GAUGE	OTHER	REASON	YES / NO
N/A										
Item	Description	Vendor	Serial #	FN L / OD	OD	ID	B. Conn	T. Conn	Length	Cum Len
1	8 1/2" Bit				8 1/2	1 1/2		4.5 Reg P	0.25	0.25
2	STAB. (NB w / FLOAT)	SD	SD-12881		6 5/8	2 3/4	4.5 Reg B	4.5 IF Box	2.76	3.01
3	1 HWDP	Transocean			5"	3"	4 1/2 IFP	4 1/2 IFB	9.39	12.40
4	8 3/8" NM IBS	SD	13062	0.69 / 6 15/16"	6 15/16"	2 13/16"	4 1/2 IF P	4 1/2 IF B	1.26	13.66
5	20 HWDP	Transocean			5"	3"	4 1/2 IFP	4 1/2 IFB	187.82	201.48
6	Jars	Drilco	233480		6 5/8"	4 3/4"	4 1/2 IFP	4 1/2 IFB	9.76	211.24
7	5 HWDP	Transocean			5"	3"	4 1/2 IFP	4 1/2 IFB	46.82	258.06
8										
9										
10										
11										
12										
13										
14										
15										
16										
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26										
27										
28										
29										
30										
BOTTOM HOLE ASSEMBLY (OBJECTIVES vs RESULTS)							BIT TO KEY ITEM (STBS. TO MIDPOINT)			
Assembly will be used to clean hole after logging / prior to running casing.							Bitm. Stab.		4.25	
							APWD		7.94	
							Resistivity		8.55	
							Gamma Ray		8.63	
							D&I survey		16.21	
							Mid. Stab.		20.22	
							Delta T		24.58	
							Top Stab.		28.56	



Assembly will be used to drill to TD while dropping inclination. On bottom the MWD tool's signal was too weak to be decoded. The decision was made to drill ahead to 5509m, the deepest that could be drilled with out taking a survey. Near crew change for the rig crews at approx. 5479m, the motor stalled. This was not noticed for approx. 10min. During this time the SPP bled back to near the normal on bottom pressure. The string was picked up and drilling was attempted. Though the torque returned to normal and the differential pressure of 200 psi was seen the ROP was very low, 1-2 m/hr. The ROP before the stall had been approx. 14 m/hr. The decision was made to POOH for the motor. While circulating the cuttings out of the riser a fair amount of stator rubber was recovered at the shakers. At surface the motor sleeve was removed and the motor laid down without rotating the bit box. The motor was drv when it was broke off the BHA.

JSO#	630415171	Depth in:	5480	Depth out:	5786	Mtr. Drig	306	BHA #	12	
Well Name:	Newburn H-23	Date In:	2-Aug-02	Date Out:	5-Aug-02	Days:	4	Hole Size:	6.5	
Operator:	Chevron/Texaco	Slide Dist.:	0.0	Slide Hrs.:	0.00	Hrs.	Steering %	0%	PDM Run #:	5
Field:	Newburn Deepwater	Rotate Dist.:	306.0	Rot. Hrs.:	48.45	Hrs.	Rotate %	100%	Drig Hrs:	48.45
Province:	Nova Scotia	R/S config:	4/5 XP	Volume:	235.0	gpm	Slide ROP:	N/A	Circ. Hrs:	15.08
Rig:	Millenium	ABH Set:	0.00	RPM S/DH:	90	258.5	Rot. ROP:	6.3	Tot. D&C:	63.53
DD:	James Cockcroft	Vendor	SLB	Avg. WOB:	8	klbf	Avg. ROP:	95.6	Inc. In:	15.33
DD:		Reac. Torq.:		SPP Off/On:	4351	4570	Bit to Svy:	16.21	Azm. In:	294.98
MWD:	Olumuyiwa Akinpelu	Mud Type:	Paradril	PV/YP:	36	11	Sand%		Inc. Out:	2.73
MWD:	Todd Wensley	Mud Wt:	15.3	Chlorides:	34000		Solid cont:	30.00%	Azm. Out:	337.00
Co. Rep:	Todd Robichaux	Mud Vis:	126	WL:	3.2		Oil/Water :	74/26	MWD BHT:	130.0
String Wt:	502.0	P/U Wt.:		S/O Wt.:			BHA Wt.:		Rot. Torq:	4500
Motor RPM	TFA / Nozzles	BIT RECORD							FAILED	
Rev / gal	0.92 in²	INNER	OUTER	MAJOR	LOC	BEARING	GAUGE	OTHER	REASON	YES / NO
1.1	3 X 20	2	3	WT	A	X	I	NO	PR	NO
Item	Description	Vendor	Serial #	FN L / OD	OD	ID	B. Conn	T. Conn	Length	Cum Len
1	6 1/2 " PDC Bit (FM 2643)	Security	702953		4 1/4	1 1/2		3.50 REG Pin	0.23	0.23
2	A475M4560XP (w/ 6 3/8" S.Stab)	Anadrill	475A-2111	0.37 / 4 3/4	4 3/4	3 3/4	3.50 REG Box	3.50 IF Box	7.23	7.46
3	Float Sub	Anadrill	SD 2356		4 3/4	2 1/2	3.50 IF Pin	3.50 IF Box	0.77	8.23
4	Stabilizer (6 3/8")	SD	14432	0.75 / 4 3/4	4 3/4	2 1/4	3.50 IF Pin	3.50 IF Box	1.84	10.07
5	IMPulse	Anadrill	168		4 3/4	2 1/4	3.50 IF Box	3.50 IF Box	10.67	20.74
6	VPWD	Anadrill	023		4 3/4	2 2/5	3.50 IF Box	3.50 IF Box	4.16	24.90
7	Stabilizer (6 3/8")	SD	14434		4 3/4	2 1/4	3.50 IF Pin	3.50 IF Box	1.84	26.74
8	DFS	Anadrill	31		4 3/4	2 1/4	3.50 IF Pin	3.50 IF Box	0.93	27.67
9	4 3/4" DC's (9 joints)	TSF			4 3/4	2 3/8	3.50 NC38 (IF) Box	3.50 NC38 (IF) Pin	84.20	111.87
10	Crossover	TSF	WS26957		5	2 1/4	3.50 IF Pin	4.00 HT40 Box	1.10	112.97
11	4" HWDP's (18 joints)	TSF			4	2 9/16	4.00 HT40 Pin	4.00 HT40 Box	168.38	281.35
12	Hydraulic Jar	Anadrill	WS2		5 1/8	2	4.00 HT40 Pin	4.00 HT40 Box	9.46	290.81
13	4" HWDP's (11 joints)	TSF			4	2 9/16	4.00 HT40 Pin	4.00 HT40 Box	103.12	393.93
14	4" 14.0 lb DP (prem.) (273 joints)	TSF			3 46/53	3 17/50	4.00 HT40 Pin	4.00 HT40 Box	2619.36	3013.29
15	Crossover	TSF			4 3/4	2 1/2	4.00 HT40 Pin	N- 50	1.40	3014.69
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
BOTTOM HOLE ASSEMBLY (OBJECTIVES vs RESULTS)							BIT TO KEY ITEM (STBS. TO MIDPOINT)			
Assembly will be used to drill to TD while dropping or holding inclination. The assembly had a moderate to strong drop tendency of approx. 0.8 to 1.8 deg/30m. The drop tendency was mostly affected by formation type. ROP was variable as was the amount of weight that could be applied to the bit. The formations through this section were very ratty in sections causing a number of stalls and requiring the WOB to be adjusted fairly often. High torque was seen at 5786m and the bit was pulled for penetration rate; however, upon inspection at surface, the bit was seen to have a fair bit of wear on the nose cutters but was in fair condition overall. Little to no wear was seen on the string stabilizers which were rerun. Stick slip was predominantly high through out the run.							BTM STAB.		1.47	
							MID STAB.		9.14	
							RESISTIVITY		12.43	
							D & I		14.02	
							GAMMA		14.69	
							APWD		21.94	
							TOP STAB.		25.82	



Assembly will be used to drill to TD
This assembly acted much like the last. The 5 7/8" sleeve stab on the motor did not seem to affect the tendency of the BHA much. The BHA both built and dropped during the run. The build or drop tended to reflect the hardness of the formation, building in the hard and dropping in the soft. Stick slip was again predominantly high through out the run, occasionally very high. The resistivity sensors in the Impulse tool failed shortly after drilling began and the tool stopped communicating approx. 8m before TD. TD was called 5m earlier that originally proposed.

Appendix F

Casing and Cementing Reports

Appendix F
Casing and Cementing Reports

Chevron Canada Resources

Casing/Liner Landing Details

Version 1

CEMENTING DETAILS									
Only		Description		Size (O.D.), mm	Weight, kg/m	Grade	Threads	Length, m	Rel#
1	36" (1" WT)	Double Valve Float Shoe	914	556.57	X-52	RL-4F	19.40		
2	36" (1" WT)	374 lb/ft X-52	914	556.57	X-52	RL-4F	25.39		
1	36" (1.5" WT), 553 lb/ft	X-56 Grade Crossover Joint	914	822.95	X-56	RL-4F	12.80		
1	36" (2" WT)	725.5 lb/ft X-60 Grade	914	1079.66	X-62	RL-4H	18.94		
1	36" LPWH, 36" (2" WT)	725.5 lb/ft X-60 ext joint	914	1079.66	X-62	RL-4H	19.19		
Lead Cement Additives: 20L/CaCl ₂ + Seawater									
Tail Cement Additives:									
Spacer Type: Dual Spacer									
Cement Displacement Rate: 2.00 m ³ / min									
Cement Returns: 0.00									
Liner Hanger (If Applicable):									
Total Pipe Installed: 95.72									
Less Cutoff Piece(s) and Landing Joints:									
DP To Land Liner (If Applicable) TOL @: 997.30									
Plus RT Elevation (above MSL):									
Casing Set @: 1.093 m TVD									
Last Casing Size: 1.093 m MD									
Hole Volume From Caliper Log: N/A									
Mud Properties Prior To Cementing: WT kg/m ³ : 1440.0 Type: 12ppg Pad Mud									
FV, sec / liter: 81	PV, mPa's: 28	YP, Pa: 11	Gels: 11	WL, ml/30 min: 18.2					
HTHP WL: 15	Solids: 15	% Oil: 15	Sands: 0	pH: 8					
AKL: 4800	CL: 4800	CA: 160	XL line: 160	Elec Stab: 160					
Casing Reciprocation?: N									
Casing Rotated?: N									
Number Of Centralizers/Wipers: 0 / 0									
Spacing: 78.8m of 5" inner string below CART tool and landed 18.5 m above float shoe. Ran									
darrin sub above CART tool for potential grout cement job. Landed casing with 997.4m of 6 5/8"									
40.9#/ft landing string. Landed casing 13.4m in on cementing stand. Nodeco cementing head 211t above RT.									
Drilling Representative: Jones/Rutenschild									
Lease: Newburn H-23									
Well Number: RWFECE-R2250									
Date: 5/22/2002									

CEMENTING DETAILS											
Cement Company:						Yard Location:					
First Stage						Circulation Time & Rate					
Prior To Cementing:											
Type	No.	Pump Time Time @ Temp Hrs. @	Yield m³ / tonne	Weight Est.	Actual	Mix Water Gal/Sx	Hrs. @	Comp. MPa	Strength @	m³/ min	Returns (Full/Partial):
Cement											
Lead	0.0		0.000	0	0	0.000	0	0	0	0	Free Water%
Tail											
Lead Cement Additives:											
Tail Cement Additives:											
Spacer Type: Volume, m³: Wt, kg/m³: PV, Pa's: YP, Pa:											
Cement Displacement Rate: Displaced With (Cemented Unit/Pump): Estimated TOC:											
Cement Returns	Early Returns?	2.00	m³ / min							Bump Plug?	1001
Second Stage DV Tool Located @:											
Cement	No.	Pump Time Time @ Temp Hrs. @	MD	Yield Cu. Ft./Sx	Weight Est. <td>Actual</td> <td>Mix Water Gal/Sx</td> <td>Hrs. @ <td>Comp. PSI</td> <td>Strength @</td> <td>WL cc</td> </td>	Actual	Mix Water Gal/Sx	Hrs. @ <td>Comp. PSI</td> <td>Strength @</td> <td>WL cc</td>	Comp. PSI	Strength @	WL cc
Lead											Free Water%
Tail											
Lead Cement Additives:											
Tail Cement Additives:											
Spacer Type: Volume, m³: Wt, kg/m³: PV, Pa's: YP, Pa:											
Cement Displacement Rate: Displaced With (Cemented Unit/Pump): Estimated TOC:											
Cement Returns	Early Returns?	cubic m / min								Bump Plug?	
Remarks: Check floats - holding. Slack off full casing w/ no subsidence & bulls-eye 0.25 deg. Release CART & lay down cement std, flush 1.5 x drillpipe volumes & POOH											
Top of HPWH = 986.54mRT. **Note minimum pass through ID of 16" landing ring in liner hanger it is 17.156"											
Mix and Pump lead cement bottom dart land and shear in bottom plug after 14.3 m² pumped w/ 9.51 MPa and pump Tail cement. Drop top dart. Use Halliburton to land dart after 14.0 m². Shear top plug w/ 27.6 MPa psi and pump additional 1.9 m² bbls w/ Halliburton. Switch to rig pump to finish displacement. Pump displacement to Fill Collar.											
Number Of Centralizers/Wipers: /											
Spacing:											
Drilling Representative: Jones/Curran											
Field: Mahone Block											
Lease: Newburn H-23											
Well Number: RWPEC-R2250											
Date: 5/30/2002											

CEMENTING DETAILS									
Only Description		Size (O.D.), mm	Weight, kg/m	Grade	Threads	Length, m	Ref#	Cement Company:	Yard Location:
1	float shoe joint	346	131.26	P-110	TC-II	11.33		Halliburton	Halifax, Nova Scotia
2	its casing w/ threaded collars	346	131.26	P-110	TC-II	26.30			
1	float collar joint	346	131.26	P-110	TC-II	13.74			
190	its casing	346	131.26	P-110	TC-II	2447.69			
1	casing hanger joint	346	131.26	P-110	TC-II	4.56			
3.3% BWOC prehydrated gel, 12.0 L/tonne Halad 344L + 10.0 L/tonne SCR100L Lead Cement Additives:									
Tail Cement Additives: 14.0 L/tonne Halad 344L, 7.0 L/tonne SCR100L									
Spacer Type: Dual Purpose Volume, m³: 21.0 Wt. kg/m³: 1,320 PV, Pa's: YP, Pa:									
Cement Displacement Rate: 1.60 m³/min Displaced With (Cemented Unit/Pump): Mud Pumps									
Cement Returns <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Early Returns? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No									
Second Stage DV Tool Located @: MD									
Cement Type: No. Sacks Pump Time @ Temp Yield Cu. Ft./Sx Est. Weight Actual Mix Water Gal./Sx Hrs. @ Comp. PSI Strength @ Hrs. WL cc Free Water%									
Lead Cement Additives:									
Tail Cement Additives:									
Spacer Type: Volume, m³: 3501.71 MD									
Cement Displacement Rate: Displaced With (Cemented Unit/Pump):									
Cement Returns <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Early Returns?									
Remarks: Land Casing and break circulation with rig pumps. Increase pump rate up to 100 strokes/minute. Held pre-job safety meeting with CT, TSF and Halliburton.									
Began losing partial returns after 11,640 strokes (approximately on bottoms up to SSWH). Shut down. Release bottom dart & pump Dual Purpose Spacer.									
Mix and Pump lead cement bottom dart land and shear in bottom plug after 14.3 m³ pumped w/ 9.51 MPa and pump Tail cement. Drop top dart. Use Halliburton to land dart after 14.0 m³. Shear top plug w/ 27.6 MPa psi and pump additional 1.9 m³ bbls w/ Halliburton. Switch to rig pump to finish displacement. Pump displacement to Fit Collar.									
Plug did not bump. Displace additional volume equal to one half of shoe track and shut down. Plug did not bump. Release pressure and check floats. Floats held.									
RVD cement lines and set casing packoff. Total mud lost = 174.9 cubic meters									
Number Of Centralizers/Wipers: 6 / 0 Type: 6 rigid body /									
Spacing: 1 rigid body centralizer on each of the first six joints run									
Drilling Representative: Robichaux / Curran / Bruton / Balasch Field: Exploration Lease: EL 2359 Well Number: Chevron et al Newburn H-23 AFE No: RWFECD-R2250 Date: 6/16/2002									

CEMENTING DETAILS									
Only Description		Size (O.D.), mm	Weight, kg/m	Grade	Threads	Length, m	Rel#	Cement Company:	Yard Location:
1	float shoe jlt	251	93.46	P-110	VAMTOP	14.72		Hallifax, Nova Scotia	
2	jis casing w/ threaded collars	251	93.46	P-110	VAMTOP	27.72			
1	double valve float collar jlt	251	93.46	P-110	VAMTOP	14.80			
76	jis casing	251	93.46	P-110	VAMTOP	1029.90			
1	x-over casing pup joint	251	93.46	P-110	VAMTOP	6.79			
171	jis casing	251	93.46	P-110	VAMTOP	2308.00			
1	9-7/8" MS700 Fullbore hanger	251	93.46	P-110	VAMTOP	5.04			
						0.00			
						0.00			
Liner Hanger (If Applicable):									
Total Pipe Installed:									
Less Cutoff Piece(s) and Landing Joints:									
DP To Land Liner (If Applicable) TOL @:									
Plus RT Elevation (above MSL):									
Casing Set @: 4.404 m TVD 4.404 m MD									
Last Casing Size: #VALUE! 3.501 m MD									
Hole Volume From Caliper Log: 247.4 cubic meters									
Mud Properties Prior To Cementing: WT kg/m ³ : 1624.0 Type: Synthetic Oil Base Mud									
FV, sec / liter: 155	PV, mPa's: 19	YP, Pa: 14	Gels: 15 / 18	WL, ml/30 min:					
HTHP WL: 6.8	Solids: 20	% Oil: 60	Sands: 0	pH:					
AKL: 2.6	CL: 39000	CA: 679	XLims: 679	Elec Stab:					
Casing Recirculation?: Length Of Strokes: Time:									
Casing Rotated? N Time Casing Moved After Bumping Plug: Hrs									
Number Of Centralizers/Wipers: 6 / 0 Type: 6 rigid body /									
Spacing: 1 solid rigid-body aluminum centralizer on each of the first six joints run.									
Four stop collars used.									
Drilling Representative: Robichaux / Ruilenschild / Alworth Field: Exploration									
Lease: EL 2359 Well Number: AFE No: Date: 6/30/2002									

CEMENTING DETAILS									
Cement Company:		Yard Location:		Circulation Time & Rate		Returns (Full/Partial):		Full	
First Stage		Class "G" cement		Prior To Cementing:		3.5 Hrs @		m ³ /min	
Cement	Type	No. tonnes	Pump Time Hrs @	Yield m ³ /tonne	Weight Est.	Actual	Mix Water Gal/Sx	Comp. MPa	Strength PSI
Lead	LaFarge Class G	24.5	3:33hrs	0.757	0	1872	0.000	14.245	25:44
Tail	LaFarge Class G	4.3	3hrs	0.757	0	1872	0.000	14.479	20
Lead Cement Additives: 35% SSA-1 + 0.2% Super CBL + 0.07 gpa SCR-100L + 0.18 gpa Halad-344									
Tail Cement Additives: 35% SSA-1 + 0.07 gpa SCR-100L + 0.18 gpa Halad-344									
Spacer Type: Dual Purpose Volume, m ³ : 13.0 Wt. kg/m ³ : 1,620 PV, Pa's: YP, Pa:									
Cement Displacement Rate: 2.00 m ³ /min Displaced With (Cemented Unit/Pump): Mud Pumps									
Cement Returns: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Early Returns? <input type="checkbox"/> No <input type="checkbox"/> No Plug?									
Second Stage DV Tool Located @:									
Cement	Type	No. Sacks	Pump Time Hrs @	Yield Cu. Ft/Sx	Weight Est.	Actual	Mix Water Gal/Sx	Comp. PSI	Strength PSI
Lead									
Tail									
Lead Cement Additives:									
Tail Cement Additives:									
Spacer Type: Volume, m ³ : Wt. kg/m ³ : PV, Pa's: YP, Pa:									
Cement Displacement Rate: Displaced With (Cemented Unit/Pump): Estimated TOC:									
Cement Returns: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Early Returns? <input type="checkbox"/> No <input type="checkbox"/> No Plug?									
Less Cutoff Piece(s) and Landing Joints:									
DP To Land Liner (If Applicable) TOL @:									
Plus RT Elevation (above MSL):									
Casing Set @: 4.404 m TVD 4.404 m MD									
Last Casing Size: #VALUE! 3.501 m MD									
Hole Volume From Caliper Log: 247.4 cubic meters									
Mud Properties Prior To Cementing: WT kg/m ³ : 1624.0 Type: Synthetic Oil Base Mud									
FV, sec / liter: 155	PV, mPa's: 19	YP, Pa: 14	Gels: 15 / 18	WL, ml/30 min:					
HTHP WL: 6.8	Solids: 20	% Oil: 60	Sands: 0	pH:					
AKL: 2.6	CL: 39000	CA: 679	XLims: 679	Elec Stab:					
Casing Recirculation?: Length Of Strokes: Time:									
Casing Rotated? N Time Casing Moved After Bumping Plug: Hrs									
Number Of Centralizers/Wipers: 6 / 0 Type: 6 rigid body /									
Spacing: 1 solid rigid-body aluminum centralizer on each of the first six joints run.									
Four stop collars used.									
Drilling Representative: Robichaux / Ruilenschild / Alworth Field: Exploration									
Lease: EL 2359 Well Number: AFE No: Date: 6/30/2002									

CEMENTING DETAILS									
Cement Company:		Hailburton		Hailfax, Nova Scotia		Yard Location:			
Only	Description	Size (O.D.), mm	Weight, kg/m	Grade	Threads	Length, m	Relief	First Stage	Class 'G' cement
1	Float Shoe	197			SLSF	0.62			
2	its casing w/ Centralizer sub	197	68.60	HCG125	SLSF	26.17			
1	Float Collar	197			SLSF	0.94			
1	it casing w/ centralizer sub	197	68.60	HCG125	SLSF	11.89			
1	it casing w/ cent sub & land collar	197	68.60	HCG125	SLSF	13.02			
2	its casing w/ centralizer sub	197	68.60	HCG125	SLSF	24.68			
76	its casing	197	68.60	HCG125	SLSF	1084.89			
						0.00			
						0.00			
Liner Hanger (if Applicable):									
Total Pipe Installed:									
Less Cutoff Piece(s) and Landing Joints:									
DP To Land Liner (if Applicable) TOL @:									
Plus RT Elevation (above MSL):									
Casing Set @: 5,323 m TVD 5,403 m MD									
Last Casing Size: 251 mm 4,404 m MD									
Hole Volume From Caliper Log:									
Mud Properties Prior To Cementing:									
PV, sec / liter:	95	PV, mPa s:	26	Gels:	5 / 8	WL, ml/30 min:			
HTHP WL:	3.4	Solids:	28.63	% Oil:	0	pH:			
AKL:		CL:	35000	CA:		Elec Stab:	325		
Casing Recirculation?:	N	Length Of Strokes:		Time:		Hrs			
Casing Rotated?	N	Time Casing Moved After Bumping Plug:				Hrs			
Number Of		Type:							
Centralizers/Wipers:	6 / 0	6 bow spring cent subs	/						
Spacing:		1 bow spring centralizer sub on each of the first six joints run							
Land plug in landing collar at 61.4 m ³ (0.95m ³ early). Pressure up to 13800kPa. Total of 15.6m ³ lost during the cement job. Set ZXP Liner top packer w/ 352000 daN.									
Pressure test packer to 27600kPa surface pressure. Pull 10 stds above the hanger and circ blms up. Estimate 0.32-0.48 m ³ cement max on top of hanger.									
Drilling Representative: Robtchaux / Curran / Brunton / Balasch / Liukus									
Lease: EL 2359									
Well Number: Chevron et al Newburn H-23									
AFE No: RWFEC-R2250									
Date: 7/25/2002									

Appendix G

Drilling Fluid Summary

Appendix G

Drilling Fluid Summary



**CHEVRON TEXACO
Cuttings Disposal Summary**

INTERVAL	Cuttings Disposed	Disposal Rate	TOTAL
17"	109 tonne	\$270 / tonne	\$29,535
12 1/4"	115 tonne		\$30,993
8 1/2"	177 tonne		\$47,874
6 1/2"	250 tonne		\$67,527
TOTALS	652 tonne	\$270/ tonne	\$175,929

BASE FLUID ACCOUNTING

BASE FLUID DISPOSAL	17"	12.25"	8.5"	6.5 P&A Incl.	TOTAL
Discharged overboard (barrels)	171.2	31	25.6	7.8	235.6
Sent to town for disposal (barrels)	154.5	120.1	229.7	270.2	774.5
Total base fluid removed (barrels)	325.7	151.1	255.3	278	1010.1





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Newburn H-23 Waste Management Recap

According to a ruling of the Canada-Nova Scotia Offshore Petroleum Board, the Newburn Prospect was governed by a synthetic base fluid discharge limitation of 6.9% base fluid to wet cuttings weight ratio, as has been the case with other wells in this jurisdiction over the past couple of years.

For primary cuttings processing on the Newburn prospect, the drillship Deepwater Millennium was fitted with a Hutchison Hayes "Duster" cuttings dryer with accompanying Hutchison Hayes 5500 high speed centrifuge. This system has proven to be effective in Gulf of Mexico operations, and similar performance was anticipated in these waters.

Shaker discard was transported to the Duster via auger, with a vacuum fed RotoHopper as back up. The ship was fitted with two one hundred horsepower Swaco vacuum units for additional cuttings transport and various containment purposes, along with a set of cuttings skips for containment and transport of waste.

The well was drilled with synthetic base fluid from the seventeen-inch interval onward. Drill cuttings dried below the 6.9% limit by the Duster were disposed of overboard. Waste from the 5500 centrifuge, from interfaces, drilled cement, and other sources not suitable for processing with the Duster were contained in skips and shipped to land for treatment and disposal at the Envirosoil facility.

Rather severe, unanticipated process rate problems arose with the Duster in the high volume, seventeen-inch section, as outlined previously. Apart from the rate problem, the system processed some 2200 barrels of drill cuttings (neat hole volume) carrying 1600 barrels of drill fluid. This represents almost 5000 barrels of waste, when the cuttings bulking factor (40%) and washout are considered.

Setting aside slops, cement, interfaces, etc. (which are contained in any case), and looking strictly at waste generated from drilling the formation, an appreciation of the economics of using the drying system may be arrived at. The produced waste attributable to formation drilling was reduced from 5000 barrels (appx.) to 600 barrels (400 bbl. of discard from the 5500 centrifuge plus 200 bbl. (appx.) of straight shaker cuttings contained via vacuum drop during interruptions of processing). This represents an onshore waste disposal reduction of 88%.

Apart from the obvious savings of onshore disposal tonnage, the cost of transport to shore, the cost of rental of additional cuttings containers to handle the large volumes, and the cost of the more than 1000 barrels of drilling fluid recovered by the dryer was saved by employing the drying system. Also, the effect on rig



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operations of about 200 extra skip loads of waste, roughly tripling the total volume of waste that was handled, is a very considerable incentive to reduce waste volume offshore.

Following are some highlights of the waste management parameters of the project.

ChevronTexaco et al Newburn H-23									
Interval	SOC	Volume Drilled	Mud Load	Mud Overboard	Synthetic Overboard	Mud to Boxes	Synthetic to Boxes	Tot Vol Boxes	Weight Boxes
17 inch	4.13	1473	1119	260	171	235	155	461	109
12.25 inch	4.28	432	276	49	31	195	120	381	115
8.5 inch	4.71	231	143	43	26	400	230	602	177
6.5 inch	4.19	87	73	15	8	340	179	441	158
P&A	0	0	0	0	0	175	92	282	93
TOTAL	4.29	2223	1611	367	236	1345	776	2167	652
Notes									
Average SOC is simple average of 24 hour reported values in percent wet weight.									
Volume drilled is neat hole volume.									
Mud load is volume of mud on shaker cuttings, calculated by retort percentages.									
Mud overboard is volume mud on cuttings after processing through cuttings dryer.									
Synthetic overboard is base fluid in above mud.									
Mud to boxes is whole mud lost to cuttings boxes, extrapolated from base volume.									
Synthetic to boxes is base fluid in boxes for onshore disposal.									
Total volume boxes per Waste Transfer records.									
All volumes in barrels									
Total weight boxes per Waste Transfer records, in tons.									

The mud recovery rate from cuttings processing was approximately 63%, computed as:

$$\left(\text{Mud Load} - (\text{Mud Overboard} + 5500 \text{ Mud Discard to boxes}) \right) / \text{Mud Load}.$$

Of 1345 barrels of mud contained in cuttings boxes, approximately 200 barrels came from 5500 centrifuge discard, and 100 barrels were contained during Duster service interruptions. The remainder of the waste came from slops, pit cleaning, interface, and the like. Opportunities for future reductions of waste volume should be sought from these sources.



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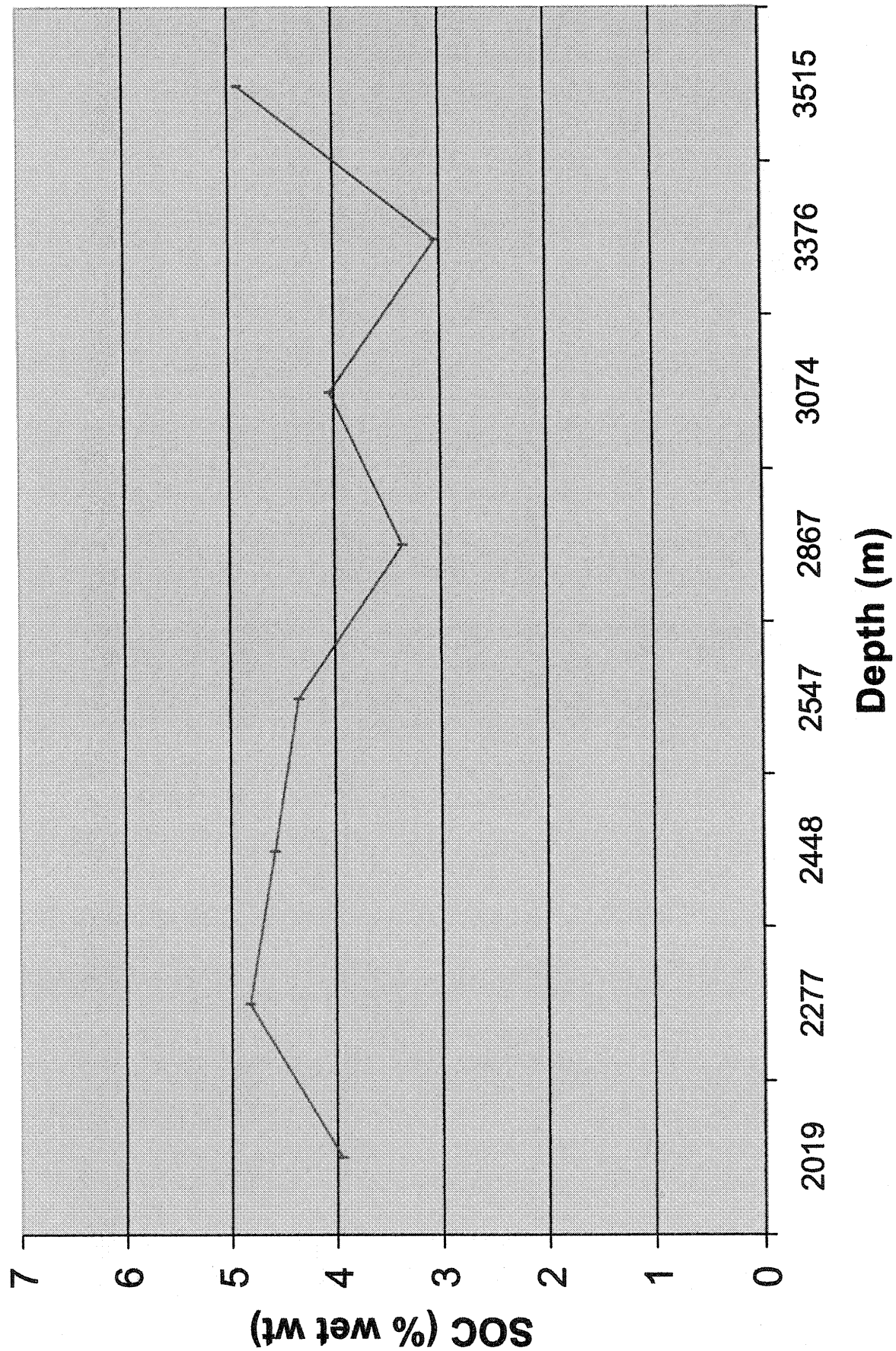
A Smith/Schlumberger Company

It was expected that the SOC readings would increase with depth, as penetration slowed and cuttings became finer. This trend did not appear, however. This would seem to be due to the effect of adding barite to the mud system as the well was drilled deeper. The addition of barite offsets the effect of progressively finer cuttings in two ways. First, the barite crowds the mud, decreasing the amount of base fluid per unit volume of mud, and, second, the barite increases the average density of total solids, which directly affects the wet weight ratio, since API procedure does not differentiate between drill solids and commercial solids for computing wet weight ratio.

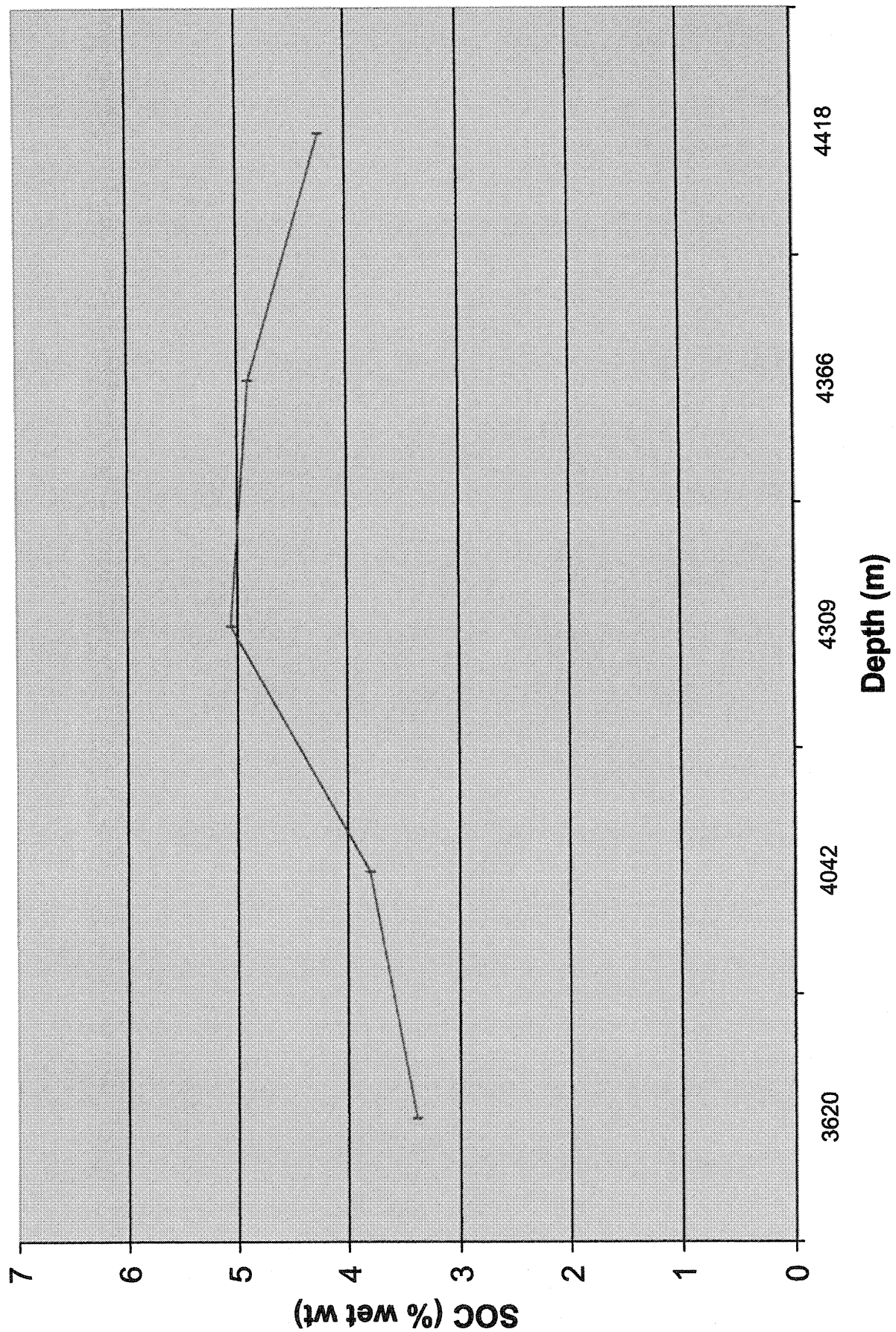
MATRIX PIT CLEANING

In the process of cleaning pits on the rig, 83.17 tonnes of wastes were generated and disposed at the Envirosoil facility.

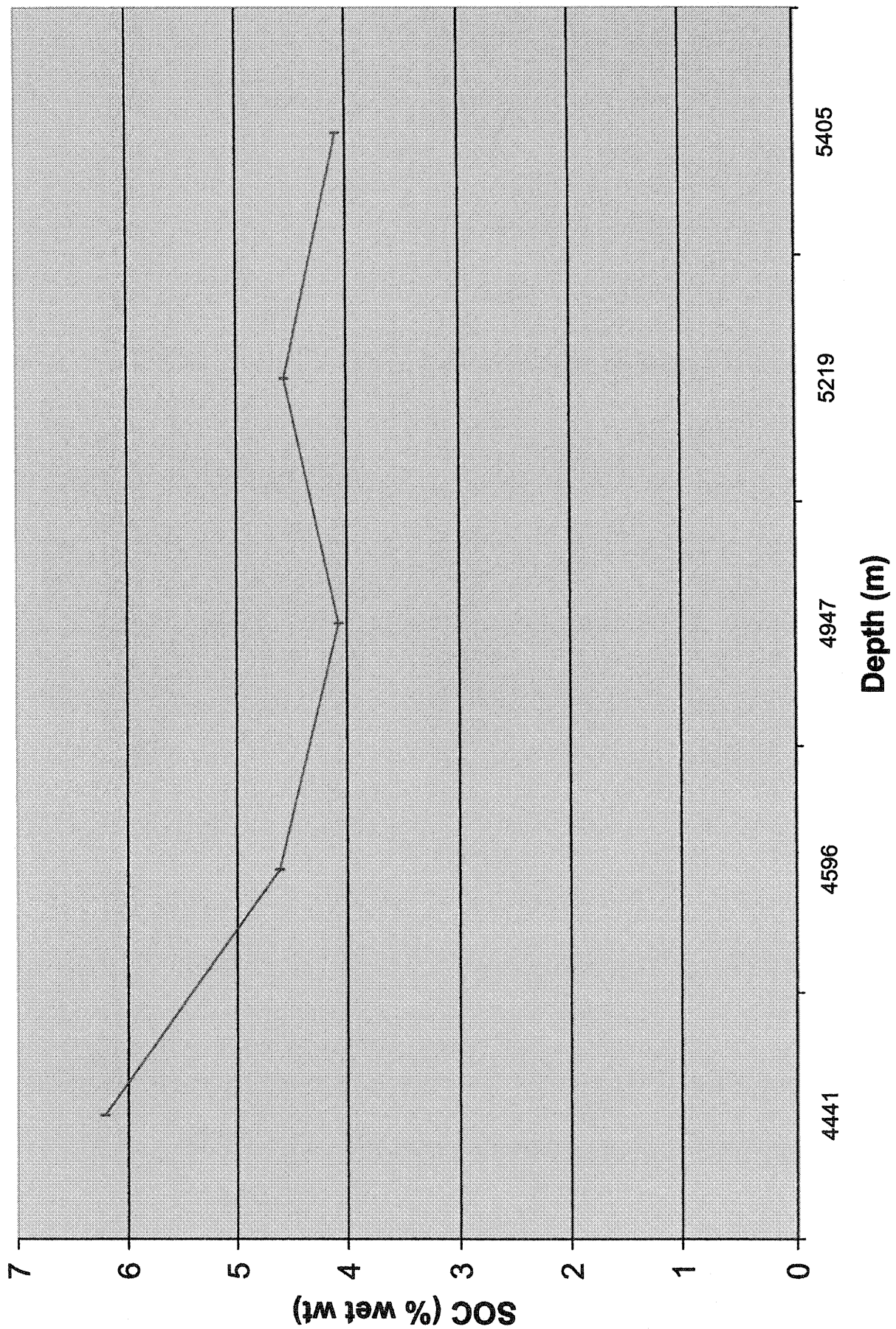
Newburn H-23 17" Section



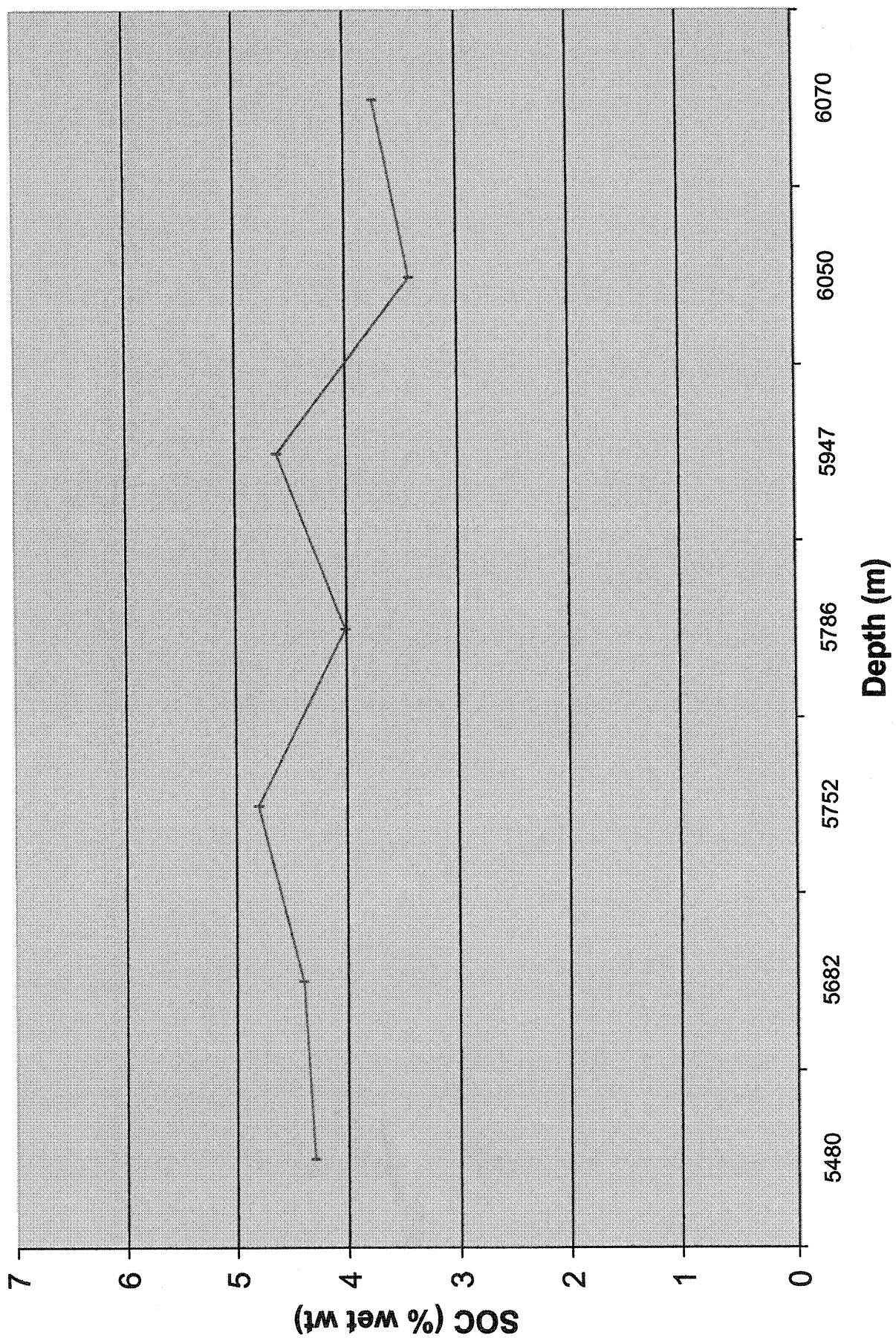
Newburn H-23 12 1/4" Section



Newburn H-23 8 1/2" Section



Newburn H-23 6 1/2" Section





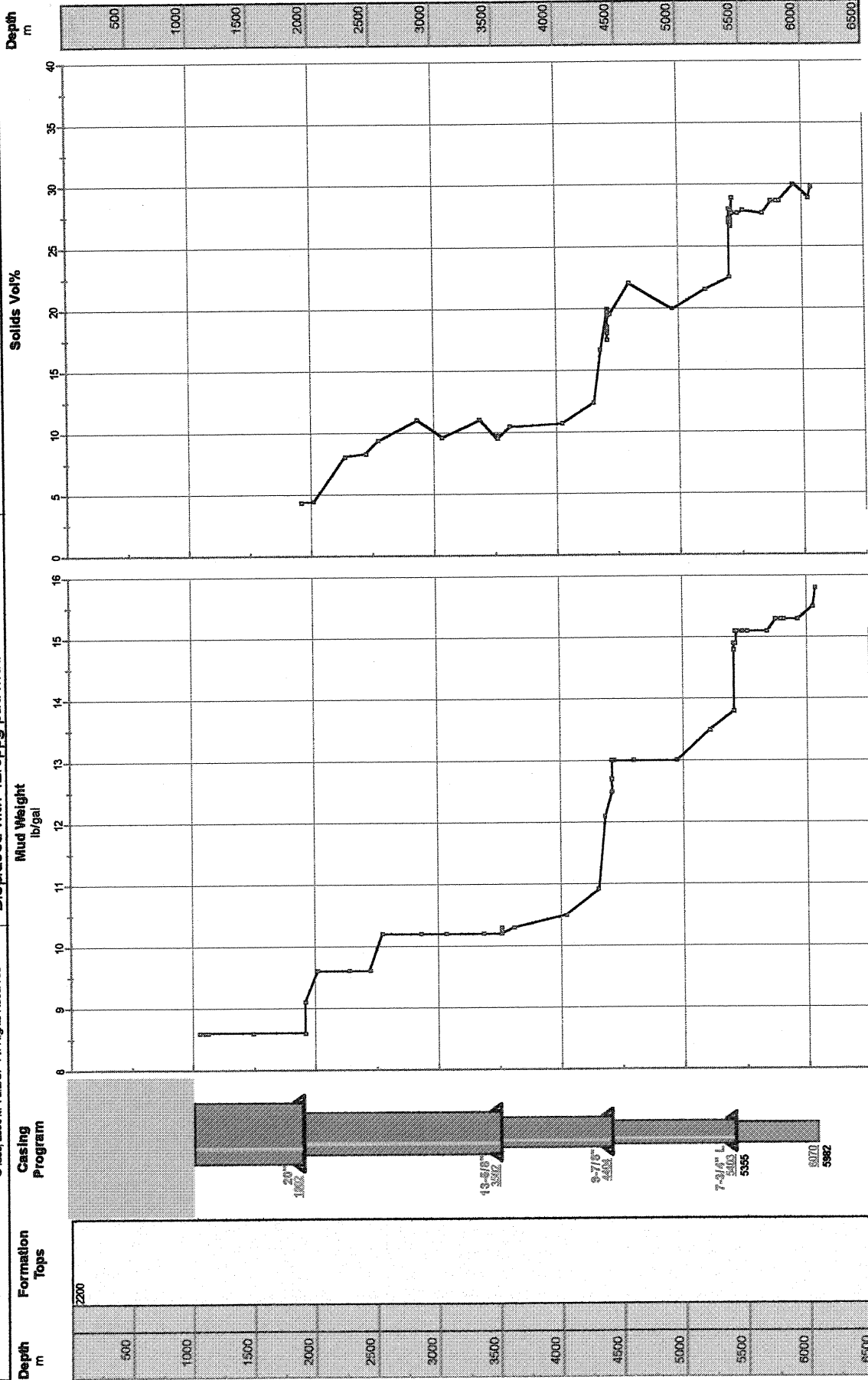
MudScan

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Adjusted solids percent
Mud weight ppg

Note 20ins hole drilled with seawater
Displaced with 12.0ppg pad mud

Operator : Chevron Canada Res
Well Name : Newburn H-23
Well Location : Mahone Block
Comments : Nova Scotia, Canada

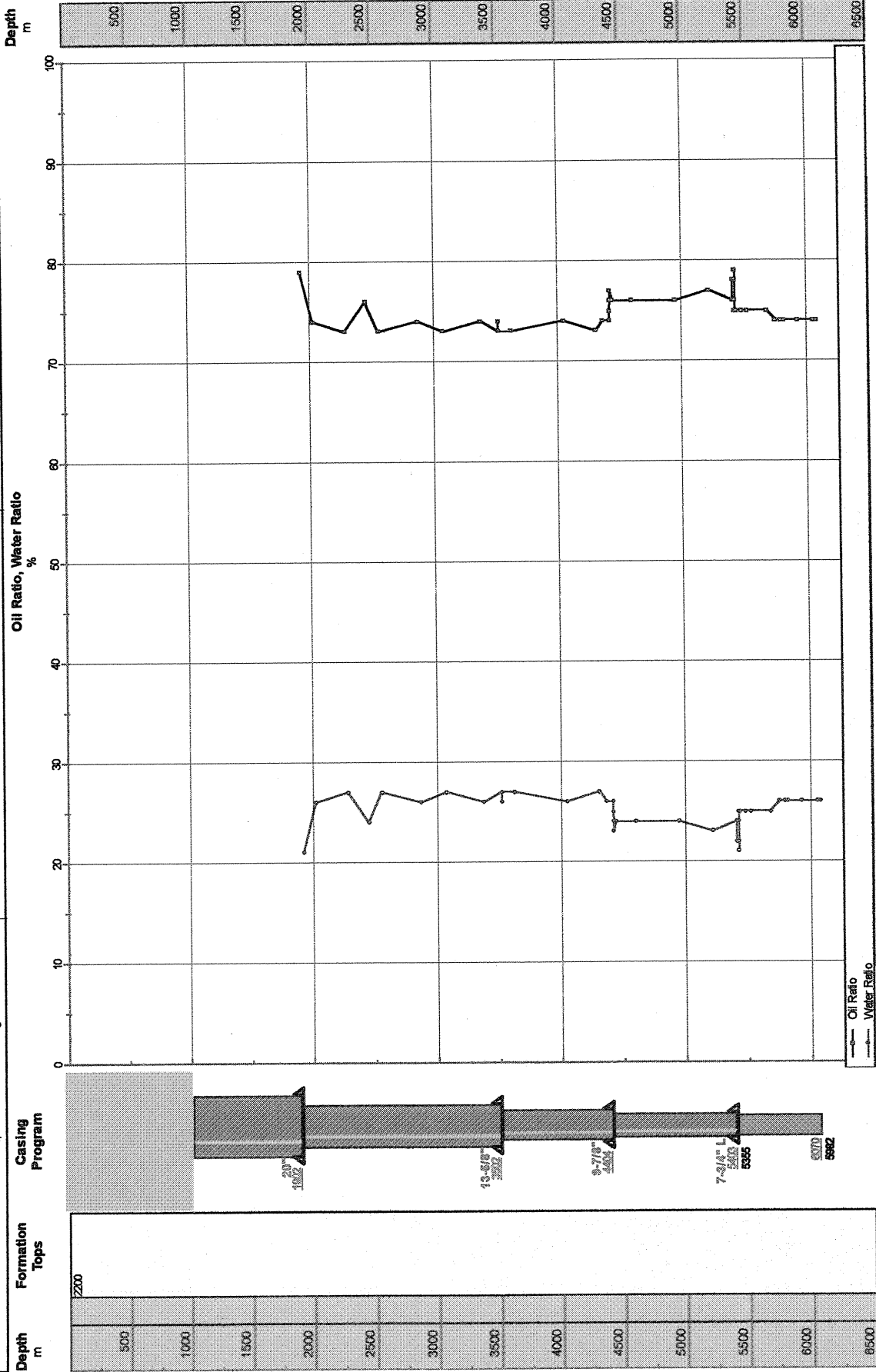




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OIL/WATER RATIO

Operator: Chevron Canada Res
Well Name: Newburn H-23
Well Location: Mahone Block
Comments: Nova Scotia, Canada





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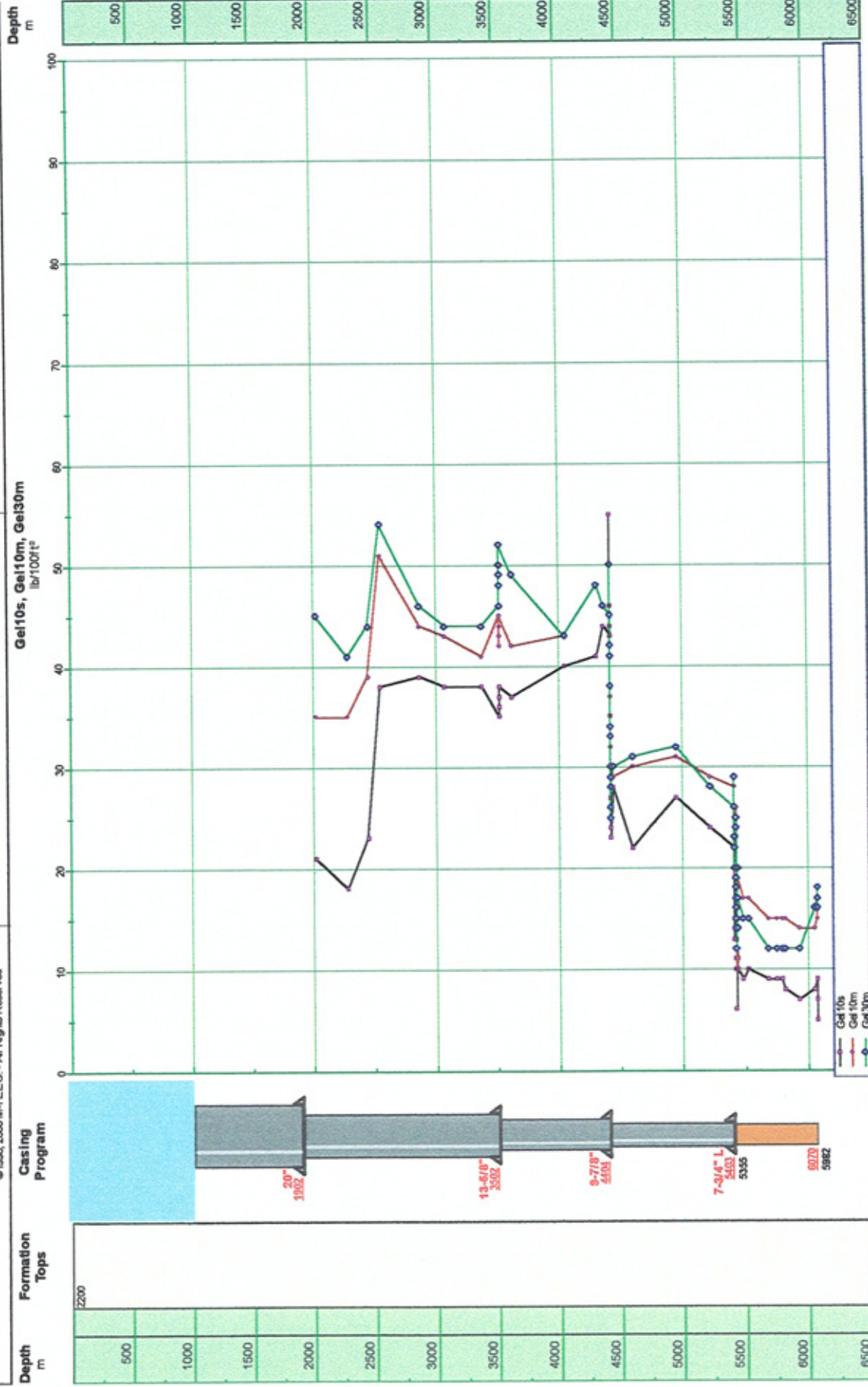
gels 10sec, 10min, 30mins

Operator : Chevron Canada Res

Well Name : Newburn H-23

Well Location : Mahone Block

Comments : Nova Scotia, Canada





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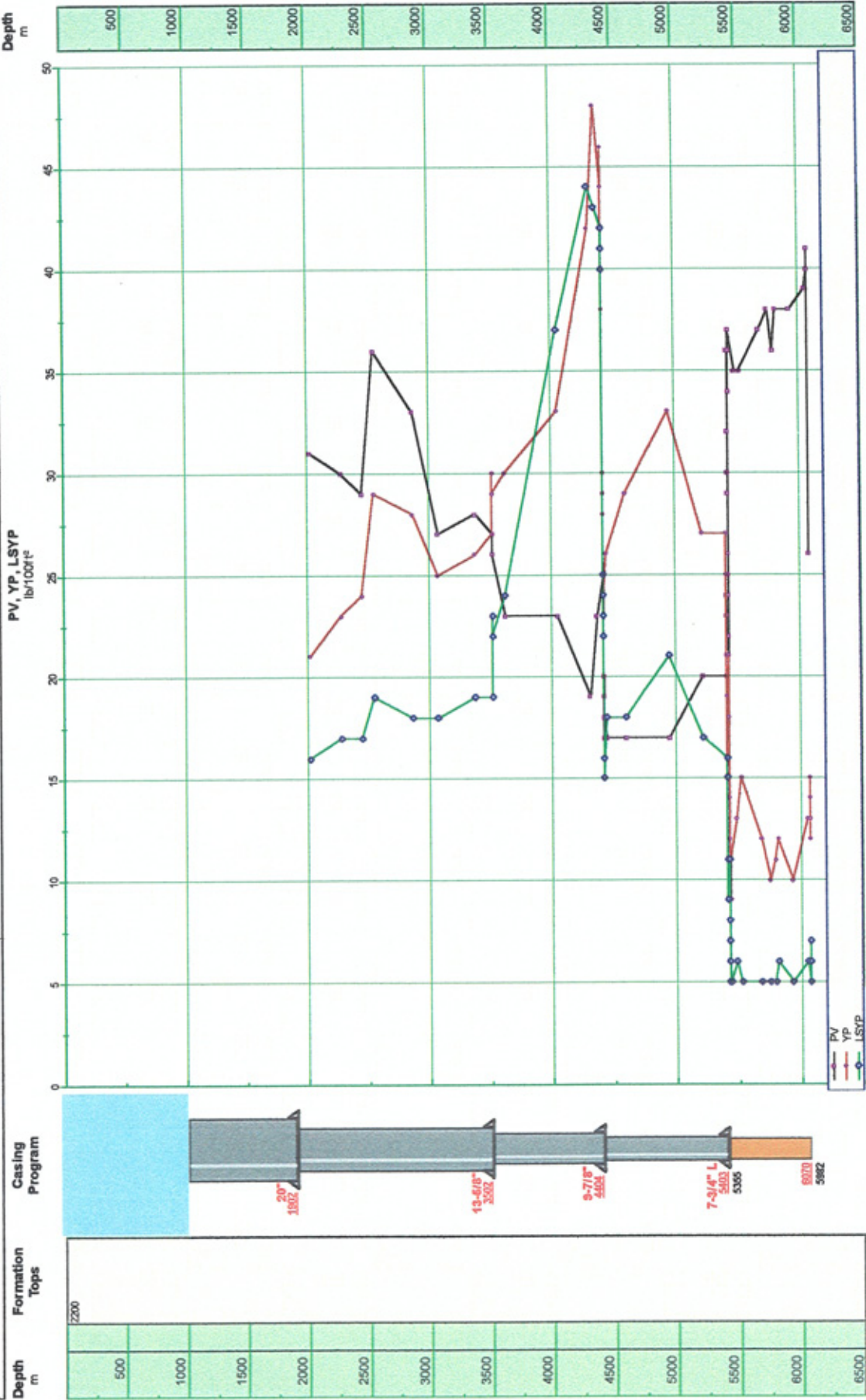
PV, YP, LSYP

Operator : Chevron Canada Res

Well Name : Newburn H-23

Well Location : Mahone Block

Comments : Nova Scotia, Canada





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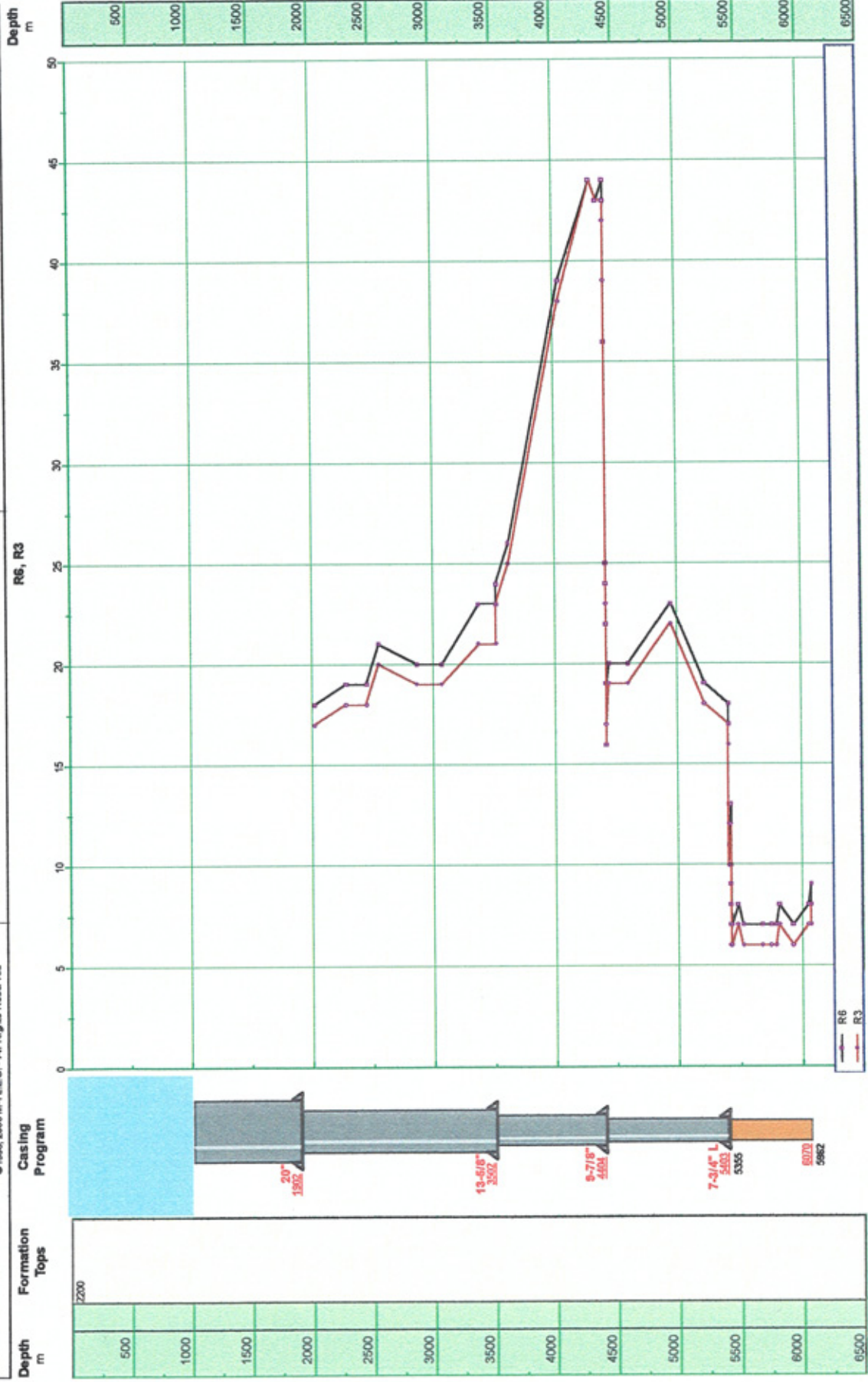
6RPM AND 3 RPM

Operator : Chevron Canada Res

Well Name : Newburn H-23

Well Location : Mahone Block

Comments : Nova Scotia, Canada



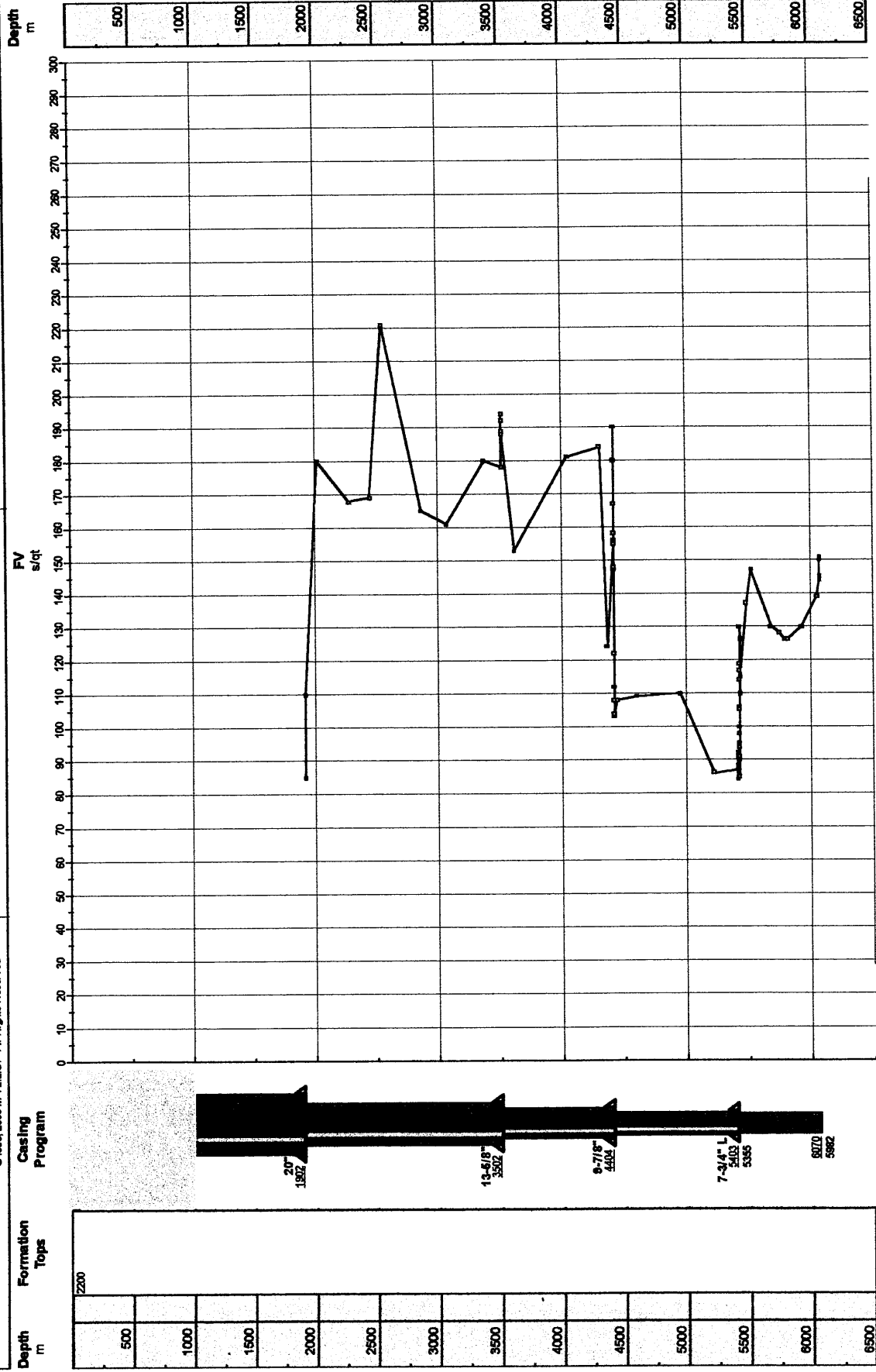


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Funnel viscosity sec/qt.

Operator : Chevron Canada Res
Well Name : Newburn H-23
Well Location : Mahone Block
Comments : Nova Scotia, Canada





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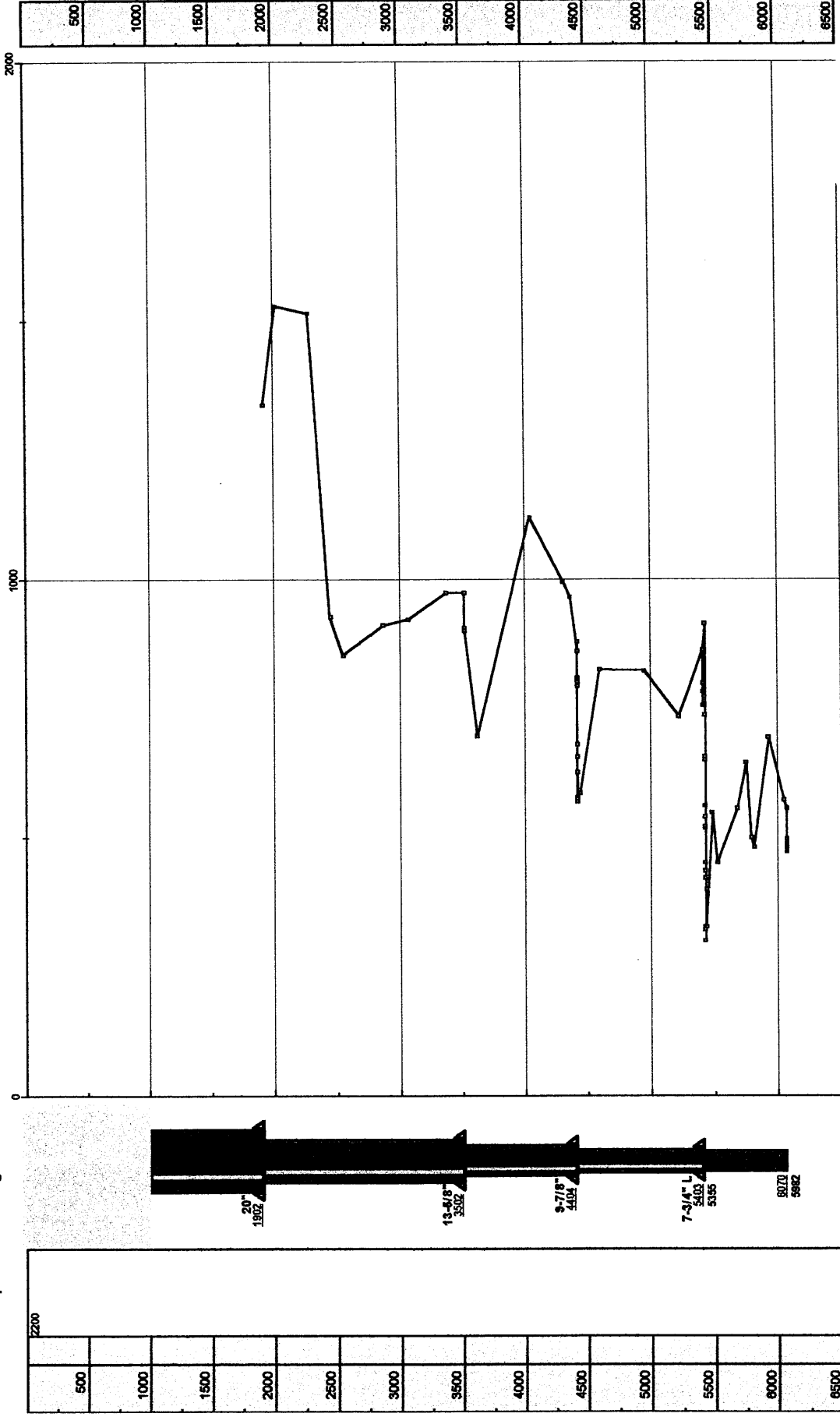
Electrical stability volts

Operator : Chevron Canada Res
Well Name : Newburn H-23
Well Location : Mahone Block
Comments : Nova Scotia, Canada

Depth m
Formation Tops
Casing Program

E-Stab
volts

Depth
m



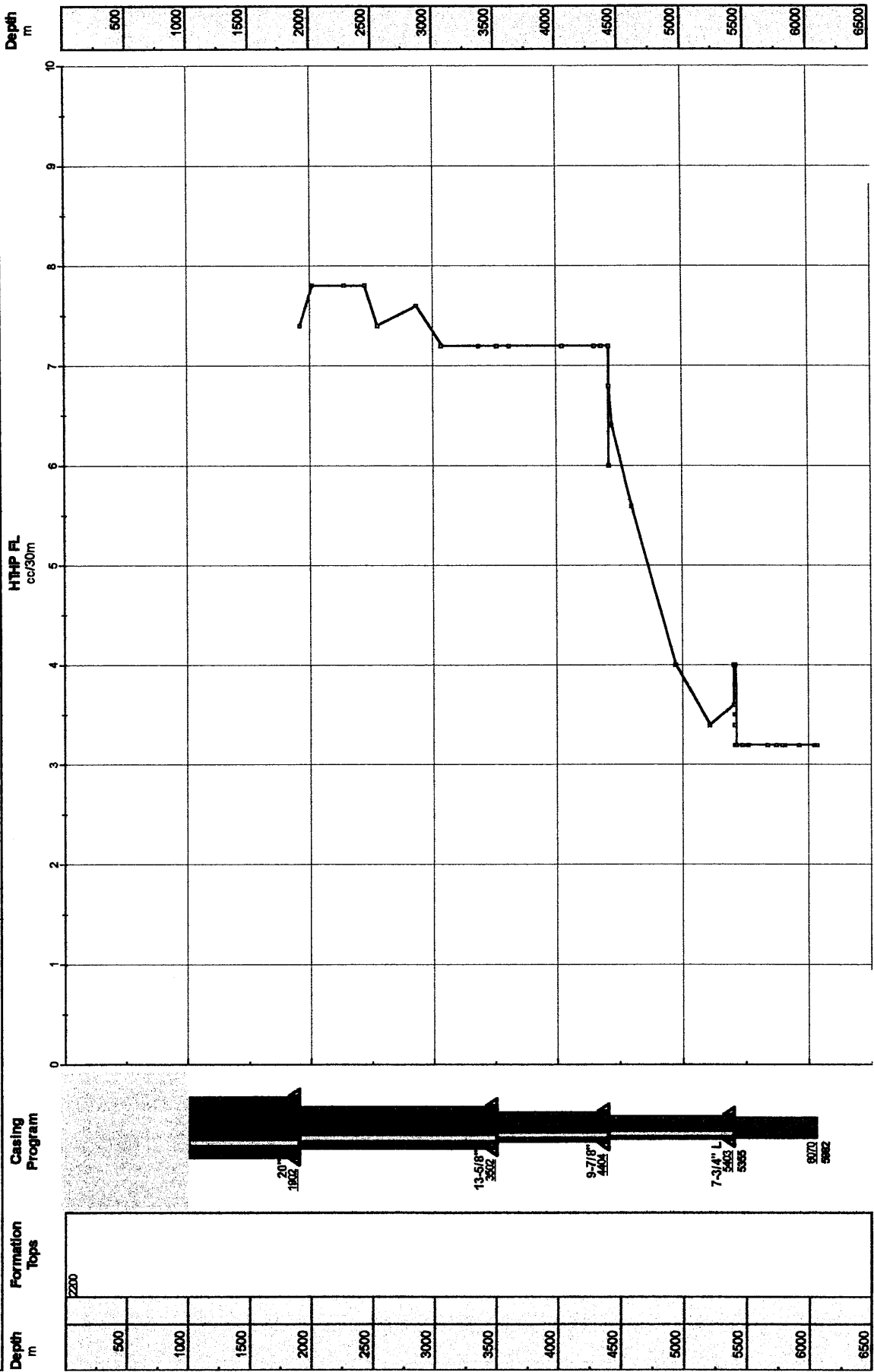


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HT/HP ccs/30min

Operator : Chevron Canada Res
Well Name : Newburn H-23
Well Location : Mahone Block
Comments : Nova Scotia, Canada





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Lime ppb

Operator : Chevron Canada Res
Well Name : Newburn H-23
Well Location : Mahone Block
Comments : Nova Scotia, Canada

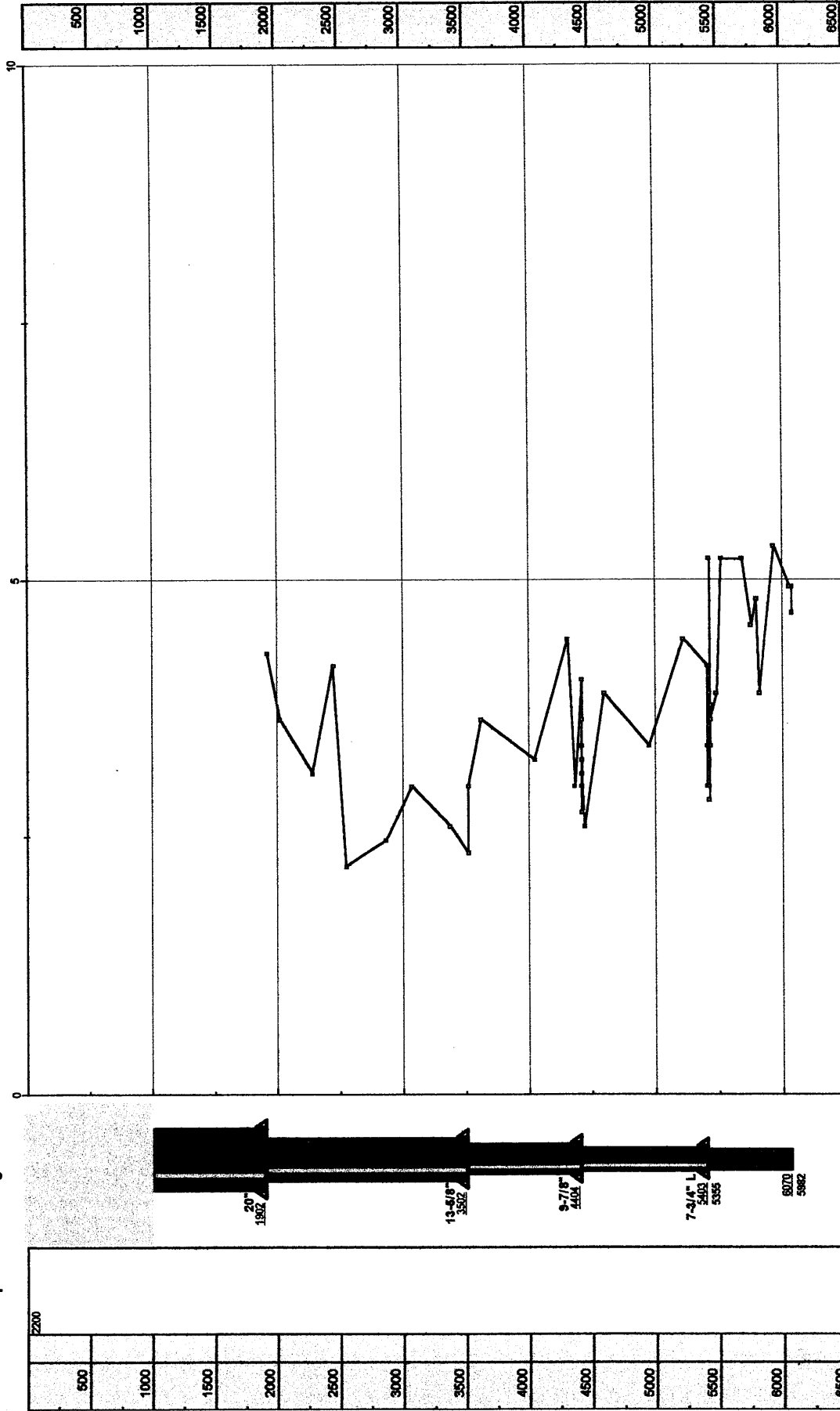
Depth m

Formation
Tops

Casing
Program

Lime

Depth
m



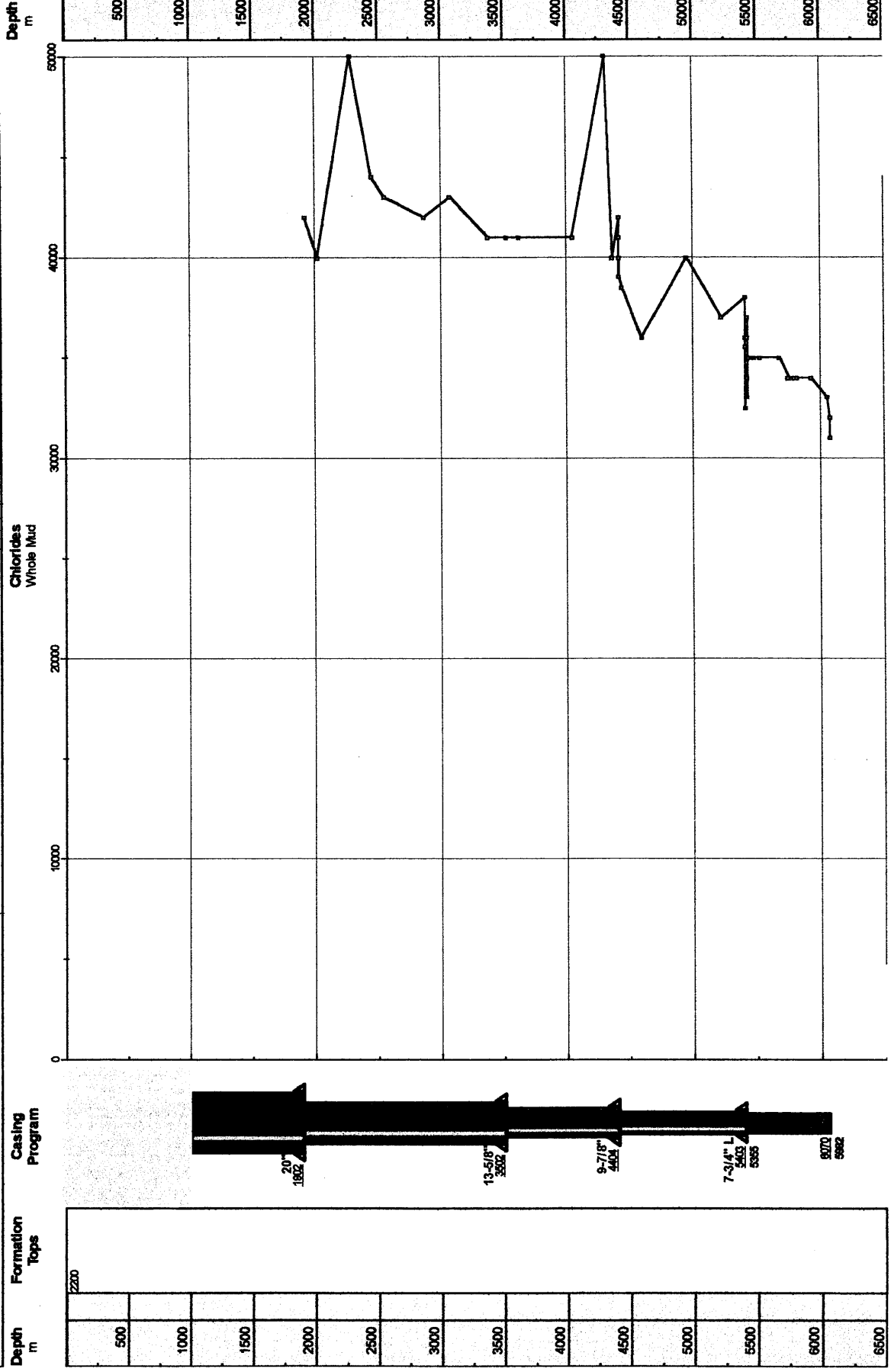


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chlorides whole mud mg/l

Operator : Chevron Canada Res
Well Name : Newburn H-23
Well Location : Mahone Block
Comments : Nova Scotia, Canada



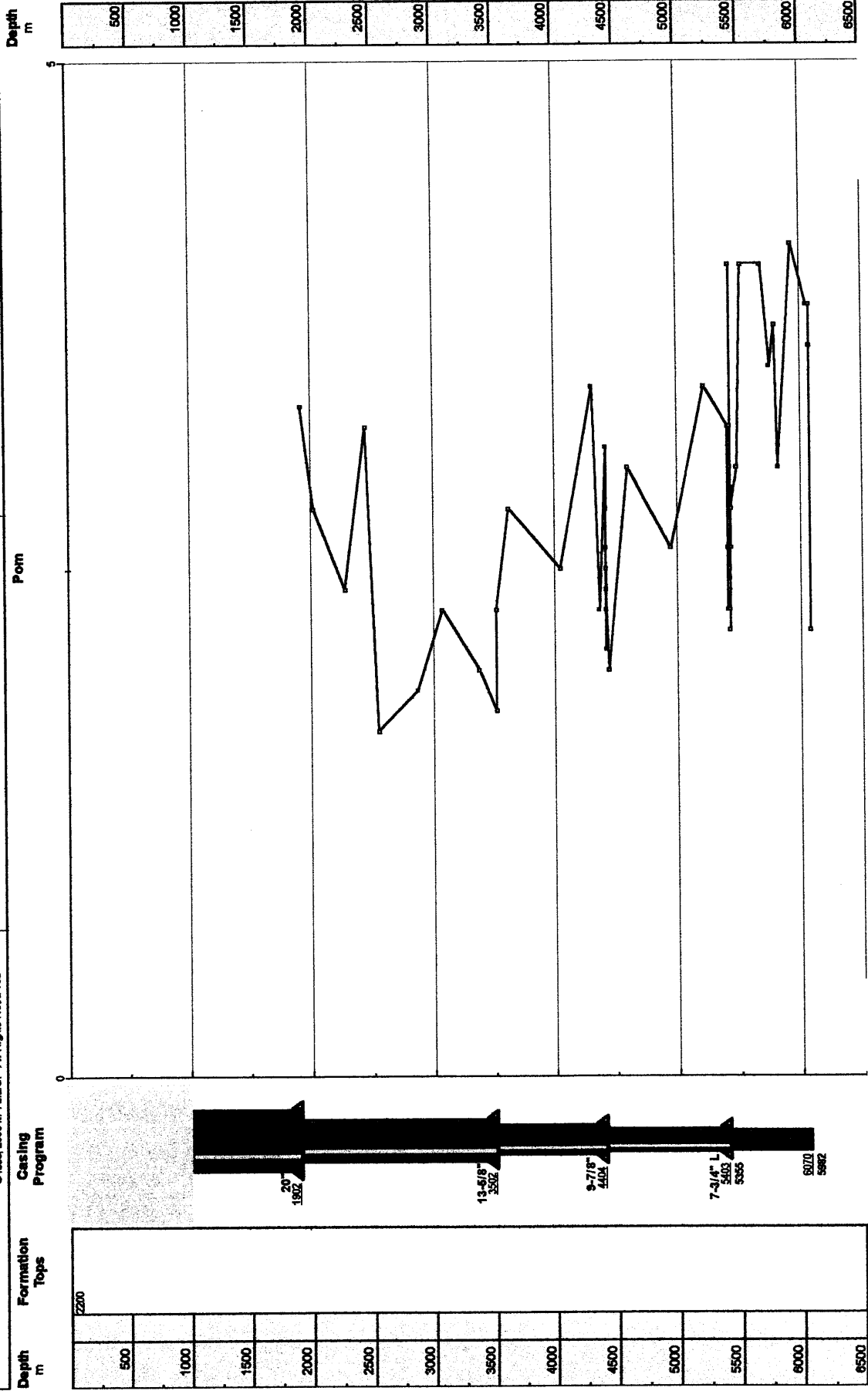


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POM

Operator : Chevron Canada Res
Well Name : Newburn H-23
Well Location : Mahone Block
Comments : Nova Scotia, Canada



Appendix H

Formation Integrity

Test Results

Appendix H
Formation Integrity Test results

20" CASING TEST AND 17" FIT

RIG: DW Millennium

DATE: 4-Jun-02

FIELD: EL 2359

WELL: Newburn H-23

CASING DATA:

SIZE INC.	WGT/FT.	GRADE	CONN.	TVDMRT	MDmRT
20	169	X-52	RL-4S	1,902	1,902

CSG. TEST DATA:

BBLs	PSI	Delta "P"	BBLs	PSI	EMW
0	0	0	0	0	
0.25	90	50	0.25	50	9.45
0.5	140	5	0.5	55	9.47
0.75	200	5	0.75	60	9.48
1	270	25	1	85	9.56
1.25	330	30	1.25	115	9.65
1.5	390	45	1.5	160	9.79
1.75	440	45	1.75	205	9.93
2	500	35	2	240	10.04
2.25	580	35	2.25	275	10.15
2.5	640	35	2.5	310	10.26
2.75	710	40	2.75	350	10.38
3	780	40	3	390	10.50
3.25	850	40	3.25	430	10.63
3.5	915	45	3.5	475	10.76
3.75	985	50	3.75	525	10.92
4	1050				
4.25	1120				
4.5	1180				
4.75	1250				
5	1320				
5.25	1390				
5.5	1460				
5.75	1530				
6	1600				
6.25	1670				
6.5	1735				
6.68	1800				

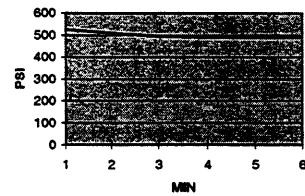
F.I.T. DATA:

LEAK OFF PSI = 530 psi
 MW-USED = 9.3 ppg
 EMW = 10.9 ppg

5 MIN BLEED OFF

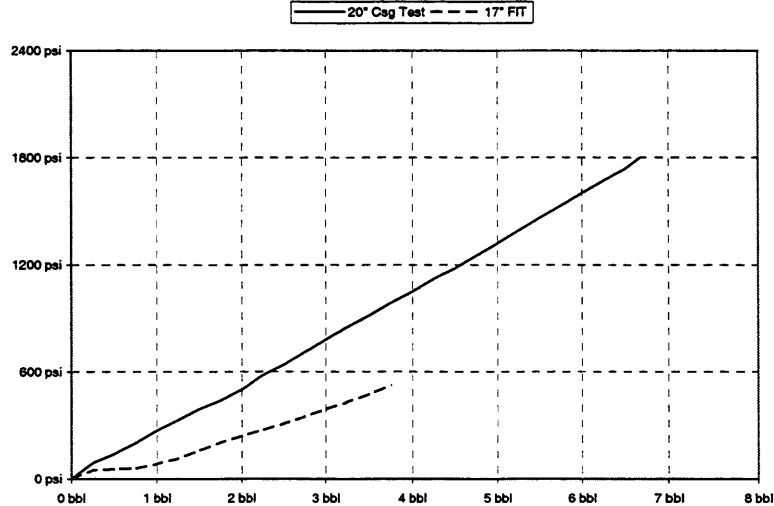
MINUTES	PSI	EMW
0	525	10.92
1	510	10.87
2	495	10.83
3	490	10.81
4	490	10.81
5	490	10.81

Five min bleed off



Vol. Bled Back 3.75 BBLs

EL 2359 Newburn H-23 20" Csg Test and 17" Hole FIT



13-5/8" CASING TEST and 12 1/4" F.I.T.

RIG: DW Millennium
 FIELD: EL 2359
 WELL: Newburn H-23

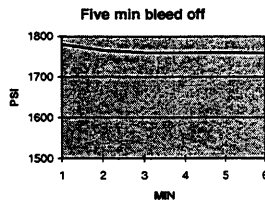
CASING DATA:

SIZE, INCH	WT/FT.	GRADE	CONN.	TVDMRT	MDmRT
13-5/8	88.2	P110	TC-II	3,502	3,502

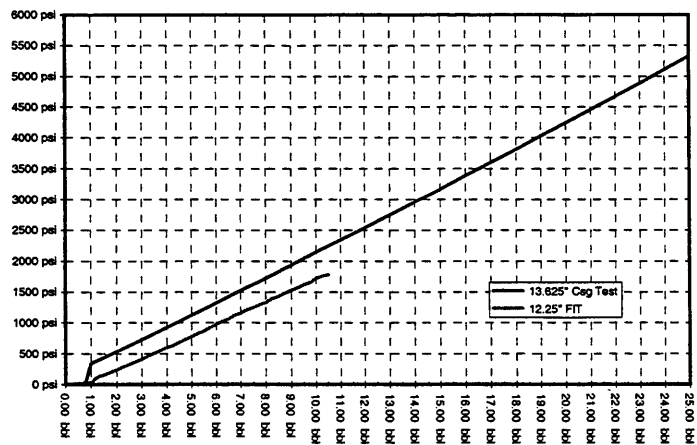
CSG. TEST DATA:

BBLs	PSI	Delta "P"	BBLs	PSI	EMW
0	0	0	0	0	
0.25	0	32	1	32	10.55
0.5	0	95	1.25	127	10.71
0.75	0	28	1.5	155	10.76
1	344	43	1.75	198	10.83
2	535	40	2	238	10.90
3	725	47	2.25	285	10.98
4	925	40	2.5	325	11.04
5	1120	43	2.75	368	11.12
6	1325	42	3	410	11.19
7	1525	52	3.25	462	11.27
8	1725	46	3.5	508	11.35
9	1935	42	3.75	550	11.42
10	2150	45	4	595	11.50
11	2340	40	4.25	635	11.56
12	2540	50	4.5	685	11.65
13	2750	45	4.75	730	11.72
14	2960	45	5	775	11.80
15	3160	53	5.25	828	11.89
16	3385	37	5.5	865	11.95
17	3595	60	5.75	925	12.05
18	3810	50	6	975	12.13
19	4030	49	6.25	1024	12.21
20	4240	36	6.5	1060	12.27
21	4455	60	6.75	1120	12.37
22	4665	35	7	1155	12.43
23	4885	60	7.25	1215	12.53
24	5105	35	7.5	1250	12.59
25	5330	45	7.75	1295	12.67
25.25	5400		8	1335	
			8.25	1395	
			8.5	1435	
			8.75	1485	
			9	1530	
			9.25	1575	
			9.5	1620	
			9.75	1655	
			10	1725	
			10.25	1760	
			10.5	1780	

Vol. Bled Back 10.5 BBLs



EL 2359 Newburn H-23
 13 5/8" Liner Test and 12 1/4" Hole FIT



9 7/8" CASING TEST AND 8 1/2" FIT

RIG: DW Millennium
FIELD: EL 2359
WELL: Newburn H-23

DATE: 4-Jul-02

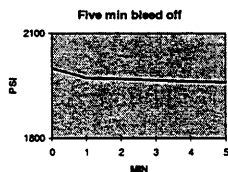
CASING DATA:

SIZE INC.		WGT/FT.	GRADE	CONN.	TVDMRT	MDMRT
9 7/8		62.8	P110/C110	VAMTOP	4,404	4,404

CSG. TEST DATA:

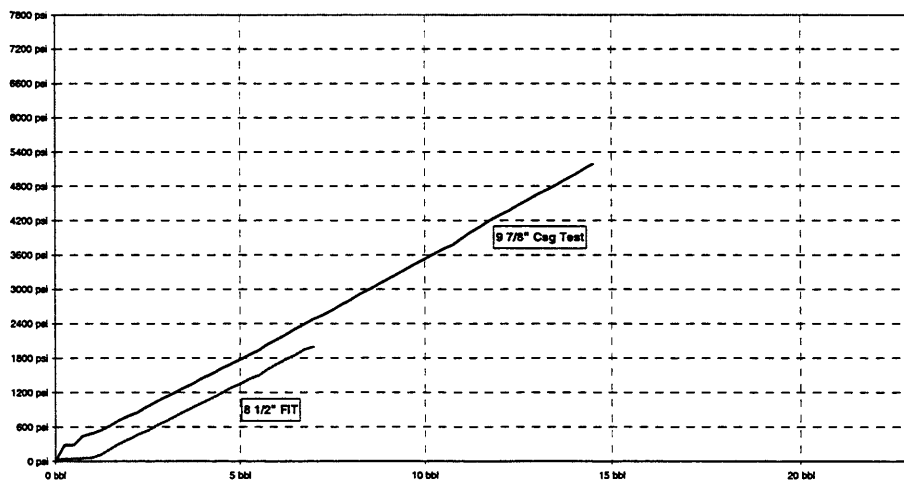
BBLs	PSI	Delta "P"	BBLs	PSI	BBLs	PSI	EMW
0	0	0	14.75	5277	0	28.9	12.88
0.25	278.5	11.8	15	5383	0.25	40.7	12.89
0.5	287	4.8	15.25	5483	0.5	45.5	12.90
0.75	434.6	5	15.5	5546	0.75	50.5	12.91
1	481.1	6.3	15.75	5656	1	56.8	12.92
1.25	539	52.8	16	5824	1.25	109.6	12.99
1.5	620	101.9	16.25	5899	1.5	211.5	13.12
1.75	717	98.5	16.5	6000	1.75	310	13.25
2	789	72.6	16.75	6105	2	382.6	13.35
2.25	857	80.4	17	6194	2.25	463	13.46
2.5	956	68	17.25	6268	2.5	531	13.55
2.75	1042	89	17.5	6364	2.75	620	13.67
3	1117	74	17.75	6463	3	694	13.76
3.25	1194	81	18	6553	3.25	775	13.87
3.5	1277	86	18.25	6639	3.5	861	13.99
3.75	1354	78	18.5	6729	3.75	939	14.09
4	1447	80	18.75	6838	4	1019	14.20
4.25	1526	81	19	6956	4.25	1100	14.30
4.5	1612	83	19.25	7035	4.5	1183	14.41
4.75	1695	97	19.5	7117	4.75	1280	14.54
5	1772	67	19.75	7216	5	1347	14.63
5.25	1861	89	20	7315	5.25	1436	14.75
5.5	1941	64	20.25	7375	5.5	1500	14.84
5.75	2045	103	20.5	7421	5.75	1603	14.97
6	2122	88	20.75	7495	6	1691	15.09
6.25	2213	85	21	7582	6.25	1776	15.20
6.5	2307	78	21.25	7555	6.5	1854	15.31
6.75	2392	96			6.75	1950	15.44
7	2480	50			7	2000	15.50
7.25	2546						
7.5	2629						
7.75	2728						
8	2812						
8.25	2910						
8.5	2989						
8.75	3087						
9	3175						
9.25	3264						
9.5	3354						
9.75	3444						
10	3534						
10.25	3614						
10.5	3697						
10.75	3774						
11	3890						
11.25	3999						
11.5	4097						
11.75	4199						
12	4290						
12.25	4368						
12.5	4468						
12.75	4555						
13	4656						
13.25	4729						
13.5	4815						
13.75	4914						
14	4994						
14.25	5094						
14.5	5183						

F.I.T. DATA:	BBLs	PSI	EMW
LEAK OFF PSI	2000	psi	
MW-USED	12.8	ppg	
EMW	15.5	ppg	
5 MIN BLEED OFF			
MINUTES	PSI	EMW	
0	2000	15.50	
1	1972	15.46	
2	1969	15.46	
3	1966	15.46	
4	1962	15.45	
5	1960	15.45	



Vol. Bled Back 7 BBLs

EL 2359 Newburn H-23 9 7/8" Csg Test and 8 1/2" Hole FIT



7 3/4" LINER TEST AND 6 1/2" FIT

RIG: DW Millennium

DATE: 1-Aug-02

FIELD: EL 2359

WELL: Newburn H-23

CASING DATA:

SIZE, INCH	WT/FT.	GRADE	CONN.	TVDMRT	MDMRT
7 3/4	46.1	HC-Q125	SLSF	5.324	5.403

CSG. TEST DATA:

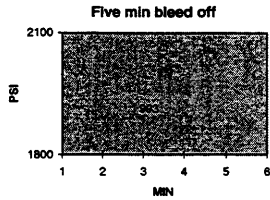
BBLS	PSI	Delta "P"	BBLS	PSI	EMW
0	65	0	0	60	15.47
0.25	125	20	0.25	80	15.49
0.5	250	45	0.5	125	15.54
0.75	365	75	0.75	200	15.62
1	480	75	1	275	15.70
1.25	577.5	65	1.25	340	15.77
1.5	675	75	1.5	415	15.86
1.75	765	80	1.75	495	15.94
2	855	70	2	565	16.02
2.25	952.5	85	2.25	650	16.12
2.5	1050	80	2.5	730	16.20
2.75	1140	80	2.75	810	16.29
3	1230	60	3	870	16.36
3.25	1325	90	3.25	960	16.46
3.5	1420	65	3.5	1025	16.53
3.75	1520		3.75		
4	1620		4		
4.25	1650		4.25		
4.5	1680		4.5		
4.75	1755		4.75		
5	1830		5		
5.25	1927.5		5.25		
5.5	2025		5.5		
5.75	2105		5.75		
6	2185		6		
6.25	2267.5		6.25		
6.5	2350		6.5		
6.75	2442.5		6.75		
7	2535		7		
7.25	2625				
7.5	2715				
7.75	2795				
8	2875				
8.25	2960				
8.5	3045				
8.75	3127.5				
9	3210				
9.25	3300				
9.5	3390				
9.75	3480				
10	3570				
10.25	3655				
10.5	3740				
10.75	3825				
11	3910				
11.25	3970				
11.5	4030				

Initial F.I.T. DATA:

LEAK OFF PSI	1450 psi
MW-USED	15.4 ppg
EMW	17.0 ppg
5 MIN BLEED OFF	
MINUTES	PSI
0	993
1	993
2	993
3	993
4	993
5	993

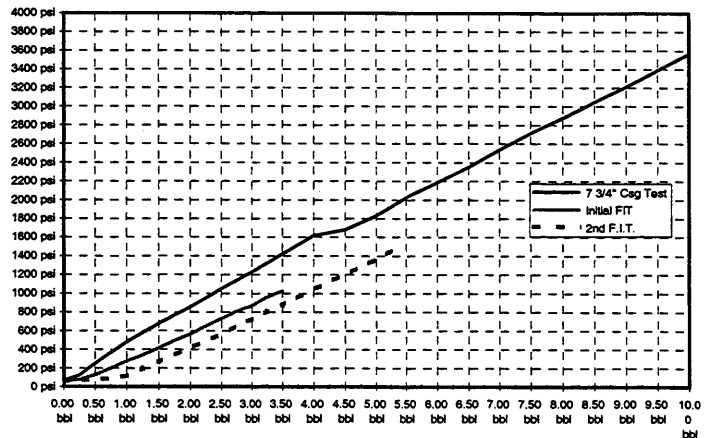
2nd F.I.T. DATA:

Delta "P"	BBLS	PSI	EMW
0	0	60	15.47
12	0.25	72	15.48
6	0.5	78	15.49
8	0.75	86	15.49
34	1	120	15.53
75	1.25	195	15.61
70	1.5	265	15.69
75	1.75	340	15.77
75	2	415	15.86
75	2.25	490	15.94
75	2.5	565	16.02
90	2.75	655	16.12
70	3	725	16.20
85	3.25	810	16.29
65	3.5	875	16.36
80	3.75	955	16.45
85	4	1040	16.54
90	4.25	1130	16.64
70	4.5	1200	16.72
85	4.75	1285	16.81
85	5	1370	16.91
90	5.25	1460	17.01



Vol. Bled Back 3.5 BBLS

EL 2359 Newburn H-23 7 3/4" Liner Test and 6 1/2" Hole FIT



Appendix I

Time Distribution

Appendix I

Time Distribution

Newburn H-23
Total Well
Total Time Breakdown

	TIME BREAKDOWN	Time (hrs)	% of Total Time
LOCATION OPERATIONS	37 Prep, Clean Location	6	0.27
	38 Move, Skid Rig	1	0.05
	Total Group Hours	7	0.32
DRILLING OPERATIONS	01 Circulate and Condition	91.5	4.12
	02 Drilling, Rotating	424.5	19.11
	04 Reaming	22.5	1.01
	05 Tripping	224.5	10.11
	07 P/U and L/D Drill Pipe, BHA	60.5	2.72
	15 Drilling Float Equipment, Cleanout	56	2.52
	17 Leak Off Test	13	0.59
	21 Rig Maintenance	13.5	0.61
	59 Test/Inspect BHA/DS	0	0.00
	62 Safety Meetings	7.75	0.35
	Total Group Hours	913.75	41.13
BOP EQUIPMENT	12 N/U and N/D Wellhead	8.5	0.38
	13 N/U and N/D BOP's	17	0.77
	14 Test BOP's	62.5	2.81
	53 Riser	18.5	0.83
	Total Group Hours	106.5	4.79
CASING & CEMENTING	08 Run Drilling Casing	152	6.84
	09 Cement Drilling Casing	32.75	1.47
	10 Run/Production Casing	1	0.05
	11 Cement Production Casing	5.5	0.25
	16 Test Casing	5.5	0.25
	29 Remedial Cementing	0	0.00
	43 WOC	12	0.54
	Total Group Hours	208.75	9.40
FORMATION EVALUATION	22 Coring	0	0.00
	25 Logging	131	5.90
	26 Sidewall Coring	33.5	1.51
	Total Group Hours	164.5	7.40
ABANDON SUSPEND	19 Plug & Abandon, Suspend	203.5	9.16
	63 Set Cement Plug	0	0.00
	Total Group Hours	203.5	9.16
UNSCHEDULED EVENTS	18 Fishing	0	0.00
	20 Rig Repair	46	2.07
	23 Well Control	84.5	3.80
	24 Other	6.5	0.29
	37 Prep, Clean Location	0	0.00
	42 WOW	2	0.09
	44 WOE	0	0.00
	45 WOO	0	0.00
	50 Lost Circulation	5.5	0.25
	Lost ROV Visibility	7	0.32
	Respod	13	0.59
	Tight Hole, Ream hole	9	0.41
	Check suspect LPWH angle	7	0.32
	Dropped fill up hose down choke line	14	0.63
	Failed Casing Test	12	0.54
	Circulation Problems	35.5	1.60
	TIH/POOH	22.5	1.01
	Lost Signal/Repair of MWD Tools	33	1.49
	Mud Motor Problems	29	1.31
	Clean out trip for FE	91.5	4.12
	Circulate and condition mud associated w/ well control	68.5	3.08
	Logging Equipment	26.5	1.19
	Running Casing	8	0.36
	Unable to set retainer during plug and abandonment	36	1.62
	Trouble with Swaco Equipment	40	1.80
	302 Other Drilling Equipment	20.5	0.92
	Total Group Hours	617.5	27.80
TOTAL HOURS		2221.5	100.0
TOTAL DAYS		92.56	

**Newburn H-23
1067 mm (42") Hole
Time Breakdown**

	TIME BREAKDOWN	Time (hrs)	% of Total Time
LOCATION OPERATIONS	37 Prep, Clean Location	6	6.59
	38 Move, Skid Rig	1	1.10
	Total Group Hours	7	7.69
DRILLING OPERATIONS	01 Circulate and Condition	3	0.00
	02 Drilling, Rotating	10	3.30
	04 Reaming	4.5	10.99
	05 Tripping	4.5	4.95
	07 P/U and L/D Drill Pipe, BHA	3	4.95
	15 Drilling Float Equipment, Cleanout		3.30
	17 Leak Off Test		0.00
	21 Rig Maintenance		0.00
	59 Test/Inspect BHA/DS		0.00
	62 Safety Meetings	0.5	0.00
	Total Group Hours	25.5	0.55
BOP EQUIPMENT	12 N/U and N/D Wellhead		0.00
	13 N/U and N/D BOP's		0.00
	14 Test BOP's		0.00
	53 Riser		0.00
CASING & CEMENTING	Total Group Hours	0	0.00
	08 Run Drilling Casing	20.5	0.00
	09 Cement Drilling Casing	3.5	22.53
	10 Run/Production Casing		3.85
	11 Cement Production Casing		0.00
	16 Test Casing		0.00
	29 Remedial Cementing		0.00
	43 WOC	12	0.00
FORMATION EVALUATION	Total Group Hours	36	13.19
	22 Coring		39.56
	25 Logging		0.00
	26 Sidewall Coring		0.00
ABANDON SUSPEND	Total Group Hours	0	0.00
	19 Plug & Abandon, Suspend		0.00
	63 Set Cement Plug		0.00
UNSCHEDULED EVENTS	Total Group Hours	0	0.00
	18 Fishing		0.00
	20 Rig Repair	7	0.00
	23 Well Control		7.69
	24 Other	2.5	0.00
	37 Prep, Clean Location		2.75
	42 WOW		0.00
	44 WOE		0.00
	45 WOO		0.00
	50 Lost Circulation		0.00
	Lost ROV Visibility		0.00
	Respud	13	0.00
	Tight Hole, Ream hole		14.29
	Check suspect LPWH angle		0.00
	Dropped fill up hose down choke line		0.00
	Failed Casing Test		0.00
	Circulation Problems		0.00
	TIH/POOH		0.00
	Lost Signal/Repair of MWD Tools		0.00
	Mud Motor Problems		0.00
	Clean out Trip for FE		0.00
	Circulate and condition mud associated w/ well control		0.00
	Logging Equipment		0.00
	Running Casing		0.00
	Unable to set retainer during plug and abandonment		0.00
	Trouble with Swaco Equipment		0.00
	302 Other Drilling Equipment		0.00
	Total Group Hours	22.5	24.73

TOTAL HOURS 91 100.0
TOTAL DAYS 3.79

**Newburn H-23
660 mm (26") Hole
Time Breakdown**

	TIME BREAKDOWN	Time (hrs)	% of Total Time
LOCATION OPERATIONS	37 Prep, Clean Location		0.00
	38 Move, Skid Rig		0.00
	Total Group Hours	0	0.00
DRILLING OPERATIONS	01 Circulate and Condition	7.5	3.57
	02 Drilling, Rotating	36	17.14
	04 Reaming	3	1.43
	05 Tripping	21	10.00
	07 P/U and L/D Drill Pipe, BHA	4	1.90
	15 Drilling Float Equipment, Cleanout	4	1.90
	17 Leak Off Test		0.00
	21 Rig Maintenance		0.00
	59 Test/Inspect BHA/DS		0.00
	62 Safety Meetings	2.75	1.31
	Total Group Hours	78.25	37.26
BOP EQUIPMENT	12 N/U and N/D Wellhead		0.00
	13 N/U and N/D BOP's	17	8.10
	14 Test BOP's	15	7.14
	53 Riser	17	8.10
	Total Group Hours	49	23.33
CASING & CEMENTING	08 Run Drilling Casing	25	11.90
	09 Cement Drilling Casing	7.75	3.69
	10 Run/Production Casing		0.00
	11 Cement Production Casing		0.00
	16 Test Casing	2	0.95
	29 Remedial Cementing		0.00
	43 WOC		0.00
	Total Group Hours	34.75	16.55
FORMATION EVALUATION	22 Coring		0.00
	25 Logging		0.00
	26 Sidewall Coring		0.00
	Total Group Hours	0	0.00
ABANDON SUSPEND	19 Plug & Abandon, Suspend		0.00
	63 Set Cement Plug		0.00
	Total Group Hours	0	0.00
UNSCHEDULED EVENTS	18 Fishing		0.00
	20 Rig Repair	5	2.38
	23 Well Control		0.00
	24 Other		0.00
	37 Prep, Clean Location		0.00
	42 WOW		0.00
	44 WOE		0.00
	45 WOO		0.00
	50 Lost Circulation		0.00
	Lost ROV Visibility	7	3.33
	Respud		0.00
	Tight Hole, Ream hole	3	1.43
	Check suspect LPWH angle	7	3.33
	Dropped fill up hose down choke line	14	6.67
	Failed Casing Tests	12	5.71
	Circulation Problems		0.00
	TIH/POOH		0.00
	Lost Signal/Repair of MWD Tools		0.00
	Mud Motor Problems		0.00
	Clean out Trip for FE		0.00
	Circulate and condition mud associated w/ well control		0.00
	Logging Equipment		0.00
	Running Casing		0.00
	Unable to set retainer during plug and abandonment		0.00
	Trouble with Swaco Equipment		0.00
	302 Other Drilling Equipment		0.00
	Total Group Hours	48	22.86

TOTAL HOURS 210
TOTAL DAYS 8.75 100.0

Newburn H-23
432 mm (17") Hole
Time Breakdown

TIME BREAKDOWN		Time (hrs)	% of Total Time
LOCATION OPERATIONS	37 Prep, Clean Location		0.00
	38 Move, Skid Rig		0.00
	Total Group Hours	0	0.00
DRILLING OPERATIONS	01 Circulate and Condition	19.5	5.70
	02 Drilling, Rotating	119	34.80
	04 Reaming		0.00
	05 Tripping	37.5	10.96
	07 P/U and L/D Drill Pipe, BHA	5	1.46
	15 Drilling Float Equipment, Cleanout	3	0.88
	17 Leak Off Test	4	1.17
	21 Rig Maintenance		0.00
	59 Test/Inspect BHA/DS		0.00
	62 Safety Meetings	2	0.58
	Total Group Hours	190	55.56
BOP EQUIPMENT	12 N/U and N/D Wellhead	2.5	0.73
	13 N/U and N/D BOP's		0.00
	14 Test BOP's	17	4.97
	53 Riser		0.00
	Total Group Hours	19.5	5.70
CASING & CEMENTING	08 Run Drilling Casing	32.5	9.50
	09 Cement Drilling Casing	11	3.22
	10 Run/Production Casing		0.00
	11 Cement Production Casing		0.00
	16 Test Casing		0.00
	29 Remedial Cementing		0.00
	43 WOC		0.00
	Total Group Hours	43.5	12.72
FORMATION EVALUATION	22 Coring		0.00
	25 Logging	30	8.77
	26 Sidewall Coring	7.5	2.19
	Total Group Hours	37.5	10.96
ABANDON SUSPEND	19 Plug & Abandon, Suspend		0.00
	63 Set Cement Plug		0.00
	Total Group Hours	0	0.00
UNSCHEDULED EVENTS	18 Fishing		0.00
	20 Rig Repair	6.5	1.90
	23 Well Control	1.5	0.44
	24 Other	4	1.17
	37 Prep, Clean Location		0.00
	42 WOW		0.00
	44 WOE		0.00
	45 WOO		0.00
	50 Lost Circulation		0.00
	Lost ROV Visibility		0.00
	Respod		0.00
	Tight Hole, Ream hole		0.00
	Check suspect LPWH angle		0.00
	Dropped fill up hose down choke line		0.00
	Failed Casing Test		0.00
	Circulation Problems		0.00
	TIH/POOH		0.00
	Lost Signal/Repair of MWD Tools		0.00
	Mud Motor Problems		0.00
	Clean out Trip for FE		0.00
	Circulate and condition mud associated w/ well control		0.00
	Logging Equipment		0.00
	Running Casing		0.00
	Unable to set retainer during plug and abandonment		0.00
	Trouble with Swaco Equipment	39.5	11.55
	302 Other Drilling Equipment		0.00
	Total Group Hours	51.5	15.06

TOTAL HOURS **342** **100.0**
TOTAL DAYS **14.25**

Newburn H-23
311 mm (12 1/4") Hole
Time Breakdown

TIME BREAKDOWN		Time (hrs)	% of Total Time
LOCATION OPERATIONS	37 Prep, Clean Location		0.00
	38 Move, Skid Rig		0.00
	Total Group Hours	0	0.00
DRILLING OPERATIONS	01 Circulate and Condition	33.5	10.18
	02 Drilling, Rotating	56.5	17.17
	04 Reaming	11.5	3.50
	05 Tripping	52	15.81
	07 P/U and L/D Drill Pipe, BHA	8.5	2.58
	15 Drilling Float Equipment, Cleanout	6.5	1.98
	17 Leak Off Test	3	0.91
	21 Rig Maintenance	3	0.91
	59 Test/Inspect BHA/DS		0.00
	62 Safety Meetings	0.5	0.15
	Total Group Hours	175	53.19
BOP EQUIPMENT	12 N/U and N/D Wellhead	6	1.82
	13 N/U and N/D BOP's		0.00
	14 Test BOP's	12.5	3.80
	53 Riser		0.00
	Total Group Hours	18.5	5.62
CASING & CEMENTING	08 Run Drilling Casing	37	11.25
	09 Cement Drilling Casing	9.5	2.89
	10 Run/Production Casing		0.00
	11 Cement Production Casing		0.00
	16 Test Casing	2.5	0.76
	29 Remedial Cementing		0.00
	43 WOC		0.00
	Total Group Hours	49	14.89
FORMATION EVALUATION	22 Coring		0.00
	25 Logging	41.5	12.61
	26 Sidewall Coring		0.00
	Total Group Hours	41.5	12.61
ABANDON SUSPEND	19 Plug & Abandon, Suspend		0.00
	63 Set Cement Plug		0.00
	Total Group Hours	0	0.00
UNSCHEDULED EVENTS	18 Fishing		0.00
	20 Rig Repair	3	0.91
	23 Well Control		0.00
	24 Other		0.00
	37 Prep, Clean Location		0.00
	42 WOW		0.00
	44 WOE		0.00
	45 WOO		0.00
	50 Lost Circulation		0.00
	Lost ROV Visibility		0.00
	Respod		0.00
	Tight Hole, Ream hole	6	1.82
	Check suspect LPWH angle		0.00
	Dropped fill up hose down choke line		0.00
	Failed Casing Test		0.00
	Circulation Problems	22	6.69
	TIH/POOH	1	0.30
	Lost Signal/Repair of MWD Tools	4.5	1.37
	Mud Motor Problems		0.00
	Clean out Trip for FE		0.00
	Circulate and condition mud associated w/ well control		0.00
	Logging Equipment		0.00
	Running Casing		0.00
	Unable to set retainer during plug and abandonment		0.00
	Trouble with Swaco Equipment	0.5	0.15
	302 Other Drilling Equipment	8	2.43
	Total Group Hours	45	13.68

TOTAL HOURS **329** **100.0**
TOTAL DAYS **13.71**

Newburn H-23
216 mm (8 1/2") Hole
Time Breakdown

	TIME BREAKDOWN	Time (hrs)	% of Total Time
LOCATION OPERATIONS	37 Prep, Clean Location		0.00
	38 Move, Skid Rig		0.00
	Total Group Hours	0	0.00
DRILLING OPERATIONS	01 Circulate and Condition	10	1.53
	02 Drilling, Rotating	82.5	12.60
	04 Reaming		0.00
	05 Tripping	37.5	5.73
	07 P/U and L/D Drill Pipe, BHA	19	2.90
	15 Drilling Float Equipment, Cleanout	25	3.82
	17 Leak Off Test	4	0.61
	21 Rig Maintenance	4	0.61
	59 Test/Inspect BHA/DS		0.00
	62 Safety Meetings	2	0.31
	Total Group Hours	184	28.09
BOP EQUIPMENT	12 N/U and N/D Wellhead		0.00
	13 N/U and N/D BOP's		0.00
	14 Test BOP's	17	2.60
	53 Riser	1.5	0.23
	Total Group Hours	18.5	2.82
CASING & CEMENTING	08 Run Drilling Casing	37	5.65
	09 Cement Drilling Casing	1	0.15
	10 Run/Production Casing	1	0.15
	11 Cement Production Casing	5.5	0.84
	16 Test Casing	1	0.15
	29 Remedial Cementing		0.00
	43 WOC		0.00
	Total Group Hours	45.5	6.95
FORMATION EVALUATION	22 Coring		0.00
	25 Logging	41	6.26
	26 Sidewall Coring	16.5	2.52
	Total Group Hours	57.5	8.78
ABANDON SUSPEND	19 Plug & Abandon, Suspend		0.00
	63 Set Cement Plug		0.00
	Total Group Hours	0	0.00
UNSCHEDULED EVENTS	18 Fishing		0.00
	20 Rig Repair	14	2.14
	23 Well Control	83	12.67
	24 Other		0.00
	37 Prep, Clean Location		0.00
	42 WOW	2	0.31
	44 WOE		0.00
	45 WOO		0.00
	50 Lost Circulation		0.00
	Lost ROV Visibility		0.00
	Respud		0.00
	Tight Hole, Ream hole		0.00
	Check suspect LPWH angle		0.00
	Dropped fill up hose down choke line		0.00
	Failed Casing Test		0.00
	Circulation Problems	13.5	2.06
	Trip to check bit (trouble drilling cement)	21.5	3.28
	Lost Signal/Repair of MWD Tools	25	3.82
	Mud Motor Problems		0.00
	Clean out trip for FE	91.5	13.97
	Circulate and condition mud associated w/ well control	68.5	10.46
	Logging Equipment	10	1.53
	Running Casing	8	1.22
	Unable to set retainer during plug and abandonment		0.00
	Trouble with Swaco Equipment		0.00
	302 Other Drilling Equipment	12.5	1.91
	Total Group Hours	349.5	53.36

TOTAL HOURS 655 100.0
TOTAL DAYS 27.29

Newburn H-23
165 mm (6 1/2") Hole
Time Breakdown

TIME BREAKDOWN		Time (hrs)	% of Total Time
LOCATION OPERATIONS	37 Prep, Clean Location		0.00
	38 Move, Skid Rig		0.00
	Total Group Hours	0	0.00
DRILLING OPERATIONS	01 Circulate and Condition	18	4.60
	02 Drilling, Rotating	120.5	30.82
	04 Reaming	3.5	0.90
	05 Tripping	72	18.41
	07 P/U and L/D Drill Pipe, BHA	21	5.37
	15 Drilling Float Equipment, Cleanout	17.5	4.48
	17 Leak Off Test	2	0.51
	21 Rig Maintenance	6.5	1.66
	59 Test/Inspect BHA/DS		0.00
	62 Safety Meetings		0.00
	Total Group Hours	261	66.75
BOP EQUIPMENT	12 N/U and N/D Wellhead		0.00
	13 N/U and N/D BOP's		0.00
	14 Test BOP's	1	0.26
	53 Riser		0.00
	Total Group Hours	1	0.26
CASING & CEMENTING	08 Run Drilling Casing		0.00
	09 Cement Drilling Casing		0.00
	10 Run/Production Casing		0.00
	11 Cement Production Casing		0.00
	16 Test Casing		0.00
	29 Remedial Cementing		0.00
	43 WOC		0.00
	Total Group Hours	0	0.00
FORMATION EVALUATION	22 Coring		0.00
	25 Logging	18.5	4.73
	26 Sidewall Coring	9.5	2.43
	Total Group Hours	28	7.16
ABANDON SUSPEND	19 Plug & Abandon, Suspend		0.00
	63 Set Cement Plug		0.00
	Total Group Hours	0	0.00
UNSCHEDULED EVENTS	18 Fishing		0.00
	20 Rig Repair	10.5	2.69
	23 Well Control		0.00
	24 Other		0.00
	37 Prep, Clean Location		0.00
	42 WOW		0.00
	44 WOE		0.00
	45 WOO		0.00
	50 Lost Circulation	5.5	1.41
	Lost ROV Visibility		0.00
	Respod		0.00
	Tight Hole, Ream hole		0.00
	Check suspect LPWH angle		0.00
	Dropped fill up hose down choke line		0.00
	Failed Casing Test		0.00
	Circulation Problems		0.00
	Trip to check bit (trouble drilling cement)		0.00
	Lost Signal/Repair of MWD Tools	3.5	0.90
	Mud Motor Problems	29	7.42
	Clean out trip for FE		0.00
	Circulate and condition mud associated w/ well control		0.00
	Logging Equipment	16.5	4.22
	Running Casing		0.00
	Unable to set retainer during plug and abandonment	36	9.21
	Trouble with Swaco Equipment		0.00
	302 Other Drilling Equipment		0.00
	Total Group Hours	101	25.83

TOTAL HOURS **391** **100.0**
TOTAL DAYS **16.29**

**Newburn H-23
Abandonment/Suspension
Time Breakdown**

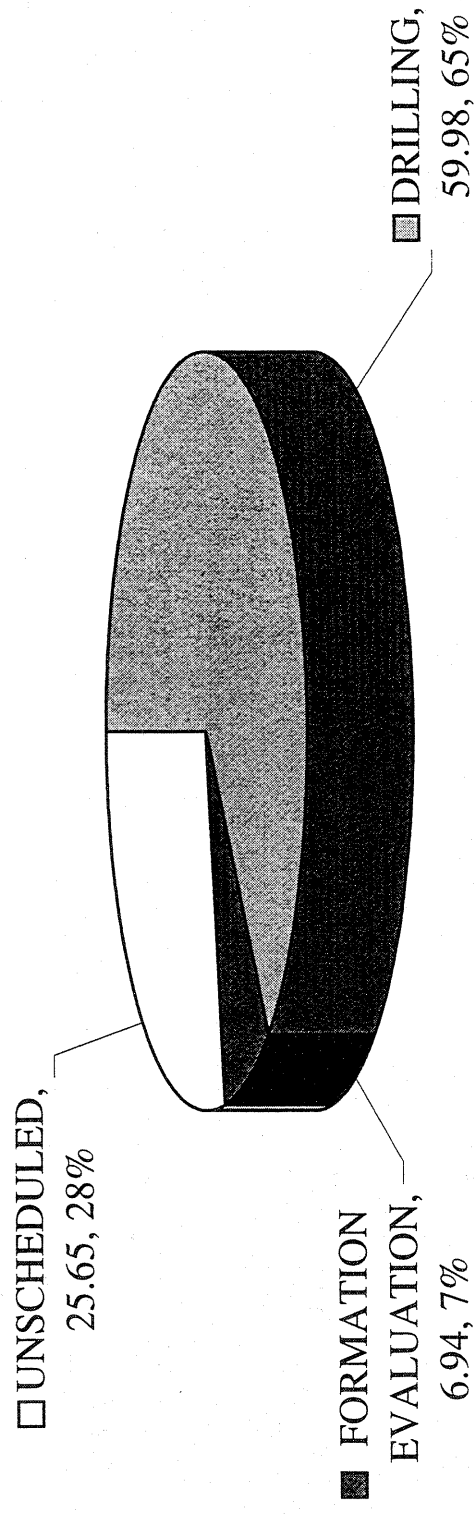
	TIME BREAKDOWN	Time (hrs)	% of Total Time
ABANDON SUSPEND	19 Plug & Abandon, Suspend	203.5	100.00
	63 Set Cement Plug		
	Total Group Hours	203.5	100.00

**TOTAL HOURS
TOTAL DAYS**

**203.50
8.48**

CHEVRON et al NEWBURN H-23

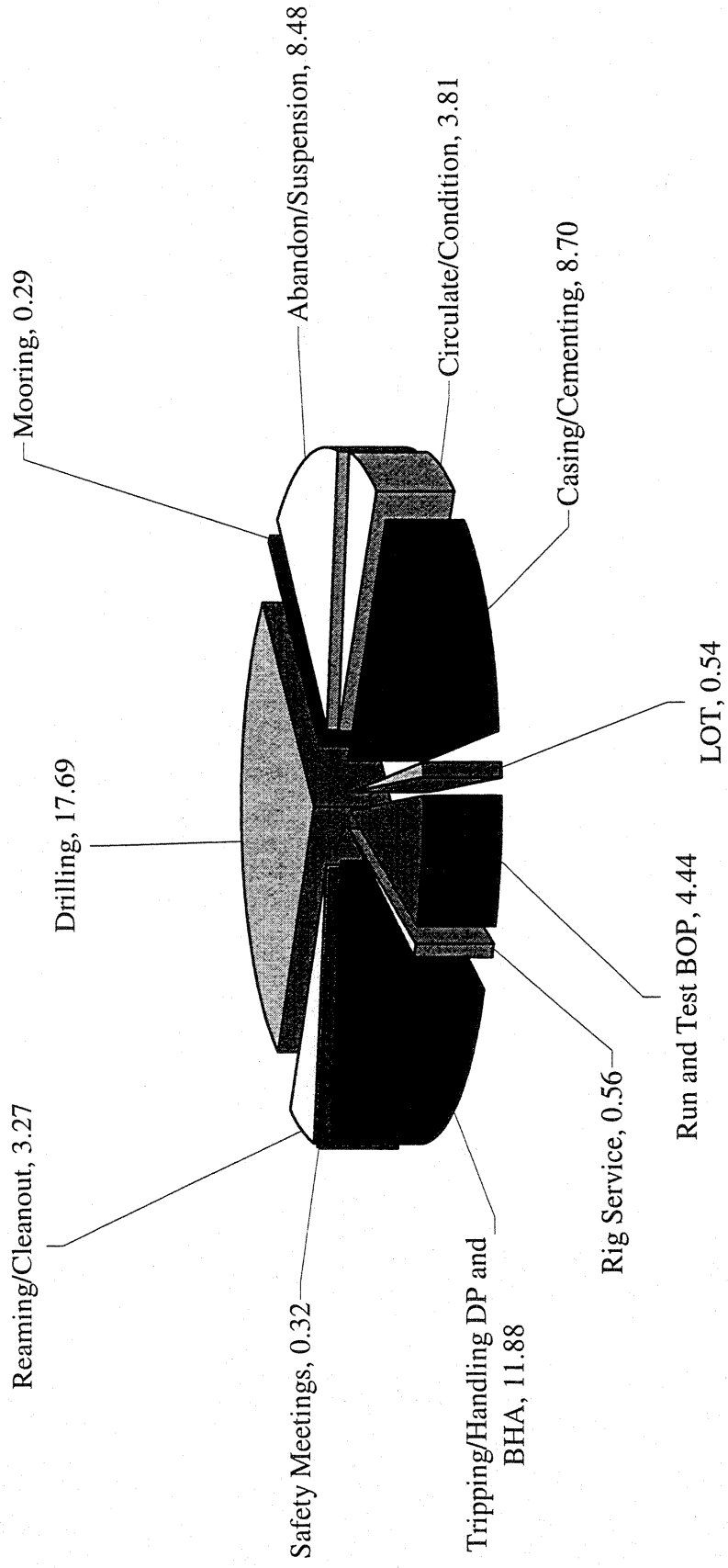
TOTAL TIME BREAKDOWN (DAYS)



CHEVRON et al NEWBURN H-23

DRILLING OPERATIONS TIME BREAKDOWN

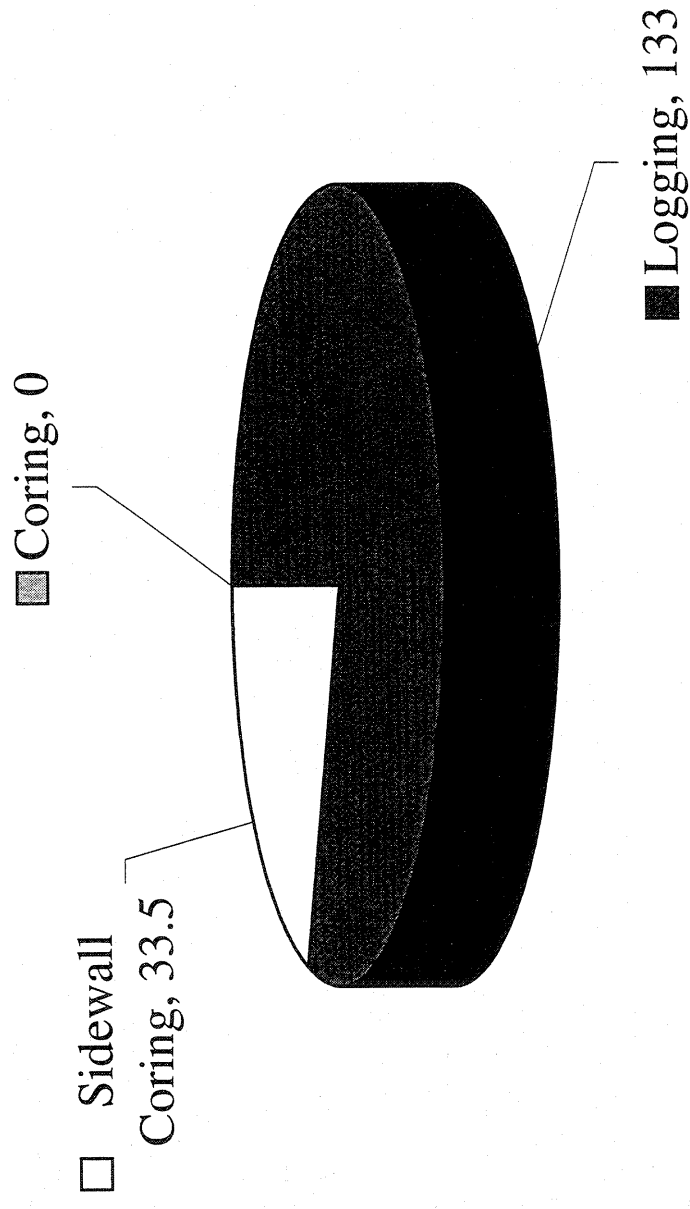
(DAYS)



CHEVRON et al NEWBURN H-23

FORMATION EVALUATION BREAKDOWN

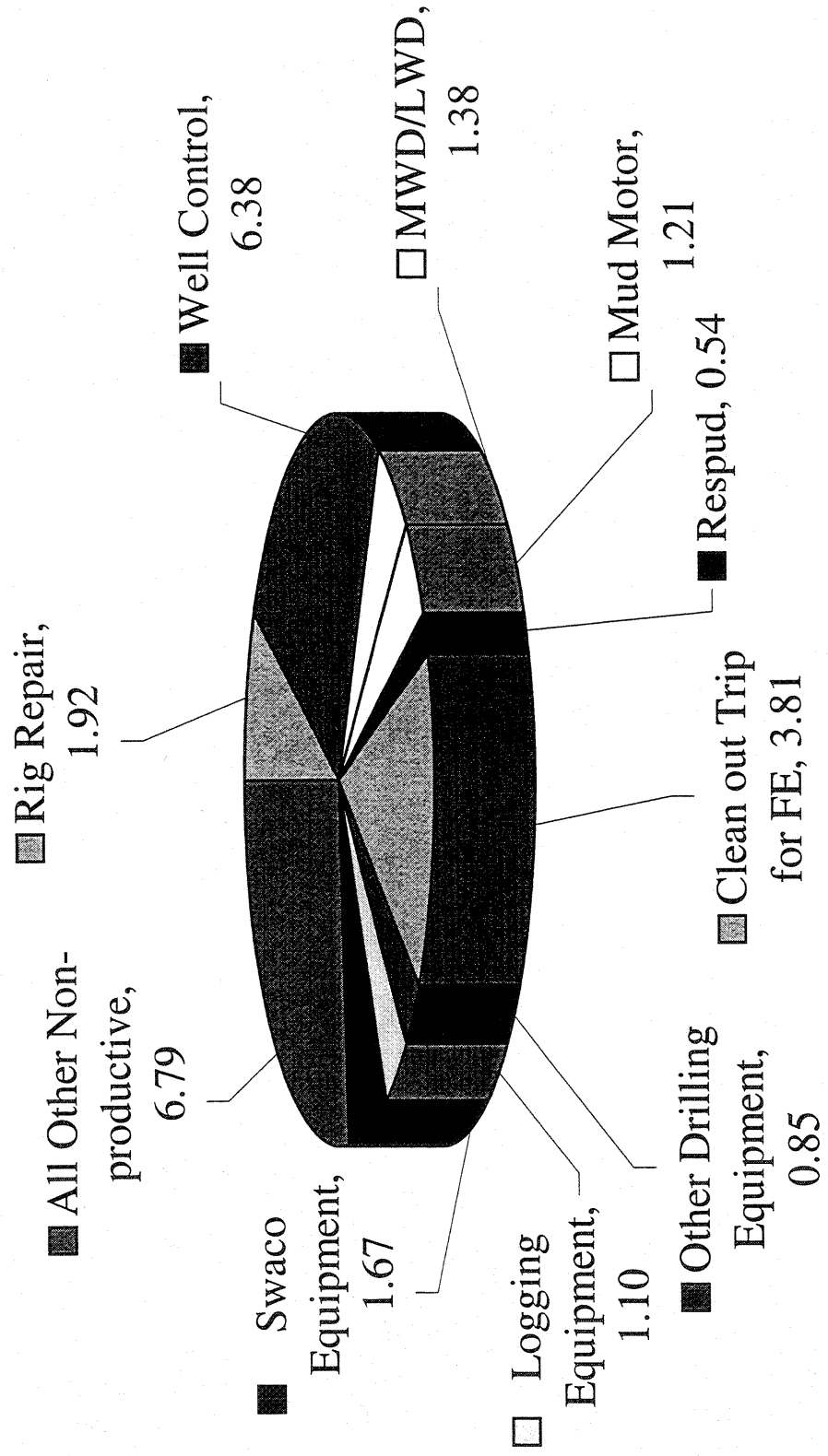
(HOURS)



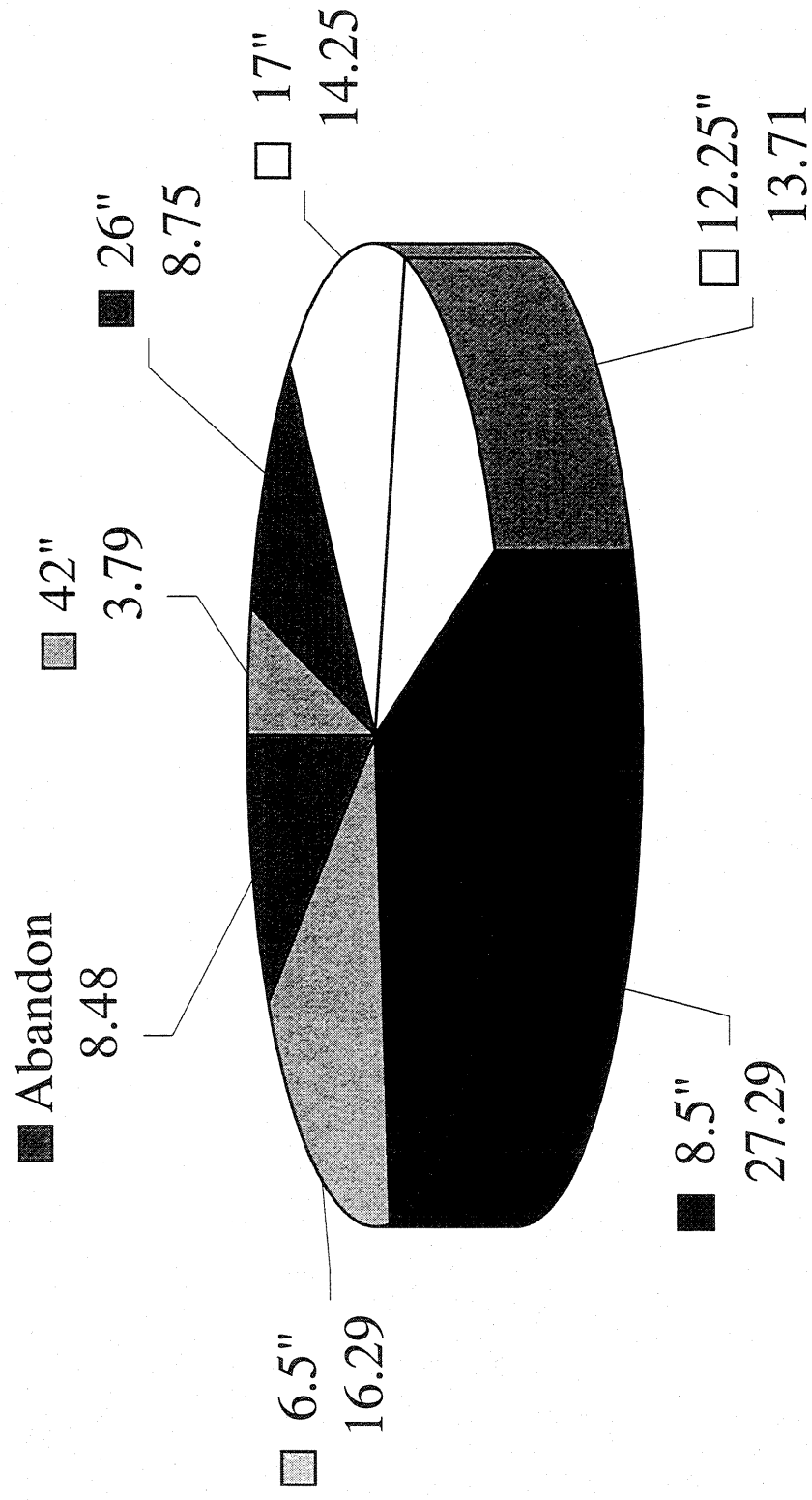
CHEVRON et al NEWBURN H-23

UNSCHEDULED EVENTS TIME BREAKDOWN

(DAYS)



CHEVRON et al NEWBURN H-23 TIME BREAKDOWN BY HOLE SECTION (DAYS)

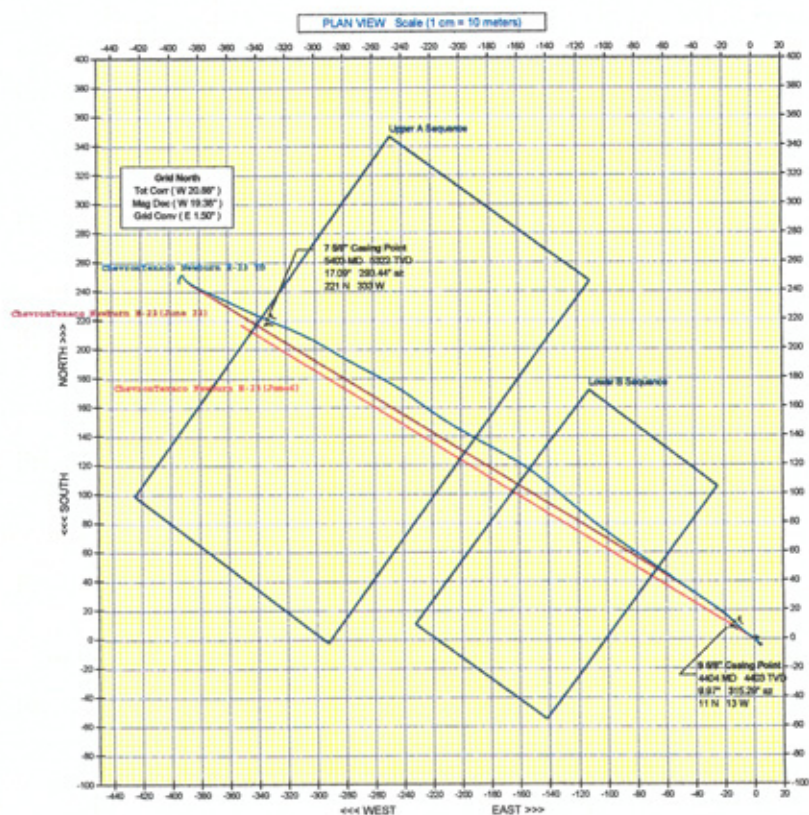
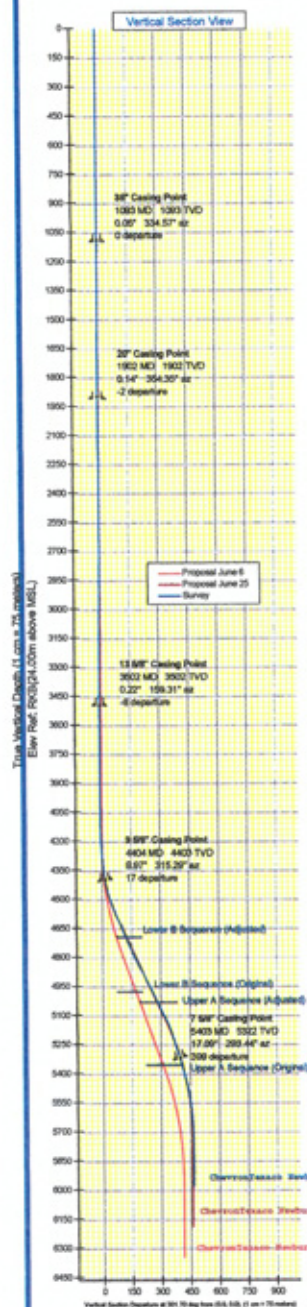


Appendix J

Directional and Deviation Surveys

Appendix J
Directional and Deviation Surveys

WELL			FIELD			STRUCTURE		
Chevron Deepwater Well			Chevron Deepwater NS			ChevronTexaco Newburn H-23		
Magellan Parameters Model: 8204-2002	Dir: 45.73° Mag Dec: 10.30°	Date: August 25, 2002 PIS	Surface Location Lat: 44° 12' 18" N Lon: 100° 01' 10" W	MOET VHS Zone 300 Surfing: 1000000000 Surfing: 1000000000	Grid Coord: 11.8333333° Scale: 1:1000000	Structure Type: 600 Page: 8	TVD Ref: 400 (2000m above MSL) Date Drawn: 28.08.2002 27 Aug 2002	



Quality Control
Drawn by:
Checked by:
Date Drawn: 27-Aug-2002

Survey Report - Geodetic

Report Date: 26-Aug-2002 Client: ChevronTexaco Field: ChevronTexaco Deepwater NS Structure / Slot: ChevronTexaco Newburne H-23 / Drill site Well: Chevron Deepwater Well Borehole: Chevron Deepwater well UW/API#: Survey Name / Date: Chevron Texaco Newburn H-23 New / August 2, 2002 Tort / AHD / DDI / ERD ratio: Grid Coordinate System: NAD83 UTM Zone 20N Location Lat/Long: N 43 12 16.726, W 60 48 18.442 Location Grid N/E Y/X: N 4785879.544 m, E 678308.756 m Grid Convergence Angle: +1.50302138° Grid Scale Factor: 0.99999113		Survey / DLS Computation Method: Minimum Curvature / Lubinski Vertical Section Azimuth: 301.700° Vertical Section Origin: N 0.000 m, E 0.000 m TVD Reference Datum: Rotary Table TVD Reference Elevation: 24,000 m relative to MSL Sea Bed / Ground Level Elevation: -977.000 m relative to MSL Magnetic Declination: -19.434° Total Field Strength: 51860.279 nT Magnetic Dip: 66.740° Declination Date: June 26, 2002 Magnetic Declination Model: BGGM 2001 North Reference: Grid North Total Corr Mag North -> Grid North: -20.937° Local Coordinates Referenced To: Well Head	
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Station ID	MD (m)	Incl (°)	Azim (°)	TVD (m)	VSec (m)	N-S (m)	E-W (m)	DLS (°/30m)	Grid Coordinates		Geographic Coordinates	
									Northing (m)	Easting (m)	Latitude	Longitude
Tie-In	0.00	0.00	231.40	0.00	0.00	0.00	0.00	0.00	4785879.54	678308.76	N 43 12 16.726	W 60 48 18.442
	900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	4785879.54	678308.76	N 43 12 16.726	W 60 48 18.442
	986.76	0.08	234.06	986.76	0.02	-0.04	-0.05	0.03	4785879.51	678308.71	N 43 12 16.725	W 60 48 18.444
	999.25	0.34	147.72	999.25	-0.01	-0.07	-0.04	0.83	4785879.47	678308.72	N 43 12 16.724	W 60 48 18.444
	1002.91	0.18	26.25	1002.91	-0.02	-0.08	-0.03	3.77	4785879.47	678308.73	N 43 12 16.724	W 60 48 18.443
	1005.89	0.31	312.03	1005.89	-0.01	-0.07	-0.03	3.15	4785879.48	678308.72	N 43 12 16.724	W 60 48 18.443
	1009.04	0.52	284.03	1009.04	0.01	-0.06	-0.05	2.72	4785879.49	678308.70	N 43 12 16.724	W 60 48 18.444
	1011.88	0.25	5.32	1011.88	0.03	-0.05	-0.06	5.72	4785879.50	678308.69	N 43 12 16.725	W 60 48 18.445
	1014.92	0.39	240.43	1014.92	0.04	-0.05	-0.07	5.64	4785879.50	678308.68	N 43 12 16.725	W 60 48 18.445
	1020.85	0.30	319.29	1020.85	0.06	-0.04	-0.10	2.24	4785879.50	678308.66	N 43 12 16.725	W 60 48 18.446
	1026.51	0.14	239.22	1026.51	0.08	-0.04	-0.12	1.63	4785879.51	678308.64	N 43 12 16.725	W 60 48 18.447
	1031.80	0.27	257.33	1031.80	0.09	-0.04	-0.13	0.81	4785879.50	678308.62	N 43 12 16.725	W 60 48 18.448
	1038.27	0.40	287.80	1038.27	0.12	-0.04	-0.17	1.00	4785879.50	678308.59	N 43 12 16.725	W 60 48 18.450
	1042.83	0.30	305.01	1042.83	0.15	-0.03	-0.19	0.95	4785879.52	678308.56	N 43 12 16.725	W 60 48 18.451
	1050.60	0.10	199.16	1050.60	0.17	-0.02	-0.21	1.32	4785879.52	678308.54	N 43 12 16.725	W 60 48 18.451
	1056.25	0.15	291.07	1056.25	0.18	-0.02	-0.22	0.97	4785879.52	678308.53	N 43 12 16.725	W 60 48 18.452
	1060.28	0.24	319.81	1060.28	0.19	-0.02	-0.23	0.97	4785879.53	678308.52	N 43 12 16.726	W 60 48 18.452
	1067.02	0.22	327.58	1067.02	0.21	0.01	-0.25	0.16	4785879.55	678308.51	N 43 12 16.726	W 60 48 18.453

1074.32	0.18	344.74	1074.32	0.24	0.03	-0.26	0.29	4785879.57	678308.50	N 43 12 16.727	W 60 48 18.453
1081.43	0.23	355.25	1081.43	0.25	0.05	-0.26	0.26	4785879.60	678308.49	N 43 12 16.728	W 60 48 18.454
1088.98	0.04	329.90	1088.98	0.26	0.07	-0.27	0.77	4785879.61	678308.49	N 43 12 16.729	W 60 48 18.454
1120.37	0.13	344.36	1120.37	0.30	0.11	-0.28	0.09	4785879.66	678308.48	N 43 12 16.730	W 60 48 18.454
1151.08	0.22	143.61	1151.08	0.27	0.10	-0.26	0.34	4785879.64	678308.50	N 43 12 16.729	W 60 48 18.453
1180.08	0.06	357.61	1180.08	0.23	0.07	-0.22	0.28	4785879.62	678308.53	N 43 12 16.729	W 60 48 18.452
1208.31	0.17	46.80	1208.31	0.22	0.11	-0.19	0.15	4785879.66	678308.56	N 43 12 16.730	W 60 48 18.450
1235.02	0.14	59.05	1235.02	0.20	0.16	-0.14	0.05	4785879.70	678308.62	N 43 12 16.731	W 60 48 18.448
1264.11	0.26	75.10	1264.11	0.14	0.19	-0.04	0.14	4785879.74	678308.71	N 43 12 16.732	W 60 48 18.444
1292.99	0.00	340.55	1292.99	0.09	0.21	0.02	0.27	4785879.75	678308.78	N 43 12 16.733	W 60 48 18.441
1321.83	0.12	32.03	1321.83	0.09	0.24	0.04	0.12	4785879.78	678308.79	N 43 12 16.734	W 60 48 18.440
1349.38	0.26	65.71	1349.38	0.06	0.29	0.11	0.19	4785879.83	678308.87	N 43 12 16.735	W 60 48 18.437
1373.75	0.19	128.27	1373.75	-0.01	0.28	0.19	0.30	4785879.83	678308.95	N 43 12 16.735	W 60 48 18.433
1407.85	0.15	169.17	1407.85	-0.10	0.21	0.24	0.11	4785879.75	678309.00	N 43 12 16.732	W 60 48 18.431
1438.06	0.20	69.92	1438.06	-0.16	0.18	0.30	0.27	4785879.73	678309.06	N 43 12 16.732	W 60 48 18.428
1451.63	0.23	43.74	1451.63	-0.18	0.21	0.34	0.22	4785879.76	678309.10	N 43 12 16.733	W 60 48 18.427
1492.73	0.28	54.32	1492.73	-0.24	0.33	0.48	0.05	4785879.87	678309.24	N 43 12 16.736	W 60 48 18.420
1521.72	0.33	57.88	1521.72	-0.30	0.42	0.61	0.06	4785879.96	678309.37	N 43 12 16.739	W 60 48 18.415
1551.38	0.11	61.19	1551.38	-0.35	0.48	0.71	0.22	4785880.02	678309.46	N 43 12 16.741	W 60 48 18.410
1578.10	0.36	106.66	1578.10	-0.45	0.46	0.81	0.33	4785880.01	678309.57	N 43 12 16.740	W 60 48 18.406
1605.49	0.12	87.66	1605.49	-0.55	0.44	0.92	0.27	4785879.98	678309.68	N 43 12 16.739	W 60 48 18.401
1633.32	0.06	119.20	1633.32	-0.59	0.43	0.96	0.08	4785879.98	678309.72	N 43 12 16.739	W 60 48 18.399
1665.53	0.29	85.38	1665.53	-0.67	0.43	1.06	0.23	4785879.98	678309.81	N 43 12 16.739	W 60 48 18.395
1689.18	0.29	90.68	1689.18	-0.77	0.44	1.18	0.03	4785879.98	678309.93	N 43 12 16.739	W 60 48 18.389
1721.21	0.37	145.41	1721.21	-0.94	0.35	1.32	0.29	4785879.89	678310.07	N 43 12 16.736	W 60 48 18.383
1749.89	0.17	124.99	1749.89	-1.06	0.25	1.41	0.23	4785879.79	678310.16	N 43 12 16.733	W 60 48 18.379
1773.09	0.44	121.19	1773.08	-1.19	0.18	1.51	0.35	4785879.73	678310.27	N 43 12 16.731	W 60 48 18.375
1794.94	0.39	104.67	1794.93	-1.34	0.12	1.65	0.18	4785879.67	678310.41	N 43 12 16.729	W 60 48 18.369
1835.12	0.29	125.33	1835.11	-1.58	0.03	1.87	0.12	4785879.57	678310.62	N 43 12 16.725	W 60 48 18.359
1859.79	0.45	120.04	1859.78	-1.73	-0.06	2.00	0.20	4785879.49	678310.76	N 43 12 16.722	W 60 48 18.353
1889.77	0.29	104.33	1889.76	-1.92	-0.13	2.18	0.19	4785879.41	678310.93	N 43 12 16.720	W 60 48 18.346
1909.28	0.33	324.94	1909.27	-1.92	-0.10	2.19	0.89	4785879.44	678310.95	N 43 12 16.721	W 60 48 18.345
1937.99	0.28	315.42	1937.98	-1.78	0.02	2.10	0.07	4785879.56	678310.85	N 43 12 16.725	W 60 48 18.349
1966.53	0.41	331.06	1966.52	-1.62	0.16	2.00	0.17	4785879.70	678310.76	N 43 12 16.729	W 60 48 18.353
1994.85	0.41	331.23	1994.84	-1.44	0.33	1.90	0.00	4785879.88	678310.66	N 43 12 16.735	W 60 48 18.357
2024.14	0.29	316.93	2024.13	-1.28	0.48	1.80	0.15	4785880.02	678310.56	N 43 12 16.740	W 60 48 18.362
2052.41	0.26	319.90	2052.40	-1.15	0.58	1.71	0.04	4785880.13	678310.47	N 43 12 16.743	W 60 48 18.366

2080.95	0.31	325.05	2080.94	-1.02	0.69	1.62	0.06	4785880.24	678310.38	N 43 12 16.747	W 60 48 18.369
2109.13	0.29	326.90	2109.12	-0.88	0.82	1.54	0.02	4785880.36	678310.30	N 43 12 16.751	W 60 48 18.373
2137.08	0.25	329.89	2137.07	-0.77	0.93	1.47	0.05	4785880.47	678310.23	N 43 12 16.755	W 60 48 18.376
2166.35	0.33	328.35	2166.34	-0.63	1.06	1.40	0.08	4785880.60	678310.15	N 43 12 16.759	W 60 48 18.379
2195.21	0.29	345.16	2195.20	-0.51	1.20	1.33	0.10	4785880.74	678310.09	N 43 12 16.764	W 60 48 18.382
2223.50	0.27	322.13	2223.49	-0.39	1.32	1.27	0.12	4785880.86	678310.03	N 43 12 16.768	W 60 48 18.384
2251.31	0.17	321.71	2251.30	-0.29	1.40	1.21	0.11	4785880.95	678309.96	N 43 12 16.770	W 60 48 18.387
2281.47	0.18	303.88	2281.46	-0.20	1.46	1.14	0.05	4785881.01	678309.90	N 43 12 16.772	W 60 48 18.390
2309.08	0.20	14.38	2309.07	-0.14	1.53	1.12	0.24	4785881.08	678309.87	N 43 12 16.775	W 60 48 18.391
2337.13	0.19	14.85	2337.12	-0.12	1.63	1.14	0.01	4785881.17	678309.90	N 43 12 16.778	W 60 48 18.390
2365.94	0.14	36.73	2365.93	-0.11	1.70	1.18	0.08	4785881.25	678309.93	N 43 12 16.780	W 60 48 18.388
2394.79	0.12	52.53	2394.78	-0.12	1.75	1.22	0.04	4785881.29	678309.98	N 43 12 16.782	W 60 48 18.386
2423.60	0.08	64.94	2423.59	-0.14	1.78	1.26	0.05	4785881.32	678310.02	N 43 12 16.782	W 60 48 18.384
2480.49	0.10	147.37	2480.48	-0.21	1.75	1.33	0.06	4785881.29	678310.08	N 43 12 16.782	W 60 48 18.381
2509.46	0.15	214.22	2509.45	-0.23	1.70	1.32	0.15	4785881.24	678310.07	N 43 12 16.780	W 60 48 18.382
2538.40	0.17	218.75	2538.39	-0.22	1.63	1.27	0.02	4785881.18	678310.03	N 43 12 16.778	W 60 48 18.384
2566.94	0.29	223.33	2566.93	-0.20	1.55	1.19	0.13	4785881.09	678309.95	N 43 12 16.775	W 60 48 18.387
2595.40	0.21	218.80	2595.39	-0.18	1.45	1.11	0.09	4785881.00	678309.87	N 43 12 16.772	W 60 48 18.391
2624.28	0.14	222.52	2624.27	-0.17	1.39	1.05	0.07	4785880.93	678309.81	N 43 12 16.770	W 60 48 18.394
2652.34	0.17	213.43	2652.33	-0.16	1.33	1.01	0.04	4785880.87	678309.76	N 43 12 16.768	W 60 48 18.396
2680.91	0.22	208.13	2680.90	-0.16	1.24	0.96	0.06	4785880.79	678309.71	N 43 12 16.765	W 60 48 18.398
2709.18	0.27	201.08	2709.17	-0.18	1.13	0.91	0.06	4785880.68	678309.67	N 43 12 16.762	W 60 48 18.400
2737.78	0.35	173.08	2737.76	-0.25	0.98	0.90	0.18	4785880.53	678309.65	N 43 12 16.757	W 60 48 18.401
2767.15	0.46	163.95	2767.13	-0.39	0.78	0.94	0.13	4785880.33	678309.70	N 43 12 16.751	W 60 48 18.400
2794.95	0.55	160.44	2794.93	-0.58	0.55	1.01	0.10	4785880.09	678309.77	N 43 12 16.743	W 60 48 18.396
2823.00	0.64	163.17	2822.98	-0.80	0.27	1.10	0.10	4785879.82	678309.86	N 43 12 16.734	W 60 48 18.393
2852.06	0.73	157.73	2852.04	-1.07	-0.06	1.22	0.11	4785879.49	678309.98	N 43 12 16.723	W 60 48 18.388
2880.42	0.59	153.56	2880.40	-1.34	-0.35	1.36	0.16	4785879.19	678310.11	N 43 12 16.713	W 60 48 18.382
2909.71	0.61	141.63	2909.69	-1.61	-0.61	1.52	0.13	4785878.93	678310.28	N 43 12 16.705	W 60 48 18.375
2938.07	0.77	146.97	2938.04	-1.93	-0.89	1.72	0.18	4785878.66	678310.47	N 43 12 16.696	W 60 48 18.367
2965.79	0.93	150.10	2965.76	-2.29	-1.24	1.93	0.18	4785878.30	678310.69	N 43 12 16.684	W 60 48 18.358
2994.76	0.93	149.36	2994.73	-2.71	-1.65	2.17	0.01	4785877.90	678310.92	N 43 12 16.671	W 60 48 18.348
3022.78	0.90	144.26	3022.74	-3.11	-2.02	2.41	0.09	4785877.52	678311.17	N 43 12 16.659	W 60 48 18.338
3052.39	0.86	152.77	3052.35	-3.52	-2.41	2.65	0.14	4785877.14	678311.41	N 43 12 16.646	W 60 48 18.327
3080.93	0.77	145.51	3080.89	-3.88	-2.75	2.86	0.14	4785876.79	678311.61	N 43 12 16.634	W 60 48 18.319
3109.56	0.62	140.18	3109.51	-4.20	-3.03	3.06	0.17	4785876.51	678311.82	N 43 12 16.625	W 60 48 18.310
3137.48	0.60	131.45	3137.43	-4.49	-3.25	3.27	0.10	4785876.30	678312.03	N 43 12 16.618	W 60 48 18.301
3166.19	0.49	122.32	3166.14	-4.76	-3.41	3.49	0.15	4785876.13	678312.24	N 43 12 16.613	W 60 48 18.292

3194.90	0.44	121.05	3194.85	-4.99	-3.53	3.69	0.05	4785876.01	678312.44	N 43 12 16.608	W 60 48 18.283
3224.31	0.35	115.96	3224.26	-5.19	-3.63	3.86	0.10	4785875.91	678312.62	N 43 12 16.605	W 60 48 18.275
3251.99	0.33	133.72	3251.94	-5.36	-3.72	4.00	0.12	4785875.82	678312.75	N 43 12 16.602	W 60 48 18.269
3280.64	0.29	144.16	3280.59	-5.50	-3.84	4.10	0.07	4785875.71	678312.85	N 43 12 16.598	W 60 48 18.265
3309.27	0.20	120.61	3309.22	-5.62	-3.92	4.18	0.14	4785875.62	678312.94	N 43 12 16.595	W 60 48 18.261
3338.09	0.33	130.63	3338.04	-5.75	-4.00	4.29	0.14	4785875.54	678313.05	N 43 12 16.593	W 60 48 18.257
3366.69	0.19	127.66	3366.64	-5.88	-4.08	4.39	0.15	4785875.46	678313.15	N 43 12 16.590	W 60 48 18.252
3395.72	0.20	191.53	3395.67	-5.95	-4.16	4.42	0.21	4785875.38	678313.17	N 43 12 16.587	W 60 48 18.251
3424.07	0.33	177.17	3424.02	-6.01	-4.29	4.41	0.15	4785875.25	678313.17	N 43 12 16.583	W 60 48 18.252
3452.59	0.24	180.03	3452.54	-6.09	-4.44	4.42	0.10	4785875.11	678313.17	N 43 12 16.579	W 60 48 18.252
3488.02	0.29	159.36	3487.97	-6.20	-4.59	4.45	0.09	4785874.95	678313.20	N 43 12 16.573	W 60 48 18.250
3512.59	0.14	159.11	3512.54	-6.27	-4.68	4.48	0.18	4785874.86	678313.24	N 43 12 16.571	W 60 48 18.249
3541.51	0.04	266.39	3541.46	-6.29	-4.71	4.48	0.16	4785874.83	678313.24	N 43 12 16.570	W 60 48 18.249
3569.90	0.09	83.05	3569.85	-6.30	-4.71	4.50	0.14	4785874.83	678313.25	N 43 12 16.570	W 60 48 18.248
3598.55	0.03	110.24	3598.50	-6.33	-4.71	4.52	0.07	4785874.83	678313.28	N 43 12 16.570	W 60 48 18.247
3627.00	0.00	340.55	3626.95	-6.33	-4.71	4.53	0.03	4785874.83	678313.29	N 43 12 16.569	W 60 48 18.247
3655.96	0.03	3.83	3655.91	-6.33	-4.71	4.53	0.03	4785874.84	678313.29	N 43 12 16.570	W 60 48 18.247
3684.34	0.06	227.65	3684.29	-6.32	-4.71	4.52	0.09	4785874.83	678313.28	N 43 12 16.570	W 60 48 18.247
3712.82	0.09	187.45	3712.77	-6.33	-4.74	4.51	0.06	4785874.80	678313.26	N 43 12 16.569	W 60 48 18.248
3741.71	0.08	234.38	3741.66	-6.33	-4.78	4.49	0.07	4785874.77	678313.24	N 43 12 16.568	W 60 48 18.249
3770.30	0.06	140.98	3770.25	-6.33	-4.80	4.48	0.11	4785874.75	678313.24	N 43 12 16.567	W 60 48 18.249
3798.88	0.09	215.11	3798.83	-6.35	-4.83	4.48	0.10	4785874.72	678313.23	N 43 12 16.566	W 60 48 18.249
3827.87	0.06	179.92	3827.82	-6.35	-4.86	4.47	0.06	4785874.68	678313.22	N 43 12 16.565	W 60 48 18.250
3856.80	0.06	285.51	3856.75	-6.35	-4.87	4.45	0.10	4785874.67	678313.21	N 43 12 16.564	W 60 48 18.251
3884.93	0.09	4.34	3884.88	-6.32	-4.85	4.44	0.10	4785874.70	678313.19	N 43 12 16.565	W 60 48 18.251
3913.73	0.04	279.65	3913.68	-6.30	-4.82	4.43	0.10	4785874.72	678313.19	N 43 12 16.566	W 60 48 18.251
3942.74	0.10	265.08	3942.69	-6.27	-4.82	4.39	0.06	4785874.72	678313.15	N 43 12 16.566	W 60 48 18.253
3970.73	0.12	237.12	3970.68	-6.24	-4.84	4.35	0.06	4785874.70	678313.10	N 43 12 16.565	W 60 48 18.255
3999.94	0.10	311.41	3999.89	-6.20	-4.84	4.30	0.14	4785874.70	678313.06	N 43 12 16.566	W 60 48 18.257
4029.56	0.10	340.13	4029.51	-6.16	-4.80	4.27	0.05	4785874.74	678313.03	N 43 12 16.567	W 60 48 18.258
4056.11	0.18	163.36	4056.06	-6.17	-4.82	4.28	0.32	4785874.73	678313.03	N 43 12 16.566	W 60 48 18.258
4084.59	0.23	146.86	4084.54	-6.26	-4.91	4.32	0.08	4785874.63	678313.08	N 43 12 16.563	W 60 48 18.256
4113.72	0.37	322.55	4113.67	-6.22	-4.88	4.30	0.62	4785874.66	678313.05	N 43 12 16.564	W 60 48 18.257
4141.97	1.22	321.53	4141.91	-5.85	-4.58	4.05	0.90	4785874.97	678312.81	N 43 12 16.574	W 60 48 18.268
4170.82	2.37	318.57	4170.75	-4.99	-3.89	3.47	1.20	4785875.66	678312.22	N 43 12 16.597	W 60 48 18.293
4198.98	3.36	316.84	4198.87	-3.64	-2.85	2.52	1.06	4785876.69	678311.27	N 43 12 16.632	W 60 48 18.334
4227.15	4.37	316.32	4226.98	-1.80	-1.47	1.21	1.08	4785878.07	678309.97	N 43 12 16.677	W 60 48 18.390

4255.99	4.93	310.77	4255.72	0.48	0.13	-0.49	0.75	4785979.68	678308.27	N 43 12 16.731	W 60 48 18.463
4284.50	5.55	306.56	4284.11	3.07	1.75	-2.52	0.77	4785881.30	678306.24	N 43 12 16.785	W 60 48 18.552
4313.09	5.98	306.62	4312.56	5.93	3.47	-4.83	0.45	4785883.01	678303.93	N 43 12 16.842	W 60 48 18.652
4343.63	6.48	309.02	4342.92	9.22	5.50	-7.44	0.55	4785885.04	678301.31	N 43 12 16.911	W 60 48 18.765
4371.21	7.35	312.84	4370.30	12.50	7.68	-9.95	1.07	4785887.22	678298.81	N 43 12 16.983	W 60 48 18.873
4393.30	8.89	315.92	4392.17	15.54	9.87	-12.17	2.17	4785889.41	678296.59	N 43 12 17.056	W 60 48 18.969
4422.31	11.83	314.53	4420.70	20.61	13.56	-15.85	3.05	4785893.11	678292.91	N 43 12 17.179	W 60 48 19.128
4451.81	15.02	308.11	4449.39	27.36	18.04	-21.01	3.58	4785897.59	678287.74	N 43 12 17.328	W 60 48 19.352
4480.65	16.81	303.90	4477.13	35.24	22.68	-27.42	2.21	4785902.22	678281.34	N 43 12 17.484	W 60 48 19.630
4510.14	18.00	304.46	4505.27	44.05	27.63	-34.71	1.22	4785907.18	678274.04	N 43 12 17.651	W 60 48 19.947
4539.62	20.11	304.64	4533.13	53.67	33.09	-42.64	2.15	4785912.64	678266.12	N 43 12 17.834	W 60 48 20.292
4569.24	22.10	304.82	4560.76	64.32	39.17	-51.40	2.02	4785918.71	678257.35	N 43 12 18.039	W 60 48 20.673
4598.75	23.88	305.23	4587.93	75.82	45.78	-60.84	1.82	4785925.33	678247.92	N 43 12 18.261	W 60 48 21.083
4626.69	23.54	304.96	4613.51	87.04	52.24	-70.03	0.38	4785931.79	678238.72	N 43 12 18.478	W 60 48 21.482
4656.50	23.13	304.94	4640.88	98.83	59.01	-79.71	0.41	4785938.55	678229.05	N 43 12 18.705	W 60 48 21.903
4685.21	21.84	305.06	4667.41	109.79	65.31	-88.71	1.35	4785944.85	678220.05	N 43 12 18.917	W 60 48 22.294
4715.06	22.26	306.34	4695.07	120.97	71.85	-97.80	0.64	4785951.39	678210.95	N 43 12 19.136	W 60 48 22.690
4744.86	23.50	307.88	4722.53	132.50	78.84	-107.04	1.39	4785958.38	678201.72	N 43 12 19.371	W 60 48 23.090
4773.86	25.61	309.73	4748.90	144.46	86.40	-116.43	2.32	4785965.94	678192.33	N 43 12 19.624	W 60 48 23.497
4803.43	25.61	310.72	4775.57	157.10	94.65	-126.18	0.43	4785974.19	678182.57	N 43 12 19.899	W 60 48 23.920
4832.53	25.80	311.48	4801.79	169.55	102.95	-135.70	0.39	4785982.49	678173.06	N 43 12 20.176	W 60 48 24.331
4861.44	26.36	308.57	4827.76	182.12	111.12	-145.43	1.45	4785990.66	678163.33	N 43 12 20.449	W 60 48 24.753
4890.85	27.85	303.93	4853.94	195.47	119.02	-156.23	2.64	4785998.57	678152.52	N 43 12 20.714	W 60 48 25.222
4920.94	28.61	299.62	4880.45	209.69	126.51	-168.33	2.17	4786006.05	678140.43	N 43 12 20.967	W 60 48 25.749
4953.96	28.04	298.15	4909.52	225.34	134.08	-182.05	0.82	4786013.62	678126.71	N 43 12 21.224	W 60 48 26.348
4979.05	26.53	299.69	4931.82	236.83	139.63	-192.11	1.99	4786019.18	678116.64	N 43 12 21.412	W 60 48 26.787
5008.54	26.13	301.11	4958.25	249.90	146.25	-203.40	0.76	4786025.79	678105.36	N 43 12 21.636	W 60 48 27.279
5037.45	24.90	303.59	4984.34	262.35	152.91	-213.92	1.69	4786032.45	678094.84	N 43 12 21.861	W 60 48 27.737
5066.89	24.74	306.00	5011.06	274.69	159.96	-224.06	1.04	4786039.50	678084.69	N 43 12 22.098	W 60 48 28.178
5095.80	24.43	306.47	5037.35	286.68	167.07	-233.76	0.38	4786046.61	678074.99	N 43 12 22.336	W 60 48 28.600
5125.05	25.42	301.91	5063.88	298.99	173.98	-243.96	2.22	4786053.53	678064.80	N 43 12 22.569	W 60 48 29.043
5155.06	27.00	298.68	5090.80	312.23	180.66	-255.40	2.13	4786060.20	678053.35	N 43 12 22.795	W 60 48 29.542
5183.78	27.41	298.27	5116.35	325.34	186.92	-266.95	0.47	4786066.46	678041.81	N 43 12 23.008	W 60 48 30.046
5213.78	24.32	299.48	5143.34	338.41	193.23	-278.41	3.13	4786072.77	678030.35	N 43 12 23.222	W 60 48 30.546
5242.89	20.15	301.52	5170.28	349.42	198.80	-287.91	4.37	4786078.35	678020.85	N 43 12 23.410	W 60 48 30.960
5271.93	18.46	299.77	5197.68	359.02	203.70	-296.16	1.85	4786083.24	678012.60	N 43 12 23.576	W 60 48 31.320
5301.29	17.46	297.47	5225.61	368.05	208.04	-304.10	1.25	4786087.58	678004.65	N 43 12 23.723	W 60 48 31.667
5330.91	17.89	294.30	5253.84	377.00	211.96	-312.19	1.07	4786091.50	677996.57	N 43 12 23.857	W 60 48 32.021

5360.48	18.65	292.31	5281.91	386.17	215.63	-320.71	1.00	4786095.17	677988.05	N 43 12 23.983	W 60 48 32.393
5451.15	15.33	294.98	5368.62	412.38	226.19	-344.99	1.13	4786105.74	677963.77	N 43 12 24.346	W 60 48 33.456
5480.16	14.54	295.11	5396.65	419.81	229.36	-351.76	0.82	4786108.90	677956.99	N 43 12 24.454	W 60 48 33.753
5508.46	13.73	295.77	5424.09	426.68	232.33	-358.01	0.88	4786111.87	677950.75	N 43 12 24.556	W 60 48 34.026
5537.57	12.48	295.14	5452.44	433.24	235.17	-363.96	1.30	4786114.71	677944.80	N 43 12 24.653	W 60 48 34.286
5565.91	11.60	295.11	5480.16	439.11	237.68	-369.32	0.93	4786117.22	677939.44	N 43 12 24.739	W 60 48 34.520
5595.20	10.44	292.74	5508.91	444.66	239.95	-374.43	1.28	4786119.49	677934.33	N 43 12 24.817	W 60 48 34.744
5623.34	8.83	295.50	5536.65	449.32	241.87	-378.73	1.79	4786121.41	677930.03	N 43 12 24.882	W 60 48 34.932
5652.64	7.59	301.05	5565.65	453.49	243.83	-382.42	1.51	4786123.37	677926.34	N 43 12 24.949	W 60 48 35.093
5681.29	6.37	302.08	5594.09	456.98	245.65	-385.39	1.28	4786125.20	677923.37	N 43 12 25.011	W 60 48 35.223
5710.35	4.86	306.60	5623.01	459.81	247.24	-387.74	1.62	4786126.79	677921.02	N 43 12 25.064	W 60 48 35.325
5738.60	3.58	318.61	5651.18	461.85	248.62	-389.29	1.64	4786128.16	677919.47	N 43 12 25.110	W 60 48 35.392
5767.64	2.73	337.00	5680.18	463.28	249.94	-390.16	1.35	4786129.48	677918.60	N 43 12 25.153	W 60 48 35.429
5796.63	1.75	333.74	5709.14	464.22	250.97	-390.62	1.02	4786130.51	677918.14	N 43 12 25.187	W 60 48 35.448
5825.67	0.84	297.98	5738.18	464.81	251.47	-391.00	1.21	4786131.01	677917.75	N 43 12 25.204	W 60 48 35.465
5855.67	0.96	248.03	5768.17	465.18	251.47	-391.43	0.77	4786131.02	677917.33	N 43 12 25.204	W 60 48 35.484
5887.92	1.34	239.09	5800.42	465.51	251.18	-392.01	0.39	4786130.72	677916.75	N 43 12 25.195	W 60 48 35.509
5914.04	1.76	217.05	5826.53	465.69	250.70	-392.51	0.83	4786130.24	677916.25	N 43 12 25.180	W 60 48 35.532
5943.18	1.46	215.89	5855.65	465.76	250.05	-393.00	0.31	4786129.59	677915.76	N 43 12 25.159	W 60 48 35.555
5972.62	2.01	207.32	5885.08	465.75	249.28	-393.45	0.62	4786128.82	677915.31	N 43 12 25.135	W 60 48 35.576
6002.00	2.25	183.19	5914.44	465.43	248.25	-393.72	0.94	4786127.79	677915.04	N 43 12 25.102	W 60 48 35.589
6031.61	1.73	175.46	5944.03	464.89	247.22	-393.72	0.59	4786126.76	677915.04	N 43 12 25.069	W 60 48 35.590
Projection To TD	6070.00	175.46	5982.41	464.20	246.07	-393.63	0.00	4786125.61	677915.13	N 43 12 25.031	W 60 48 35.587

Survey Error Model: Wolff & deWardt 2.0000 sigma

Surveying Programme:

<u>MD From (m)</u>	<u>MD To (m)</u>	<u>EQU Freq</u>	<u>Survey Tool</u>	<u>Type</u>
0.00	6070.00	Act-Sins	Anadrill	MWD

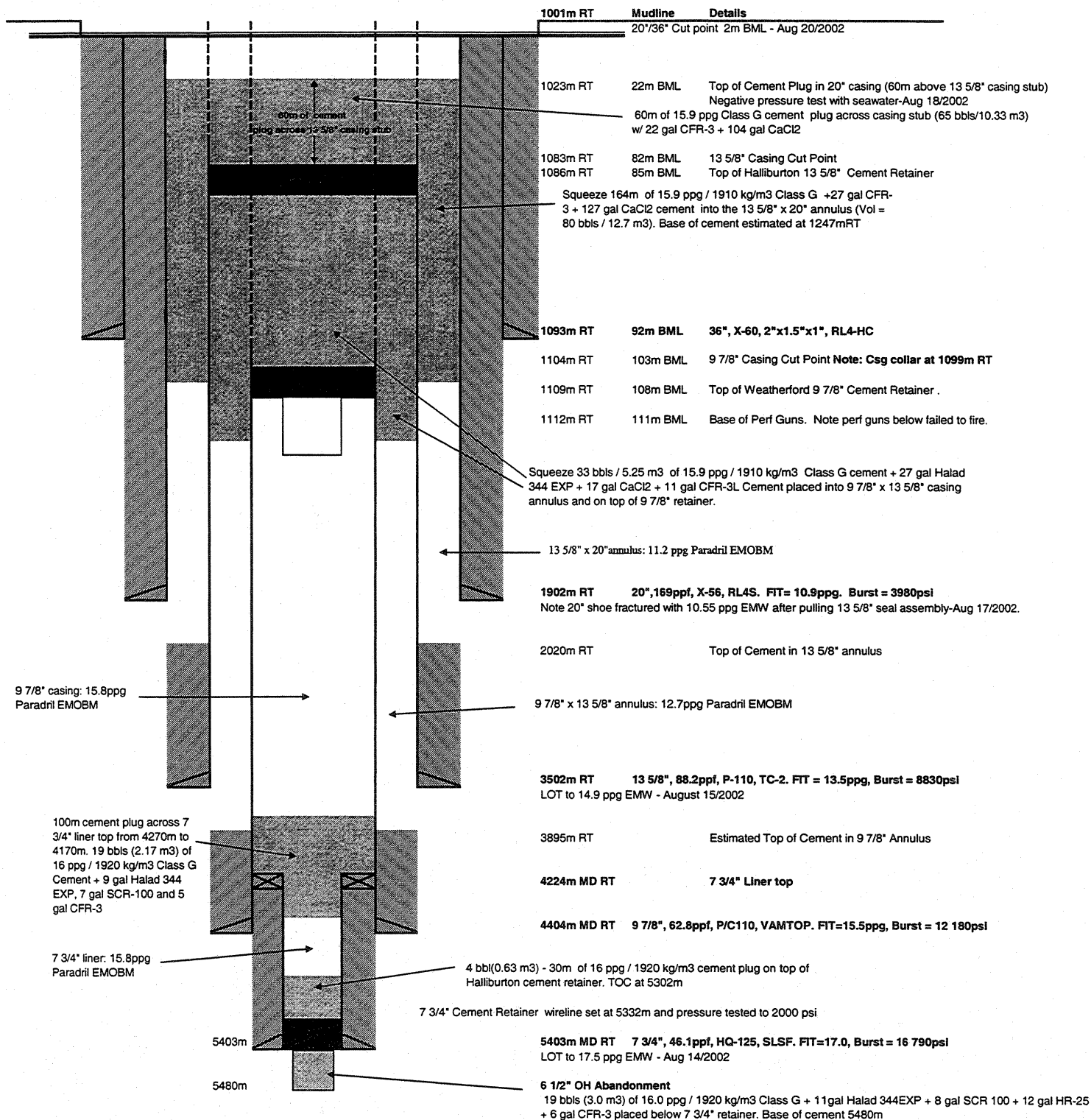
Appendix K

Abandonment Details

Appendix K

Abandonment Details

Newburn H-23 Final P&A Diagram





Oceaneering, International, Inc.

931 Highway 90 East
Bayou Vista, LA 70380
Tel. (504) 395-5247
Fax (504) 395-5330

Date: 8/21/2002

Client: Chevron/Texaco

CLEAR BOTTOM CERTIFICATION

Location: Newburn H-23

Vessel: Deepwater Millennium

On Wednesday, August 21, 2002 Oceaneering AWS personnel performed a post well site abandonment bottom survey using the combination of video and 360 degree scanning sonar. The survey was performed at Newburn H-23. The AWS system performing the bottom survey was the Magnum 50 remotely operated vehicle interfaced to the Simrad MS 90 scanning sonar.

In performing our ocean bottom survey, we certify that the area inspected complies with our interpretation of clean bottom defined by the U.S. Department of the Interior, Notice to Lessees, Operators of Interim Requirements for site clearance (and verification) of abandoned oil and gas structures in the Gulf of Mexico.

We appreciate this opportunity to provide this survey for you and look forward to working with you again.

If there are any further questions regarding this survey or general AWS services, please contact Dell Dodson, AWS Operations Manager at our Morgan City, Louisiana facility (504) 395-5247.

Sincerely,

AWS Supervisor
Oceaneering International, Inc.
Gulf Coast Division

/ly

Appendix L

Well Schematic

Appendix L
Well Schematic

Final As Drilled Stick Diagram **EL 2359 - Newburn H-23**

Well: EL 2359 Newburn H-23
Mudline Location: N= 4 785 879.120 m E= 678 308.970 m

Rig: TSF Deepwater Millennium
WBS No. RWFEC-R2253
UWI Well Number: 300H234320060450
Lat/Long: 43° 12' 16.7121" N / 60° 48' 18.4330" W (NAD83)
KB to MSL (ft): 24 m
Water Depth (ft): 977 m
KB to ML (ft): 1001 m

ABB Vetco 18 3/4" HPWH 18-3/4" HPWH @ +4.5 m AML
 ABB Vetco 96" LPWH 36" LPWH @ +3.64 m AML

	Casing MD/TVD	HOLE SIZE	CASING & CEMENT	FIT	DIRECTIONAL PROGRAM
	1,093 m	42"	36"X2", 1.5", 1" WT, X-60, X66 Vetco RL4-HC/RL4-F Annular Volume +200% Excess to mudline		
	1,902 m	26"	20" 0.812" WT, X-66, 169ppf, Vetco RL4-S Annular Volume +100% Excess to mudline Lead: Foamed cement @ 12.0 ppg - 1044 bbl slurry Tail G @ 16.0 ppg + accel - 100m - 250 bbl	11.1 ppg	Straight Hole
Top of 13 5/8" cement 2020m MD		17"			
	3,502 m		13 5/8", 62.2 ppg, P-110, TC-II Annular Volume to 2200m at 10% OH Excess Lead: class G @ 13.0 ppg, "G" + 3.3% PHG to 2200m Tail: class G @ 15.6 ppg, 3300m (200m above shoe)	13.5 ppg	Straight Hole
Top of 9 7/8" cement 3895m		12-1/4"			
TOL 4224m	4224 m		9-7/8", 62.6 ppg, P/C-110, VAM TOP Annular Volume to 3800m at 10% OHE Lead: class G @ 15.6#, "G" + 0.2% Super CBL to 3800m Tail: class G @ 15.6#, 4345m	15.2 ppg	Directional KOP = 4110m RT Build to +/-10 deg
	4,404 m / 4403m	8-1/2"			
	5403 m / 5324m	6 1/2"	7 1/4", 62.1 ppg, HC Q-125, SLSF Annular Volume to 4224m + 30% OHE Class G + 35% Silica Flour @ 15.6#, to 4224m	17.0ppg	Directional Build & Hold to +/-25deg Max Angle 28.6deg
TD	6070 m / 5982m				Directional Drop at +/- 1 -1.6deg/30m TD 1.73deg

Appendix M
Composite Wireline
Well Log

Appendix M
Composite Wireline Well Log

Multi-Run Composite Log
(see Log Box 3)

Appendix N

Daily Geological Reports

Appendix N
Daily Geological Reports

Storage Units: Metric

Geological Morning Report

Jun 3, 2002

Well Name: Chevron et al Newburn H-23
Location:

Spud Date: May 22, 2002 @ 00:30
Days from Spud: 12
K.B. Elevation 24.00
Ground Elevation: -977.00

Date: Jun 3, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 1,917.00
Progress:
Average R.O.P.: 0.00

Daily Costs: \$1,502,747

Accumulated Cost: \$21,619,661

Formation: Eocene

Operational Status: Clean sand trap & prepare mud tanks to drill out.
Operational Summary: POOH after successfully pressure testing casing; Make up BHA, RIH to the top of BOP's, while cleaning mud tanks; offload SBM from supply boats. RIH to top of cement at 1891 meters, displace to SBM.

Report From: Cyril MacPherson/Bryan MacDougall
For **Barbara Carleton**

Forecast: Drill out cement and casing shoe, clean out rat hole and drill 2 m new formation, conduct FIT, Drill ahead.

Well Name: Chevron et al Newburn H-23
Location:**Spud Date:** May 22, 2002 @ 00:30
Days from Spud: 13
K.B. Elevation: 24.00
Ground Elevation: -977.00**Date:** Jun 4, 2002
Time: 2400 hrs
Rotating Hours: 8.00 hrs**Depth:** 2,019.00
Progress: 102.00
Average R.O.P.: 12.75**Daily Costs:** \$568,111**Accumulated Cost:** \$22,190,871**Formation:** Eocene**Operational Status:** Drilling 17" hole @ approx 10 m/hr**Operational Summary:** Drill out cement, shoe track and casing shoe, clean rat hole and drill 2 meters new hole to 1919, conduct FIT to 1300 kg/m3. Drill ahead.**Report From:** Cyril MacPherson/Bryan MacDougall
Report To: Barbara Carleton
Remarks: Forecast: Drill ahead

Lithology Summary

Kelly Bushing Elevation: 24.00**Ground Elevation:** -977.00**** All Depths measured from Kelly Bushing Elevation ****1,920.00 to 2,020.00
(100.00)

Claystone:gray. silty, amorphous, common glauconite grains, occasional disseminated pyrite, trace carbonaceous flakes, trace sand grains. Contaminated with cement for first 30 meters.

Storage Units: Metric

Morning Report Total Gas Summary

Jun 4, 2002

Well Name: Chevron et al Newburn H-23

Date: Jun 4, 2002

Location:

Time: 2400 hrs

Depth: 2,019.00

Report From: Cyril MacPherson/Bryan MacDougall

Progress: 102.00

Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval Data			Total Gas Data		Gas Comments
From	To	Thickness	Minimum	Maximum	
1,917.00	1,938.00	21.00	0.800		
1,938.00	1,973.00	35.00	1.400		
1,973.00	2,019.00	46.00	2.400		

Well Name: Chevron et al Newburn H-23
Location:**Spud Date:** May 22, 2002 @ 00:30
Days from Spud: 14
K.B. Elevation: 24.00
Ground Elevation: -977.00**Date:** Jun 5, 2002
Time: 2400 hrs
Rotating Hours: 18.40 hrs**Depth:** 2,285.00
Progress: 266.00
Average R.O.P.: 14.46**Daily Costs:****Accumulated Cost:****Formation:** Early Eocene**Operational Status:** Drilling**Operational Summary:** Drill 177.8 mm hole from 2019 to 2285 meters at midnight. Low rop due to inability of solids control system to handle the volume of cuttings.**Report From:** Cyril MacPherson/Bryan MacDougall**Report To:** Barbara Carleton**Remarks:** 24 hr Forecast Drill ahead, should intersect top of Paleocene
72 hr Forecast: Continue to drill ahead, through Paleocene and into T20 unconformity and possibly into Base Tertiary if rop keeps up to approx 300 m/day.

Lithology Summary

Kelly Bushing Elevation: 24.00 **Ground Elevation:** -977.00***** All Depths measured from Kelly Bushing Elevation *****

2,019.00 to 2,260.00 (241.00)	Claystone: gray, brownish in part, firm, amorphous, blocky in part, trace carbonaceous flakes, silty, rarely marly.
2,260.00 to 2,300.00 (40.00)	Claystone: gray, gray brown in part, firm, moderately amorphous, blocky in part, silty, trace carbonaceous flakes, minor beige limestone stringers, occasional glauconitic sandstone laminae.

Storage Units: Metric

Morning Report Total Gas Summary

Jun 5, 2002

Well Name: Chevron et al Newburn H-23

Date: Jun 5, 2002

Location:

Time: 2400 hrs

Depth: 2,285.00

Report From: Cyril MacPherson/Bryan MacDougall

Progress: 266.00

Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval Data			Total Gas Data		Gas Comments
From	To	Thickness	Minimum	Maximum	
2,019.00	2,164.00	145.00	2.340	3.840	
2,164.00	2,194.00	30.00	1.640		
2,194.00	2,266.00	72.00	2.670		

Well Name: Chevron et al Newburn H-23
Location:

Spud Date: May 22, 2002 @ 00:30
Days from Spud: 15
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 6, 2002
Time: 2400 hrs
Rotating Hours: 6.40 hrs

Depth: 2,448.00
Progress: 163.00
Average R.O.P.: 25.47

Daily Costs:

Accumulated Cost:

Formation: Early Eocene

Operational Status: Drilling ahead

Operational Summary: Drill to 2320 meters, problem with solids control system, clean up Swaco problems, circulate the hole and resume drilling, Swaco equipment appears to be working better.

Report From: Cyril MacPherson/Bryan MacDougall

Report To: Barbara Carleton

Remarks: Forecast: 24 Hour Drill to 2475, circulate and bring mud weight to 10.2 ppg, wiper trip, RIH and drill ahead. Should encounter Paleocene Lowstand.
Forecast 72hr: Drill ahead through Paleocene and into Tertiary

Lithology Summary

Kelly Bushing Elevation: 24.00

Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

2,260.00 to 2,470.00
(210.00)

Claystone: Gray to gray brown and rarely light gray and green, firm to blocky amorphous in part, slightly silty, common trace glauconite and carbonaceous flakes, rare trace very fine sandstone.

Storage Units: Metric

Morning Report Total Gas Summary

Jun 6, 2002

Well Name: Chevron et al Newburn H-23

Date: Jun 6, 2002

Location:

Time: 2400 hrs

Depth: 2,448.00

Report From: Cyril MacPherson/Bryan MacDougall

Progress: 163.00

Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval Data			Total Gas Data		Gas Comments
From	To	Thickness	Minimum	Maximum	
2,266.00	2,302.00	36.00	2.490		Note, gas data lost for 7 meters through this interval, datalog computer crash.
2,302.00	2,320.00	18.00	0.130		Low gas reading as a result of decreased pump rates due to solids control; problems
2,320.00	2,433.00	113.00	2.250		

Well Name: Chevron et al Newburn H-23
Location:**Spud Date:** May 22, 2002 @ 00:30
Days from Spud: 16
K.B. Elevation: 24.00
Ground Elevation: -977.00**Date:** Jun 7, 2002
Time: 2400 hrs
Rotating Hours: 8.00 hrs**Depth:** 2,547.00
Progress: 99.00
Average R.O.P.: 12.38**Daily Costs:****Accumulated Cost:****Formation:** Eocene**Operational Status:** Drilling Ahead**Operational Summary:** Drill to 2476 meters, circulate hole clean, increase mud weight to 1215 kg/m3, wiper trip to casing shoe, RIH and drill ahead .**Report From:** Cyril MacPherson/Bryan MacDougall**Report To:** Barbara Carleton**Remarks:** 24hr Forecast: Drill into Paleocene Lowstand today.
72hr Forecast: Continue to drill ahead through Paleocene and intersect the T20 (approx 3030m) unconformity on the 9th, and into the Base Tertiary (approx 3210m)

Lithology Summary

Kelly Bushing Elevation: 24.00 **Ground Elevation:** -977.00**** All Depths measured from Kelly Bushing Elevation ****2,470.00 to 2,522.00
(52.00) Claystone: medium gray, firm to blocky, amorphous in part, rare trace fine grained glauconitic sandstone.2,522.00 to 2,680.00
(158.00) Claystone: 90% gray, slightly greenish in part, firm and partly blocky, amorphous, slightly silty, commonly pyritic with thin limestone stringers and laminae.

Limestone: 5% beige, mudstone to partly very fine packstone, crumbly to slightly hard, argillaceous in part, trace carbonaceous.

2,580.00 to 2,600.00
(20.00) Claystone: light gray, slightly greenish in part, firm and amorphous, calcareous to marly, trace pyritic.

Storage Units: Metric

Morning Report Total Gas Summary

Jun 7, 2002

Well Name: Chevron et al Newburn H-23

Date: Jun 7, 2002

Location:

Time: 2400 hrs

Report From: Cyril MacPherson/Bryan MacDougall

Depth: 2,547.00

Report To: Barbara Carleton

Progress: 99.00

**** All Gas Values are in Percentage ****

Interval Data			Total Gas Data		Gas Comments
From	To	Thickness	Minimum	Maximum	
2,433.00	2,476.00	43.00	2.880		
2,476.00	2,508.00	32.00	1.770		
2,508.00	2,518.00	10.00	2.770		
2,518.00	2,538.00	20.00	2.030		

Well Name: Chevron et al Newburn H-23
Location:

Spud Date: May 22, 2002 @ 00:30
Days from Spud: 17
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 8, 2002
Time: 2400 hrs
Rotating Hours: 24.00 hrs

Depth: 2,867.00
Progress: 320.00
Average R.O.P.: 13.33

Daily Costs:

Accumulated Cost:

Formation: Paleocene

Operational Status: Drilling Ahead

Operational Summary: Drill 431.8mm hole from 2547 to 2867.

Report From: Cyril MacPherson/Bryan MacDougall

Report To: Barbara Carleton

Remarks: 24hr Forecast: Drill into Paleocene T20 Unconformity.

72hr Forecast: Drill on through into Tertiary and most likely to casing point

Lithology Summary

Kelly Bushing Elevation: 24.00 Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

2,600.00 to 2,772.00 (172.00)	Claystone: very light gray to medium gray, gray green, amorphous to subblocky, soft to firm, very calcareous to marly, fine disseminated pyrite, beige limestone stringers, grading to marlstone.
2,772.00 to 2,797.00 (25.00)	Claystone: 10% light gray to medium gray, amorphous to subblocky, soft to firm, very calcareous, fine disseminated pyrite, grading to marlstone. Marlstone: 15% very light gray white, soft, amorphous, fine disseminated pyrite and pyrite laminae. Limestone: 75% very light greenish gray, soft to firm, brittle, amorphous to subblocky, mudstone, locally packstone, very fine pyrite laminae, dense, no shows.
2,797.00 to 2,847.00 (50.00)	Limestone: 100% very light greenish gray to gray white, mudstone, slightly hard, argillaceous to marly, rare claystone stringer.
2,847.00 to 2,870.00 (23.00)	Claystone: 85% medium gray and brown, firm to blocky, silty, calcareous to marly in part, common trace glauconite and pyritic in part. Limestone: 15% light gray green to gray white, firm to slightly hard, argillaceous mudstone, rarely grading to packstone, interbeds in claystone.

Storage Units: Metric

Morning Report Total Gas Summary

Jun 8, 2002

Well Name: Chevron et al Newburn H-23

Date: Jun 8, 2002

Location:

Time: 2400 hrs

Depth: 2,867.00

Report From: Cyril MacPherson/Bryan MacDougall

Progress: 320.00

Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval Data			Total Gas Data		Gas Comments
From	To	Thickness	Minimum	Maximum	
2,538.00	2,584.00	46.00	2.180		
2,584.00	2,773.00	189.00	1.650		
2,773.00	2,789.00	16.00	2.820	4.370	Gas Peak at 2780
2,789.00	2,854.00	65.00	1.210		

Well Name: Chevron et al Newburn H-23**Location:****Spud Date:** May 22, 2002 @ 00:30**Days from Spud:** 18**K.B. Elevation:** 24.00**Ground Elevation:** -977.00**Date:** Jun 9, 2002**Time:** 2400 hrs**Rotating Hours:** 14.00 hrs**Depth:** 3,074.00**Progress:** 207.00**Average R.O.P.:** 14.79**Daily Costs:****Accumulated Cost:****Formation:** Paleocene T 20 Unconformity**Operational Status:** Drilling ahead at 3074 meters

05:30 am Status: Drilling Ahead at 3140 meters.

Operational Summary: Drill to 2885 meters, problems with solids handling equipment, resume drilling and drill to 3074 meters.**Report From:** Cyril MacPherson**Report To:** Barbara Carleton**Remarks:**

24hr Forecast: Drill through base Tertiary and into Cretaceous.

72hr Forecast: Drill to casing point, clean hole and begin logging with Schlumberger.

Lithology Summary**Kelly Bushing Elevation:**

24.00

Ground Elevation:

-977.00

**** All Depths measured from Kelly Bushing Elevation ****2,870.00 to 2,875.00
(5.00)

Claystone: 85% medium gray and brown, firm to blocky, silty, calcareous to marly in part, common trace glauconite and pyritic in part.

Limestone: 15% light gray green to gray white, firm to slightly hard, argillaceous mudstone, rarely grading to packstone, interbeds in claystone.

2,875.00 to 3,022.00
(147.00)

Claystone: medium gray, firm to partly blocky, calcareous to marly in part, minor beige limestone stringers, common trace glauconite, trace pyrite, abundant pyrite nodules locally.

3,022.00 to 3,060.00
(38.00)

Claystone: 75% medium gray to partly brownish gray, firm, silty in part occasionally grading to argillaceous siltstone, common trace pyrite, common carbonaceous flakes, calcareous to marly.

Limestone: 25% beige to tan, crumbly, mudstone, common carbonaceous streaks and flakes.

3,060.00 to 3,100.00
(40.00)

Claystone: medium gray, firm and blocky, calcareous, silty grading locally to argillaceous siltstone, minor beige limestone stringers, pyritic in part.

Well Name: Chevron et al Newburn H-23**Date:** Jun 9, 2002**Location:****Time:** 2400 hrs**Depth:** 3,074.00**Report From:** Cyril MacPherson**Progress:** 207.00**Report To:** Barbara Carleton**** All Gas Values are in Percentage ******Interval:** From: 2,854.00 to 3,013.00 Thickness: 159.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	1.990	1.940	0.040							
Maximum										

Remarks:**Interval:** From: 3,013.00 to 3,034.00 Thickness: 21.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	4.030	3.970	0.060	0.010						
Maximum										

Remarks:**Interval:** From: 3,034.00 to 3,048.00 Thickness: 14.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	8.940	8.790	0.130	0.010						
Maximum	13.050	12.840	0.018	0.020	0.010					

Remarks: Gas Peak at 3041**Legend**Total Gas = TG
Methane = C1Ethane = C2
Propane = C3Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23**Date:** Jun 9, 2002**Location:****Time:** 2400**Depth:** 3,074.00**Report From:** Cyril MacPherson**Progress:** 207**Report To:** Barbara Carleton**Kelly Bushing Elevation:** 24.00**Casing Flange Elevation:** -973.36**Ground Elevation:** -977.00**Storage Units:** Metric**** All Depths measured from Kelly Bushing Elevation ****

Group	Formation	Prognosed	Sample Top	Sample Top	Subsea	Thickness	Difference
Member		Top	(MD)	(TVD)	Elevation		From
							Prognosis
	T20 Unconformity	3,038.00	3,022.00	3,021.99	-2,997.99		16.01

Well Name: Chevron et al Newburn H-23
Location:**Spud Date:** May 22, 2002 @ 00:30
Days from Spud: 19
K.B. Elevation: 24.00
Ground Elevation: -977.00**Date:** Jun 10, 2002
Time: 2400 hrs
Rotating Hours: 23.50 hrs**Depth:** 3,376.00
Progress: 302.00
Average R.O.P.: 12.85**Daily Costs:****Accumulated Cost:****Formation:** Cretaceous?**Operational Status:** Drilling ahead.

5:30 Status: Drilling at 3341 meters.

Operational Summary: Drill 431.8mm hole from 3074 to 3376 meters, no indication of Base Tertiary**Report From:** Cyril MacPherson**Report To:** Barbara Carleton**Remarks:**

24hr Forecast: Drill to 13 5/8 casing point early today, circulate hole clean and POOH for logging.

72hr Forecast: Log with Schlumberger.

Lithology Summary

Kelly Bushing Elevation: 24.00 **Ground Elevation:** -977.00**** All Depths measured from Kelly Bushing Elevation ****

3,100.00 to 3,230.00 (130.00)	Claystone: medium gray, firm to blocky in part, rarely platy, calcareous, silty grading locally to and interbedded with argillaceous siltstone, traces of glauconite and pyrite, occasional carbonaceous flakes, commonly with beige limestone stringers and thin interbeds.
3,230.00 to 3,400.00 (170.00)	Claystone: medium gray, blocky to platy in part, moderately to weakly calcareous, decreasing carbonate with depth, silty grading to siltstone in part, minor limestone stringers and thin interbeds.

Well Name: Chevron et al Newburn H-23

Date: Jun 10, 2002

Location:

Time: 2400 hrs

Depth: 3,376.00

Report From: Cyril MacPherson

Progress: 302.00

Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval: From: 3,048.00 to 3,103.00 Thickness: 55.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	5.130	5.030	0.090	0.010						
Maximum	6.800	6.670	0.110	0.020	0.010					

Remarks: Peak Gas at 3069

Interval: From: 3,103.00 to 3,191.00 Thickness: 88.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	2.790	2.720	0.060	0.010						
Maximum										

Remarks:

Interval: From: 3,191.00 to 3,355.00 Thickness: 164.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	1.920	1.860	0.300	0.010						
Maximum										

Remarks:

LegendTotal Gas = TG
Methane = C1Ethane = C2
Propane = C3Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23**Location:****Date:** Jun 10, 2002**Time:** 2400**Depth:** 3,376.00**Progress:** 302**Report From:** Cyril MacPherson**Report To:** Barbara Carleton**Kelly Bushing Elevation:** 24.00**Ground Elevation:** -977.00**Casing Flange Elevation:** -973.36**Storage Units:** Metric**** All Depths measured from Kelly Bushing Elevation ****

Group Formation Member	Prognosed Top	Sample Top (MD)	Sample Top (TVD)	Subsea Elevation	Thickness	Difference From Prognosis
<i>T20 Unconformity</i>	3,038.00	3,022.00	3,021.96	-2,997.96		16.04

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 20
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 11, 2002
Time: 2400 hrs
Rotating Hours: 11.50 hrs

Depth: 3,515.00
Progress: 139.00
Average R.O.P.: 12.09

Daily Costs:

Accumulated Cost:

Formation: Cretaceous?

Operational Status: Tripping out of hole to log

5:30 Status: pulling out of hole at 1060 meters.

Operational Summary: Drill to 3515 meters, circulate hole clean and wiper trip; and circulate the hole clean.
Wiper Trip Gas 4.84%/1.44%/ after 6.25 hrs with pumps off

Report From: Cyril MacPherson

Report To: Barbara Carleton

Remarks: 24hr Forecast: Log with Schlumberger, PEX and VSP
72hr Forecast: Complete VSP, run SWC, begin running 13 5/8 casing

Lithology Summary

Kelly Bushing Elevation: 24.00 **Ground Elevation:** -977.00

**** All Depths measured from Kelly Bushing Elevation ****

3,400.00 to 3,460.00 (60.00)	Claystone: medium gray, firm to blocky, weakly to moderately calcareous, silty grading to argillaceous siltstone interbeds and stringers, trace pyrite and common trace carbonaceous specks, minor limestone stringers.
3,460.00 to 3,515.00 (55.00)	Claystone: medium gray, firm to blocky and partly platy, calcareous to dolomitic, silty grading to siltstone, minor beige to tan dolomitic limestone stringers, trace pyrite.

Well Name: Chevron et al Newburn H-23

Date: Jun 11, 2002

Location: Scotian Shelf

Time: 2400 hrs

Depth: 3,515.00

Report From: Cyril MacPherson

Progress: 139.00

Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval: From: 3,355.00 to 3,410.00 Thickness: 55.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	1.880	1.840	0.030	0.010						
Maximum										

Remarks:

Interval: From: 3,410.00 to 3,430.00 Thickness: 20.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	2.740	2.680	0.050	0.010						
Maximum	3.310									

Remarks:

Interval: From: 3,430.00 to 3,515.00 Thickness: 85.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	2.020	1.970	0.040	0.010						
Maximum										

Remarks:

LegendTotal Gas = TG
Methane = C1Ethane = C2
Propane = C3Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 21
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 12, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 3,515.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Cretaceous?

Operational Status: Rigging up VSP

5:30 Status: Running VSP

Operational Summary: POOH laying down BHA, rig up Schlumberger aand run in and complete logging run number 1(DTS-EMS-PEX-AIT) and rig down.

Report From: Cyril MacPherson

Report To: Barbara Carleton

Remarks: 24hr Forecast: Complete VSP shots and run SWC.
72hr Forecast: Run casing

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 22
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 13, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 3,515.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Cretaceous?

Operational Status: Rigging down Schlumberger

05:30 Status: Retrieving wear bushing.

Operational Summary: Complete VSP and run MSCT.

Report From: Cyril MacPherson

Report To: Barbara Carleton

Remarks: 24hr Forecast: Retrieve wear bushing, rig up and begin to run casing.
72hr Forecast: Complete running casing, and cement.

Lithology Summary

Kelly Bushing Elevation: 24.00

Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

1944m Core # 25: 4.8 cm Claystone: greenish gray, firm, amorphous, slightly silty.

2030m Core # 24: 5 cm Claystone: gray brown, firm, silty in part.

2104m Core # 1, 5 cm Claystone: gray brown, firm, amorphous in part, slightly, trace carbonaceous.

2157m Core # 23: 5 cm Claystone: brown, firm to blocky.

2199m Core # 22: 5 cm Claystone: brown, firm to blocky.

2230.3m Core # 21 5 cm Claystone: brown, firm and blocky.

2269.5m Core # 20: 5 cm Claystone: brown, firm to blocky.

2323.5m Core # 19: 5 cm Claystone: brown, firm to blocky.

2364m Core # 18: 5 cm Claystone: brown to gray brown. firm.

2413.5m Core # 2: 4 cm Claystone: gray, silty, firm.

2497.3m Core # 17: 5 cm Claystone: brown gray, firm, calcareous, slightly silty, trace pyrite.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 22
K.B. Elevation: 24.00
Ground Elevation: -977.00

2535m Core # 3: 4.5 cm Claystone: gray to brownish, firm, trace pyrite, cut by fracture.

2635m Core # 16: 5 cm Claystone: brownish gray, firm, calcareous, silty in part, trace pyrite.

2677m Core # 15: 5 cm Claystone: gray, slightly brown, firm, moderately calcareous, trace silty.

2759m Core # 14: 4.5 cm Claystone: gray, firm to dense, calcareous, fractured.

2815m Core # 13: 4.8 cm Marlstone: very light grayish green, dense, common carbonaceous specks.

2858m Core # 12: 4.5 cm Claystone: light gray green, blocky, calcareous, cut by a fracture.

2883m Core # 11: 5 cm Marlstone: light gray greenish, dense, common carbonaceous flakes.

2903m Core # 10: 4.5 cm Claystone: medium gray, dark gray in part, dense, blocky, trace pyrite, cut by a fracture.

3004m Core # 9: 5 cm Marlstone: green gray, argillaceous, blocky, modly hd, rrlly silty.

3033m Core # 4: 5 cm Claystone: gray, firm, moderately well indurated, calcareous, silty in part, minor beige argillaceous limestone nodule or inclusions.

3139m Core # 8: 5 cm Claystone; medium gray, brownish in part, firm to blocky, slightly silty, calcite to locally marly, trace thin marly laminae.

3236m Core # 7: 5 cm Claystone: medium gray, brownish in part, firm to blocky, slightly silty, calcite to locally marly, trace thin marly laminae.

3373m Core # 6: 5 cm Claystone: medium to dark gray, blocky, dense, rarely silty, weakly calcareous.

3481m Core # 5: 5 cm Claystone: gray, moderately hard, slightly silty, wkly calcareous, cut by brownish calcareous laminae.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 26
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 17, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 3,515.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Cretaceous

Operational Status: Running in hole.

5:30 am Status: Drilling Cement

Operational Summary: Pressure test casing, make up BHA and RIH.

Report From: Cyril MacPherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: Drill out cement and casing shoe, perform FIT, drill ahead.
72hr Forecast: Drill ahead.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 27
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 18, 2002
Time: 2400 hrs
Rotating Hours: 9.00 hrs

Depth: 3,620.00
Progress: 105.00
Average R.O.P.: 11.67

Daily Costs:

Accumulated Cost:

Formation: Cretaceous?

Operational Status: Drilling ahead

5:30 Status: Drilling ahead

Operational Summary: RIH to top of cement, drill out cement and shoe, clean out rat hole and conduct FIT to 1620kg/m3 EMW. Drill ahead 311 mm hole.

Report From: Cyril MacPherson

Report To: Darcy Deibert

Remarks:

24hr Forecast: Drill 311mm hole through Cenomanian Unconformity and into Albian.

72hr Forecast: Drill through Sequence D and to kick off point.

Lithology Summary

Kelly Bushing Elevation: 24.00

Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

3,515.00 to 3,690.00
(175.00)

Claystone: medium gray, firm to blocky in part, partly dolomitic, silty with minor siltstone stringers, common carbonaceous specks with minor dolomite stringers and thin laminae.

Dolomite: tan to light brown in part, mudstone to cryptocrystalline in part, brittle to locally moderately hard and dense, commonly argillaceous grading to marlstone in part, common carbonaceous flakes and streaks

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Date: Jun 18, 2002
Time: 2400 hrs
Depth: 3,620.00
Progress: 105.00

Report From: Cyril MacPherson
Report To: Darcy Deibert

**** All Gas Values are in Percentage ****

Interval: From: 3,515.00 to 3,620.00 Thickness: 105.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.310	0.300								
Maximum										

Remarks:

Legend

Total Gas = TG
Methane = C1

Ethane = C2
Propane = C3

Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4

Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 28
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 19, 2002
Time: 2400 hrs
Rotating Hours: 21.50 hrs

Depth: 4,042.00
Progress: 422.00
Average R.O.P.: 19.63

Daily Costs:

Accumulated Cost:

Formation: Cretaceous

Operational Status: Drilling ahead

5:30am Status: Circulating at 4053 meters after wiper trip.

Operational Summary: Drill 311 mm hole from 3620 to 4042 meters.

Report From: Cyril MacPherson

Report To: Darcy Deibert

Remarks: 24hr Forecast: Drill to approx 4200 meters and begin kick off.
72hr Forecast: Drill ahead in deviated hole section.

Lithology Summary

Kelly Bushing Elevation: 24.00

Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

3,690.00 to 3,985.00
(295.00)

Claystone: >95% medium gray, predominately firm to blocky in part, rarely platy, silty grading to and interbedded with siltstone, generally dolomitic, minor to common thin dolomite stringers and interbeds, common carbonaceous specks, locally slightly pyritic,

Dolomite: <5% tan to beige and rarely brown, generally mudstone with minor to frequent cryptocrystalline fragments and stringers, argillaceous locally becoming marlstone, occasional trace of pyrite.

3,985.00 to 4,050.00
(65.00)

Claystone: brownish gray, firm and blocky in part, slightly calcareous, silty, occasional brown calcareous marlstone, minor white calcareous siltstone interbeds, occasional trace pyrite.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf
Report From: Cyril MacPherson
Report To: Darcy Deibert

Date: Jun 19, 2002
Time: 2400 hrs
Depth: 4,042.00
Progress: 422.00

**** All Gas Values are in Percentage ****

Interval: From: 3,620.00 to 4,020.00 Thickness: 400.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.470	0.460								
Maximum										

Remarks: Connection Gas: 3853: 20/50/5 min
3968: 18/50/7min
3997: 28/54/7min

Legend

Total Gas = TG
Methane = C1

Ethane = C2
Propane = C3

Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4

Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 29
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 20, 2002
Time: 2400 hrs
Rotating Hours: 16.00 hrs

Depth: 4,309.00
Progress: 267.00
Average R.O.P.: 16.69

Daily Costs:

Accumulated Cost:

Formation: Cretaceous.

Operational Status: Drilling ahead

5:30 Status: Circulating out gas, after gas peak to 20%.

Operational Summary: Wiper trip and bring MW up to 11.5 ppg, drill ahead.

Report From: Cyril MacPherson

Report To: Darcy Deibert

Remarks: 24hr Forecsat: Increase Mud Wt and drill ahead
72hr Forecast: Drill ahead, keeping MW above expected pore pressure, possibly
drilling to next casing point.

NOTE: Gas Values reported in %

Lithology Summary

Kelly Bushing Elevation: 24.00 Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

3,985.00 to 4,070.00 (85.00)	Claystone: medium gray, partly brownish, rare light gray, firm to blocky, very slightly calcareous, silty grading to siltstone in part, minor brown argillaceous limestone stringers partly dolomitic.
4,070.00 to 4,270.00 (200.00)	Claystone: brown, grayish in part, firm to blocky, slightly calcareous, silty grading to siltstone, common carbonaceous flakes, occasional gray white calcareous siltstone stringers,
4,270.00 to 4,310.00 (40.00)	Claystone: 70% brown, grayish in part, firm to blocky, slightly calcareous, silty grading to siltstone, common carbonaceous flakes, minor gray white calcareous siltstone stringer Claystone: 15% off white to grayish white, partly brown, soft and amorphous, silty and rarely sandy, locally becoming chalky limestone, occasional dead oil with dull gold fluorescence and no cut. Limestone: 15% off white, grayish white, chalky, soft to crumbly, argillaceous, trace carbonaceous flakes. with trace glauconite, commonly interbedded with a silty white clay laminae.

Well Name: Chevron et al Newburn H-23
 Location: Scotian Shelf
 Report From: Cyril MacPherson
 Report To: Darcy Deibert

Date: Jun 20, 2002
 Time: 2400 hrs
 Depth: 4,309.00
 Progress: 267.00

**** All Gas Values are in Percentage ****

Interval: From: 4,020.00 to 4,104.00 Thickness: 84.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.450	0.440								
Maximum	0.750	0.740								

Remarks: Connection Gas: 4111 m 1.05/0.76/5min
 4160 m 0.97/0.80/5min
 4167 m 1.16/0.90/10min
 4197 m 1.27/0.97/5min

Interval: From: 4,104.00 to 4,290.00 Thickness: 186.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.800	0.790								
Maximum	1.000	0.099								

Remarks: Connection Gas: 4226 m 1.28/0.98/5min
 4254 m 1.28/1.03/5min
 42.8 m 1.18/1.00/5min
 4197 m 1.27/0.97/5min

Legend

Total Gas = TG
 Methane = C1

Ethane = C2
 Propane = C3

Iso Butane = IC4
 Normal Butane = NC4
 Total Butane = TC4

Iso Pentane = IC5
 Normal Pentane = NC5
 Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 29
K.B. Elevation: 24.00
Ground Elevation: -977.00

4,310.00 to 4,320.00
(10.00)

Sandstone: off white, partly buff, fine grained, occasional medium grains, subrounded, generally well sorted, unconsolidated in sample, white limestone and partly argillaceous matrix, occasional dead oil stain with dull yellow fluorescence and very slight weak white cut, common limestone interbeds.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 30
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 21, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 4,366.00
Progress: 57.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Cretaceous

Operational Status: Building Mud Weight to 1476kg/m3
5:30 Status: Circulating after short wiper trip.

Operational Summary: Drill to 4366 meters, gas readings increasing, circulate, gas up to 20%, increase mud weight to 1368kg/m3 then 1428kg/m3, background gas 5%. Still getting high pumps off gas, raise MW to 1476kg/m3 ppg.

Report From: Cyril MacPherson

Report To: Darcy Deibert

Remarks: 24hr Forecast: Get gas under control and drill ahead.
72hr Forecast: Drill to next casing point

Lithology Summary

Kelly Bushing Elevation:

24.00

Ground Elevation:

-977.00

**** All Depths measured from Kelly Bushing Elevation ****

4,320.00 to 4,326.00 (6.00)	Sandstone: off white, partly buff, fine grained, occasional medium grains, subrounded, generally well sorted, unconsolidated in sample, white limestone and partly argillaceous matrix, occasional dead oil stain with dull yellow fluorescence and very slight weak white cut, common limestone interbeds. Limestone: off white, light brownish in part, chalky and crumbly, sandy and silty, grading to calcareous sandstone in part, trace glauconite, argillaceous and becoming marly, minor gray claystone laminae.
4,326.00 to 4,346.00 (20.00)	Claystone: gray brown, blocky, calcareous, silty, trace carbonaceous flakes.
4,346.00 to 4,357.00 (11.00)	Limestone: off white, grayish white in part, soft to crumbly, chalky, partly argillaceous, silty and sandy in part, trace carbonaceous material.
4,357.00 to 4,366.00 (9.00)	Claystone: medium gray, gray brown, blocky, silty, calcareous, occasional thin white limestone stringers,

Well Name: Chevron et al Newburn H-23**Date:** Jun 21, 2002**Location:** Scotian Shelf**Time:** 2400 hrs**Depth:** 4,366.00**Report From:** Cyril MacPherson**Progress:** 57.00**Report To:** Darcy Deibert**** All Gas Values are in Percentage ******Interval:** From: 4,290.00 to 4,366.00 Thickness: 76.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.980	0.940								
Maximum	13.000	12.800	0.300	0.100						

Remarks: Connection Gases: 4308: 1.42/1.20/4min _ 4338: 2.40/2.00/6min

Pumps off Gases: 4356: 21.12/11.30/6min _ 4366: 30.00/13.0/16min

LegendTotal Gas = TG
Methane = C1Ethane = C2
Propane = C3Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 31
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 22, 2002
Time: 2400 hrs
Rotating Hours: 5.50 hrs

Depth: 4,418.00
Progress: 52.00
Average R.O.P.: 9.45

Daily Costs:

Accumulated Cost:

Formation: Cretaceous

Operational Status: Drilling

5:30 Status: POOH for wiper trip.

Operational Summary: Build mud weight to 1500kg/m3, short wiper trip, 12.6% gas from bottoms up, drill 20 meters, simulated connection with resulting gas of 2.33%, drill ahead slowly to 4418.5 meters, resistivity trend decreasing, indicating increasing pore pressure, estimated to be 1476kg/m3.
Stopped drilling for casing due to increasing pore pressure.

Report From: Cyril MacPherson

Report To: Darcy Deibert

Remarks:

24hr Forecast: Wiper trip to Casing shoe, RIH and circulate clean, POOH to log.

72hr Forecast: Log with Schlumberger

Lithology Summary

Kelly Bushing Elevation:

24.00

Ground Elevation:

-977.00

**** All Depths measured from Kelly Bushing Elevation ****

4,366.00 to 4,418.00
(52.00)

Claystone: medium gray, blocky to platy and slightly elongated, calcareous, silty with local siltstone stringers, trace carbonaceous flakes, minor marlstone and limestone stringers, occasionally pyritic and glauconitic locally.

Well Name: Chevron et al Newburn H-23

Date: Jun 22, 2002

Location: Scotian Shelf

Time: 2400 hrs

Report From: Cyril MacPherson

Depth: 4,418.00

Report To: Darcy Deibert

Progress: 52.00

**** All Gas Values are in Percentage ****

Interval: From: 4,367.00 to 4,410.00 Thickness: 43.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.520	0.450								
Maximum	1.090	0.990								

Remarks: Wipertrip gas @ 4366: 12.61/1.88/60min
Simulated Conn Gas; 4366 7.94/4.66/18min
4376 2.68/0.94/8min
4386 2.33/0.86/8min
4396 3.44/1.08/5min

LegendTotal Gas = TG
Methane = C1Ethane = C2
Propane = C3Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 32
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 23, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs
Depth: 4,418.50
Progress: 0.50
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Cretaceous

Operational Status: Circulating after wiper trip to the shoe.

5:30 Status: POOH to log.

Operational Summary: Circulate and condition mud, doing a number of simulated connections and short trips in order to get the gas entering the well down low enough to safely POOH to log.

Simulated Connections at 4411 = 1.64%/.47%/5min

4418 = 1.82/.62/5min

Wiper Trips at 4418 = 6.42/1.14/140min

4417 = 8.52/1.65/120min

Report From: Cyril MacPherson

Report To: Darcy Deibert

Remarks:

24hr Forecast: POOH and begin logging.

72hr Forecast: Complete logging and begin running casing.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 33
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 24, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 4,418.50
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence C?

Operational Status: Running in hole with Schlumberger for first logging run.
EMS-DTS-DSI-PEX-AIT-GR

5:30 Status: Logging in casing to find correlation with 17 " logs.

Operational Summary: Circulate bottoms up from wiper trip to shoe, and trip out off hole to log. Rig up Schlumberger.

Report From: Cyril MacPherson

Report To: Darcy Deibert

Remarks:

24hr: Forecast; Run MDT, wiper trip.

72hr Forecast: Complete wiper trip and complete logging

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 34
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 25, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 4,418.50
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence C?

Operational Status: 00:00 status: POOH with logging tools (Run 3; OBMI)

05:30 Status: RIH for wiper / hole conditioning trip.

Operational Summary: Complete 1st logging Run
EMS-DTS-DSI-PEX-AIT-GR

RIH & complete 2nd Run, (MDT) attempt 12 pressure points, no success, indications of fractured formation.

RIH w/ 3 rd Run (OBMI)

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24hr: Forecast: Complete Logging Run 3, wiper trip

72hr Forecast: Complete wiper trip and complete logging, prepare to run casing

Storage Units: Metric

Geological Morning Report

Jun 26, 2002

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf
24.00

Spud Date: May 22, 2002 @ 12:30
Days from Spud: K.B. **Elevation:** 35

Elevation: **Ground** -977.00

Date:	Time: 2400	Jun 26, 2002	hrs
Progress:	Depth: 4,418.50	0.00	
Rotating Hours:	hrs	Average R.O.P.:	

Daily Costs:

Accumulated Cost:

Formation: Sequence C?

Operational Status: 00:00 status: Pumping out of hole

Operational Summary: 05:30 Status: Pulling out of hole
Finish logging Run #3 (OBMI), R/D Schlumberger, M/U BHA, RIH for conditioning trip, break circ. every 15 stds on trip in, safety wash last 10 stds to bottom, circulate hole, condition mud, spot heavy pill on bottom, pump out of hole.

Report
From: Max gas = 42.5 %
Background after circulating = 2.5%
Bryan Mac Dougall
Barbara Carleton

24 hr. forecast: Sidewall coring run, retrieve wear bushing.
72 hr. forecast: Run & cement 9 7/8" casing

Chevron Canada Resources

UWI Newburn H-23

Chevron et al Newburn H-23
Scotian Shelf

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 36
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 27, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 4,418.50
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence C ?

Operational Status: 00:00 status: RIH to retrieve wear bushing

05:30 Status: R/U to run 9 7/8" casing

Operational Summary: POOH, R/U Schlumberger, cut rotary sidewall cores, attempt 24 cores, recover 24 cores, R/D Schlumberger, RIH to retrieve wear bushing

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr forecast: Run casing

72 hr forecast: run casing, cement same, prepare to drill next hole section.

Sidewall Core Descriptions

Core #1 4277.7m (5cm)

Claystone: brown gray, firm, slightly calcareous, silty, fracture along long axis of the core.

Core #2 4233.4m (3cm)

Claystone: dark gray brown, firm, slightly calcareous, very silty, fine carbonaceous specs, fracture along long axis of the core.

Core #3 4112.8m (5 cm)

Claystone: dark gray brown, firm, very slightly calcareous, silty, quartz and orange feldspar grains, fine disseminated pyrite, exhibits conchoidal fracture.

Core #4 4043.2m (4.5cm)

Claystone: dark gray brown, firm, very slightly calcareous, silty, fine carbonaceous specks.

Core #5 3989m (3.5cm) (fractured)

Claystone: medium gray, firm, silty, dolomitic, fine carbonaceous specks.

Core #6 4317.5m (4.5cm)

Conglomeratic Sandstone: varicoloured gray, firm to hard, fine to pebble size grains, poorly sorted, fine grained matrix, calcareous cement, trace carbonaceous micro-laminations, patchy good – very good visible porosity, no show.

Core #7 4362.3m (3.5cm)

Claystone: dark gray black, firm, slightly calcareous, silty in part, fracture along long axis of the core.

Core #8 4353.5m (4.5cm)

Sandstone: gray, firm to hard, very fine to fine grained, well sorted, subrounded, quartz grains, trace feldspar and glauconite, well cemented with calcareous cement or matrix, patchy fair visible porosity, no shows.

Core #9 4390.0m (4cm)

Claystone: dark gray to gray black, firm, slightly calcareous, silty in part, trace disseminated and nodular pyrite, fracture along long axis of core.

Core #10 4354.5m (5cm)

Sandstone: light gray, firm to hard, quartz grains, trace glauconite and feldspar grains, fine grained, well sorted, subrounded grains, well cemented with a calcite cement, patchy fair visible porosity, no show; shale and carbonaceous micro laminations along the long axis of the core.

Core #11 4349.7m (5cm)

Sandstone: light gray, firm to hard, quartz grains, trace glauconite and feldspar grains, fine grained, well sorted, subrounded grains, well cemented with calcite cement, patchy fair visible porosity, no show.

Core #12 4325.5m (5cm)

Claystone with sandy laminations / sections: dark gray, firm, slightly calcareous, local fine to medium subrounded to subangular quartz grains, patchy poor visible porosity where sandy.

Core #13 4323m (5cm)

Pebble conglomerate: varicoloured, pebble size (chert, clastics, carbonates) in a strongly calcareous very fine sand matrix, patchy visible porosity in the matrix, no show.

Core #14 4319.8m (4 cm)

Conglomeratic sandstone: light gray, very fine to very coarse grained, quartz grains, minor lithic fragments, subrounded to subangular, well cemented with a strongly calcareous matrix or cement, patchy very poor visible porosity, no show.

Core #15 4318.5m (4.5cm)

Sandstone: gray, firm becoming friable, fine to medium quartz grains, poorly sorted, subrounded to subangular, weakly cemented with calcareous cement, patchy visible porosity (it may be better than observed as the sample was covered on the surface with the residue of drilling mud); carbonaceous shale micro-laminations along the long axis of the core.

Core #16 4313.5m (5cm)

Sandstone: gray, firm becoming friable, very fine to fine quartz grains, poorly sorted, subrounded to subangular, weakly cemented with calcareous cement, patchy visible porosity (it may be better than observed as the sample was covered on the surface with the residue of drilling mud); carbonaceous shale micro-laminations along the long axis of the core.

Core #17 4312.8m (5cm)

Sandstone: light gray, firm to hard, very fine to fine grained quartz, well sorted, subrounded to subangular grains, well cemented with a very strong calcareous cement, no visible porosity, no show; trace carbonaceous micro-laminations.

Core #18 4307.8m (5cm)

Claystone: medium to dark gray, soft to firm, very slightly calcareous, silty, trace carbonaceous specks, and micro-laminations.

Core #19 3973.5m (5cm) (fracture along long axis of core)

Claystone: dark gray black, firm, very slightly calcareous, silty, trace carbonaceous specks.

Core #20 3942.0m (4cm)

Claystone: dark gray black, firm, slightly calcareous.

Core #21 3906.5m (4.5cm)

Claystone: dark gray black, firm, slightly calcareous.

Core #22 3808.9m (4cm)

Claystone: dark gray black, firm, slightly calcareous, it has one beige marly section.

Core #23 3743.0m (5cm)

Claystone: dark gray black, firm, slightly calcareous.

Core #24 3701.0m (3.5cm) (broken up)

Claystone: dark gray black, firm, slightly calcareous.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 37
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 28, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 4,418.50
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence C ?

Operational Status: 00:00 status: Running 9 7/8" casing.

05:30 Status: Running 9 7/8" casing.

Operational Summary: Retrieve wear bushing, R/U to run casing, Run casing

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr forecast = continue to run casing, cement same.

72 hr forecast = Drill ahead

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 38
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 29, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 4,418.50
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence C ?

Operational Status: 00:00 status: Cementing 9 7/8" casing.

05:30 Status: Running wear bushing

Operational Summary: Run 9 7/8" casing, circulate hole (Max Gas = 57.7%), cement casing

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr forecast: Test BOP, M/U new BHA, RIH,
72 hr forecast: Drill Ahead

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 39
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jun 30, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 4,418.50
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence C ?

Operational Status: 00:00 status: Testing casing

05:30 Status: M/U BHA

Operational Summary: Test BOP's, Test Casing

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: Drill ahead

72 hr. forecast: Drill ahead

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 40
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 1, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 4,418.50
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence C?

Operational Status: 00:00 status: Drilling Cement

05:30 Status: POOH @ 4299m to check bit condition

Operational Summary: POOW w/ test tool, test casing, M/U BHA, RIH, tag cement @ 4273m, drill cement (slow ROP, cannot get constant ROP or torque)

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: POOH, check bit, RIH,
72 hr. forecast: Drill ahead.

Average gas while drilling cement = 30 u (Canadian)

LWD/MWD Sensor Offsets:

Res: = 8.54

GR: = 8.62

Dir: = 16.18

Sonic: = 24.57

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 41
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 2, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 4,418.50
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence C ?

Operational Status: 00:00 hrs: Working on top drive hydraulic seal

05:30 hrs: Working on top drive hydraulic seal

Operational Summary: POOH, change bit, check Powerdrive & LWD/MWD package, RIH to 4121m (top drive problem)

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: RIH, drill cement, shoe, 3m new formation, perform FIT to 15.5 ppg, increase MW to 13.0 ppg, drill ahead

72 hr. forecast: Drill ahead.

LWD/MWD Sensor Offsets:

Res: = 8.54

GR: = 8.62

Dir: = 16.18

Sonic: = 24.57

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 42
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 3, 2002
Time: 2400 hrs
Rotating Hours: 0.50 hrs

Depth: 4,421.00
Progress: 3.0
Average R.O.P.: 3.0

Daily Costs:

Accumulated Cost:

Formation: Sequence C ?

Operational Status: 00:00 hrs.: C & CM prior to performind FIT.

05:30 hrs: Increasing MW to 13.0 ppg prior to drilling ahead.

Operational Summary: Repair rig, RIH 4299m, drill cement & float equipment, claen rat hole to 4418m, drill to 4421m, circulate & condition mud

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

FIT = 15.5 ppg
Max Gas = 38u (Cdn)

24 hr. forecast: Drill ahead.

72 hr. forecast: Drill ahead.

LWD/MWD Sensor Offsets:

Res: = 8.54
GR: = 8.62
Dir: = 16.18
Sonic: = 24.57

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 43
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 4, 2002
Time: 2400 hrs
Rotating Hours: 1.50 hrs

Depth: 4,424.00
Progress: 3.00
Average R.O.P.: 2.00

Daily Costs:

Accumulated Cost:

Formation: Sequence C ?

Operational Status: 00:00 hrs.: RIH

05:30 hrs: break circulation, attempting to get LWD/MWD working

Operational Summary: Circulate hole clean, perform FIT, circulate & raise MW to 13.0 ppg, drill to 4424m, POOH, change bit, check PowerDrive & LWD/MWD package, RIH, Slip/Cut line, RIH

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: Drill ahead.
72 hr. forecast: Drill ahead.

LWD/MWD Sensor Offsets:

Res: = 8.55

GR: = 8.63

Dir: = 16.20

Sonic: = 24.57

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 44
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 5, 2002
Time: 2400 hrs
Rotating Hours: 1.40 hrs

Depth: 4,441.00
Progress: 17.00
Average R.O.P.: 12.14

Daily Costs:

Accumulated Cost:

Formation: Sequence C ?

Operational Status: 00:00 hrs: RIH

05:30 hrs: RIH

Operational Summary: RIH, attempt to get MWD/LWD started, drill to 4421m, POOH, C/O LWD/MWD & Powerdrive, RIH

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: Drill ahead.

72 hr. forecast: Drill ahead.

LWD/MWD Sensor Offsets:

Res: = 8.55

GR: = 8.63

Dir: = 16.20

Sonic: = 24.57

Lithology Summary

Kelly Bushing Elevation: 24.00

Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

4,424.00 to 4,441.00
(17.00)

Silty claystone: medium gray to gray brown, firm, subblocky, coarse silt size quartz grains, calcareous, argillaceous, carbonaceous specks and laminations with pyrite, minor calcite stringers and marlstone stringers, grading to siltstone.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Date: Jul 5, 2002
Time: 2400 hrs
Depth: 4,441.00
Progress: 17.00

Report From: Bryan Mac Dougall
Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval: From: 4,425.00 to 4,441.00 Thickness: 16.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.180	0.170								
Maximum	0.300	0.280								

Remarks: No trip gas observed.

Legend

Total Gas = TG
Methane = C1

Ethane = C2
Propane = C3

Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4

Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 45
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 6, 2002
Time: 2400 hrs
Rotating Hours: 10.20 hrs

Depth: 4,603.00
Progress: 162.00
Average R.O.P.: 15.88

Daily Costs:

Accumulated Cost:

Formation: Upper Sequence B ?

Operational Status: 00:00 hrs.: Drill ahead

05:30 hrs.: Drill ahead.

Operational Summary: RIH, wash from 4404 - 4441, drill ahead.

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: Drill ahead, looking for core point.
72 hr. forecast: Drill ahead, looking for core point

LWD/MWD Sensor Offsets:

Res: = 8.55

GR: = 8.63

Dir: = 16.20

Sonic: = 24.57

Lithology Summary

Kelly Bushing Elevation: 24.00 Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

4,441.00 to 4,555.00
(114.00) Claystone: medium to dark gray, firm, subblocky, calcareous, locally very silty, very fine disseminated pyrite, very fine carbonaceous specks, trace brown limestone stringers, grading to shale.

4,555.00 to 4,600.00
(45.00) Shale: medium to dark gray brown, firm, brittle, subblocky, calcareous, trace fine disseminated pyrite, minor trace very fine carbonaceous specks, trace beige limestone stringers, trace crystalline calcite vienlets.

The section from 4555 seems to be more indurated and less silty than the section from 4441 - 4555. Most changes however are very subtle and gradational.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 46
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 7, 2002
Time: 2400 hrs
Rotating Hours: 16.40 hrs

Depth: 4,938.00
Progress: 335.00
Average R.O.P.: 20.43

Daily Costs:

Accumulated Cost:

Formation: Sequence B ?

Operational Status: 00:00 hrs: Drill ahead

05:50 hrs.: Drill ahead

Operational Summary: Drill ahead, function test BOP, drill ahead.

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: Drill ahead, looking for core point.

72 hr. forecast: Drill ahead, looking for core point

LWD/MWD Sensor Offsets:

Res: = 8.55

GR: = 8.63

Dir: = 16.20

Sonic: = 24.57

Circulated 1 hr for samples @ 4450m

Lithology Summary

Kelly Bushing Elevation: 24.00

Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

4,600.00 to 4,940.00
(340.00)

Predominately Shale: light - dark gray to gray brown, trace green, firm to moderately hard, brittle, subblocky, calcareous, locally silty or with silty laminations, very fine carbonaceous specks and very fine disseminated pyrite, trace brown limestone stringers, trace white very calcareous sandy stringers, trace loose pyrite, trace crystalline calcite stringers or vianlets.

There were a few traces of sandstone.

light gray, friable, clear and frosted white quartz grains, very fine to fine grained, well sorted, subrounded, calcareous cement, argillaceous matrix, poor - no visible porosity, no shows.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Date: Jul 7, 2002
Time: 2400 hrs
Depth: 4,938.00
Progress: 335.00

Report From: Bryan Mac Dougall
Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval: From: 4,587.00 to 4,690.00 Thickness: 103.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.310	0.300								
Maximum	0.750	0.740	0.100							

Remarks:

Interval: From: 4,690.00 to 4,763.00 Thickness: 73.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.710	0.700	0.200							
Maximum	2.100	2.000	0.400	0.100	0.100					

Remarks:

Interval: From: 4,763.00 to 4,857.00 Thickness: 94.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.660	0.650	0.200							
Maximum	1.200	1.150	0.300	0.100						

Remarks:

Interval: From: 4,857.00 to 4,909.00 Thickness: 52.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	1.300	1.200	0.100							
Maximum	2.700	1.900	0.800	0.200	0.100					

Remarks:

Legend

Total Gas = TG
Methane = C1

Ethane = C2
Propane = C3

Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4

Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 47
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 8, 2002
Time: 2400 hrs
Rotating Hours: 13.50 hrs

Depth: 5,219.00
Progress: 281.00
Average R.O.P.: 20.81

Daily Costs:

Accumulated Cost:

Formation: Upper A Sequence ?

Operational Status: 00:00 hrs: Circulating and raising mud weight

05:30 hrs: Circulating out dummy connection,
mud weight = 13.8 ppg

Operational Summary: Drill ahead, circulate out gas at 5218m, raise mud weight to
13.5 ppg, dummy connection, circulate bottoms up,

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: Drill ahead, looking for core point.
72 hr. forecast: Drill ahead, looking for core point

LWD/MWD Sensor Offsets:

Res: = 8.55

GR: = 8.63

Dir: = 16.20

Sonic: = 24.57

Lithology Summary

Kelly Bushing Elevation: 24.00

Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 47
K.B. Elevation: 24.00
Ground Elevation: -977.00

4,940.00 to 5,219.00
(279.00)

The lithology through this interval is predominately shale. a representative description would be:

Shale: medium gray, subblocky, firm to hard, brittle, very calcareous, locally silty, trace very fine disseminated pyrite and carbonaceous flakes, trace limestone stringers.

Locally there is loose pyrite, pyrite veining, thin siltstone and very fine sandstone laminae, crystalline calcite.

From 5135m to 5219m there is sand in the samples, ranging from trace to 20%.

Sand: loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded, no shows.

Note: Screens on shaker from which samples are collected are now 210 mesh.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Date: Jul 8, 2002
Time: 2400 hrs
Depth: 5,219.00
Progress: 281.00

Report From: Bryan Mac Dougall
Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval: From: 4,909.00 to 5,074.00 Thickness: 165.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.680	0.580	0.100							
Maximum	3.000	2.800	0.200							

Remarks:

Interval: From: 5,074.00 to 5,186.00 Thickness: 112.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	1.400	1.300	0.100							
Maximum	3.300	3.000	0.300							

Remarks:

Interval: From: 5,186.00 to 5,219.00 Thickness: 33.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	19.300	18.600	0.600	0.100						
Maximum	61.300	57.200	3.600	0.700	0.600					

Remarks: Connection Gases (Canadian gas units) (peak/background/time pumps off)

4938.5 (170/107/9)
4967.0 (252/135/9)
4997.0 (264/137/9)
5025.0 (277/138/9)
5055.0 (300/161/9)
5084.0 (295/170/9)
5114.0 (329/200/8)
5143.0 (324/190/9)
5172.0 (320/190/6)

Legend

Total Gas = TG
Methane = C1

Ethane = C2
Propane = C3

Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4

Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 48
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 9, 2002
Time: 2400 hrs
Rotating Hours: 9.80 hrs

Depth: 5,405.00
Progress: 186.00
Average R.O.P.: 18.98

Daily Costs:

Accumulated Cost:

Formation: Sequence A ?

Operational Status: 00:00 hrs: Well shut in, circulating out kick

00:00 hrs: Well shut in, circulating out kick

Operational Summary: Circulate out dummy connection, raise MW to 13.8 ppg, dummy connection, circulate out dummy connection, drill ahead, shut-in well, circulate out kick

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: Well control

72 hr. forecast: Well control ??

LWD/MWD Sensor Offsets:

Res: = 8.55

GR: = 8.63

Dir: = 16.20

Sonic: = 24.57

Lithology Summary

Kelly Bushing Elevation: 24.00

Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

5,219.00 to 5,377.00
(158.00)

Shale: light to medium gray to gray brown, firm, subblocky, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace light gray very fine grained calcareous sandstone laminations, local silty laminations, trace limestone stringers.

Trace Sandstone stringers: light gray, off white, firm to hard, friable to brittle, very fine to fine grained quartz, well sorted, subrounded, calcareous cement, local pyrite cement, grading to sandy limestone, no visible porosity, no shows.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Date: Jul 9, 2002
Time: 2400 hrs
Depth: 5,405.00
Progress: 186.00

Report From: Bryan Mac Dougall
Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval: From: 5,219.00 to 5,377.00 Thickness: 158.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	1.780	1.510	0.400							
Maximum	2.700	2.440	0.900	0.300						

Remarks: SCG @ 5219m (5696/390/15) MW = 13.5 ppg
SCG @ 5219m (3026/135/18) MW = 13.8 ppg
CG @ 5248m (1438/250/8)
CG @ 5289m (1484/260/9)
CG @ 5318m (1130/225/9)
CG @ 5348m (1200/160/8)
POG @ 5350m (885/210/3)
POG @ 5353m (408/160/2)
Gas measured in Canadian units
POG = pumps off gas
SCG = simulated connection gas
CG = connection gas

Legend

Total Gas = TG
Methane = C1

Ethane = C2
Propane = C3

Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4

Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 49
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 10, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,405.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A ?

Operational Status: 00:00 hrs: Circulate kill mud

05:30 hrs: Circulate kill mud.

Operational Summary: Circulate out kick, circulate kill mud.

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: Well control
72 hr. forecast: Well control ??

LWD/MWD Sensor Offsets:

Res: = 8.55

GR: = 8.63

Dir: = 16.20

Sonic: = 24.57

Max gas while circulating out kick = 36% (3600 Cdn units)

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 50
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 11, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,405.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: 00:00 hrs: Well Control

05:30 hrs: Well Control

Operational Summary: Continue to pump kill weight mud.
Displace riser with kill weight mud.

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: Well control
72 hr. forecast: ???

LWD/MWD Sensor Offsets:

Res: = 8.55m

GR: = 8.63m

Dir: = 16.20m

Sonic: = 24.57m

Average gas while circulating kill mud = 32.9% (3920 Cdn u)

Average gas while displacing riser = 2.25% , the connection gas from 5377m was in the riser (CG= 862/225/8)

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 51
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 12, 2002
Time: 2400 hrs
Rotating Hours: hrs

Depth: 5,405.00
Progress: 0.00
Average R.O.P.:

Daily Costs:

Accumulated Cost:

Formation: Sequence A ?

Operational Status: 00:00 hrs: Circulating well, increasing MW to 14.9 ppg prior to dummy connection.

05:30 hrs: Circulating out dummy connection.

Operational Summary: Circulate well through choke, sweep stack, open well, flow check, circulate, dummy connection, circulate well, stage up flow rate to 350 gal/min, increase MW to 14.9 ppg.

Report From: Bryan Mac Dougall
Report To: Barbara Carleton
Remarks: 24 hr. forecast: Wiper trip
72 hr. forecast: ???

LWD/MWD Sensor Offsets:

Res: = 8.55m

GR: = 8.63m

Dir: = 16.20m

Sonic: = 24.57m

Gas on Btms up after opening well = 61.8% (6180 cdn u)

DCG = 5400/900/15 ; MW = 14.8 ppg

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 52
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 13, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,405.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: 00:00 hrs: circulating btms up from 4470m

05:00 hrs: Washing in hole

Operational Summary: Circulate, dummy connection (23 mins), circulate, wash to 5405m, circulate, pump out to 4997m, circulate btms up +, pump out to 4470m, circulate btms up +,

Report From: Bryan MacDougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: Circulate out gas, extended flow check, circulate
72 hr. forecast: ???

DCG (2400/200/23)

Btms up from washing to bottom = 23.9% (2390 u)

Btms up from 4397m = 56.7% (5670 u)

Test Gas equipment (OK)

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 53
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 14, 2002
Time: 0 hrs
Rotating Hours: 7.30 hrs

Depth: 5,423.00
Progress: 18.00
Average R.O.P.: 2.47

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: 00:00 hrs: Drill ahead

05:30 hrs: Depth 2425m, Extended flow check

Operational Summary: Circ well, wash to bottom, circ. well, lay out 1 single, p/u 1 std, drill ahead.

Report From: Bryan MacDougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: Extended flow check, circulate btms up, POOH
72 hr. forecast: log, run liner.

Flow rate not high enough to turn on LWD/MWD tools.

Lithology Summary

Kelly Bushing Elevation: 24.00

Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****5,405.00 to 5,425.00
(20.00)

Shale: (85%) medium gray to gray brown, subblocky, soft to firm, slightly calcareous, silty, in part, fine disseminated carbonaceous specks, calcareous stringers, locally pyritic, trace orange brown calcareous stringers (siderite ?).

Siltstone: (12%) light gray, soft to firm, quartz grains, trace feldspar and glauconite, slightly calcareous, carbonaceous specks, grading to silty shale.

Sandstone: (3%) light gray brown, soft to very hard, quartz, trace glauconite, very fine to fine grained, well sorted, subangular, hackly texture, generally well cemented with siliceous cement, calcareous matrix, locally pyritic, poor visible porosity, no shows.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 54
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 15, 2002
Time: 2400 hrs
Rotating Hours: 0.60 hrs

Depth: 5,425.00
Progress: 2.00
Average R.O.P.: 3.33

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: 00:00 hrs: Circulating up choke / kill lines with lower annular closed.

05:30 hrs: Circulating well

Operational Summary: Drill 5423m - 5425m, Circulate, flow check and bleed back volume, circulate well, erratic returns, close diverter - shut in on lower annular, circulate riser, monitor gas, open diverter, circulate riser, change out packer on diverter (monitor well on trip tank, circulate through choke) circulate up choke/kill lines with annular closed.

Report From: Bryan MacDougall

Report To: Barbara Carleton

Remarks:

24 hr. forecast: Circulate, extended flow check

72 hr. forecast: wireline log

Max gas = 55.7% (5570 Cdn u) (gas reading prior to shutting diverter and lower annular)

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 55
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 16, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,425.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Pulling out of hole to log.

5:30 Status: Pumping out of hole at 4365 meters.

Operational Summary: Open annular and circulate well, perform extended flow check, circulate bottoms up until background gas down to 200 units, begin to pump out of hole.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: Complete trip and begin logging with Schlumberger.

72hr Forecast: Complete logging and run casing.

BTM up after opening annular 56.7%

Flow check gas 63.5%

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 57
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 18, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,425.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: POOH with logging tools.

5:30 Status: RIH for clean out trip.

Operational Summary: Complete trip out of hole, rig up Schlumberger and run logs. 1 descent, two logging runs, CNL-LDT-OBMI, CMR.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: RIH to TD, breaking circulation at bottom of riser, halfway in casing and at shoe.

72hr Forecast: Complete wiper trip, circulate hole clean and POOH to complete logging.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 58
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 19, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,425.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Circulating at casing shoe.

5:30 Status: Washing into hole at 4828 meters.

Operational Summary: POOH with wireline and rig down, begin to RIH for clean out trip. Run in to bottom of riser and flush out riser, run in to 2727 meters and circulate casing, continue to run in to casing shoe and circulate hole clean.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: RIH to bottom, circulate hole clean and insure well is static, POOH to continue logging.

72hr Forecast. Complete logging and run liner.

Gas Peaks

Circulate Riser: 1.7%

Circulate btm's up at 2727: 23.7%

Circulate btm's up at shoe: 64.8%

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 60
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 21, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,425.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Circulating bottoms up after flow check.

5:30 Status: Pumping out of hole at 5025 meters.

Operational Summary: RIH from 5135 to 5425 pumping each stand in, circulate from TD with maximum gas of 67.1% and MW cut to 1670 kg/m3, continue to pump until gas values drop below 400 unit and returning MW is 1780kg/m3. Flow check for 80 minutes, circulate bottoms up.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: POOH and begin logging.

72hr Forecast: Complete logging and run casing.

GAS PEAKS	TG%	C1%	C2%	C3%	C4%
Circulating at 5135 :	66.3	60.6	4.5	0.9	0.2
Circulating at 5425:	67.1	61.4	4.6	0.9	0.2

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 61
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 22, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,425.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Rigging up Schlumberger

5:30 Status: Logging, CNL-LDT

Operational Summary: Pump out of hole to casing, circulate at casing and flow check, pull wet for 5 stands, hole fill good, pump slug and POOH to riser, boost riser clean and complete trip. Rig up Schlumberger.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: Log with Schlumberger
72hr Forecast: Run casing and cement.

Bottoms up gas from Flow Check at 5425 : 2.6%
Boost riser gas: 2.4%

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 62
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 23, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,425.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Pulling out of hole with MSCT.

5:30 Status: Rigging up to run casing.

Operational Summary: Complete first logging descent successfully, POOH and rig down CNL-LDT, rig up MSCT and RIH, problems with tool, pick up backup and RIH, cut 25 sidewall cores, POOH with MSCT.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: Run casing.

72hr Forecast: Cement casing and run VSP in cased hole.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 65
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 26, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,425.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Running in Hole to test BOP's.

5:30 Status: Testing BOP's.

Operational Summary: Circulate well before cementing liner, maximum gas of 63.4%. Cement liner, pull back to 3925 and circulate until background gas values drop to 2%. POOH, make up testing string and RIH .

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: Complete stack test, RIH and drill out.
72hr Forecast: Run VSP, drill ahead.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 66
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 27, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,425.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Running in hole with 165mm bit.

5:30 Status: Running in hole.

Operational Summary: RIH with test plug, pressure test stack, POOH and test surface equipment, lay down test stand and make up 165 mm bit and BHA, RIH picking up 102 mm drill pipe.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: RIH and drill out cement and shoe, spot LCM plug and POOH to run VSP.

72hr Forecast: Complete VSP and RIH for FIT.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 67
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 28, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,425.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Circulating, displacing to 1812kg/m3 mud

5:30 Status: Drilling out shoe track.

Operational Summary: RIH picking up 102mm (35 stands) drill pipe, run in to 4070 meters, wash down through top of liner, circulate at 4261 meters raising mud weight to 1812kg/m3. Continue to run in to 5363, tagging wiper plug, displace hole to 1812 kg/m3 mud .

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: Drill out shoe and spot LCM plug, POOH and begin logging VSP.
72hr Forecast: Complete VSP run, RIH for FIT.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 68
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 29, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,427.00
Progress: 2.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Circulating bottoms up.

5:30 Status: Pulling out of hole to run VSP.

Operational Summary: Drill shoe track and float equipment, drill 2 meters new hole to 5427.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: POOH and run VSP

72hr Forecast: Complete VSP run, Conduct FIT, RIH and drill ahead.

NOTE: Maximum gas from botoms up, 4.2%.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 69
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 30, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,427.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Wireline logging, VSP.

5:30 Status: Rigging Down Schlumberger

Operational Summary: Circulate bottoms up, POOH, rig up Schlumberger and begin running VSP.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: Complete VSP, conduct FIT, drill ahead.
72hr Forecast: Drill ahead.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 70
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Jul 31, 2002
Time: 2400 hrs
Rotating Hours: 0.00 hrs

Depth: 5,427.00
Progress: 0.00
Average R.O.P.: 0.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Running in hole at 4805 meters.

5:30 Status: Drilling at 5436 meters.

Operational Summary: Complete VSP's, rig down Schlumberger, conduct FIT to 1980 kg/m3 before running in hole, make up LWD and surface test, RIH.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: Perform FIT to 2040 kg/m3, then drill ahead.

72hr Forecast: Drill ahead looking for core point.

NOTE: LWD tool failed to function, plan to drill ahead 85 meters without the LWD.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 71
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Aug 1, 2002
Time: 2400 hrs
Rotating Hours: 6.80 hrs

Depth: 5,480.00
Progress: 53.00
Average R.O.P.: 7.79

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Pulling out of hole to change out LWD and mud motor.

5:30 Status: Running in hole.

Operational Summary: RIH with 117 mm bit, conduct FIT to 2040 kg/m3 EMW, lwd tool failure, drill ahead to 5480, mud motor failure, circulate bottoms up and POOH.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: Change out Anadril tools and RIH to drill ahead.

72hr Forecast: Drill ahead looking for a core point.

Lithology Summary

Kelly Bushing Elevation: 24.00

Ground Elevation: -977.00

***** All Depths measured from Kelly Bushing Elevation *****

5,425.00 to 5,480.00
(55.00)

Shale: Medium gray and partly light gray, slightly brownish in part, calcareous, silty, common white calcite fragments and veins, trace pyrite and occasional carbonaceous stks and flakes, rare loose sand grains, rare trace Inoceramus.

Well Name: Chevron et al Newburn H-23

Date: Aug 1, 2002

Location: Scotian Shelf

Time: 2400 hrs

Report From: Cyril Mac Pherson

Depth: 5,480.00

Report To: Barbara Carleton

Progress: 53.00

**** All Gas Values are in Percentage ****

Interval: From: 5,427.00 to 5,480.00 Thickness: 53.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.340	0.310								
Maximum	0.820	0.780								

Remarks: Trip Gas : 2.2%/0.5%/47.5 hrs

LegendTotal Gas = TG
Methane = C1Ethane = C2
Propane = C3Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 72
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Aug 2, 2002
Time: 2400 hrs
Rotating Hours: 5.00 hrs

Depth: 5,517.00
Progress: 37.00
Average R.O.P.: 7.40

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Drilling 117mm hole.

5:30 Status: Drilling ahead.

Operational Summary: POOH, change out MWD tool and mud motor, RIH , function test mwd on way in hole,
drill 177 mm hole to 5517.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: Drill ahead to a core point.

72 hr Forecast: Drill ahead to a core point.

NOTE: LWD offset:

GR: 14.63

Res: 12.38

Lithology Summary

Kelly Bushing Elevation: 24.00

Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****5,480.00 to 5,505.00
(25.00)

Shale: Medium gray, partly dark gray, blocky, slightly silty, calcareous with minor to trace white limestone stringers and streaks,

5,505.00 to 5,525.00
(20.00)

Shale: 95% Medium gray, dark gray in part, slightly silty, calcareous, trace carbonaceous, occasional thin siltstone stringers and interbeds.
Siltstone: 5% Gray, friable to firm, calcareous and argillaceous, common carbonaceous material.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Date: Aug 2, 2002
Time: 2400 hrs
Depth: 5,517.00
Progress: 37.00

Report From: Cyril Mac Pherson
Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval: From: 5,480.00 to 5,495.00 Thickness: 15.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.370	0.360								
Maximum	0.450	0.430								

Remarks: TRIP GAS: 1.3%/0.4%/24hrs

Legend

Total Gas = TG
Methane = C1

Ethane = C2
Propane = C3

Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4

Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 73
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Aug 3, 2002
Time: 2400 hrs
Rotating Hours: 20.00 hrs

Depth: 5,682.00
Progress: 165.00
Average R.O.P.: 8.25

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Drilling ahead.

5:30 Status: Drilling ahead, 2.5 m/hr

Operational Summary: Drill 117mm hole from 5517 to 5682 meters.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: Drill ahead to possible core point.

72hr Forecast: Drill ahead to possible core point.

LWD Offsets: GR: 14.69 m

RES: 12.43 m

Lithology Summary

Kelly Bushing Elevation: 24.00

Ground Elevation: -977.00

***** All Depths measured from Kelly Bushing Elevation *****5,525.00 to 5,680.00
(155.00)

Shale: Predominately medium gray and brownish gray, silty, calcareous at top of section becoming less calcareous with depth, common white calcite or limestone fragments, possible shell fragments, locally grading to argillaceous siltstone locally up to 20%, occasional loose sand grains.

5,680.00 to 5,685.00
(5.00)

Shale: 70% medium gray to brownish in part, firm to blocky, silty, occasional white calcite, trace pyrite, minor argillaceous siltstone stringers and lenses, slightly sandy.

Siltstone: 30% light gray to grayish white, friable, argillaceous and trace calcareous, partly sandy, trace carbonaceous.

5,685.00 to 5,690.00
(5.00)

Shale: 80 % medium gray to brownish in part, firm to blocky, silty, occasional white calcite, trace pyrite, minor argillaceous siltstone stringers and lenses, slightly sandy.

Sandstone: 20% light grayish white, very fine grained to silty, subangular and well sorted, partly friable with argillaceous cement to hard with silica cement, minor shaly laminae, tight, no shows.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Date: Aug 3, 2002
Time: 2400 hrs
Depth: 5,682.00
Progress: 165.00

Report From: Cyril Mac Pherson
Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval: From: 5,500.00 to 5,670.00 Thickness: 170.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.460	0.440								
Maximum	0.640	0.610								

Remarks: Connection gas: 0.9%/0.6%/5min at 5611
1.0%/0.6%/5min at 5640

Legend

Total Gas = TG
Methane = C1

Ethane = C2
Propane = C3

Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4

Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 74
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Aug 4, 2002
Time: 2400 hrs
Rotating Hours: 21.00 hrs

Depth: 5,754.00
Progress: 72.00
Average R.O.P.: 3.43

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Drilling ahead.

Operational Summary: Drill 117mm hole from 5682 to 5754 meters.

5:30 Status: Drilling ahead at 5778, 4 meter/hr.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: Drill ahead, possible bit trip.

72hr Forecast: Drill ahead looking for a core point.

Lithology Summary

Kelly Bushing Elevation:

24.00

Ground Elevation:

-977.00

**** All Depths measured from Kelly Bushing Elevation ****

5,690.00 to 5,760.00
(70.00)

Shale: Medium gray and partly brownish, firm to blocky and partly amorphous, slightly silty with common very fine sandstone clasts and stringers, occasional calcareous fragments and streaks, minor loose sand grains.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Date: Aug 4, 2002
Time: 2400 hrs
Depth: 5,754.00
Progress: 72.00

Report From: Cyril Mac Pherson
Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval: From: 5,670.00 to 5,750.00 Thickness: 80.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.380	0.360								
Maximum	0.560	0.540								

Remarks: Connection Gas: 0.60% / 0.40% / 5min at 5669
0.96% / 0.50% / 5min at 5697
1.17% / 0.54% / 5min at 5727

Legend

Total Gas = TG
Methane = C1

Ethane = C2
Propane = C3

Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4

Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 75
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Aug 5, 2002
Time: 2400 hrs
Rotating Hours: hrs

Depth: 5,786.00
Progress: 32.00
Average R.O.P.:

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Tripping out of hole for new bit.

5:30 Status: Running in hole with bit # 9.

Operational Summary: Drill 117mm hole from 5754 to 5786, slow rop and torque, circulate bottoms up and begin to POOH.

Report From: Cyril Mac Pherson

Report To: Barbara Carleton

Remarks:

24hr Forecast: Complete bit trip, and drill ahead

72hr Forecast: Drill ahead looking for something to core.

Lithology Summary

Kelly Bushing Elevation: 24.00 **Ground Elevation:** -977.00

**** All Depths measured from Kelly Bushing Elevation ****

5,760.00 to 5,773.00 (13.00)	Shale: medium gray and medium brownish gray, firm to blocky and slightly amorphous, silty, occasional to common calcareous fragments, minor siltstone stringers or clasts, occasional ssstrgs and or clasts.
5,773.00 to 5,775.00 (2.00)	Siltstone: light gray to gray white, friable, argillaceous, sandy in part, locally becoming very fine grained sandstone, trace carbonaceous material.
5,775.00 to 5,779.00 (4.00)	Sandstone: off white, very fine grained, subrounded and well sorted, hard and siliceous, no visible porosity, no shows, common loose sand grains.
5,779.00 to 5,786.00 (7.00)	Shale: medium brownish gray, blocky and firm, silty in part, occasional calcareous fragments, minor siltstone and rare sandstone, trace pyrite.

Well Name: Chevron et al Newburn H-23

Date: Aug 5, 2002

Location: Scotian Shelf

Time: 2400 hrs

Depth: 5,786.00

Report From: Cyril Mac Pherson

Progress: 32.00

Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval: From: 5,750.00 to 5,786.00 Thickness: 36.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.230	0.220								
Maximum	0.310	0.290								

Remarks: Connection gas: 1.09% / 0.30% / 5 mins at 5754
0.70% / 0.26% / 5 mins at 5781

Legend

Total Gas = TG
Methane = C1

Ethane = C2
Propane = C3

Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4

Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 76
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Aug 6, 2002
Time: 2400 hrs
Rotating Hours: 5.20 hrs

Depth: 5,812.00
Progress: 26.00
Average R.O.P.: 5.00

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Drill Ahead

05:30 status: Drill ahead

Operational Summary: Drill new hole from 5786 - 5812m

Report From: Bryan Mac Dougall
Report To: Barbara Carleton
Remarks:

24 hr forecast: drill ahead
72 hr forecast: drill ahead

Sensor Offsets:
Gamma Ray = 14.69 m
Resistivity = 12.43

Note:

- 1) Resistivity tool failure.
- 2) Problems with datalogs well wizzard & database.

Lithology Summary

Kelly Bushing Elevation: 24.00 Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

5,786.00 to 5,810.00 (24.00)	Shale 98%: medium brown to gray brown, subblocky, soft to firm, silty, calcareous, locally pyritic, minor light gray siltstone laminations, trace light gray to off white very fine grained sandstone laminations, trace calcareous laminations, local calcareous fragments. Siltstone 2%: light gray, soft, friable, carbonaceous in part.
5,810.00 to 5,815.00 (5.00)	Shale 100%: light gray brown to brown, subblocky, soft to firm, silty, calcareous, locally pyritic, minor light gray siltstone laminations, common calcareous fragments, trace white limestone stringers.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Date: Aug 6, 2002
Time: 2400 hrs
Depth: 5,812.00
Progress: 26.00

Report From: Bryan Mac Dougall
Report To: Barbara Carleton

**** All Gas Values are in Percentage ****

Interval: From: 4,586.00 to 5,800.00 Thickness: 1,214.00

	TG	C1	C2	C3	IC4	NC4	TC4	IC5	NC5	TC5
Minimum	0.380	0.370								
Maximum	0.640	0.600								

Remarks: Trip Gas = 2966/50/33 hrs

Legend

Total Gas = TG
Methane = C1

Ethane = C2
Propane = C3

Iso Butane = IC4
Normal Butane = NC4
Total Butane = TC4

Iso Pentane = IC5
Normal Pentane = NC5
Total Pentane = TC5

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 77
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Aug 7, 2002
Time: 2400 hrs
Rotating Hours: 22.60 hrs

Depth: 5,951.00
Progress: 139.00
Average R.O.P.: 6.15

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Drill Ahead

05:30 status: Drill Ahead

Operational Summary: Drill ahead.

Report From: Bryan Mac Dougall
Report To: Barbara Carleton
Remarks:

24 hr forecast: drill ahead
72 hr forecast: drill ahead

Sensor Offsets:
Gamma Ray = 14.69 m
Resistivity = 12.43

Note:
1) Resistivity tool failure.

Lithology Summary

Kelly Bushing Elevation: 24.00 Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

5,815.00 to 5,820.00 (5.00)	Shale 85%: gray, subblocky, soft to firm, silty, very calcareous, local fine disseminated pyrite, carbonaceous specks, trace white limestone stringers. Sand 15%: predominately loose very fine clear quartz grains, trace feldspar, subrounded, well sorted, occasionally weakly consolidated with calcareous cement, friable, trace carbonaceous specks, trace white limestone stringers, no visible porosity, no shows.
5,820.00 to 5,920.00 (100.00)	Shale 100%: light gray to gray brown, subblocky, firm, brittle, calcareous, calcareous stringers and micro laminae, silty in part, fine disseminated pyrite, trace carbonaceous specks, trace white limestone fragments.
5,920.00 to 5,930.00 (10.00)	Shale 100%: medium brown, firm, brittle, slightly calcareous, silty in part, fine disseminated pyrite.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 77
K.B. Elevation: 24.00
Ground Elevation: -977.00

5,930.00 to 5,940.00
(10.00)

Shale 100: light to medium gray brown, firm, brittle, slightly calcareous, inc in silt content + silty laminae, fine disseminated and nodular pyrite, trace white limestone fragments and laminations.

Well Name: Chevron et al Newburn H-23
Location: Scotian Shelf

Spud Date: May 22, 2002 @ 12:30
Days from Spud: 78
K.B. Elevation: 24.00
Ground Elevation: -977.00

Date: Aug 8, 2002
Time: 2400 hrs
Rotating Hours: 20.70 hrs

Depth: 6,051.00
Progress: 100.00
Average R.O.P.: 4.83

Daily Costs:

Accumulated Cost:

Formation: Sequence A

Operational Status: Drill ahead.

05:30 status: Circ btms up at TD (6070m MD), LWD/MWD failure and pressure loss necessitated calling TD.

Operational Summary: Drill ahead, weigh up mud to 15.8 ppg.

Report From: Bryan Mac Dougall

Report To: Barbara Carleton

Remarks:

24 hr forecast: Circulate hole clean, POOH, R/U Schlumberger

72 hr Forecast: Run Wireline, prepare to P & A.

Lithology Summary

Kelly Bushing Elevation: 24.00 Ground Elevation: -977.00

**** All Depths measured from Kelly Bushing Elevation ****

5,940.00 to 5,954.00 (14.00)	Shale 100%: medium gray, firm, brittle, slightly calcareous, silty, common light gray coarse silt laminae, fine disseminated and nodular pyrite, trace carbonaceous laminations.
5,954.00 to 5,958.00 (4.00)	Siltstone: light gray to off white, soft to firm, friable, coarse silt to very fine sand, arenaceous, quartz grains, trace carbonaceous laminations, locally slightly calcareous, grading to very fine grained sandstone. Sandstone: light gray to off white, soft, friable, quartz, very fine grained, well sorted, poorly cemented with calcareous cement, poor visible porosity; + loose unconsolidated quartz grains, very fine to lower fine grained, moderately well sorted, subrounded, no shows.
5,958.00 to 6,055.00 (97.00)	Shale 100%: brown to gray brown, soft to firm, brittle, calcareous, pyritic, minor silty laminae, trace white limestone fragments and stringers, trace carbonaceous specks.

Appendix O

Detailed Drill

Cuttings Descriptions

Appendix O
Detailed Drill Cuttings Descriptions

Chevron et al Newburn H-23 **Detailed Drill Cuttings Descriptions**

(10 meter spacing)

1,920.00 to 1,930.00	95% Cement	Cement from shoe.
	5% Claystone	medium gray to gray grn, soft, amorphous, slightly calcareous.
1,930.00 to 1,940.00	70% Claystone	gray to gray green, soft, slightly calcareous, glauconite grains.
	30% Cement	Cement from shoe.
1,940.00 to 1,950.00	70% Claystone	gray to gray green, soft to firm, fine glauconite grains, trace loose very fine quartz grains, very fine disseminated pyrite.
	30% Cement	Cement from shoe.
1,950.00 to 1,960.00	70% Claystone	gray to gray green, soft to firm, fine glauconite grains, trace loose very fine quartz grains, very fine disseminated pyrite.
	30% Cement	Cement from shoe.
1,960.00 to 1,970.00	80% Claystone	gray to gray green, soft to firm, fine glauconite grains, trace loose very fine quartz grains, very fine disseminated pyrite.
	20% Cement	Cement from shoe.
1,970.00 to 1,980.00	100% Claystone	gray, gray green, soft to firm, fine glauconite grains, trace loose very fine quartz grains, very fine disseminated pyrite.
1,980.00 to 1,990.00	100% Claystone	gray, silty, amorphous, common glauconite grains, trace carbonaceous flakes, occasional disseminated pyrite.
1,990.00 to 2,000.00	100% Claystone	gray, silty, amorphous, common glauconite grains, occasional disseminated pyrite, trace carbonaceous flakes, trace sand grains.
2,000.00 to 2,010.00	100% Claystone	gray, silty, amorphous, common glauconite grains, occasional disseminated pyrite, trace carbonaceous flakes, trace sand grains.
2,010.00 to 2,020.00	100% Claystone	gray, silty, amorphous, minor glauconite grains, occasional disseminated pyrite, trace carbonaceous flakes.
2,020.00 to 2,030.00	100% Claystone	gray, firm, silty, trace carbonaceous flakes, rare glauconite, very slightly calcareous.
2,030.00 to 2,040.00	100% Claystone	gray, firm, silty, trace carbonaceous flakes, rare glauconite, very slightly calcareous.
2,040.00 to 2,050.00	100% Claystone	gray, firm, silty, trace carbonaceous flakes, rare glauconite, very slightly calcareous.
2,050.00 to 2,060.00	100% Claystone	gray, firm to amorphous in part, silty, trace carbonaceous flakes.
2,060.00 to 2,070.00	100% Claystone	medium gray, silty in part, firm to amorphous, minor trace glauconite and disseminated pyrite, trace carbonaceous flakes.
2,070.00 to 2,080.00	100% Claystone	medium gray, silty, firm, partly amorphous, trace disseminated pyrite, minor glauconite grains, trace sand grains.

2,080.00 to 2,090.00	100% Claystone medium gray, silty, firm, partly amorphous, trace disseminated pyrite, minor glauconite grains, trace sand grains.
2,090.00 to 2,100.00	100% Claystone medium gray, silty, firm, partly amorphous, trace disseminated pyrite, minor glauconite grains, trace sand grains.
2,100.00 to 2,110.00	100% Claystone medium gray, trace light gray and slightly calcareous, trace very fine siliceous and slightly carbonaceous sandstone.
2,110.00 to 2,120.00	100% Claystone medium gray, silty, firm, amorphous, trace carbonaceous and rare glauconite grain.
2,120.00 to 2,130.00	100% Claystone gray to gray brown, amorphous to subblocky, firm to brittle, very fine disseminated pyrite, trace carbonaceous specks, silty in part.
2,130.00 to 2,140.00	100% Claystone gray to gray brown, amorphous to subblocky, firm to brittle, very fine disseminated pyrite, trace carbonaceous specks, rare glauconite grains, silty in part.
2,140.00 to 2,150.00	100% Claystone gray to gray brown, amorphous to subblocky, firm to brittle, very fine disseminated pyrite, trace carbonaceous specks, rare glauconite grains, silty in part, locally grading to shale.
2,150.00 to 2,160.00	100% Claystone gray brown, amorphous to subblocky, firm to brittle, very fine disseminated pyrite, rare carbonaceous specks and glauconite grains, very fine silt, locally grading to shale.
2,160.00 to 2,170.00	100% Claystone gray brown, amorphous to subblocky, firm to brittle, very fine disseminated pyrite, rare carbonaceous specks and glauconite grains, very fine silt.
2,170.00 to 2,180.00	100% Claystone gray and gray brown, amorphous to subblocky, firm to brittle, very fine disseminated pyrite, rare carbonaceous specks and glauconite grains, very fine silt, locally grading to shale.
2,180.00 to 2,190.00	100% Claystone gray brown, amorphous to subblocky, firm to brittle, trace very fine disseminated pyrite, rare carbonaceous specks.
2,190.00 to 2,200.00	100% Claystone gray brown, amorphous to subblocky, firm to brittle, trace very fine disseminated pyrite, rare carbonaceous specks.
2,200.00 to 2,210.00	100% Claystone gray brown, silty, firm and amorphous.
2,210.00 to 2,220.00	100% Claystone gray brown, silty, firm and amorphous, rare very fine sandstone stringer.
2,220.00 to 2,230.00	100% Claystone gray brown, silty, firm and amorphous, common glauconite grains.
2,230.00 to 2,240.00	100% Claystone gray, brownish in part, silty, firm and amorphous, trace glauconite.
2,250.00 to 2,260.00	100% Claystone gray, brownish in part, firm, amorphous, blocky in part, trace carbonaceous flakes, silty, rarely marly.
2,260.00 to 2,270.00	95% Claystone gray, brownish in part, firm, amorphous, blocky in part, trace carbonaceous flakes, silty. 5% Limestone light beige, lime mudstone, argillaceous, trace carbonaceous, moderate hard.

2,270.00 to 2,280.00	100% Claystone gray, brownish in part, firm, amorphous, blocky in part, trace carbonaceous flakes, silty, common limestone stringers, common green very fine glauconite grains in clay matrix.
2,280.00 to 2,290.00	100% Claystone gray, gray brown in part, firm, moderately amorphous, blocky in part, silty, trace carbonaceous flakes, minor beige limestone stringers, occasional glauconitic sandstone laminae.
2,290.00 to 2,300.00	100% Claystone gray, gray brown in part, firm, moderately amorphous, blocky in part, silty, trace carbonaceous flakes, minor beige limestone stringers, occasional glauconitic sandstone laminae.
2,300.00 to 2,310.00	100% Claystone gray brown, firm, amorphous to blocky silty, trace carbonaceous flakes, minor beige limestone stringers, occasional glauconitic sandstone laminae.
2,310.00 to 2,320.00	100% Claystone gray brown, firm, amorphous to blocky silty, trace carbonaceous flakes, minor beige limestone stringers, occasional glauconitic sandstone laminae.
2,320.00 to 2,330.00	100% Claystone gray brown, firm, amorphous to subblocky, silty, trace carbonaceous flakes, very fine glauconite grains, fine disseminated pyrite.
2,330.00 to 2,340.00	100% Claystone gray brown, firm, amorphous to subblocky, silty, trace carbonaceous flakes, very fine glauconite grains, fine disseminated pyrite.
2,340.00 to 2,350.00	100% Claystone gray brown, firm, amorphous to subblocky, silty, trace carbonaceous flakes, very fine glauconite grains, fine disseminated pyrite.
2,350.00 to 2,360.00	100% Claystone gray brown, firm, partly amorphous, slightly silty, trace carbonaceous flakes.
2,360.00 to 2,370.00	100% Claystone gray brown, firm, partly amorphous, slightly silty, trace carbonaceous flakes, trace limestone stringers and trace glauconite.
2,370.00 to 2,380.00	100% Claystone gray brown, firm, partly amorphous, slightly silty, trace carbonaceous flakes, trace limestone stringers and trace glauconite, trace very fine grained glauconitic sandstone.
2,380.00 to 2,390.00	100% Claystone brown, gray brown, firm to partly amorphous, silty in part, trace carbonaceous flakes.
2,390.00 to 2,400.00	100% Claystone gray and brownish gray, firm to blocky, amorphous in part, slightly silty, common trace glauconite, occasional beige limestone laminae.
2,400.00 to 2,410.00	100% Claystone gray and brownish gray, firm to blocky, amorphous in part, slightly silty to trace very fine sandy, common trace glauconite, occasional beige limestone laminae.
2,410.00 to 2,420.00	100% Claystone gray and brownish gray, firm to blocky, amorphous in part, slightly silty, common trace glauconite, trace limestone laminae.
2,420.00 to 2,430.00	100% Claystone gray brown, firm, blocky in part, slightly amorphous, silty in part, common trace glauconite.
2,430.00 to 2,440.00	100% Claystone gray brown, trace light green, firm, blocky in part, slightly amorphous, silty in part, common trace glauconite.

2,440.00 to 2,450.00	100% Claystone gray brown, rarely very light green and light gray, firm, blocky in part, slightly amorphous, silty in part, common trace glauconite.
2,450.00 to 2,460.00	100% Claystone gray, slightly greenish, firm to blocky, silty in part, trace glauconite.
2,460.00 to 2,470.00	100% Claystone gray, slightly greenish, trace light gray, firm to blocky, silty in part, trace glauconite.
2,470.00 to 2,480.00	100% Claystone medium gray and rarely light gray, firm to blocky, amorphous in part, rare trace fine to medium grained glauconitic sandstone.
2,480.00 to 2,490.00	100% Claystone medium gray and rarely light gray, firm to blocky, amorphous in part, trace calcareous.
2,490.00 to 2,500.00	100% Claystone medium gray, firm to blocky, amorphous in part, rare trace fine grained glauconitic sandstone.
2,500.00 to 2,510.00	100% Claystone medium gray, firm to soft, amorphous, trace carbonaceous flakes, silty in part.
2,510.00 to 2,520.00	95% Claystone medium gray, firm to soft, amorphous, trace carbonaceous flakes, silty, trace fine grained sandstone. 5% Limestone light grayish white to beige, partly greenish, firm, lime mudstone, crumbly, argillaceous, trace sand grains.
2,520.00 to 2,530.00	80% Claystone gray, firm to soft in part, amorphous, slightly silty. 20% Limestone beige to gray white and greenish in part, lime mudstone locally becoming partly microcrystalline, crumbly to firm and slightly hard in part, argillaceous, minor clear calcite.
2,530.00 to 2,540.00	80% Claystone gray, firm and blocky, amorphous, slightly silty, common trace disseminated pyrite, trace carbonaceous flakes. 20% Limestone beige to rarely gray white, lime mudstone locally becoming partly microcrystalline, crumbly to firm and slightly hard in part, argillaceous, trace chalky, trace carbonaceous material.
2,540.00 to 2,550.00	85% Claystone gray, firm and blocky, amorphous, slightly silty, common trace disseminated pyrite, trace carbonaceous flakes. 15% Limestone beige, lime mudstone locally becoming partly microcrystalline, crumbly to firm and slightly hard in part, argillaceous, trace chalky, trace carbonaceous material.
2,550.00 to 2,560.00	90% Claystone gray and light gray, rare green, firm and blocky, amorphous, silty in part, common trace pyrite, thin limestone laminae. 10% Limestone beige, lime mudstone, crumbly to firm and slightly hard in part, argillaceous, trace chalky, trace carbonaceous material.
2,560.00 to 2,570.00	90% Claystone gray, slightly greenish in part, firm and partly blocky, amorphous, slightly silty, commonly pyritic with thin limestone stringers and laminae. 10% Limestone beige, mudstone to partly very fine packstone, crumbly to slightly hard, argillaceous in part, trace carbonaceous.
2,570.00 to 2,580.00	95% Claystone Light gray to medium gray, slightly greenish and brownish in part, firm, amorphous, silty, commonly pyritic, calcareous in part. 5% Limestone beige, mudstone to partly very fine packstone, crumbly to slightly hard, argillaceous in part, trace carbonaceous.

2,580.00 to 2,590.00	100% Claystone light gray to medium gray, slightly greenish in part, firm and amorphous, minor limestone stringers becoming calcareous in part.
2,590.00 to 2,600.00	100% Claystone light gray, slightly greenish in part, firm and amorphous, calcareous to marly, trace pyritic.
2,600.00 to 2,610.00	100% Claystone light gray and partly brown, firm and amorphous, calcareous to marly, minor beige limestone stringers.
2,610.00 to 2,620.00	100% Claystone light gray and partly brown, firm and amorphous, calcareous to marly, minor beige limestone stringers.
2,620.00 to 2,630.00	100% Claystone light to medium gray, partly brown, soft to firm, amorphous to subblocky, calcareous to marly, trace disseminated pyrite, minor beige limestone stringers.
2,630.00 to 2,640.00	100% Claystone light to medium gray, gray green, partly brown, soft to firm, amorphous to subblocky, calcareous to marly, minor beige limestone stringers.
2,640.00 to 2,650.00	100% Claystone light to medium gray, gray green, partly brown, soft to firm, amorphous to subblocky, calcareous to marly, minor beige limestone stringers.
2,650.00 to 2,660.00	100% Claystone light to medium gray, gray green, gray brown, firm, amorphous to subblocky, calcareous to marly, fine disseminated pyrite, minor beige limestone stringers.
2,660.00 to 2,670.00	100% Claystone light to medium gray, gray green, gray brown, firm, subblocky, calcareous to marly, fine disseminated pyrite, minor beige limestone stringers, locally grading to marlstone.
2,670.00 to 2,680.00	100% Claystone light to medium gray, gray brown, firm, subblocky, very calcareous to marly, fine disseminated pyrite, minor beige limestone stringers, locally grading to marlstone.
2,680.00 to 2,690.00	100% Claystone light to medium gray, gray brown, firm, subblocky, very calcareous to marly, fine disseminated pyrite, minor beige limestone stringers, locally grading to marlstone.
2,690.00 to 2,700.00	100% Claystone predominately medium gray, subblocky, firm to brittle, very calcareous to marly, fine disseminated pyrite, trace fine carbonaceous specks, minor beige limestone stringers, locally grading to marlstone.
2,700.00 to 2,710.00	100% Claystone predominately medium gray, subblocky, firm to brittle, very calcareous to marly, fine disseminated pyrite, trace fine carbonaceous specks, minor beige limestone stringers, locally grading to marlstone.
2,710.00 to 2,720.00	100% Claystone light to medium gray, gray green, gray brown, subblocky, firm to brittle, very calcareous to marly, fine disseminated pyrite, locally grading to marlstone.
2,720.00 to 2,730.00	95% Claystone light to medium gray, gray green, gray brown, subblocky, firm to brittle, very calcareous to marly, fine disseminated pyrite, locally grading to marlstone. 5% Limestone beige to gray white, firm to hard, mudstone, locally microcrystalline.
2,730.00 to 2,740.00	100% Claystone very light gray to medium gray, gray green, amorphous to subblocky, soft to firm, very calcareous to marly, fine disseminated pyrite, trace glauconite laminae, beige limestone stringers, grading to marlstone.

2,740.00 to 2,750.00	100% Claystone very light gray to medium gray, gray green, amorphous to subblocky, soft to firm, very calcareous to marly, fine disseminated pyrite, beige limestone stringers, grading to marlstone.
2,750.00 to 2,760.00	100% Claystone very light gray white to medium gray, gray green, amorphous to subblocky, soft to firm, very calcareous to marly, fine disseminated pyrite and loose pyrite, trace loose very fine quartz grains, beige limestone stringers, grading to marlstone.
2,760.00 to 2,770.00	65% Marlstone very light gray white, soft, amorphous, fine disseminated pyrite and pyrite laminae. 30% Claystone light gray to medium gray, amorphous to subblocky, soft to firm, very calcareous, fine disseminated pyrite, grading to marlstone. 5% Limestone beige to gray white, firm to hard, bit to crumbly, mudstone, locally microcrystalline.
2,770.00 to 2,780.00	60% Limestone very light greenish gray, soft to firm, brittle, amorphous to subblocky, mudstone, locally packstone, very fine pyrite laminae, dense, no shows. 20% Claystone light gray to medium gray, amorphous to subblocky, soft to firm, very calcareous, fine disseminated pyrite, grading to marlstone. 20% Marlstone very light gray white, soft, amorphous, fine disseminated pyrite and pyrite laminae.
2,780.00 to 2,790.00	80% Limestone very light greenish gray, soft to firm, brittle, amorphous to subblocky, mudstone, locally packstone, very fine pyrite laminae, dense, no shows. 10% Claystone light gray to medium gray, amorphous to subblocky, soft to firm, very calcareous, fine disseminated pyrite, grading to marlstone. 10% Marlstone very light gray white, soft, amorphous, fine disseminated pyrite and pyrite laminae.
2,790.00 to 2,800.00	90% Limestone light gray white and slightly greenish, firm to crumbly, mudstone, locally grading to marlstone with minor claystone stringers and thin interbeds. 10% Claystone gray brown, firm, calcareous.
2,800.00 to 2,810.00	100% Limestone light gray white and slightly greenish, firm to crumbly, mudstone, locally grading to marlstone with minor claystone stringers.
2,810.00 to 2,820.00	100% Limestone gray white, greenish in part, slightly hard to crumbly mudstone, argillaceous to marly, locally interbedded with gray brown claystone.
2,820.00 to 2,830.00	100% Limestone gray white, greenish in part, slightly hard to crumbly mudstone, argillaceous to marly, locally interbedded with gray brown claystone.
2,830.00 to 2,840.00	100% Limestone very light greenish gray to gray white, mudstone, slightly hard, argillaceous to marly, rare claystone stringer.
2,840.00 to 2,850.00	60% Claystone light brown, firm to amorphous, slightly to moderately calcareous. 40% Limestone very light greenish gray to gray white, mudstone, slightly hard, argillaceous to marly, rare claystone stringer.
2,850.00 to 2,860.00	80% Claystone medium gray and brown, firm to blocky, silty, calcareous to marly in part, common trace glauconite and pyritic in part. 20% Limestone light gray green to gray white, firm to slightly hard, argillaceous mudstone, rarely grading to packstone, interbeds in claystone.

2,860.00 to 2,870.00	90% Claystone medium gray and brown, firm to blocky, silty, calcareous to marly in part, common trace glauconite and pyritic in part. 10% Limestone light gray green to gray white, firm to slightly hard, argillaceous mudstone, rarely grading to packstone, interbeds in claystone.
2,870.00 to 2,880.00	60% Limestone light gray green to gray white, firm to slightly hard, argillaceous mudstone, rarely grading to packstone. 40% Claystone medium gray and brown, firm to blocky, silty, calcareous to marly in part, common trace glauconite and pyritic in part.
2,880.00 to 2,890.00	100% Claystone medium gray, subblocky, firm to moderately hard, brittle, very calcareous, common very fine disseminated pyrite, glauconite grains and carbonaceous specks, grading to shale.
2,890.00 to 2,900.00	100% Claystone medium gray, gray brown, subblocky, firm to moderately hard, brittle, very calcareous, common very fine disseminated pyrite + loose pyrite, glauconite grains, carbonaceous specks, locally grading to shale.
2,900.00 to 2,910.00	100% Claystone medium gray, firm to blocky, calcareous, grading to shale in part, commonly pyritic, trace light gray green limestone stringers.
2,910.00 to 2,920.00	75% Claystone medium gray, firm to blocky, calcareous, grading to shale in part, commonly pyritic, trace light gray green limestone stringers. 25% Siltstone light gray, partly greenish, argillaceous, calcareous, glauconitic.
2,920.00 to 2,930.00	100% Claystone medium gray to light gray, firm to blocky and slightly hard, calcareous to marly, minor limestone stringers, common pyrite.
2,930.00 to 2,940.00	100% Claystone medium gray to light gray, firm to blocky and slightly hard, calcareous to marly, minor limestone stringers, common pyrite.
2,940.00 to 2,950.00	100% Claystone gray, firm to blocky, slightly silty, common glauc, calcareous locally grading to marlstone, minor beige limestone stringers.
2,950.00 to 2,960.00	100% Claystone medium gray, firm to partly blocky, calcareous to marly in part, minor beige limestone stringers, common trace glauconite.
2,960.00 to 2,970.00	100% Claystone medium gray, firm to partly blocky, calcareous to marly in part, minor beige limestone stringers, common trace glauconite.
2,970.00 to 2,980.00	100% Claystone medium gray, firm to partly blocky, calcareous to marly in part, minor beige limestone stringers, common trace glauconite, trace pyrite.
2,980.00 to 2,990.00	100% Claystone medium gray, firm to blocky in part, calcareous to marly, minor beige limestone stringers, very abundant pyrite nodules.
2,990.00 to 3,000.00	100% Claystone medium gray, firm, blocky in part, calcareous to marly, trace pyrite.
3,000.00 to 3,010.00	100% Claystone medium gray, firm, blocky in part, calcareous to marly, trace pyrite.
3,010.00 to 3,020.00	100% Claystone medium gray, firm, blocky in part, calcareous to marly, trace pyrite.

3,020.00 to 3,030.00	50% Claystone brownish gray, firm, silty in part, trace pyrite, common carbonaceous flakes, calcareous to marly. 50% Limestone beige to tan, crumbly, mudstone, common carbonaceous streaks and flakes.
3,030.00 to 3,040.00	75% Claystone brownish gray, firm, silty in part, trace pyrite, common carbonaceous flakes, calcareous to marly. 25% Limestone beige to tan, crumbly, mudstone, common carbonaceous streaks and flakes.
3,040.00 to 3,050.00	85% Claystone medium gray, firm to blocky in part, calcareous to occasionally marly, silty grading locally to siltstone, trace glauconite, common carbonaceous flakes and streaks, interbedded with limestone. 15% Limestone beige, speckled black, crumbly mudstone, occasionally becoming very fine packstone, rarely microcrystalline in part, common carbonaceous material, slightly argillaceous.
3,050.00 to 3,060.00	95% Claystone medium gray, firm to blocky in part, calcareous to occasionally marly, silty grading locally to siltstone, trace glauconite, common carbonaceous flakes and streaks, interbedded with limestone. 5% Limestone beige, speckled black, crumbly mudstone, occasionally becoming very fine packstone, rarely microcrystalline in part, common carbonaceous material, slightly argillaceous.
3,060.00 to 3,070.00	90% Claystone medium gray, firm to blocky in part, calcareous to occasionally marly, silty grading locally to siltstone, trace glauconite, common carbonaceous flakes and streaks, interbedded with limestone. 10% Limestone beige, speckled black, crumbly mudstone, occasionally becoming very fine packstone, rarely microcrystalline in part, common carbonaceous material, slightly argillaceous, trace pyrite.
3,070.00 to 3,080.00	100% Claystone medium gray, firm and blocky, calcareous, silty grading locally to argillaceous siltstone, minor beige limestone stringers, pyritic in part.
3,080.00 to 3,090.00	100% Claystone medium gray, firm and blocky, calcareous, silty grading locally to argillaceous siltstone, occasional very fine argillaceous sandstone stringer, minor beige limestone stringers, pyritic in part.
3,090.00 to 3,100.00	100% Claystone medium gray, firm and blocky, calcareous, silty grading locally to argillaceous siltstone, minor beige limestone stringers, pyritic in part.
3,100.00 to 3,110.00	90% Claystone medium gray, firm to partly blocky, calcareous grading occasionally to argillaceous siltstone, minor glauconite, common trace carbonaceous flakes streaks, trace pyrite, rare trace siderite. 10% Limestone beige to tan, speckled black with carbonaceous matter, crumbly, mudstone.
3,110.00 to 3,120.00	100% Claystone medium gray, firm to partly blocky, calcareous grading occasionally to argillaceous siltstone, minor glauconite, common trace carbonaceous flakes streaks, trace pyrite, rare trace siderite, minor limestone stringers.
3,120.00 to 3,130.00	100% Claystone medium gray, firm to partly blocky, calcareous grading occasionally to argillaceous siltstone, minor glauconite, common trace carbonaceous flakes streaks, trace pyrite, rare trace siderite, rare limestone stringer.
3,130.00 to 3,140.00	100% Claystone medium gray, firm, blocky, calcareous, silty, trace pyrite, rare limestone stringer, trace glauconite.

3,140.00 to 3,150.00	100% Claystone medium gray, firm, blocky, calcareous, silty, trace pyrite, minor beige limestone stringers, trace glauconite.
3,150.00 to 3,160.00	100% Claystone medium gray, firm, blocky, calcareous, silty, trace pyrite, minor beige limestone stringers.
3,160.00 to 3,170.00	100% Claystone medium gray, firm, bky, calcareous, silty grading locally to siltstone, common glauconite, rare limestone stringer.
3,170.00 to 3,180.00	100% Claystone medium gray, firm, bky, calcareous, silty grading locally to siltstone, common glauconite, trace pyrite.
3,180.00 to 3,190.00	100% Claystone medium gray, firm, blocky, calcareous, silty grading to argillaceous siltstone, pyritic, locally glauconitic, occasional very fine sandstone stringer, trace limestone stringer.
3,190.00 to 3,200.00	100% Claystone medium gray, firm, blocky, calcareous, silty grading to argillaceous siltstone, pyritic, locally glauconitic, occasional very fine sandstone stringer, trace limestone stringer.
3,200.00 to 3,210.00	100% Claystone medium gray, firm, blocky, calcareous, silty grading to argillaceous siltstone, pyritic, locally glauconitic, occasional very fine sandstone stringer, trace limestone stringer.
3,210.00 to 3,220.00	100% Claystone medium gray, firm to blocky in part, rarely platy, calcareous, silty grading to and partly interbedded with siltstone, rare trace sandy, trace limestone stringers.
3,220.00 to 3,230.00	80% Claystone medium gray, firm to blocky in part, rarely platy, calcareous, silty grading to siltstone, rare trace sandy, trace limestone stringers. 20% Siltstone gray, firm to friable, argillaceous, calcareous, glauconitic in part.
3,230.00 to 3,240.00	95% Claystone medium gray, firm to blocky, moderately calcareous, silty grading to siltstone in part, common trace carbonaceous flakes. 5% Limestone beige, moderately hard to brittle in part, mudstone, argillaceous, partly pyritic, common carbonaceous specks.
3,240.00 to 3,250.00	90% Claystone medium gray, firm to blocky, moderately calcareous, silty grading to siltstone in part, common trace carbonaceous flakes, trace glauconite, occasional pyrite. 10% Limestone beige, moderately hard to brittle in part, mudstone, argillaceous, partly pyritic, common carbonaceous specks.
3,250.00 to 3,260.00	100% Claystone medium gray, firm to blocky, moderately calcareous, silty grading to siltstone in part, common trace carbonaceous flakes, trace glauconite, occasional pyrite, minor limestone stringers.
3,260.00 to 3,270.00	100% Claystone medium gray, firm to blocky, moderately calcareous, silty grading to siltstone in part, common trace carbonaceous flakes, trace glauconite, occasional pyrite, minor limestone stringers.
3,270.00 to 3,280.00	100% Claystone medium gray, firm to blocky, moderately calcareous, silty, occasionally grading to and interbedded with argillaceous siltstone, common thin beige limestone stringers.

3,280.00 to 3,290.00	90% Claystone medium gray, firm to blocky, moderately calcareous, silty, occasionally grading to and interbedded with argillaceous siltstone. 10% Limestone beige to tan in part, partly speckled black, mudstone, modlt hard to brittle, common carbonaceous streaks and specks.
3,290.00 to 3,300.00	100% Claystone medium gray, firm to blocky, moderately calcareous, silty, occasionally grading to and interbedded with argillaceous siltstone, common thin beige limestone stringers.
3,300.00 to 3,310.00	90% Claystone medium gray, firm to blocky, moderately calcareous, silty, occasionally grading to and interbedded with argillaceous siltstone. 10% Limestone beige to tan in part, partly speckled black, mudstone, modlt hard to brittle, common carbonaceous streaks and specks.
3,310.00 to 3,320.00	100% Claystone medium gray, firm to blocky, moderately calcareous, silty, occasionally grading to and interbedded with argillaceous siltstone, common thin beige limestone stringers.
3,320.00 to 3,330.00	100% Claystone medium gray, firm to blocky, moderately calcareous, silty, occasionally grading to and interbedded with argillaceous siltstone, common thin beige limestone stringers.
3,330.00 to 3,340.00	100% Claystone medium gray, firm to blocky, moderately calcareous, silty, occasionally grading to and interbedded with argillaceous siltstone, common thin beige limestone stringers.
3,340.00 to 3,350.00	100% Claystone medium gray, blocky to platy in part, weakly calcareous, silty, rare limestone stringer.
3,350.00 to 3,360.00	100% Claystone medium gray, blocky, weakly calcareous, silty grading to siltstone, minor limestone stringers.
3,360.00 to 3,370.00	100% Claystone medium gray, blocky, weakly calcareous, silty and commonly grading to argillaceous siltstone, trace pyrite, trace carbonaceous flakes, rare limestone stringer.
3,370.00 to 3,380.00	100% Claystone medium gray, blocky, weakly calcareous, silty and commonly grading to argillaceous siltstone, trace pyrite, trace carbonaceous flakes, minor limestone stringer.
3,380.00 to 3,390.00	90% Claystone medium gray, blocky, weakly calcareous, silty and commonly grading to argillaceous siltstone, trace pyrite, trace carbonaceous flakes. 10% Limestone beige to tan, speckled black, moderately hard to brittle, mudstone becoming partly microcrystalline in part, common carbonaceous specks.
3,390.00 to 3,400.00	100% Claystone medium gray, weakly to moderately calcareous, silty grading to and interbedded with argillaceous siltstone, trace pyrite, occasional limestone stringers, common trace carbonaceous specks.
3,400.00 to 3,410.00	100% Claystone medium gray, weakly to moderately calcareous, silty grading to and interbedded with argillaceous siltstone, trace pyrite, occasional limestone stringers, common trace carbonaceous specks.
3,410.00 to 3,420.00	100% Claystone medium gray, weakly to moderately calcareous, silty grading to and interbedded with argillaceous siltstone, trace pyrite, occasional limestone stringers, common trace carbonaceous specks.
3,420.00 to 3,430.00	100% Claystone medium gray, firm to blocky, weakly to moderately calcareous, silty grading to argillaceous siltstone interbeds and stringers, trace pyrite and common trace carbonaceous specks, minor limestone stringers.

3,430.00 to 3,440.00	100% Claystone medium gray, firm to blocky, weakly to moderately calcareous, silty grading to argillaceous siltstone interbeds and stringers, trace pyrite and common trace carbonaceous specks, minor limestone stringers
3,440.00 to 3,450.00	100% Claystone medium gray, firm to blocky, weakly to moderately calcareous, silty grading to argillaceous siltstone interbeds and stringers, trace pyrite and common trace carbonaceous specks, minor limestone stringers
3,450.00 to 3,460.00	100% Claystone medium gray, firm to blocky, weakly to moderately calcareous, silty grading to argillaceous siltstone interbeds and stringers, trace pyrite and common trace carbonaceous specks, minor limestone stringers
3,460.00 to 3,470.00	100% Claystone medium gray, firm to blocky and partly platy, calcareous to dolomitic, silty grading to siltstone, minor beige to tan dolomitic limestone stringers.
3,470.00 to 3,480.00	100% Claystone medium gray, firm to blocky and partly platy, calcareous to dolomitic, silty grading to siltstone, minor beige to tan dolomitic limestone stringers, trace pyrite.
3,480.00 to 3,490.00	100% Claystone medium gray, firm to blocky and partly platy, dolomitic, silty grading to siltstone, minor dolomite stringers.
3,490.00 to 3,500.00	100% Claystone medium gray, firm to blocky and partly platy, dolomitic, silty grading to siltstone, minor dolomite stringers.
3,500.00 to 3,510.00	100% Claystone medium gray, blocky and platy in part, dolomitic, silty grading to siltstone, minor dolomite stringers.
Change to 5 meter drill cuttings sample interval	
3,510.00 to 3,515.00	100% Claystone medium gray, blocky and platy in part, dolomitic, silty grading to siltstone, minor dolomite stringers.
3,515.00 to 3,520.00	100% Claystone medium gray, blocky to platy in part, calcareous in part, silty grading to siltstone, partly glauconitic and carbonaceous.
3,520.00 to 3,525.00	100% Claystone medium gray, blocky to platy in part, calcareous in part, silty grading to siltstone, partly glauconitic and carbonaceous.
3,525.00 to 3,530.00	100% Claystone medium gray, blocky to platy in part, calcareous in part, silty grading to siltstone, partly glauconitic and carbonaceous, common thin siltstone laminae, occasional sand grain, minor limestone stringers.
3,530.00 to 3,535.00	100% Claystone medium gray, blocky to slightly amorphous, moderately calcareous, silty grading to siltstone. common carbonaceous, flakes, minor siltstone interbeds, occasional limestone stringers.
3,535.00 to 3,540.00	100% Claystone medium gray, blocky to slightly amorphous, moderately calcareous, silty grading to siltstone. common carbonaceous, flakes, minor siltstone interbeds, occasional limestone stringers.
3,540.00 to 3,545.00	90% Claystone medium gray, blocky to slightly amorphous, moderately calcareous, silty grading to siltstone. common carbonaceous, flakes, minor siltstone stringers. 10% Limestone tan, mudstone, argillaceous in part, brittle, common carbonaceous specks and streaks, interbeds in claystone.

3,545.00 to 3,550.00	95% Claystone medium gray, blocky to slightly amorphous, moderately calcareous, silty grading to siltstone. common carbonaceous, flakes, occasional gray white siltstone stringers. 5% Limestone tan, mudstone, argillaceous in part, brittle, common carbonaceous specks and streaks, interbeds in claystone.
3,550.00 to 3,555.00	90% Claystone medium gray, blocky to platy in part, slightly amorphous, moderately calcareous, silty, common trace carbonaceous flakes, occasional siltstone stringers, trace pyrite. 10% Limestone tan, mudstone, moderately hard in part to brittle, carbonaceous in part, slightly argillaceous, thin interbeds in claystone.
3,555.00 to 3,560.00	100% Claystone medium gray, blocky to platy in part, slightly amorphous, moderately calcareous, silty, common trace carbonaceous flakes, occasional siltstone stringers, trace pyrite, minor thin limestone stringers.
3,560.00 to 3,565.00	100% Claystone medium gray, firm to blocky, amorphous in part, commonly silty with occasional siltstone laminae and thin interbeds, minor limestone stringers, trace chert fragments.
3,565.00 to 3,570.00	100% Claystone medium gray, firm to blocky, amorphous in part, partly calcareous, commonly silty with occasional siltstone laminae and thin interbeds, minor limestone stringers.
3,570.00 to 3,575.00	100% Claystone medium gray, firm to blocky, amorphous in part, partly calcareous, commonly silty with occasional siltstone laminae and thin interbeds, minor dolomitic limestone stringers.
3,575.00 to 3,580.00	100% Claystone medium gray, firm to blocky, amorphous in part, partly calcareous, commonly silty with occasional siltstone laminae and thin interbeds, minor dolomitic limestone stringers.
3,580.00 to 3,585.00	90% Claystone medium gray, firm to blocky in part, slightly to moderately calcareous, silty grading to siltstone, trace pyrite, common carbonaceous flakes, rare trace possible shell fragment. 10% Limestone tan, argillaceous mudstone, occasionally becoming cryptocrystalline, brittle to partly moderately hard, common carbonaceous specks and streaks.
3,585.00 to 3,590.00	100% Claystone medium gray, firm to blocky in part, slightly to moderately calcareous, silty grading to siltstone, trace pyrite, common carbonaceous flakes.
3,590.00 to 3,595.00	95% Claystone medium gray, firm to blocky in part, slightly to moderately calcareous, silty grading to siltstone, trace pyrite, common carbonaceous flakes. 5% Limestone tan, argillaceous mudstone, occasionally becoming cryptocrystalline, brittle to partly moderately hard, common carbonaceous specks and streaks.
3,595.00 to 3,600.00	100% Claystone medium gray, firm to blocky in part, slightly to moderately calcareous, silty grading to siltstone, trace pyrite, common carbonaceous flakes.
3,600.00 to 3,605.00	100% Claystone medium gray, firm to partly amorphous, silty with common siltstone stringers, weakly calcareous to dolomitic, trace glauconite, minor dolomitic limestone stringers.
3,605.00 to 3,610.00	100% Claystone medium gray, firm to partly amorphous, silty with common siltstone stringers, weakly calcareous to dolomitic, trace glauconite, minor dolomite stringers.
3,610.00 to 3,615.00	100% Claystone medium gray, firm to partly amorphous, silty with common siltstone stringers, weakly calcareous to dolomitic, trace glauconite, minor dolomite stringers.

3,615.00 to 3,620.00	95% Claystone medium gray, firm to blocky in part, dolomitic, silty with siltstone stringers. 5% Dolomite tan, mudstone to packstone in part, common cryptocrystalline fragments, brittle to hard in part, commonly argillaceous grading locally to marlstone.
3,620.00 to 3,625.00	100% Claystone medium gray, firm and partly blocky, small\dolomitic, silty with siltstone, common minor dolomite stringers and laminae.
3,625.00 to 3,630.00	95% Claystone medium gray, firm to blocky and amorphous in part, dolomitic, silty with siltstone stringers, common dolomite stringers and thin laminae. 5% Dolomite tan to light brown in part, mudstone to cryptocrystalline in part, brittle to locally moderately hard and dense, commonly argillaceous grading to marlstone in part, common carbonaceous flakes and streaks.
3,630.00 to 3,635.00	100% Claystone medium gray, firm to blocky and amorphous in part, dolomitic, silty with siltstone stringers, common dolomite stringers and thin laminae.
3,635.00 to 3,640.00	100% Claystone medium gray, firm to blocky and amorphous in part, dolomitic, silty with siltstone stringers, common dolomite stringers and thin laminae.
3,640.00 to 3,645.00	100% Claystone medium gray, firm to blocky and amorphous in part, dolomitic, silty with siltstone stringers, common dolomite stringers and thin laminae.
3,645.00 to 3,650.00	100% Claystone medium gray, blocky, amorphous in part, dolomitic, silty, minor dolomite stringers.
3,650.00 to 3,655.00	100% Claystone medium gray, blocky, amorphous in part, dolomitic, silty, minor dolomite stringers.
3,655.00 to 3,660.00	100% Claystone medium gray, blocky, amorphous in part, dolomitic, silty, minor dolomite stringers.
3,660.00 to 3,665.00	100% Claystone medium gray, blocky, silty commonly grading to siltstone, common carbonaceous specks, dolomitic in part with minor dolomite stringers and laminae.
3,665.00 to 3,670.00	100% Claystone medium gray, blocky, silty commonly grading to siltstone, common carbonaceous specks, dolomitic in part with minor dolomite stringers and laminae.
3,670.00 to 3,675.00	100% Claystone medium gray, blocky, silty commonly grading to siltstone, common carbonaceous specks, dolomitic in part with minor dolomite stringers and laminae, trace glauconite.
3,675.00 to 3,680.00	90% Claystone medium gray, firm to blocky in part, partly dolomitic, silty with minor siltstone stringers, common carbonaceous specks. 10% Dolomite tan, mudstone with frequent cryptocrystalline fragments and grains, moderately hard to brittle, argillaceous, trace pyrite, trace calcite veins, common carbonaceous streaks.
3,680.00 to 3,685.00	90% Claystone medium gray, firm to blocky in part, partly dolomitic, silty with minor siltstone stringers, common carbonaceous specks. 10% Dolomite tan, mudstone with frequent cryptocrystalline fragments and grains, moderately hard to brittle, argillaceous, trace pyrite, trace calcite veins, common carbonaceous streaks.
3,685.00 to 3,690.00	100% Claystone medium gray, firm to blocky in part, partly dolomitic, silty with minor siltstone stringers, common carbonaceous specks with minor dolomite stringers and thin laminae.

3,690.00 to 3,695.00	100% Claystone medium gray, firm to blocky in part, partly dolomitic, silty with minor siltstone stringers, common carbonaceous specks with minor dolomite stringers and thin laminae.
3,695.00 to 3,700.00	100% Claystone medium gray, blocky, slightly platy, silty grading to argillaceous siltstone, dolomitic, common dolomite stringers.
3,700.00 to 3,705.00	90% Claystone medium gray, blocky, slightly platy, silty grading to argillaceous siltstone, dolomitic. 10% Dolomite tan to light brown in part, mudstone to packstone with common cryptocrystalline grains or fragments, common carbonaceous streaks.
3,705.00 to 3,710.00	100% Claystone medium gray, blocky, slightly platy, silty grading to argillaceous siltstone, dolomitic, occasional dolomite stringers, common gray argillaceous siltstone stringers or interbeds.
3,710.00 to 3,715.00	80% Claystone medium gray, soft, amorphous, silty, trace pyrite, weakly dolomitic, occasional dolomite stringer. 20% Siltstone light gray, soft, argillaceous, trace carbonaceous specks.
3,715.00 to 3,720.00	100% Claystone medium gray, firm to partly blocky, slightly dolomitic, silty with minor siltstone interbeds, trace pyrite, occasional dolomite stringers.
3,720.00 to 3,725.00	100% Claystone medium gray, firm to partly blocky, slightly dolomitic, silty with minor siltstone interbeds, trace pyrite, occasional dolomite stringers.
3,725.00 to 3,730.00	100% Claystone medium gray, firm to partly blocky, slightly dolomitic, silty with minor siltstone interbeds, trace pyrite, occasional dolomite stringers.
3,730.00 to 3,735.00	85% Claystone medium gray, firm to partly blocky, slightly dolomitic, silty with minor siltstone interbeds, trace pyrite. 15% Dolomite tan to brown in part, msdt with common cryptocrystalline fragments or grains, common carbonaceous streaks.
3,735.00 to 3,740.00	95% Claystone medium gray, firm to partly blocky, slightly dolomitic, silty with minor siltstone interbeds, trace pyrite, occasional dolomite stringers. 5% Dolomite tan to brown, mudstone to partly cryptocrystalline, common carbonaceous streaks.
3,740.00 to 3,745.00	100% Claystone medium gray, firm to partly blocky, slightly dolomitic, silty with minor siltstone interbeds, trace pyrite, minor dolomite stringers.
3,745.00 to 3,750.00	95% Claystone medium gray, blocky, silty with siltstone stringers, weakly dolomitic, common disseminated pyrite. 5% Dolomite tan to brown, mudstone to partly cryptocrystalline, brittle to partly moderately hard, argillaceous in part, common carbonaceous streaks.
3,750.00 to 3,755.00	90% Claystone medium gray, blocky, silty with siltstone stringers, weakly dolomitic, common disseminated pyrite. 10% Dolomite tan to brown, mudstone to partly cryptocrystalline, brittle to partly moderately hard, argillaceous in part, common carbonaceous streaks.

3,755.00 to 3,760.00	95% Claystone medium gray, blocky, silty with siltstone stringers, weakly dolomitic, occasional disseminated pyrite. 5% Dolomite tan to brown, mudstone to partly cryptocrystalline, brittle to partly moderately hard, argillaceous in part, common carbonaceous streaks.
3,760.00 to 3,765.00	90% Claystone medium gray, blocky, silty with siltstone stringers, weakly dolomitic, occasional disseminated pyrite. 10% Dolomite tan to brown, mudstone to partly cryptocrystalline, brittle to partly moderately hard, argillaceous in part, common carbonaceous streaks.
3,765.00 to 3,770.00	100% Claystone medium gray, blocky, silty, partly dolomitic, minor siltstone stringers and common dolomite stringers.
3,770.00 to 3,775.00	100% Claystone medium gray, blocky, silty, partly dolomitic, minor siltstone stringers and common dolomite stringers.
3,775.00 to 3,780.00	100% Claystone medium gray, blocky, silty, partly dolomitic, minor siltstone stringers and common dolomite stringers.
3,780.00 to 3,785.00	100% Claystone medium gray, firm to partly blocky and occasionally soft, silty, slightly dolomitic, common trace carbonaceous specks, grading locally to siltstone, minor dolomite stringers.
3,785.00 to 3,790.00	100% Claystone medium gray, firm to partly blocky and occasionally soft, silty, slightly dolomitic, common trace carbonaceous specks, grading locally to siltstone, minor dolomite stringers, trace pyrite.
3,790.00 to 3,795.00	100% Claystone medium gray, firm to partly blocky, silty, slightly dolomitic, common trace carbonaceous specks, grading locally to siltstone, minor dolomite stringers.
3,795.00 to 3,800.00	90% Claystone medium gray, blocky to platy in part, moderately to weakly dolomitic, silty, common carbonaceous specks, occasionally grading to siltstone. 10% Dolomite brown to tan, predominately cryptocrystalline, partly mudstone, moderately hard in part, to brittle, common carbonaceous streaks.
3,800.00 to 3,805.00	90% Claystone medium gray, blocky to platy in part, moderately to weakly dolomitic, silty, common carbonaceous specks, occasionally grading to siltstone. 10% Dolomite
3,805.00 to 3,810.00	100% Claystone medium gray, blocky to platy in part, moderately to weakly dolomitic, silty, common carbonaceous specks, occasionally grading to siltstone, minor dolomite stringers.
3,810.00 to 3,815.00	100% Claystone medium gray, blocky to platy in part, moderately to weakly dolomitic, silty, common carbonaceous specks, occasionally grading to siltstone, minor dolomite stringers.
3,815.00 to 3,820.00	100% Claystone medium gray, blocky, silty, dolomitic in part, common trace carbonaceous specks, minor dolomite stringers.
3,820.00 to 3,825.00	100% Claystone medium gray, blocky, silty, dolomitic in part, common trace carbonaceous specks, minor dolomite stringers.
3,825.00 to 3,830.00	100% Claystone medium gray, blocky, silty, dolomitic in part, common trace carbonaceous specks, minor dolomite stringers.

3,830.00 to 3,835.00	100% Claystone medium gray, firm to blocky in part, weakly dolomitic, silty, common carbonaceous specks, minor dolomitic mudstone stringers.
3,835.00 to 3,840.00	100% Claystone medium gray, firm to blocky in part, weakly dolomitic, silty, common carbonaceous specks, minor dolomitic mudstone stringers.
3,840.00 to 3,845.00	100% Claystone medium gray, firm to blocky in part, weakly dolomitic, silty, common carbonaceous specks, minor dolomitic mudstone stringers.
3,845.00 to 3,850.00	100% Claystone medium gray, firm to blocky in part, weakly dolomitic, silty, common carbonaceous specks, minor dolomitic mudstone stringers.
3,850.00 to 3,855.00	100% Claystone medium gray, firm to blocky in part, silty, slightly dolomitic, common trace carbonaceous specks, minor dolomite stringers and thin interbeds.
3,855.00 to 3,860.00	100% Claystone medium gray, firm to blocky in part, silty, slightly dolomitic, common trace carbonaceous specks, minor dolomite stringers and thin interbeds.
3,860.00 to 3,865.00	100% Claystone medium gray, firm to blocky in part, silty, slightly dolomitic, common trace carbonaceous specks, minor dolomite stringers and thin interbeds.
3,865.00 to 3,870.00	100% Claystone medium gray, firm to blocky in part, silty, slightly dolomitic, common trace carbonaceous specks, minor dolomite stringers and thin interbeds.
3,870.00 to 3,875.00	100% Claystone medium gray, firm to blocky in part, silty, slightly dolomitic, common trace carbonaceous specks, minor dolomite stringers and thin interbeds.
3,875.00 to 3,880.00	85% Claystone medium gray, blocky to platy in part, silty, slightly dolomitic, occasional siltstone stringers, common carbonaceous specks. 15% Dolomite tan to beige, mudstone to partly cryptocrystalline, moderately hard to brittle, common carbonaceous streaks, rare trace chert.
3,880.00 to 3,885.00	80% Claystone medium gray, blocky to platy in part, silty, slightly dolomitic, occasional siltstone stringers, common carbonaceous specks. 10% Dolomite tan to beige, mudstone to partly cryptocrystalline, moderately hard to brittle, common carbonaceous streaks, rare trace chert.
3,885.00 to 3,890.00	100% Claystone medium gray, blocky, silty, slightly dolomitic, carbonaceous specks, occasional siltstone stringers and minor argillaceous dolomite stringers.
3,890.00 to 3,895.00	100% Claystone medium gray, blocky, silty, slightly dolomitic, carbonaceous specks, occasional siltstone stringers and minor argillaceous dolomite stringers.
3,895.00 to 3,900.00	100% Claystone medium gray, blocky, silty, slightly dolomitic, carbonaceous specks, occasional siltstone stringers and minor argillaceous dolomite stringers.
3,900.00 to 3,905.00	100% Claystone medium gray, blocky, silty, slightly dolomitic, carbonaceous specks, occasional siltstone stringers and minor argillaceous dolomite stringers.
3,905.00 to 3,910.00	100% Claystone medium gray, blocky, silty, slightly dolomitic, carbonaceous specks, occasional siltstone stringers and minor argillaceous dolomite stringers.
3,910.00 to 3,915.00	95% Claystone medium gray, blocky, silty, slightly dolomitic, common carbonaceous specks, occasional gray argillaceous siltstone stringers with rare white calcareous very fine sandy siltstone interbeds, trace pyritic fossil burrow.

	5% Dolomite tan to beige, mudstone with common cryptocrystalline fragments and grains, argillaceous grading locally to marlstone.
3,915.00 to 3,920.00	90% Claystone medium gray, blocky, silty, slightly dolomitic, common carbonaceous specks, occasional gray argillaceous siltstone stringers with rare white calcareous very fine sandy siltstone interbeds, trace pyritic fossil burrow. 10% Dolomite tan to beige, mudstone with common cryptocrystalline fragments and grains, argillaceous grading locally to marlstone.
3,920.00 to 3,925.00	70% Claystone medium gray, blocky, silty, slightly dolomitic, common carbonaceous specks, occasional gray argillaceous siltstone stringers with rare white calcareous very fine sandy siltstone interbeds. 30% Siltstone off white to light gray, friable, calcareous, argillaceous, slightly sandy. Occasional carbonaceous flakes, rare trace glauconite.
3,925.00 to 3,930.00	75% Claystone medium gray, blocky, silty, slightly dolomitic, common carbonaceous specks, occasional gray argillaceous siltstone stringers with rare white calcareous very fine sandy siltstone interbeds. 25% Siltstone off white to light gray, friable, calcareous, argillaceous, slightly sandy. Occasional carbonaceous flakes, rare trace glauconite.
3,930.00 to 3,935.00	100% Claystone medium gray, firm to blocky, moderately dolomitic, silty grading locally to siltstone, trace carbonaceous specks, minor beige dolomite stringers,
3,935.00 to 3,940.00	90% Claystone medium gray, firm to blocky, moderately dolomitic, silty grading locally to siltstone, trace carbonaceous specks. 10% Dolomite beige to tan and brown in part, mudstone to partly cryptocrystalline, brittle to locally hard, argillaceous in part, common trace carbonaceous streaks, trace pyrite.
3,940.00 to 3,945.00	95% Claystone medium gray, firm to blocky, moderately dolomitic, silty grading locally to siltstone, trace carbonaceous specks. 5% Dolomite beige to tan and brown in part, mudstone to partly cryptocrystalline, brittle to locally hard, argillaceous in part, common trace carbonaceous streaks.
3,945.00 to 3,950.00	95% Claystone medium gray, firm to blocky, moderately dolomitic, silty grading locally to siltstone, trace carbonaceous specks. 5% Dolomite beige to tan and brown in part, mudstone to partly cryptocrystalline, brittle to locally hard, argillaceous in part, common trace carbonaceous streaks.
3,950.00 to 3,955.00	90% Claystone medium gray, firm to blocky, moderately dolomitic, silty grading locally to siltstone, trace carbonaceous specks. 10% Dolomite beige to tan and brown in part, mudstone to partly cryptocrystalline, brittle to locally hard, argillaceous in part, common trace carbonaceous streaks.
3,955.00 to 3,960.00	90% Claystone medium gray, firm to blocky, slightly dolomitic, silty, common carbonaceous specks, grading to siltstone in part. 10% Dolomite tan to beige to partly brown, mudstone, partly cryptocrystalline and microcrystalline, brittle to hard in part, argillaceous locally becoming marly, occasional carbonaceous streak.
3,960.00 to 3,965.00	90% Claystone medium gray, firm to blocky, slightly dolomitic, silty, common carbonaceous specks, grading to siltstone in part. 10% Dolomite tan to beige to partly brown, mudstone, partly cryptocrystalline and microcrystalline, brittle to hard in part, argillaceous locally becoming marly, occasional carbonaceous streak.

3,965.00 to 3,970.00	100% Claystone medium gray, firm to partly blocky, slightly dolomitic, silty grading to siltstone, rare very fine sandstone stringer, minor argillaceous dolomite stringers grading to dolomitic marlstone.
3,970.00 to 3,975.00	100% Claystone medium gray, firm to partly blocky, slightly dolomitic, silty grading to siltstone, rare very fine sandstone stringer, minor argillaceous dolomite stringers grading to dolomitic marlstone.
3,975.00 to 3,980.00	100% Claystone medium gray, firm to partly blocky, slightly dolomitic, silty grading to siltstone, rare very fine sandstone stringer, minor argillaceous dolomite stringers grading to dolomitic marlstone.
3,980.00 to 3,985.00	100% Claystone medium gray, occasionally light gray, firm to partly blocky, slightly dolomitic, silty grading to siltstone, rare very fine sandstone stringer, minor argillaceous dolomite stringers grading to dolomitic marlstone.
3,985.00 to 3,990.00	100% Claystone brownish gray, rarely light gray, firm to partly blocky, slightly calcareous to non calcareous, silty, trace pyrite, minor siltstone interbeds.
3,990.00 to 3,995.00	100% Claystone brownish gray, rarely light gray, firm to partly blocky, slightly calcareous to non calcareous, silty, trace pyrite, minor siltstone interbeds.
3,995.00 to 4,000.00	100% Claystone brownish gray, rarely light gray, firm to partly blocky, slightly calcareous to non calcareous, silty, trace pyrite, minor siltstone interbeds.
4,000.00 to 4,005.00	100% Claystone brownish gray, firm, blocky in part, silty in part, occasional white calcareous siltstone stringers.
4,005.00 to 4,010.00	100% Claystone brownish gray, firm, blocky in part, silty in part, occasional white calcareous siltstone stringers, occasional trace pyrite.
4,010.00 to 4,015.00	100% Claystone medium gray, brownish in part, firm to blocky, silty, slightly calcareous, minor brown calcareous marlstone, rare white calcareous siltstone stringer.,
4,015.00 to 4,020.00	100% Claystone medium gray, brownish in part, firm to blocky, silty, slightly calcareous, minor brown calcareous marlstone, rare white calcareous siltstone stringer.,
4,020.00 to 4,025.00	100% Claystone medium gray, brownish in part, firm to blocky, silty, slightly calcareous, minor brown calcareous marlstone, rare white calcareous siltstone stringer, slightly elongated cuttings.
4,025.00 to 4,030.00	100% Claystone medium gray, brownish in part, firm to blocky, occasionally slightly splintery, silty, slightly calcareous with occasional calcareous marlstone stringers, trace pyrite.
4,030.00 to 4,035.00	100% Claystone medium gray, brownish in part, firm to blocky, occasionally slightly splintery, silty, slightly calcareous with occasional calcareous marlstone stringers, trace pyrite.
4,035.00 to 4,040.00	100% Claystone medium gray, firm to blocky, silty, slightly calcareous, minor argillaceous calcareous marlstone.
4,040.00 to 4,045.00	100% Claystone medium gray, firm to blocky, silty, slightly calcareous, minor argillaceous calcareous marlstone.
4,045.00 to 4,050.00	100% Claystone medium gray, firm to blocky, silty, slightly calcareous, minor argillaceous calcareous marlstone.

4,050.00 to 4,055.00	100% Claystone medium gray, firm to blocky, silty, slightly calcareous, minor argillaceous calcareous marlstone, occasional white calcareous siltstone stringer.
4,055.00 to 4,060.00	100% Claystone medium gray, partly brownish, rare light gray, firm to blocky, very slightly calcareous, silty grading to siltstone in part, minor brown argillaceous limestone stringers partly dolomitic, trace pyrite.
4,060.00 to 4,065.00	100% Claystone medium gray, partly brownish, rare light gray, firm to blocky, very slightly calcareous, silty grading to siltstone in part, minor brown argillaceous limestone stringers partly dolomitic.
4,065.00 to 4,070.00	100% Claystone medium gray, firm to blocky, silty, slightly calcareous, occasional siltstone stringers, minor argillaceous dolomitic limestone stringers becoming marly in part.
4,070.00 to 4,075.00	100% Claystone brownish gray, firm to blocky, silty, slightly calcareous to dolomitic in part, occasional argillaceous dolomitic limestone grading to marlstone, trace glauconite.
4,075.00 to 4,080.00	100% Claystone brownish gray, firm to blocky, silty, slightly calcareous to dolomitic in part, occasional argillaceous dolomitic limestone grading to marlstone..
4,080.00 to 4,085.00	100% Claystone brownish gray, firm to blocky, silty, slightly calcareous to dolomitic in part, occasional argillaceous dolomitic limestone grading to marlstone..
4,085.00 to 4,090.00	100% Claystone brownish gray, blocky, slightly calcareous, silty, grading to slts in part, occasional brown limestone to dolomite stringers, grading to marl, trace white calcareous siltstone.
4,090.00 to 4,095.00	100% Claystone brownish gray, blocky, slightly calcareous, silty, grading to slts in part, occasional brown limestone to dolomite stringers, grading to marl.
4,095.00 to 4,100.00	100% Claystone brownish gray, blocky, slightly calcareous, silty, grading to slts in part, occasional brown limestone to dolomite stringers, grading to marl.
4,100.00 to 4,105.00	100% Claystone brownish gray, blocky, slightly calcareous, silty, grading to slts in part, occasional brown limestone to dolomite stringers, grading to marl, trace white calcareous siltstone.
4,105.00 to 4,110.00	100% Claystone medium gray, brownish in part, blocky, silty, slightly calcareous, occasional siltstone stringers, occasional marlstone with trace carbonaceous streaks.
4,110.00 to 4,115.00	100% Claystone medium gray, brownish in part, blocky, silty, slightly calcareous, occasional siltstone stringers, occasional marlstone with trace carbonaceous streaks.
4,115.00 to 4,120.00	100% Claystone brownish gray, firm to blocky, silty, slightly calcareous, minor calcareous marlstone to partly dolomitic limestone stringers, occasional calcite .
4,120.00 to 4,125.00	100% Claystone brownish gray, dark gray in part, slightly calcareous, silty with occasional calcareous siltstone stringer, trace pyrite, rare trace glauconite.
4,125.00 to 4,130.00	100% Claystone gray brown, blocky, silty, slightly calcs, occasional siltstone stringer, minor brown limestone to marly stringers.

4,130.00 to 4,135.00	90% Claystone gray brown, blocky, silty, slightly calcs, occasional siltstone stringer, minor brown limestone to marly stringers.
	10% Limestone light brown to tan, microcrystalline to partly mudstone, brittle, argillaceous, trace glauconite.
4,135.00 to 4,140.00	90% Claystone gray brown, blocky, silty, slightly calcs, occasional siltstone stringer, minor brown limestone to marly stringers.
	10% Limestone light brown to tan, microcrystalline to partly mudstone, brittle, argillaceous, trace glauconite.
4,140.00 to 4,145.00	70% Claystone gray brown, blocky, silty, slightly calcs, occasional siltstone stringer, minor brown limestone to marly stringers.
	30% Calcareous Marlstone light gray, argillaceous, firm to moderately hard in part, grading to limestone with common limestone stringers.
4,145.00 to 4,150.00	100% Claystone dark brown to gray brown, blocky, silty, moderately calcareous, common carbonaceous specks, trace disseminated pyrite, grading locally to argillaceous siltstone.
4,150.00 to 4,155.00	100% Claystone dark brown to gray brown, blocky, silty, moderately calcareous, common carbonaceous specks, trace disseminated pyrite, grading locally to argillaceous siltstone.
4,155.00 to 4,160.00	100% Claystone dark brown to gray brown, blocky, silty, moderately calcareous, common carbonaceous specks, trace disseminated pyrite, grading locally to argillaceous siltstone.
4,160.00 to 4,165.00	100% Claystone dark brown to gray brown, blocky, silty, moderately calcareous, common carbonaceous specks, trace disseminated pyrite, grading locally to argillaceous siltstone.
4,165.00 to 4,170.00	100% Claystone brown to gray brown, firm to blocky, slightly calcareous, silty, common carbonaceous specks, trace disseminated pyrite with occasional light gray white calcareous, slightly sandy, argillaceous siltstone interbeds.
4,170.00 to 4,175.00	100% Claystone brown to gray brown, firm to blocky, slightly calcareous, silty, common carbonaceous specks, trace disseminated pyrite with occasional light gray white calcareous, siltstone stringers.
4,175.00 to 4,180.00	100% Claystone brown to gray brown, firm to blocky, slightly calcareous, silty, common carbonaceous specks, trace disseminated pyrite with occasional light gray white calcareous, siltstone stringers.
4,180.00 to 4,185.00	100% Claystone brown, grayish in part, slightly calcareous, silty grading to siltstone with occasional calcareous siltstone, common carbonaceous specks, trace pyrite.
4,185.00 to 4,190.00	100% Claystone brown to gray brown, firm to blocky, slightly calcareous, silty, common carbonaceous specks, trace disseminated pyrite with occasional light gray white calcareous siltstone stringers.
4,190.00 to 4,195.00	100% Claystone brown to gray brown, firm to blocky, slightly calcareous, silty, common carbonaceous specks, trace disseminated pyrite with occasional light gray white calcareous siltstone stringers.
4,195.00 to 4,200.00	100% Claystone brown to gray brown, blocky, partly calcareous, silty becoming argillaceous siltstone, occasional white to gray white calcareous siltstone, trace glauconite, common carbonaceous flakes.

4,200.00 to 4,205.00	100% Claystone brown to gray brown, blocky, partly calcareous, silty becoming argillaceous siltstone, occasional white to gray white calcareous siltstone, trace glauconite, common carbonaceous flakes.
4,205.00 to 4,210.00	100% Claystone brown to gray brown, blocky, partly calcareous, silty becoming argillaceous siltstone, occasional white to gray white calcareous siltstone, trace glauconite, common carbonaceous flakes.
4,210.00 to 4,215.00	100% Claystone brown to gray brown, blocky, partly calcareous, silty becoming argillaceous siltstone, occasional white to gray white calcareous siltstone, trace glauconite, common carbonaceous flakes.
4,215.00 to 4,220.00	100% Claystone brown to gray brown, blocky, partly calcareous, silty becoming argillaceous siltstone, occasional white to gray white calcareous siltstone, trace glauconite, common carbonaceous flakes.
4,220.00 to 4,225.00	100% Claystone brown, grayish in part, firm to blocky, slightly calcareous, silty grading to siltstone, common carbonaceous flakes, occasional gray white calcareous siltstone stringers.
4,225.00 to 4,230.00	100% Claystone brown, grayish in part, firm to blocky, slightly calcareous, silty grading to siltstone, common carbonaceous flakes, occasional gray white calcareous siltstone stringers.
4,230.00 to 4,235.00	75% Claystone brown, grayish in part, firm to blocky, slightly calcareous, silty grading to siltstone, common carbonaceous flakes, occasional gray white calcareous siltstone stringers. 25% Limestone white to off white and grayish in part, chalky mudstone, crumbly, silty, trace glauconite.
4,235.00 to 4,240.00	100% Claystone brown, grayish in part, firm to blocky, slightly calcareous, silty grading to siltstone, common carbonaceous flakes, occasional gray white calcareous siltstone stringers.
4,240.00 to 4,245.00	100% Claystone brown, grayish in part, firm to blocky, slightly calcareous, silty grading to siltstone, common carbonaceous flakes, minor gray white calcareous siltstone stringers.
4,245.00 to 4,250.00	100% Claystone brown, grayish in part, firm to blocky, weakly calcareous, silty, minor calcareous siltstone stringers.
4,250.00 to 4,255.00	100% Claystone brown, grayish in part, firm to blocky, weakly calcareous, silty, minor calcareous siltstone stringers.
4,255.00 to 4,260.00	100% Claystone brown, grayish in part, firm to blocky, weakly calcareous, silty, minor calcareous siltstone stringers.
4,260.00 to 4,265.00	100% Claystone brown, grayish brown, firm and blocky, silty, slightly calcareous, trace carbonaceous specks, minor white chalky limestone.
4,265.00 to 4,270.00	100% Claystone brown, grayish brown, firm and blocky, silty, slightly calcareous, trace carbonaceous specks, minor white chalky limestone.

4,270.00 to 4,275.00	85% Claystone brown, grayish brown, firm and blocky, silty, slightly calcareous, trace carbonaceous specks, minor white chalky limestone.
	15% Limestone white to gray white, chalky, trace carbonaceous flakes.
4,275.00 to 4,280.00	60% Limestone white to off white and gray white, soft to crumbly, chalky, common carbonaceous flakes, partly silty.
	40% Claystone brown, grayish brown, firm and blocky, silty, slightly calcareous, trace carbonaceous specks.
4,280.00 to 4,285.00	75% Limestone off white, grayish white, chalky, soft to crumbly, argillaceous, trace carbonaceous flakes.
	25% Claystone brown, grayish brown, firm and blocky, silty, slightly calcareous, trace carbonaceous specks.
4,285.00 to 4,290.00	80% Limestone off white, grayish white, chalky, soft to crumbly, argillaceous, trace carbonaceous flakes. with trace glauconite, commonly interbedded with a silty white clay laminae.
	20% Claystone brown, grayish brown, firm and blocky, silty, slightly calcareous, trace carbonaceous specks.
4,290.00 to 4,295.00	60% Claystone brown gray to off white, soft amorphous white silty clay laminae in limestone and brown gray claystone.
	40% Limestone off white, grayish white, chalky, soft to crumbly, argillaceous, trace carbonaceous flakes, with trace glauconite, commonly interbedded with a silty white clay laminae.
4,295.00 to 4,300.00	100% Claystone off white to grayish white, partly brown, soft and amorphous, silty and rarely sandy, locally becoming chalky limestone, occasional dead oil with dull gold fluorescence and no cut.
4,300.00 to 4,305.00	70% Claystone off white to grayish white, partly brown, soft and amorphous, silty and rarely sandy, locally becoming chalky limestone, occasional dead oil with dull gold fluorescence and no cut.
	30% Limestone off white, grayish white, chalky, soft to crumbly, argillaceous, trace carbonaceous flakes, commonly interbedded with a silty white clay laminae.
4,305.00 to 4,310.00	85% Claystone off white to grayish white, partly brown, soft and amorphous, silty and rarely sandy, locally becoming chalky limestone, occasional dead oil with dull gold fluorescence and no cut.
	15% Limestone off white, grayish white, chalky, soft to crumbly, argillaceous, trace carbonaceous flakes, commonly interbedded with a silty white clay laminae.
4,310.00 to 4,315.00	75% Sandstone off white, partly buff, fine grained, occasional medium grains, subrounded, generally well sorted, unconsolidated in sample, white limestone and partly argillaceous matrix, occasional dead oil stain with dull yellow fluorescence and very slight weak white cut, common limestone interbeds.
	25% Limestone off white, grayish white, chalky, soft to crumbly, argillaceous, trace carbonaceous flakes, commonly interbedded with a silty white clay laminae.
4,315.00 to 4,320.00	100% Sandstone off white, partly buff, fine grained, occasional medium grains, subrounded, generally well sorted, unconsolidated in sample, white limestone and partly argillaceous matrix, occasional dead oil stain with dull yellow fluorescence and very slight weak white cut, common limestone interbeds.

4,320.00 to 4,325.00	100% Limestone off white, light brownish in part, chalky and crumbly, sandy and silty, grading to calcareous sandstone in part, trace glauconite, argillaceous and becoming marly, minor gray claystone laminae.
4,325.00 to 4,330.00	80% Claystone gray brown, blocky, calcareous, silty, trace carbonaceous flakes. 20% Calcareous marlstone light tan to gray, firm to blocky, argillaceous.
4,330.00 to 4,335.00	100% Claystone gray brown, blocky, calcareous, silty, trace carbonaceous flakes.
4,335.00 to 4,340.00	100% Claystone gray brown, blocky, calcareous, silty, trace carbonaceous flakes.
4,340.00 to 4,345.00	75% Claystone gray brown, blocky, calcareous, silty, trace carbonaceous flakes. 25% Limestone off white, grayish white in part, soft to crumbly, chalky, partly argillaceous, silty and sandy in part, trace carbonaceous material.
4,345.00 to 4,350.00	100% Limestone off white, grayish white in part, soft to crumbly, chalky, partly argillaceous, silty and sandy in part, trace carbonaceous material.
4,350.00 to 4,355.00	60% Limestone off white, grayish white in part, soft to crumbly, chalky, partly argillaceous, silty and sandy in part, trace carbonaceous material, occasional claystone laminae. 40% Claystone medium gray, gray brown in part, firm and blocky, silty, calcareous, common carbonaceous flakes.
4,355.00 to 4,360.00	90% Claystone medium gray, gray brown in part, firm and blocky, silty, calcareous, common carbonaceous flakes. 10% Limestone off white, grayish white in part, soft to crumbly, chalky, partly argillaceous, silty and sandy in part, trace carbonaceous material, occasional claystone laminae.
4,360.00 to 4,365.00	100% Claystone medium gray, gray brown, blocky, silty, calcareous, occasional thin white limestone stringers.
4,365.00 to 4,370.00	100% Claystone medium gray, slightly brownish, blocky to platy in part, calcareous, silty grading locally to siltstone, common carbonaceous flakes, occasional marly stringer.
4,370.00 to 4,375.00	100% Claystone medium gray, slightly brownish, blocky to platy in part, calcareous, silty grading locally to siltstone, common carbonaceous flakes, occasional marly stringer.
4,375.00 to 4,380.00	100% Claystone medium gray, slightly brownish, blocky to platy in part, calcareous, silty grading locally to siltstone, common carbonaceous flakes, minor tan limestone stringers.
4,380.00 to 4,385.00	100% Claystone medium gray, blocky to platy in part, calcareous, silty grading locally to siltstone, common carbonaceous flakes, minor tan limestone stringers, common trace glauconite and rare trace pyrite.
4,385.00 to 4,390.00	100% Claystone medium gray, blocky to platy in part, calcareous, silty grading locally to siltstone, common carbonaceous flakes, minor tan limestone stringers, common trace glauconite and rare trace pyrite.
4,390.00 to 4,395.00	100% Claystone medium gray, blocky to platy, partly elongated, calcareous, silty grading locally to siltstone, trace pyrite, minor marlstone stringers.
4,395.00 to 4,400.00	100% Claystone medium gray, blocky to platy, partly elongated, calcareous, silty grading locally to siltstone, trace pyrite, minor marlstone stringers.

4,400.00 to 4,405.00	100% Claystone medium gray, blocky to platy, partly elongated, calcareous, silty grading locally to siltstone, trace pyrite, minor marlstone stringers.
4,405.00 to 4,410.00	100% Claystone medium gray, blocky to platy and slightly elongated, calcareous, silty with local siltstone stringers, trace carbonaceous flakes, minor marlstone stringers.
4,410.00 to 4,415.00	100% Claystone medium gray, blocky to platy and slightly elongated, calcareous, silty with local siltstone stringers, trace carbonaceous flakes, minor marlstone stringers and occasional very fine grained argillaceous sandstone stringers.
4,415.00 to 4,418.00	100% Claystone medium gray, blocky to platy and slightly elongated, calcareous, silty with local siltstone stringers, trace carbonaceous flakes, minor marlstone stringers and occasional very fine grained argillaceous sandstone stringers.
4,418.00 to 4,425.00	50% Claystone medium gray to gray brown, firm, subblocky, calcareous, silty, carbonaceous specks, calcareous stringers, marlstone stringers, grading to siltstone. 50% Siltstone medium gray to gray brown, firm, subblocky, coarse silt size quartz grains, calcareous, argillaceous, carbonaceous specks, calcareous stringers, marlstone stringers.
4,425.00 to 4,430.00	80% Claystone medium gray to gray brown, firm, subblocky, calcareous, silty, carbonaceous specks, calcareous stringers, marlstone stringers, grading to siltstone. 20% Siltstone medium gray to gray brown, firm, subblocky, coarse silt size quartz grains, calcareous, argillaceous, carbonaceous specks and laminations with pyrite, minor calcite stringers and marlstone stringers.
4,430.00 to 4,435.00	90% Silty claystone medium gray to gray brown, firm, subblocky, calcareous, very silty, common coarse silt size quartz grains, carbonaceous specks, calcareous stringers, marlstone stringers, grading to siltstone. 10% Siltstone medium gray to gray brown, firm, subblocky, coarse silt size quartz grains, calcareous, argillaceous, carbonaceous specks and laminations with pyrite, minor calcite stringers and marlstone stringers.
4,435.00 to 4,440.00	80% Siltstone light to medium gray to gray brown, firm, subblocky, coarse silt size quartz grains, calcareous, argillaceous, carbonaceous specks and laminations with pyrite, minor calcite stringers and marlstone stringers. 20% Silty claystone medium gray to gray brown, firm, subblocky, coarse silt size quartz grains, calcareous, argillaceous, carbonaceous specks and laminations with pyrite, minor calcite stringers and marlstone stringers.
4,440.00 to 4,445.00	100% Silty claystone light gray, firm, amorphous to subblocky, calcareous, coarse silt size clear and frosted white quartz grains, very fine disseminated pyrite, fine carbonaceous specks, minor dolomite stringers, grading to siltstone.
4,445.00 to 4,450.00	70% Claystone light gray, firm, amorphous to subblocky, calcareous, silty laminations, very fine disseminated pyrite, fine carbonaceous specks, minor dolomite stringers, grading to siltstone. 30% Silty claystone light gray, firm, amorphous to subblocky, calcareous, coarse silt size clear and frosted white quartz grains, very fine disseminated pyrite, fine carbonaceous specks, minor dolomite stringers, grading to siltstone.
4,450.00 to 4,455.00	100% Claystone light to medium gray, firm, subblocky, slightly calcareous, silty laminations and stringers, local very fine disseminated pyrite, fine carbonaceous specks, locally grading to siltstone.

4,455.00 to 4,460.00	100% Claystone light to medium gray, firm, subblocky, slightly calcareous, silty laminations and stringers, local very fine disseminated pyrite, fine carbonaceous specks, locally grading to siltstone.
4,460.00 to 4,465.00	100% Claystone very light to medium gray, firm, subblocky, slightly calcareous, silty laminations and stringers, local very fine disseminated pyrite, fine carbonaceous specks, locally grading to siltstone.
4,465.00 to 4,470.00	100% Claystone very light to medium gray, firm, subblocky, slightly calcareous, silty laminations and stringers, local very fine disseminated pyrite, fine carbonaceous specks, locally grading to siltstone.
4,470.00 to 4,475.00	100% Claystone very light to medium gray, firm, subblocky, slightly calcareous, silty laminations and stringers, local very fine disseminated pyrite, fine carbonaceous specks, trace loose very fine frosted white and clear quartz grains, trace limestone micro laminations, locally grading to siltstone.
4,475.00 to 4,480.00	100% Claystone very light to medium gray and dark gray brown, firm, subblocky, very slightly calcareous, silty laminations and stringers, local very fine disseminated pyrite, fine carbonaceous specks, trace loose very fine frosted white and clear quartz grains, trace limestone and very fine grained sandstone micro laminations, commonly grading to siltstone.
4,480.00 to 4,485.00	100% Claystone very light to medium gray and dark gray brown, firm, subblocky, very slightly calcareous, silty laminations and stringers, local very fine disseminated pyrite, fine carbonaceous specks, trace loose very fine frosted white and clear quartz grains, trace limestone and very fine grained sandstone micro laminations, commonly grading to siltstone.
4,485.00 to 4,490.00	100% Claystone very light to medium gray and dark gray brown, firm, subblocky, very slightly calcareous, silty laminations and stringers, local very fine disseminated pyrite, fine carbonaceous specks, trace loose very fine frosted white and clear quartz grains, trace limestone and very fine grained sandstone micro laminations, commonly grading to siltstone.
4,490.00 to 4,495.00	100% Claystone medium to dark gray, firm, subblocky, slightly calcareous, silty, very fine disseminated pyrite, very fine carbonaceous specks, trace siderite(?), commonly grading to siltstone.
4,495.00 to 4,500.00	100% Claystone medium to dark gray, firm, subblocky, slightly calcareous, silty, very fine disseminated pyrite, very fine carbonaceous specks, trace siderite(?), commonly grading to siltstone or silty shale.
4,500.00 to 4,505.00	100% Claystone medium to dark gray, firm, subblocky, slightly calcareous, silty, very fine disseminated pyrite, very fine carbonaceous specks, trace siderite(?), minor siltstone micro laminations, locally grading to siltstone or silty shale.
4,505.00 to 4,510.00	100% Claystone medium to dark gray, firm, subblocky, slightly calcareous, silty, very fine disseminated pyrite, very fine carbonaceous specks, trace siderite(?), minor siltstone micro laminations, locally grading to siltstone or silty shale.
4,510.00 to 4,515.00	100% Claystone medium to dark gray, firm, subblocky, calcareous, silty, very fine disseminated pyrite, very fine carbonaceous specks, trace brown limestone stringers, grading to shale.

4,515.00 to 4,520.00	100% Claystone medium to dark gray, firm, subblocky, calcareous, silty, very fine disseminated pyrite, very fine carbonaceous specks, trace brown limestone stringers, grading to shale.
4,520.00 to 4,525.00	100% Claystone medium to dark gray, firm, subblocky, calcareous, silty, very fine disseminated pyrite, very fine carbonaceous specks, trace brown limestone stringers, grading to shale.
4,525.00 to 4,530.00	100% Claystone light to medium gray, firm, brittle, subblocky, calcareous, silty, very fine disseminated pyrite, very fine carbonaceous specks, trace brown limestone stringers, grading to shale.
4,530.00 to 4,535.00	100% Claystone light to medium gray, firm, brittle, subblocky, slightly calcareous, silty, very fine disseminated pyrite, very fine carbonaceous specks, trace brown limestone stringers, grading to shale.
4,535.00 to 4,540.00	100% Claystone light to medium gray, firm, brittle, subblocky, slightly calcareous, silty, very fine disseminated pyrite, very fine carbonaceous specks, trace brown limestone stringers, grading to silty shale.
4,540.00 to 4,545.00	100% Claystone light to medium gray, firm, brittle, subblocky, slightly calcareous, silty, local coarse silt size quartz grains, very fine disseminated pyrite, very fine carbonaceous specks, trace brown limestone stringers, grading to silty shale.
4,545.00 to 4,550.00	100% Claystone light to medium gray, firm, brittle, subblocky, slightly calcareous, silty, local coarse silt size quartz grains, very fine disseminated pyrite, very fine carbonaceous specks, trace brown limestone stringers, grading to silty shale.
4,550.00 to 4,555.00	100% Claystone light to medium gray, firm, brittle, subblocky, slightly calcareous, silty, local coarse silt size quartz grains, very fine disseminated pyrite, very fine carbonaceous specks, trace brown limestone stringers, grading to silty shale.
4,555.00 to 4,565.00	100% Shale medium to dark gray brown, firm, brittle, subblocky, calcareous, fine disseminated pyrite, trace very fine carbonaceous specks.
4,565.00 to 4,570.00	100% Shale medium to dark gray brown, firm, brittle, subblocky, calcareous, fine disseminated pyrite, trace very fine carbonaceous specks.
4,570.00 to 4,575.00	100% Shale medium to dark gray brown, firm, brittle, subblocky, calcareous, trace fine disseminated pyrite.
4,575.00 to 4,580.00	100% Shale medium to dark gray brown, firm, brittle, subblocky, calcareous, trace fine disseminated pyrite.
4,580.00 to 4,585.00	100% Shale medium to dark gray brown, firm, brittle, subblocky, calcareous, trace fine disseminated pyrite, trace brown limestone stringers, trace crystalline calcite laminations.
4,585.00 to 4,590.00	100% Shale medium to dark gray brown, firm, brittle, subblocky, calcareous, trace fine disseminated pyrite, trace beige limestone stringers.
4,590.00 to 4,595.00	100% Shale medium to dark gray brown, firm, brittle, subblocky, calcareous, trace fine disseminated pyrite, trace beige limestone stringers, trace crystalline calcite vienlets.

4,595.00 to 4,600.00	100% Shale medium to dark gray brown, firm, brittle, subblocky, calcareous, trace fine disseminated pyrite, trace carbonaceous specks, trace beige limestone stringers, trace crystalline calcite vienlets.
4,600.00 to 4,605.00	100% Shale medium to dark gray brown, firm, brittle, subblocky, calcareous, locally silty, trace fine disseminated pyrite, trace carbonaceous specks, trace beige limestone stringers with pyrite and imbedded very fine quartz grains.
4,605.00 to 4,610.00	100% Shale light to medium gray to gray brown, firm, brittle, subblocky, calcareous, locally silty, fine disseminated pyrite, carbonaceous specks, trace beige limestone stringers with pyrite and imbedded very fine quartz grains.
4,610.00 to 4,615.00	100% Shale light to medium gray to gray brown, firm, brittle, subblocky, calcareous, locally silty, fine disseminated pyrite, carbonaceous specks, trace beige limestone stringers with pyrite and imbedded very fine quartz grains.
4,615.00 to 4,620.00	100% Shale light to medium gray to gray brown, firm, brittle, subblocky, calcareous, locally silty, fine disseminated pyrite, carbonaceous specks, trace beige limestone stringers with pyrite and imbedded very fine quartz grains.
4,620.00 to 4,625.00	100% Shale medium gray to gray brown, local light gray silty stringers, firm, brittle, subblocky, calcareous, trace very fine disseminated pyrite, trace carbonaceous specks, trace beige limestone stringers.
4,625.00 to 4,630.00	100% Shale medium gray to gray brown, local light gray silty stringers, firm, brittle, subblocky, calcareous, trace very fine disseminated pyrite, trace very fine carbonaceous specks, minor trace beige limestone stringers.
4,630.00 to 4,635.00	100% Shale medium gray to gray brown, firm, brittle, subblocky, locally silty, calcareous, trace very fine disseminated pyrite, trace very fine carbonaceous specks, minor trace beige limestone stringers.
4,635.00 to 4,640.00	100% Shale medium gray to gray brown, firm, brittle, subblocky, locally silty, calcareous, trace very fine disseminated pyrite, trace very fine carbonaceous specks, minor trace beige limestone stringers.
4,640.00 to 4,645.00	100% Shale medium gray to gray brown, firm, brittle, subblocky, locally silty, calcareous, trace very fine disseminated pyrite, trace very fine carbonaceous specks, minor trace beige limestone stringers.
4,645.00 to 4,650.00	100% Shale medium gray to gray brown, trace gray green, firm, brittle, subblocky, calcareous, trace very fine disseminated pyrite, trace very fine carbonaceous specks, minor trace beige limestone stringers with very fine quartz grains and carbonaceous material.
4,650.00 to 4,655.00	100% Shale medium gray to gray brown, trace gray green, trace very light gray siltstone stringers, firm, brittle, subblocky, calcareous, trace very fine disseminated pyrite, trace very fine carbonaceous specks, minor trace beige limestone stringers with very fine quartz grains and carbonaceous material.
4,655.00 to 4,660.00	100% Shale medium gray to gray brown, trace gray green, firm, brittle, subblocky, calcareous, trace very fine disseminated pyrite, trace very fine carbonaceous specks, minor trace beige limestone stringers with very fine quartz grains and carbonaceous material, + very light gray soft non calcareous silty shale stringers.

4,660.00 to 4,665.00	100% Shale 50% medium gray to gray brown, trace gray green, firm, brittle, subblocky, calcareous, trace very fine disseminated pyrite, trace very fine carbonaceous specks, minor trace beige limestone stringers with very fine quartz grains and carbonaceous material; 50% very light gray soft non calcareous silty shale stringers with very fine disseminated pyrite and carbonaceous specks, trace loose pyrite.
4,665.00 to 4,670.00	100% Shale 20% medium gray to gray brown, trace gray green, firm, brittle, subblocky, calcareous, trace very fine disseminated pyrite, trace very fine carbonaceous specks, minor trace beige limestone stringers with very fine quartz grains and carbonaceous material; 80% very light gray soft non calcareous silty shale stringers with very fine disseminated pyrite and carbonaceous specks, trace loose pyrite.
4,670.00 to 4,675.00	100% Shale very light gray, soft to firm, plastic to brittle, subblocky, trace very fine disseminated pyrite, trace very fine carbonaceous specks, locally silty, minor dolomitic stringers.
4,675.00 to 4,680.00	100% Shale very light gray, soft to firm, plastic to brittle, subblocky, locally slightly calcareous, trace very fine disseminated pyrite, trace very fine carbonaceous specks, locally silty, minor dolomitic stringers.
4,680.00 to 4,685.00	100% Shale very light gray, soft to firm, plastic to brittle, subblocky, locally slightly calcareous, trace very fine disseminated pyrite, trace very fine carbonaceous specks, locally silty, minor dolomitic stringers.
4,685.00 to 4,690.00	100% Shale very light gray, firm, brittle, subblocky, silty in locally slightly calcareous, trace very fine disseminated pyrite, trace very fine carbonaceous specks, local siliceous coarse siltstone micro laminations, minor dolomitic and limestone stringers.
4,690.00 to 4,695.00	100% Shale medium to dark gray brown, firm, brittle, subblocky, slightly calcareous, very fine disseminated pyrite, very fine carbonaceous specks, minor trace beige argillaceous limestone stringers with carbonaceous material.
4,695.00 to 4,700.00	100% Shale medium to dark gray brown, firm, brittle, subblocky, slightly calcareous, very fine disseminated pyrite, very fine carbonaceous specks, minor trace beige argillaceous limestone stringers with carbonaceous material, trace coarse silt size to very fine sand laminations.
4,700.00 to 4,705.00	100% Shale medium to dark gray brown, firm, brittle, subblocky, slightly calcareous, very fine disseminated pyrite, very fine carbonaceous specks, minor trace beige argillaceous limestone stringers with carbonaceous material.
4,705.00 to 4,710.00	100% Shale medium to dark gray brown, firm, brittle, subblocky, slightly calcareous, very fine disseminated pyrite, very fine carbonaceous specks, minor trace beige argillaceous limestone stringers with carbonaceous material, minor light gray shale laminations.
4,710.00 to 4,715.00	100% Shale dark gray brown, firm moderately hard, brittle, subblocky, non to slightly calcareous, locally silty, very fine disseminated pyrite, very fine carbonaceous specks, minor trace beige argillaceous limestone stringers with carbonaceous material.
4,715.00 to 4,720.00	100% Shale dark gray brown, firm moderately hard, brittle, subblocky, non to slightly calcareous, locally silty, very fine disseminated pyrite, common very fine carbonaceous specks.

4,720.00 to 4,725.00	100% Shale dark gray brown, firm moderately hard, brittle, subblocky, non to slightly calcareous, locally silty, very fine disseminated pyrite, common very fine carbonaceous specks, trace loose pyrite.
4,725.00 to 4,730.00	100% Shale dark gray brown, firm moderately hard, brittle, subblocky, non to slightly calcareous, locally silty, very fine disseminated pyrite, common very fine carbonaceous specks, trace loose pyrite.
4,730.00 to 4,735.00	100% Shale dark gray brown, firm moderately hard, brittle, subblocky, non to slightly calcareous, locally silty, very fine disseminated pyrite, common very fine carbonaceous specks, trace argillaceous limestone stringers with carbonaceous material.
4,735.00 to 4,740.00	100% Shale dark gray brown, firm to moderately hard, brittle, subblocky, non to slightly calcareous, locally silty, very fine disseminated pyrite, common very fine carbonaceous specks, trace argillaceous limestone stringers with carbonaceous material.
4,740.00 to 4,745.00	100% Shale dark gray brown, firm to moderately hard, brittle, subblocky, non to slightly calcareous, locally siliceous, silty, very fine disseminated pyrite, common very fine carbonaceous specks.
4,745.00 to 4,750.00	100% Shale medium to dark gray brown, firm to moderately hard, brittle, subblocky, non to slightly calcareous, silty, very fine disseminated pyrite, common very fine carbonaceous specks.
4,750.00 to 4,755.00	100% Shale medium to dark gray brown, firm to moderately hard, brittle, subblocky, non to slightly calcareous, silty, very fine disseminated pyrite, common very fine carbonaceous specks, trace argillaceous limestone stringers with carbonaceous material.
4,755.00 to 4,760.00	100% Shale medium to dark gray brown, firm to moderately hard, brittle, subblocky, non to slightly calcareous, silty, very fine disseminated pyrite, common very fine carbonaceous specks, trace argillaceous limestone stringers with carbonaceous material.
4,760.00 to 4,765.00	100% Shale medium to dark gray brown, firm to moderately hard, brittle, subblocky, non to slightly calcareous, silty, very fine disseminated pyrite, common very fine carbonaceous specks, trace argillaceous limestone stringers with carbonaceous material.
4,765.00 to 4,770.00	100% Shale medium to dark gray brown, firm to moderately hard, brittle, subblocky, non to slightly calcareous, silty, very fine disseminated pyrite, common very fine carbonaceous specks, trace argillaceous limestone stringers with carbonaceous material, trace loose pyrite.
4,770.00 to 4,775.00	100% Shale medium to dark gray brown, firm to moderately hard, brittle, subblocky, non to slightly calcareous, locally siliceous, silty, very fine disseminated pyrite, common very fine carbonaceous specks, trace argillaceous limestone stringers with carbonaceous material, trace loose pyrite.
4,775.00 to 4,780.00	100% Shale medium to dark gray brown, firm to moderately hard, brittle, subblocky, non to slightly calcareous, locally siliceous, silty, very fine disseminated pyrite, common very fine carbonaceous specks, trace argillaceous limestone stringers.

4,780.00 to 4,785.00	100% Shale medium to dark gray brown, firm to moderately hard, brittle, subblocky, non to slightly calcareous, locally siliceous, silty, very fine disseminated pyrite, common very fine carbonaceous specks, trace argillaceous limestone stringers.
4,785.00 to 4,790.00	100% Shale medium to dark gray brown, firm to moderately hard, brittle, subblocky, non to slightly calcareous, locally siliceous, silty, very fine disseminated pyrite, common very fine carbonaceous specks, trace argillaceous limestone stringers.
4,790.00 to 4,795.00	100% Shale medium to dark gray to gray brown, firm to moderately hard, brittle, subblocky, calcareous, trace argillaceous limestone stringers.
4,795.00 to 4,800.00	100% Shale medium to dark gray to gray brown, firm to moderately hard, brittle, subblocky, calcareous, trace argillaceous limestone stringers.
4,800.00 to 4,805.00	100% Shale medium to dark gray to gray brown, firm to moderately hard, brittle, subblocky, calcareous, trace argillaceous limestone stringers.
4,805.00 to 4,810.00	100% Shale medium to dark gray to gray brown, firm to moderately hard, brittle, subblocky, calcareous.
4,810.00 to 4,815.00	100% Shale medium to dark gray to gray brown, firm to moderately hard, brittle, subblocky, calcareous.
4,815.00 to 4,820.00	100% Shale medium to dark gray to gray brown, firm to moderately hard, brittle, subblocky, calcareous.
4,820.00 to 4,825.00	100% Shale medium to dark gray to gray brown, firm to moderately hard, brittle, subblocky, calcareous, trace brown limestone stringers, trace white very calcareous sandy stringers.
4,825.00 to 4,830.00	100% Shale medium to dark gray, trace gray brown, firm to moderately hard, brittle, subblocky, calcareous, very fine carbs specks, trace very fine disseminated pyrite, trace brown limestone stringers, trace white very calcareous sandy stringers.
4,830.00 to 4,835.00	100% Shale medium to dark gray, trace gray brown, firm to moderately hard, brittle, subblocky, calcareous, very fine carbs specks, trace very fine disseminated pyrite, trace brown limestone stringers, trace white very calcareous sandy stringers.
4,835.00 to 4,840.00	100% Shale medium gray, trace gray brown, firm to moderately hard, brittle, subblocky, calcareous, very fine carbs specks, trace very fine disseminated pyrite, trace brown limestone stringers, trace white very calcareous sandy stringers.
4,840.00 to 4,845.00	100% Shale medium gray, trace gray brown, firm to moderately hard, brittle, subblocky, calcareous, locally silty, very fine carbs specks, trace very fine disseminated pyrite, trace brown limestone stringers, trace white very calcareous sandy stringers.
4,845.00 to 4,850.00	100% Shale medium gray, trace gray brown, firm to moderately hard, brittle, subblocky, calcareous, locally silty, very fine carbs specks, trace very fine disseminated pyrite, trace brown limestone stringers, trace white very calcareous sandy stringers.
4,850.00 to 4,855.00	100% Shale medium gray, trace gray brown, trace green, firm to moderately hard, brittle, subblocky, calcareous, locally silty, very fine carbs specks, very fine disseminated pyrite, trace brown limestone stringers with carbonaceous material, trace white very calcareous sandy stringers.

4,855.00 to 4,860.00	100% Shale medium gray, trace gray brown, trace green, firm to moderately hard, brittle, subblocky, calcareous, locally silty, very fine carbs specks, very fine disseminated pyrite, trace brown limestone stringers with carbonaceous material, trace white very calcareous sandy stringers.
4,860.00 to 4,865.00	100% Shale medium gray and t gray brown, trace green, firm to moderately hard, brittle, subblocky, slightly calcareous, locally silty, very fine carbs specks, very fine disseminated pyrite, trace brown limestone stringers, minor trace white very calcareous sandy stringers.
4,865.00 to 4,870.00	100% Shale medium gray and t gray brown, trace green, firm to moderately hard, brittle, subblocky, slightly calcareous, locally silty, very fine carbs specks, very fine disseminated pyrite, trace brown limestone stringers, minor trace white very calcareous sandy stringers.
4,870.00 to 4,875.00	100% Shale medium to gray and gray brown, trace green, firm to moderately hard, brittle, subblocky, slightly calcareous, locl silty laminations, very fine carbs specks, very fine disseminated pyrite, white calcareous sandy stgs with trace glauconite.
4,875.00 to 4,880.00	100% Shale medium to gray and gray brown, trace green, firm to moderately hard, brittle, subblocky, slightly calcareous, locl silty laminations, very fine carbs specks, very fine disseminated pyrite, white calcareous sandy stgs with trace glauconite.
4,880.00 to 4,885.00	100% Shale medium gray brown, firm to moderately hard, brittle, subblocky, very calcareous, locl silty laminations, very fine carbs specks, very fine disseminated pyrite, trace brown limestone stringers, trace nodule pyrite.
4,885.00 to 4,890.00	100% Shale medium gray, firm to moderately hard, brittle, subblocky, calcareous, locl silty laminations, very fine carbs specks, very fine disseminated pyrite, trace brown argillaceous limestone stringers with carbonaceous material, trace pyritized worm burrows, trace white crystalline calcite stringers.
4,890.00 to 4,895.00	100% Shale medium gray, firm to moderately hard, brittle, subblocky, calcareous, locl silty laminations, very fine carbs specks, very fine disseminated pyrite, trace brown argillaceous limestone stringers with carbonaceous material, trace white crystalline calcite stringers.
4,895.00 to 4,900.00	100% Shale medium to dark gray, firm to moderately hard, brittle, subblocky, calcareous, very fine carbs specks, very fine disseminated pyrite, trace brown argillaceous limestone stringers with carbonaceous material, trace white crystalline calcite stringers, minor trace very fine grained sandstone laminations.
4,900.00 to 4,905.00	100% Shale medium to dark gray brown, firm to moderately hard, brittle, subblocky, calcareous, very fine carbs specks, very fine disseminated pyrite, trace brown argillaceous limestone stringers with carbonaceous material, trace white crystalline calcite stringers, trace loose frosted white and clear very fine rounded quartz grains.
4,905.00 to 4,910.00	100% Shale dark gray, firm to moderately hard, brittle, subblocky, slightly calcareous, very fine carbs specks, very fine disseminated pyrite, trace brown argillaceous limestone stringers, trace white crystalline calcite stringers, minor trace loose glauconite grains.

4,910.00 to 4,915.00	100% Shale dark gray, firm to moderately hard, brittle, subblocky, slightly calcareous, very fine carbs specks, very fine disseminated pyrite, trace brown argillaceous limestone stringers, trace white crystalline calcite stringers, trace light gray argillaceous limestone stringers with trace very fine grained quartz grains.
4,915.00 to 4,920.00	100% Shale medium gray, firm to moderately hard, brittle, subblocky, slightly calcareous, very fine carbs specks, very fine disseminated pyrite, silty in part.
4,920.00 to 4,925.00	100% Shale medium gray, firm to moderately hard, brittle, subblocky, slightly calcareous, very fine carbs specks, very fine disseminated pyrite, silty in part.
4,925.00 to 4,930.00	99% Shale medium gray, firm to moderately hard, brittle, subblocky, slightly calcareous, very fine carbs specks, very fine disseminated pyrite, silty in part. 1% Sandstone light gray, friable, clear and frosted white quartz grains, very fine to fine grained, well sorted, subrounded grains, calcareous cement, poor visible porosity, no shows.
4,930.00 to 4,935.00	100% Shale medium gray, trace green, firm to moderately hard, brittle, subblocky, slightly calcareous, very fine carbs specks, very fine disseminated pyrite, silty in part, trace limestone stringers, trace loose pyrite.
4,935.00 to 4,940.00	100% Shale medium gray, trace green, firm to moderately hard, brittle, subblocky, very slightly calcareous, very fine carbs specks, very fine disseminated pyrite, silty in part.
4,940.00 to 4,945.00	100% Shale medium gray, trace green with glauconite, firm, brittle, subblocky, very slightly calcareous, very fine carbs specks, very fine disseminated pyrite, silty in part, white crystalline calcite stringers, trace sandy laminations.
4,945.00 to 4,950.00	99% Shale medium gray, trace green with glauconite, firm, brittle, subblocky, very slightly calcareous, very fine carbs specks, very fine disseminated pyrite, silty in part, white crystalline calcite stringers, trace sandy laminations. 1% Sandstone light gray -off white, friable, clear and frosted quartz grains, very fine to fine grained, well sorted, subrounded, calcareous cement, poor visible porosity, no shows.
4,950.00 to 4,955.00	100% Shale very light to light gray, firm, subblocky, brittle, very calcareous, very fine disseminated pyrite and carbonaceous specks.
4,955.00 to 4,960.00	100% Shale very light to light gray, firm, subblocky, brittle, very calcareous, very fine disseminated pyrite and carbonaceous specks, white calcareous vienlets, local silty laminations.
4,960.00 to 4,965.00	100% Shale light to medium gray, firm, subblocky, brittle, very calcareous, very fine disseminated pyrite and carbonaceous specks, white calcareous vienlets, local silty laminations.
4,965.00 to 4,970.00	100% Shale light to medium gray, firm, subblocky, brittle, very calcareous, very fine disseminated pyrite and carbonaceous specks, white calcareous vienlets, local silty laminations with quartz feldspar and glauconite grains, pyrite vienlets.
4,970.00 to 4,975.00	100% Shale light to medium gray, firm, subblocky, brittle, very calcareous, very fine disseminated pyrite and carbonaceous specks, trace white calcareous vienlets.
4,975.00 to 4,980.00	100% Shale light to medium gray, firm, subblocky, brittle, very calcareous, very fine disseminated pyrite and carbonaceous specks.

4,980.00 to 4,985.00	100% Shale light to medium gray, firm, subblocky, brittle, very calcareous, very fine disseminated pyrite and carbonaceous specks, trace white calcareous vienlets.
4,985.00 to 4,990.00	100% Shale light to medium gray, firm, subblocky, brittle, very calcareous, very fine disseminated pyrite and carbonaceous specks, trace white calcareous vienlets.
4,990.00 to 4,995.00	100% Shale medium gray brown, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace white crystalline calcite vienlets, trace brown limestone with carbonaceous laminations, pyrite laminations.
4,995.00 to 5,000.00	100% Shale medium gray brown, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace white crystalline calcite vienlets, trace brown limestone with micro laminations.
5,000.00 to 5,005.00	100% Shale medium gray brown, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace white limestone vienlets.
5,005.00 to 5,010.00	100% Shale medium gray brown, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace white limestone.
5,010.00 to 5,015.00	100% Shale medium gray brown, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace white limestone.
5,015.00 to 5,020.00	100% Shale medium gray, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace calcareous vienlets.
5,020.00 to 5,025.00	100% Shale medium gray, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace calcareous vienlets, trace light gray calcareous sandstone laminations.
5,025.00 to 5,030.00	100% Shale medium gray and gray brown, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, minor silty laminations.
5,030.00 to 5,035.00	100% Shale medium gray brown, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace very fine sandstone laminations.
5,035.00 to 5,040.00	100% Shale medium gray brown, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace white crystalline calcite, local silty laminations.
5,040.00 to 5,045.00	100% Shale medium gray, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace brown and white limestone stringers w/ carbonaceous laminae.
5,045.00 to 5,050.00	100% Shale light to medium gray, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace brown and white limestone stringers w/ carbonaceous laminae.
5,050.00 to 5,055.00	100% Shale medium gray, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace brown and white limestone stringers w/ carbonaceous laminae.
5,055.00 to 5,060.00	100% Shale medium gray, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace brown and white limestone stringers w/ carbonaceous laminae.

5,060.00 to 5,065.00	100% Shale medium gray, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks.
5,065.00 to 5,070.00	100% Shale light gray brown and medium gray, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace white limestone stringers, trace light gray very fine grained calcareous sandstone stringers.
5,070.00 to 5,075.00	100% Shale gray brown, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace white limestone stringers.
5,075.00 to 5,080.00	100% Shale gray brown, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks, trace white limestone stringers.
5,080.00 to 5,085.00	65% Shale gray brown, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks. 35% Sand loose, clear and frosted white quartz grains, orange feldspar, very fine grained, well sorted, no shows.
5,085.00 to 5,090.00	50% Claystone very light gray, amorphous, soft, slightly calcareous. 50% Shale medium gray, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks.
5,090.00 to 5,095.00	95% Shale gray brown, firm, subblocky, brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous specks. 5% Sandstone light gray, friable, clear quartz, very fine grained, well sorted, calcareous cement, no visible porosity, no shows; + loose very fine quartz grains.
5,095.00 to 5,100.00	100% Shale light to medium gray, subblocky, soft to firm, plastic to brittle, calcareous, trace very fine disseminated pyrite and carbonaceous flakes, trace white crystalline calcite.
5,100.00 to 5,105.00	100% Shale light to medium gray, subblocky, firm, plastic to brittle, very calcareous, trace very fine disseminated pyrite and carbonaceous flakes, trace white crystalline calcite.
5,105.00 to 5,110.00	100% Shale light to medium gray, subblocky, soft to firm, brittle, calcareous, trace very fine disseminated pyrite and carbonaceous flakes.
5,110.00 to 5,115.00	100% Shale medium gray, subblocky, firm, brittle, calcareous, trace very fine disseminated pyrite and carbonaceous flakes.
5,115.00 to 5,120.00	100% Shale medium gray, subblocky, firm, brittle, calcareous, trace very fine disseminated pyrite and carbonaceous flakes, minor trace very fine sand stringers, trace silty laminations, trace white crystalline calcite fragments.
5,120.00 to 5,125.00	100% Shale lower to medium gray, subblocky, firm, brittle, calcareous, trace very fine disseminated pyrite and carbonaceous flakes.
5,125.00 to 5,130.00	100% Shale medium gray, subblocky, firm, brittle, calcareous, trace very fine disseminated pyrite and carbonaceous flakes.
5,130.00 to 5,135.00	100% Shale medium gray, subblocky, firm, brittle, very calcareous, locally silty, lighter very fine disseminated pyrite and carbonaceous flakes.

5,135.00 to 5,140.00	80% Shale medium gray, subblocky, firm to hard, brittle, very calcareous, locally silty, trace very fine disseminated pyrite and carbonaceous flakes, trace pyrite veining and pyrite worm burrows. 20% Sand loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded, no shows.
5,140.00 to 5,145.00	90% Shale light to medium gray, subblocky, firm to hard, brittle, very calcareous, locally silty, trace very fine disseminated pyrite and carbonaceous flakes, trace pyrite veining. 10% Sand loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded, no shows + light gray calcareous cemented sandstone.
5,145.00 to 5,150.00	90% Shale light to medium gray, subblocky, firm to hard, brittle, very calcareous, locally silty, trace very fine disseminated pyrite and carbonaceous flakes. 10% Sand loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded, no shows.
5,150.00 to 5,155.00	95% Shale medium gray, subblocky, firm to hard, brittle, very calcareous, locally silty, trace very fine disseminated pyrite and carbonaceous flakes. 5% Sand loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded, no shows.
5,155.00 to 5,160.00	100% Shale medium gray, subblocky, firm to hard, brittle, very calcareous, locally silty, trace very fine disseminated pyrite and carbonaceous flakes, trace limestone stringers.
5,160.00 to 5,165.00	100% Shale medium gray, firm, very calcareous, locally silty, trace very fine disseminated pyrite and carbonaceous flakes, trace loose very fine sand.
5,165.00 to 5,170.00	100% Shale medium gray, firm, very calcareous, trace very fine disseminated pyrite and carbonaceous flakes, trace loose very fine sand, trace silt laminations, trace white limestone stringers.
5,170.00 to 5,175.00	80% Shale medium gray, firm, very calcareous, very fine carbonaceous flakes, trace white limestone stringers. 20% Sand loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded, no shows.
5,175.00 to 5,180.00	100% Shale dark gray, soft to firm, very calcareous, very fine carbonaceous flakes, trace loose very fine sand, trace white limestone stringers.
5,180.00 to 5,185.00	85% Shale dark gray, soft to firm, very calcareous, very fine carbonaceous flakes, trace loose very fine sand, trace white limestone stringers. 15% Sand loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded, no shows.
5,185.00 to 5,188.50	100% Shale medium to dark gray, soft to firm, very calcareous, very fine carbonaceous flakes, trace white limestone stringers, locally silt laminations.
5,188.50 to 5,190.00	90% Shale medium gray, soft to firm, very calcareous, very fine carbonaceous flakes, trace white limestone stringers, loose pyrite, pyrite veins, trace white and clear crystalline calcite. 10% Sand loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded, no shows.

5,190.00 to 5,195.00	90% Shale light to medium gray, soft to firm, very calcareous, very fine carbonaceous flakes, trace white limestone stringers, trace light gray very fine sandstone stringers.
	10% Sand loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded, no shows.
5,195.00 to 5,200.00	90% Shale light to medium gray, firm, very calcareous, very fine carbonaceous specks, light gray to white sandy calcareous stringers + trace light gray very fine grained sandstone laminations.
	10% Sand loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded, no shows.
5,200.00 to 5,205.00	90% Shale light gray, firm, very calcareous, very fine carbonaceous specks, locally silty, trace white limestone, trace light gray argillaceous calcareous very fine sandstone stringers.
	10% Sand loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded, no shows.
5,205.00 to 5,210.00	95% Shale medium to dark gray, firm, very calcareous, very fine carbonaceous specks, local siltstone laminae, trace white and beige limestone stringers.
	5% Sand loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded, no shows.
5,210.00 to 5,215.00	100% Shale medium to dark gray, firm, very calcareous, very fine carbonaceous specks, local siltstone laminae, trace white and beige limestone stringers, trace sandstone and siltstone laminations.
5,215.00 to 5,219.00	95% Shale medium to dark gray, firm, very calcareous, very fine carbonaceous specks, local siltstone laminae, trace white and beige limestone stringers, trace sandstone and siltstone laminations.
	5% Sand loose, clear and frosted white quartz grains, trace orange feldspar, very fine to fine grained, well sorted, subrounded, no shows.
5,219.00 to 5,225.00	100% Shale light to medium gray brown, firm, subblocky, very calcareous, very fine disseminated pyrite and carbonaceous specks, trace light gray very fine grained calcareous sandstone laminations, local silty laminations.
5,225.00 to 5,230.00	95% Shale light to medium gray brown, firm, subblocky, very calcareous, very fine disseminated pyrite and carbonaceous specks, trace light gray very fine grained calcareous sandstone laminations, local silty laminations, trace limestone.
	5% Sandstone mottled light gray, firm to hard, friable to brittle, very fine to fine grained, well sorted, subrounded, well cemented with calcareous cement, trace carbonaceous material, trace disseminated pyrite, grading to sandy limestone, no visible porosity, no shows.
5,230.00 to 5,235.00	98% Shale light to medium gray brown, firm, subblocky, very calcareous, very fine disseminated pyrite and carbonaceous specks, local silty laminations, trace crystalline calcite.
	2% Sandstone mottled light gray, firm to hard, friable to brittle, very fine to fine grained, well sorted, subrounded, well cemented with calcareous cement, trace carbonaceous material, trace disseminated pyrite, grading to sandy limestone, no visible porosity, no shows.
5,235.00 to 5,240.00	100% Shale medium to dark gray brown, firm, subblocky, very calcareous, very fine disseminated pyrite and carbonaceous specks, trace light gray very fine grained calcareous sandstone laminations, local silty laminations, trace limestone stringers.

5,240.00 to 5,245.00	<p>99% Shale medium to dark gray brown, firm, subblocky, very calcareous, very fine disseminated pyrite and carbonaceous specks, trace light gray very fine grained calcareous sandstone laminations, local silty laminations, trace limestone stringers.</p> <p>1% Sandstone mottled light gray, firm to hard, friable to brittle, very fine to fine grained, well sorted, subrounded, well cemented with calcareous cement, trace carbonaceous material, trace disseminated pyrite, grading to sandy limestone, no visible porosity, no shows.</p>
5,245.00 to 5,250.00	<p>100% Shale gray brown, firm, subblocky, very calcareous, very fine disseminated pyrite and carbonaceous specks, trace light gray very fine grained calcareous sandstone laminations, local silty laminations, trace limestone stringers.</p>
5,250.00 to 5,255.00	<p>100% Shale dark gray, firm, subblocky, very calcareous, very fine disseminated pyrite and carbonaceous specks.</p>
5,255.00 to 5,260.00	<p>100% Shale dark gray brown, firm, subblocky, very calcareous, very fine disseminated pyrite and carbonaceous specks, trace light gray very fine grained calcareous sandstone laminations with pyrite.</p>
5,260.00 to 5,265.00	<p>98% Shale dark gray brown, firm, subblocky, very calcareous, very fine disseminated pyrite and carbonaceous specks, trace light gray very fine grained calcareous sandstone laminations with pyrite.</p> <p>2% Sandstone mottled light gray, firm to hard, friable to brittle, very fine to fine grained, well sorted, subrounded, well cemented with calcareous cement, trace carbonaceous material, trace disseminated pyrite, grading to sandy limestone, no visible porosity, no shows.</p>
5,265.00 to 5,270.00	<p>100% Shale medium gray, soft to firm, very calcareous, locally silty, trace argillaceous limestone stringers, trace very calcareous sandstone stringers, trace fine disseminated pyrite.</p>
5,270.00 to 5,275.00	<p>100% Shale medium gray, soft to firm, very calcareous, locally silty, trace argillaceous limestone stringers with carbonaceous laminations, trace very calcareous sandstone stringers, trace fine disseminated pyrite.</p>
5,275.00 to 5,280.00	<p>100% Shale medium gray, soft to firm, very calcareous, locally silty, trace argillaceous limestone stringers, trace very calcareous sandstone stringers, trace fine disseminated pyrite.</p>
5,280.00 to 5,285.00	<p>100% Shale gray brown, firm, very calcareous, trace argillaceous limestone stringers, sandstone and siltstone stringers, trace fine disseminated pyrite.</p>
5,285.00 to 5,290.00	<p>99% Shale gray brown, firm, very calcareous, trace argillaceous limestone stringers, sandstone and siltstone stringers, trace fine disseminated pyrite.</p> <p>1% Sandstone light gray, firm to hard, friable to brittle, very fine to fine quartz grains, well sorted, subrounded, well cemented with calcareous cement, no visible porosity, no shows.</p>
5,290.00 to 5,295.00	<p>98% Shale gray brown, firm, very calcareous, trace sandstone and siltstone stringers, trace fine disseminated pyrite and carbonaceous specks, trace sandstone stringers.</p> <p>2% Sandstone light gray, off white, firm to hard, friable to brittle, very fine to fine grained quartz, well sorted, subrounded, calcareous cement, local pyrite cement, no visible porosity, no shows.</p>

5,295.00 to 5,300.00	100% Shale medium gray, firm, very calcareous, trace sandstone and siltstone stringers, trace fine disseminated pyrite.
5,300.00 to 5,305.00	100% Shale light to medium gray to gray brown, firm, very calcareous, locally silty, trace sandstone and siltstone stringers, trace fine disseminated pyrite.
5,305.00 to 5,310.00	100% Shale medium to gray brown, firm, very calcareous, locally silty, trace sandstone and siltstone stringers, trace fine disseminated pyrite.
5,310.00 to 5,315.00	100% Shale medium gray to gray brown, firm, very calcareous, locally silty, trace sandstone and siltstone stringers, trace fine disseminated pyrite, trace white limestone.
5,315.00 to 5,320.00	100% Shale medium gray, firm, very calcareous, locally silty, trace sandstone and siltstone stringers, trace fine disseminated pyrite.
5,325.00 to 5,330.00	100% Shale medium gray, soft to firm, very calcareous, trace sandstone and siltstone stringers, trace fine disseminated pyrite, trace white calcareous laminations.
5,330.00 to 5,335.00	100% Shale medium gray brown, soft to firm, very calcareous, locally pyritic, minor trace white limestone.
5,335.00 to 5,340.00	100% Shale medium gray brown, soft to firm, very calcareous, locally pyritic, minor trace white limestone.
5,340.00 to 5,345.00	100% Shale medium gray brown, soft to firm, very calcareous, locally pyritic, trace local calcareous laminations, trace argillaceous limestone stringers.
5,345.00 to 5,350.00	100% Shale medium gray, soft to firm, very calcareous, locally pyritic, locally silty.
5,350.00 to 5,355.00	100% Shale medium gray, soft to firm, very calcareous, locally pyritic, locally silty.
5,355.00 to 5,360.00	100% Shale medium gray, soft to firm, very calcareous, locally pyritic, locally silty.
5,360.00 to 5,365.00	100% Shale medium to dark gray, soft to firm, very calcareous, locally pyritic, locally silty.
5,365.00 to 5,370.00	100% Shale medium to dark gray to gray brown, soft to firm, very calcareous, locally pyritic, trace argillaceous limestone.
5,370.00 to 5,375.00	100% Shale medium to dark gray, soft to firm, very calcareous, locally pyritic, trace argillaceous limestone.
5,375.00 to 5,380.00	No Sample Well control, no sample.
5,380.00 to 5,385.00	No sample Well control, no sample.
5,385.00 to 5,390.00	No sample Well control, no sample.
5,390.00 to 5,395.00	No sample Well control, no sample.
5,395.00 to 5,400.00	No sample Well control, no sample.
5,400.00 to 5,405.00	No Sample Well control, no sample.

5,405.00 to 5,410.00	<p>75% Shale gray to gray brown, soft to firm, calcareous, silty, fine carbonaceous specks, calcareous laminations and stringers, trace disseminated pyrite, trace glauconite, trace orange brown calcareous stringers (siderite ?), trace loose pyrite; + green very calcareous, grading to limestone.</p> <p>15% Siltstone light gray, soft to firm, quartz grains, trace feldspar and glauconite, slightly calcareous, carbonaceous specks, grading to silty shale.</p> <p>10% Sandstone light gray brown, soft to very hard, quartz, trace glauconite, very fine to fine grained, well sorted, subangular, hackly texture, generally well cemented with siliceous cement, calcareous matrix, locally pyritic, poor visible porosity, no shows.</p>
5,410.00 to 5,415.00	<p>85% Shale medium gray to gray brown, subblocky, soft to firm, slightly calcareous, silty, in part, fine disseminated carbonaceous specks, calcareous stringers, locally pyritic, trace orange brown calcareous stringers (siderite ?).</p> <p>14% Siltstone light gray, soft to firm, quartz grains, trace feldspar and glauconite, slightly calcareous, carbonaceous specks, grading to silty shale.</p> <p>1% Sandstone light gray brown, soft to very hard, quartz, trace glauconite, very fine to fine grained, well sorted, subangular, hackly texture, generally well cemented with siliceous cement, calcareous matrix, locally pyritic, poor visible porosity, no shows.</p>
5,415.00 to 5,420.00	<p>90% Shale medium gray to gray brown, subblocky, soft to firm, slightly calcareous, silty, in part, fine disseminated carbonaceous specks, calcareous stringers, locally pyritic, trace orange brown calcareous stringers (siderite ?).</p> <p>10% Siltstone light gray, soft to firm, quartz grains, trace feldspar and glauconite, slightly calcareous, carbonaceous specks, grading to silty shale.</p>
5,420.00 to 5,425.00	<p>90% Shale medium gray to gray brown, subblocky, soft to firm, slightly calcareous, silty, in part, fine disseminated carbonaceous specks, calcareous stringers, locally pyritic, trace orange brown calcareous stringers (siderite ?).</p> <p>10% Siltstone light gray, soft to firm, quartz grains, trace feldspar and glauconite, slightly calcareous, carbonaceous specks, grading to silty shale.</p>
5,425.00 to 5,430.00	<p>100% Shale medium gray, slightly brownish, blocky, calcareous, commonly silty, frequent disseminated pyrite, rare carbonaceous plant rmns, common white calcite, trace Inoceramus, rare trace sand grains.</p>
5,430.00 to 5,435.00	<p>100% Shale medium gray, slightly brownish, blocky, calcareous, commonly silty, frequent disseminated pyrite, rare carbonaceous plant rmns, common white calcite, trace Inoceramus, rare trace sand grains.</p>
5,435.00 to 5,440.00	<p>100% Shale medium gray, blocky, calcareous, trace pyrite, common calcite, trace Inoceramus.</p>
5,445.00 to 5,450.00	<p>100% Shale medium brownish gray, blocky, calcareous, silty, common trace calcareous vein and nodule.</p>
5,450.00 to 5,455.00	<p>100% Shale medium gray, brownish in part, blocky, silty, trace pyrite, minor very thin siltstone laminae, minor white calcite fragments and occasional veins.</p>
5,455.00 to 5,460.00	<p>100% Shale medium gray and partly light gray, blocky to firm in part, slightly soft, silty, calcareous, common white calcite, veins and fragments.</p>
5,460.00 to 5,465.00	<p>100% Shale medium gray and light gray, blocky to firm, slightly silty, calcareous, trace pyrite, occasional carbonaceous stks and flakes.</p>
5,465.00 to 5,470.00	<p>100% Shale light and medium gray, firm to partly soft and occasionally blocky, calcareous, slightly silty, occasional carbonaceous stks, minor calcite veins.</p>

5,470.00 to 5,475.00	100% Shale medium gray and light gray, blocky to firm , calcareous to slightly calcareous where light gray, common carbonaceous stks &tr pyrite, rare calcite.
5,475.00 to 5,480.00	100% Shale medium gray and light gray, blocky to firm , calcareous to slightly calcareous where light gray, common carbonaceous stks &tr pyrite, rare calcite.
5,480.00 to 5,485.00	100% Shale medium gray, blocky, slightly silty, moderately calcareous, trace calcite, minor fine sand grains.
5,485.00 to 5,490.00	100% Shale medium gray, dark gray in part, blocky, slightly silty, calcareous, common trace carbonaceous flakes and strks, minor white limestone stringers and calcite veins.
5,490.00 to 5,495.00	100% Shale medium gray, dark gray in part, blocky, slightly silty, calcareous, common trace carbonaceous flakes and strks, minor white limestone stringers and calcite veins
5,495.00 to 5,500.00	100% Shale medium to dark gray, blocky, partly silty, calcareous, carbonaceous in part, occasional pyrite, minor white limestone, trace calcite,
5,500.00 to 5,505.00	100% Shale medium to dark gray, blocky, partly silty, calcareous, carbonaceous in part, occasional pyrite, minor white limestone, to occasional gray calcareous and carbonaceous siltstone stringers.
5,505.00 to 5,510.00	95% Shale medium to dark gray, blocky, partly silty, calcareous, carbonaceous in part, occasional pyrite, minor white limestone, tocc gray calcareous and carbonaceous siltstone stringers. 5% Siltstone gray, firm friable, argillaceous and calcareous, fairly carbonaceous, trace sand grains.
5,510.00 to 5,515.00	100% Shale medium to dark gray, partly brownish, blocky to firm, calcareous and silty in part, trace calcite, minor siltstone stringers as above.
5,515.00 to 5,520.00	100% Shale medium to dark gray, partly brownish, blocky to firm, calcareous and silty in part, common calcite, trace siltstone stringers.
5,520.00 to 5,525.00	100% Shale medium to dark gray, partly brownish, blocky to firm, calcareous and silty in part, common calcite, trace siltstone stringers.
5,525.00 to 5,530.00	100% Shale medium to dark gray, partly brownish, blocky to firm, calcareous and silty in part, common calcite, trace siltstone stringers.
5,530.00 to 5,535.00	100% Shale medium gray brownish, blocky to firm, slightly silty, partly calcareous, common white calcite or limestone fragments and rare veins, minor light gray siltstone, trace grayish white very fine to fine sandstone.
5,535.00 to 5,540.00	100% Shale medium gray brownish, blocky to firm, slightly silty, partly calcareous, common white calcite or limestone fragments and rare veins, occasional light gray siltstone, trace sand grains.
5,540.00 to 5,545.00	100% Shale medium gray, slightly brownish, blocky, partly calcareous, trace pyrite, occasionally light gray with common carbonaceous material, minor white calcite or limestone fragments.
5,545.00 to 5,550.00	100% Shale medium gray, slightly brownish, blocky, partly calcareous, trace pyrite, rare light gray with common carbonaceous material, occasional white calcite or limestone fragment.

5,550.00 to 5,555.00	100% Shale medium gray, brownish in part, firm to blocky, rarely silty, weakly calcareous, rare trace pyrite, occasional calcite fragment.
5,555.00 to 5,560.00	100% Shale medium gray, blocky, slightly calcareous, silty in part, common white calcite or shell fragments, rare siltstone, trace very fine grained sandstone.
5,560.00 to 5,565.00	100% Shale medium gray, blocky, slightly calcareous, silty in part, common white calcite or shell fragments, trace siltstone
5,565.00 to 5,570.00	90% Shale medium gray brown, firm to blocky in part, partly weakly calcareous, silty, 10% Siltstone grayish white, friable, soft, argillaceous and slightly calcareous, commonly carbonaceous, very fine sandy in part.
5,570.00 to 5,575.00	80% Shale medium gray brown, firm to blocky in part, partly weakly calcareous, silty, 20% Siltstone grayish white, friable, soft, argillaceous and slightly calcareous, commonly carbonaceous, very fine sandy in part.
5,575.00 to 5,580.00	85% Shale medium gray brown, firm to blocky in part, partly weakly calcareous, silty, 15% Siltstone grayish white, friable, soft, argillaceous and slightly calcareous, commonly carbonaceous, very fine sandy in part.
5,580.00 to 5,585.00	80% Shale brownish gray, blocky to firm, silty, non calcareous, occasional white calcite (fossil?) fragments. 20% Siltstone light gray to gray white, friable to slightly hard in part, argillaceous, carbonaceous in part, slightly sandy.
5,585.00 to 5,590.00	85% Shale brownish gray, blocky to firm, silty, non calcareous, occasional white calcite (fossil?) fragments. 15% Siltstone light gray to gray white, friable to slightly hard in part, argillaceous, carbonaceous in part, slightly sandy, grading to very fine grained sandstone in part.
5,590.00 to 5,595.00	90% Shale brownish gray, blocky to firm, silty, non calcareous, occasional white calcite (fossil?) fragments. 10% Siltstone light gray to gray white, friable to slightly hard in part, argillaceous, carbonaceous in part, slightly sandy, grading to very fine grained sandstone in part.
5,595.00 to 5,600.00	90% Shale gray brown, firm, partly blocky, silty, trace calcite (fossil?) fragments. 10% Siltstone light gray, friable, argillaceous, non calcareous, sandy in part, local carbonaceous material.
5,600.00 to 5,605.00	90% Shale brown, firm, silty, non calcareous, common siltstone stringers and lenses 10% Sandstone gray white, very fine grained, subrounded and well sorted, moderate hard to friable in part, argillaceous matrix, occasional pyrite cement, trace carbonaceous, no visible porosity, no shows
5,605.00 to 5,610.00	100% Shale brown, firm, silty, minor stringers and lenses siltstone.
5,610.00 to 5,615.00	100% Shale gray brown, firm to blocky in part, silty commonly grading to argillaceous siltstone, trace carbonaceous material, occasional very fine grained sandstone stringer.
5,615.00 to 5,620.00	100% Shale gray brown, firm to blocky in part, silty, trace carbonaceous material, occasional very fine grained sandstone stringer. with common siltstone stringers and laminae.

5,620.00 to 5,625.00	100% Shale gray brown, firm to blocky in part, silty, trace carbonaceous material, occasional very fine grained sandstone stringer. with common siltstone stringers and laminae.
5,625.00 to 5,630.00	100% Shale gray brown to gray in part, firm, silty grading to siltstone, common trace pyrite, frequent carbonaceous siltstone stringers, rare calcite fragment.
5,630.00 to 5,635.00	100% Shale gray brown to gray in part, firm, silty grading to siltstone, common trace pyrite, frequent carbonaceous siltstone stringers, rare calcite fragment.
5,635.00 to 5,640.00	100% Shale gray brown, firm, silty, occasional calcite fragment, common thin siltstone stringers, rare very fine sandstone.
5,640.00 to 5,645.00	75% Shale gray brown, firm, silty, occasional calcite fragment, common thin siltstone stringers, rare very fine sandstone. 25% Siltstone gray white to light gray, friable, argillaceous, partly carbonaceous, grading to and interbedded with shale.
5,645.00 to 5,650.00	100% Shale gray brown, firm, silty, occasional calcite fragment, common thin siltstone stringers, rare very fine sandstone.
5,650.00 to 5,655.00	100% Shale gray brown, firm, silty, occasional calcite fragment, common thin siltstone stringers, rare very fine sandstone.
5,655.00 to 5,660.00	100% Shale brown and gray, firm, silty, occasionally grading to siltstone.
5,660.00 to 5,665.00	100% Shale medium gray partly brownish, firm, silty, common argillaceous siltstone stringers, occasional white clac to limestone fragments, trace loose sand grains.
5,665.00 to 5,670.00	100% Shale medium gray, firm, silty, minor argillaceous siltstone stringers, occasional white clac to limestone fragments, common loose fine sand grains, common trace pyrite.
5,670.00 to 5,675.00	100% Shale medium gray, firm, silty, minor argillaceous siltstone stringers, occasional white calcite to limestone fragments, common loose fine sand grains, common trace pyrite.
5,675.00 to 5,680.00	70% Shale medium gray to brownish in part, firm to blocky, silty, occasional white calcite, trace pyrite, minor argillaceous siltstone stringers and lenses, slightly sandy. 30% Siltstone light gray to grayish white, friable, argillaceous and trace calcareous, partly sandy, trace carbonaceous.
5,680.00 to 5,685.00	60% Shale medium gray to brownish in part, firm to blocky, silty, occasional white calcite, trace pyrite, minor argillaceous siltstone stringers and lenses, slightly sandy. 40% Sandstone light grayish white, very fine grained to silty, subangular and well sorted, partly friable with argillaceous cement to hard with silica cement, minor shaly laminae, tight, no shows.
5,685.00 to 5,690.00	70% Shale brown, gray brown in part, firm, silty, occasional calcite. 30% Sandstone white to off white and gray white in part, very fine grained to silty in part, subangular and well sorted, very hard, siliceous, slightly argillaceous, trace glauconite, tight, no shows.
5,690.00 to 5,695.00	80% Shale brown, gray brown in part, firm, silty, occasional calcite. 20% Sandstone white to off white, grayish in part, very fine grained to silty, subangular and well sorted, very hard and siliceous, trace glauconite, slightly argillaceous in part, tight, no shows.

5,695.00 to 5,700.00	100% Shale medium gray, firm, sub blocky, mm in part, trace pyrite, common sand grains and rare sandstone stringers or clast.
5,700.00 to 5,705.00	100% Shale medium gray to brownish in part, firm to blocky in part, slightly calcareous, occasional white calcareous fragments and streaks, minor sandstone stringers or clasts and loose sand grains.
5,705.00 to 5,710.00	100% Shale medium gray to brownish in part, firm to blocky in part, slightly calcareous, occasional white calcareous fragments and streaks, minor sandstone stringers or clasts and loose sand grains.
5,710.00 to 5,715.00	100% Shale gray brown, blocky to firm, slightly silty, trace calcareous fragments, trace sandstone clasts.
5,715.00 to 5,720.00	100% Shale gray brown, blocky to firm, slightly silty, trace calcareous fragments, trace sandstone clasts and stringers.
5,720.00 to 5,725.00	100% Shale gray brown, blocky to firm, slightly silty, trace calcareous fragments, trace sandstone stringers and clasts.
5,725.00 to 5,730.00	100% Shale brownish gray, blocky, slightly silty, minor siltstone stringers, trace calcareous fragments, occasional very fine sandstone clasts.
5,730.00 to 5,735.00	100% Shale medium gray, firm to soft in sample, amorphous, frequent calcareous lenses, fragments and streaks, occasional siltstone.
5,735.00 to 5,740.00	100% Shale medium gray, firm to soft in sample, amorphous, frequent calcareous lenses, fragments and streaks, occasional siltstone.
5,740.00 to 5,745.00	100% Shale medium gray, blocky to firm, slightly silty, occasional calcareous fragments, common very fine sandstone clasts and stringers.
5,745.00 to 5,750.00	100% Shale medium gray, blocky to firm, slightly silty, occasional calcareous fragments, common very fine sandstone clasts and stringers.
5,750.00 to 5,755.00	100% Shale brownish gray, blocky and firm, silty, occasional calcareous fragments, minor partly sandy siltstone stringers and clasts.
5,755.00 to 5,760.00	100% Shale brownish gray, blocky and firm, silty, occasional calcareous fragments, minor partly sandy siltstone stringers and clasts.
5,760.00 to 5,765.00	100% Shale brownish gray, blocky to firm, silty in part, occasional siltstone.
5,765.00 to 5,770.00	90% Shale medium brownish gray, bly and firm, silty, common calcareous fragments, minor siltstone interbeds. 10% Siltstone light gray to gray white, friable, argillaceous, sandy in part, locally becoming very fine grained sandstone, trace carbonaceous material.
5,770.00 to 5,775.00	95% Shale medium brownish gray, bly and firm, silty, common calcareous fragments, minor siltstone interbeds. 5% Sandstone off white, very fine grained, subrounded and well sorted, hard and siliceous, no visible porosity, no shows, common loose sand grains.
5,775.00 to 5,780.00	100% Shale medium brownish gray, blocky and firm, silty in part, occasional calcareous fragments, minor siltstone and rare sandstone, trace pyrite.

5,780.00 to 5,785.00	100% Shale medium brownish gray, blocky and firm, silty in part, occasional calcareous fragments, minor siltstone and rare sandstone, trace pyrite.
5,785.00 to 5,790.00	100% Shale medium brown to gray brown, subblocky to amorphous, soft to firm, silty in part, calcareous, minor light gray siltstone lamsmnr trace calcareous laminations.
5,790.00 to 5,795.00	100% Shale medium brown to gray brown, subblocky, soft to firm, silty, calcareous, minor light gray siltstone laminations, minor trace calcareous laminations.
5,795.00 to 5,800.00	100% Shale medium brown to gray brown, subblocky, soft to firm, silty, calcareous, locally pyritic, minor light gray siltstone laminations, trace light gray to off white very fine grained sandstone laminations, trace calcareous laminations.
5,800.00 to 5,805.00	95% Shale light to medium brown, trace green, subblocky, soft to firm, silty, calcareous, locally pyritic, minor light gray siltstone laminations, trace calcareous laminations. 5% Siltstone light gray, soft, friable, carbonaceous in part.
5,805.00 to 5,810.00	100% Shale brown, subblocky to amorphous, soft to firm, silty, calcareous, locally pyritic, minor light gray siltstone laminations, trace calcareous laminations.
5,810.00 to 5,815.00	100% Shale light gray brown to brown, subblocky, soft to firm, silty, calcareous, locally pyritic, minor light gray siltstone laminations, common calcareous fragments and limestone stringers.
5,815.00 to 5,820.00	100% Shale gray, subblocky, soft to firm, silty, very calcareous, local fine disseminated pyrite, carbonaceous specks, trace white limestone stringers.
5,820.00 to 5,822.50	85% Shale gray, subblocky, soft to firm, silty, very calcareous, local fine disseminated pyrite, carbonaceous specks, trace white limestone stringers. 15% Sand predominately loose very fine clear quartz grains, trace feldspar, subrounded, well sorted, occasionally weakly consolidated with calcareous cement, friable, trace carbonaceous specks, trace white limestone stringers, no visible porosity, no shows.
5,822.50 to 5,825.00	98% Shale gray, subblocky, soft to firm, silty, very calcareous, local fine disseminated pyrite, carbonaceous specks, trace white limestone stringers. 2% Sand predominately loose very fine clear quartz grains, trace feldspar, subrounded, well sorted, occasionally weakly consolidated with calcareous cement, friable, trace carbonaceous specks, trace white limestone stringers, no visible porosity, no shows.
5,825.00 to 5,830.00	100% Shale light gray to gray brown, subblocky, firm, brittle, calcareous, calcareous stringers and micro laminae, silty in part, fine disseminated pyrite, trace carbonaceous specks.
5,830.00 to 5,835.00	100% Shale light gray to gray brown, subblocky, firm, brittle, calcareous, calcareous stringers and micro laminae, silty in part, fine disseminated pyrite, trace carbonaceous specks, trace white limestone fragments.
5,835.00 to 5,840.00	100% Shale medium brown to gray brown, subblocky, firm to hard, brittle, calcareous, silty in part, fine disseminated pyrite, trace carbonaceous specks, minor white limestone fragments and stringers.
5,840.00 to 5,845.00	100% Shale gray brown, subblocky, firm to moderately hard, brittle, calcareous, silty in part, fine disseminated pyrite, trace limestone stringers and micro laminations.
5,845.00 to 5,850.00	100% Shale gray brown, subblocky, firm to moderately hard, brittle, calcareous, silty in part, fine disseminated pyrite and loose pyrite, trace limestone fragments.

5,850.00 to 5,855.00	100% Shale gray brown, subblocky, firm to moderately hard, brittle, calcareous, silty in part, fine disseminated pyrite, trace calcareous laminations with pyrite.
5,855.00 to 5,860.00	100% Shale gray brown, subblocky, firm to moderately hard, brittle, calcareous, silty in part, trace fine glauconite ? in the shale, fine disseminated pyrite, common white limestone fragments.
5,860.00 to 5,865.00	100% Shale gray brown, subblocky, firm to moderately hard, brittle, calcareous, silty in part, fine disseminated pyrite, trace limestone fragments, trace carbonaceous specks.
5,865.00 to 5,870.00	100% Shale gray brown, subblocky, firm to moderately hard, brittle, calcareous, silty in part, fine disseminated pyrite, trace limestone fragments, trace carbonaceous specks.
5,870.00 to 5,875.00	100% Shale gray to brown gray, firm, brittle, very calcareous, silty, fine disseminated pyrite, trace calcareous fragments, trace lignite with pyrite and calcite.
5,875.00 to 5,880.00	100% Shale gray brown, firm, brittle, very calcareous, inc in silt and fine disseminated pyrite, trace calcareous fragments, locally grading to siltstone.
5,880.00 to 5,885.00	100% Shale medium brown, subblocky, firm, brittle, very calcareous, silty, fine disseminated and loose pyrite, trace limestone laminations and fragments.
5,885.00 to 5,890.00	100% Shale medium brown, subblocky, firm, brittle, very calcareous, silty, fine disseminated and loose pyrite, trace limestone laminations and fragments.
5,890.00 to 5,895.00	100% Shale medium brown, subblocky, firm, brittle, very calcareous, silty, fine disseminated and loose pyrite, abundant limestone fragments.
5,895.00 to 5,900.00	100% Shale medium brown, subblocky, firm, brittle, very calcareous, silty, fine disseminated and loose pyrite, trace limestone fragments, minor trace loose sand grains.
5,900.00 to 5,905.00	100% Shale medium gray brown, firm, brittle, calcareous, silty in part, fine disseminated pyrite, trace limestone fragments.
5,905.00 to 5,910.00	100% Shale medium gray brown, firm, brittle, calcareous, silty in part, fine disseminated pyrite, trace limestone fragments.
5,910.00 to 5,915.00	100% Shale medium gray brown, firm, brittle, calcareous, silty in part, fine disseminated pyrite, trace limestone fragments.
5,915.00 to 5,920.00	100% Shale medium gray brown, firm, brittle, calcareous, silty in part, fine disseminated pyrite, trace limestone fragments.
5,920.00 to 5,925.00	100% Shale medium brown, firm, brittle, slightly calcareous, silty in part, fine disseminated pyrite.
5,925.00 to 5,930.00	100% Shale light to medium gray brown, firm, brittle, slightly calcareous, silty in part, fine disseminated pyrite.
5,930.00 to 5,935.00	100% Shale light to medium gray brown, firm, brittle, slightly calcareous, inc in silt content + silty laminae, fine disseminated and nodular pyrite, trace white limestone fragments and laminations.
5,935.00 to 5,940.00	100% Shale medium gray brown, firm, brittle, slightly calcareous, silty + light gray silty laminae, fine disseminated and nodular pyrite, trace white limestone fragments and laminations.

5,940.00 to 5,945.00	100% Shale medium gray, firm, brittle, slightly calcareous, silty, common light gray coarse silt laminae, fine disseminated and nodular pyrite, trace carbonaceous laminations.
5,945.00 to 5,950.00	50% Shale medium gray, firm, brittle, slightly calcareous, silty, common light gray coarse silt laminae, fine disseminated and nodular pyrite, trace carbonaceous laminations. 50% Siltstone light gray to off white, soft to firm, friable, coarse silt to very fine sand, arenaceous, quartz grains, trace carbonaceous laminations, locally slightly calcareous.
5,950.00 to 5,955.00	50% Shale medium gray, firm, brittle, slightly calcareous, silty, common light gray coarse silt laminae, fine disseminated and nodular pyrite, trace carbonaceous laminations. 50% Siltstone light gray to off white, soft to firm, friable, coarse silt to very fine sand, arenaceous, quartz grains, trace carbonaceous laminations, locally slightly calcareous, grading to very fine grained sandstone.
5,955.00 to 5,960.00	40% Sandstone light gray to off white, soft, friable, quartz, very fine grained, well sorted, poorly cemented with calcareous cement, poor visible porosity; + loose unconsolidated quartz grains, very fine to lower fine grained, moderately well sorted, subrounded, no shows. 40% Siltstone light gray to off white, soft to firm, friable, coarse silt to very fine sand, arenaceous, quartz grains, trace carbonaceous laminations, locally slightly calcareous, grading to very fine grained sandstone. 20% Shale medium gray, firm, brittle, slightly calcareous, silty, common light gray coarse silt laminae, fine disseminated and nodular pyrite, trace carbonaceous laminations.
5,960.00 to 5,965.00	100% Shale medium gray brown, soft to firm, slightly calcareous, silty in part, trace fine disseminated pyrite.
5,965.00 to 5,970.00	100% Shale medium gray brown, soft to firm, slightly calcareous, silty in part, trace fine disseminated pyrite, trace brown calcareous stringers.
5,970.00 to 5,975.00	100% Shale medium gray brown, soft to firm, slightly calcareous, silty, trace fine disseminated pyrite, trace siliceous sandy stringers with pyrite and carbonaceous material, trace white calcareous laminae.
5,975.00 to 5,980.00	100% Shale gray brown, soft to firm, non to slightly calcareous, silty, trace fine disseminated pyrite, trace white calcareous laminae.
5,980.00 to 5,985.00	100% Shale gray brown, soft to firm, non to slightly calcareous, silty, trace fine disseminated pyrite, trace white calcareous laminae.
5,985.00 to 5,990.00	100% Shale brown, soft, non to slightly calcareous, pyrite lenses, trace silt laminae.
5,990.00 to 5,995.00	100% Shale brown, soft, calcareous, trace pyrite micro nodules, trace brown calcareous laminations.
5,995.00 to 6,000.00	100% Shale brown, soft, calcareous, trace pyrite micro nodules, trace brown calcareous laminations and white limestone stringers.
6,000.00 to 6,005.00	100% Shale brown to gray brown, soft, calcareous, pyrite lenses, silty in part, trace white limestone fragments.
6,005.00 to 6,010.00	100% Shale brown to gray brown, soft, calcareous, pyrite lenses + loose pyrite, minor light gray brown silty laminae, trace white limestone fragments.
6,010.00 to 6,015.00	100% Shale brown to gray brown, soft, calcareous, minor pyrite lenses, minor light gray brown silty laminae, trace white limestone fragments and stringers.

4	6,015.00 to 6,020.00	100% Shale brown to gray brown, firm, brittle, slightly calcareous, locally silty, fine disseminated pyrite.
	6,020.00 to 6,025.00	100% Shale gray brown, soft to firm, brittle, calcareous, fine disseminated pyrite.
	6,025.00 to 6,030.00	100% Shale gray brown, soft to firm, brittle, calcareous, fine disseminated pyrite, trace white limestone frgs and stringers.
	6,030.00 to 6,035.00	100% Shale gray brown, soft to firm, brittle, calcareous, trace light gray silty laminations, fine disseminated pyrite, trace orange brown siderite ?.
	6,035.00 to 6,040.00	100% Shale light gray brown to brown, soft to firm, brittle, non to slightly calcareous, trace light gray silty laminations, fine disseminated pyrite, trace carbonaceous specks.
	6,040.00 to 6,045.00	100% Shale gray brown, soft to firm, brittle, calcareous, locally silty, fine disseminated pyrite, trace carbonaceous specks, trace white limestone laminae.
	6,045.00 to 6,050.00	100% Shale light gray to gray brown, soft to firm, brittle, slightly calcareous, locally silty, fine disseminated pyrite, trace carbonaceous specks.
	6,050.00 to 6,055.00	100% Shale light gray to gray brown, soft to firm, brittle, slightly calcareous, locally silty, fine disseminated pyrite, trace carbonaceous specks, trace orange brown siderite?.
	6,055.00 to 6,060.00	100% Shale light gray to gray brown, soft to firm, brittle, slightly calcareous, locally silty, fine disseminated pyrite, trace carbonaceous specks.
	6,060.00 to 6,065.00	100% Shale gray brown, soft to firm, brittle, slightly calcareous, fine disseminated pyrite, trace carbonaceous specks, trace brown limestone.
	6,065.00 to 6,070.00	100% Shale gray brown, light gray, soft to firm, brittle, calcareous, fine disseminated pyrite, trace carbonaceous specks, trace white limestone stringers.

Appendix P

Detailed Sidewall Core Descriptions

Appendix P
Detailed Sidewall Core Descriptions

Newburn H-23 Summary of Sidewall Coring Programme

Well Name Chevron et al Newburn H-23			Hole Size 431.8 mm (17")			Date June 13, 2002			
Interval 1944m to 3481m (Run #1)			Requested 25		Number of Sidewall Cores Obtained 25			Lost 0	
Core No.	Depth (m)	Recovery (cm)	Analyses						Final Disposition of Sidewall Cores
			Bio-strat	Routine Core Analysis	Xray Diffraction	Whole Core Photos	Thin Section	Rock Eval	
1	2104	5	X					X	*Chevron Canada Resources
2	2413.5	4	X					X	*Chevron Canada Resources
3	2535	4.5	X					X	*Chevron Canada Resources
4	3033	5	X					X	*Chevron Canada Resources
5	3481	5	X		X			X	*Chevron Canada Resources
6	3373	5	X		X			X	*Chevron Canada Resources
7	3236	5	X		X			X	*Chevron Canada Resources
8	3139	5	X		X			X	*Chevron Canada Resources
9	3004	5	X					X	*Chevron Canada Resources
10	2903	4.5	X		X			X	*Chevron Canada Resources
11	2883	5	X					X	*Chevron Canada Resources
12	2858	4.5	X					X	*Chevron Canada Resources
13	2815	4.8	X					X	*Chevron Canada Resources
14	2759	4.5	X					X	*Chevron Canada Resources
15	2677	5	X					X	*Chevron Canada Resources
16	2635	5	X					X	*Chevron Canada Resources
17	2497.3	5	X					X	*Chevron Canada Resources
18	2364	5	X					X	*Chevron Canada Resources
19	2323.5	5	X					X	*Chevron Canada Resources
20	2269.5	5	X					X	*Chevron Canada Resources
21	2230.5	5	X					X	*Chevron Canada Resources
22	2199	5	X					X	*Chevron Canada Resources
23	2157	5	X					X	*Chevron Canada Resources
24	2030	5	X					X	*Chevron Canada Resources
25	1944	4.8	X					X	*Chevron Canada Resources

* Sidewall cores temporarily retained by Chevron Canada Resources, 500 5th Avenue S.W., Calgary, Alberta for possible additional analyses. Please contact Phil Nantais at (430) 234-5290.

Newburn H-23 Summary of Sidewall Coring Programme

Well Name Chevron et al Newburn H-23			Hole Size 317.5 mm (12 1/4")		Date June 27, 2002				
Interval 3503m to 4424m (Run #2)			Requested 24		Number of Sidewall Cores Obtained 24			Lost 0	
Core No.	Depth (m)	Recovery (cm)	Analyses						Final Disposition of Sidewall Cores
			Bio-strat	Routine Core Analysis	Xray Diffraction	Whole Core Photos	Thin Section	Rock Eval	
1	4277.7	5	X					X	*Chevron Canada Resources
2	4233.4	3	X		X			X	*Chevron Canada Resources
3	4112.8	5	X		X			X	*Chevron Canada Resources
4	4043.2	4.5	X					X	*Chevron Canada Resources
5	3989	3.5	X		X			X	*Chevron Canada Resources
6	4317.5	4.5		X	X	X	X		*Chevron Canada Resources
7	4362.3	3.5	X					X	*Chevron Canada Resources
8	4353.5	4.5		X	X	X	X		*Chevron Canada Resources
9	4390	4	X					X	*Chevron Canada Resources
10	4354.5	5		X	X	X	X		*Chevron Canada Resources
11	4349.7	5		X	X	X	X		*Chevron Canada Resources
12	4325.5	5		X	X	X	X	X	*Chevron Canada Resources
13	4323	5		X	X	X	X		*Chevron Canada Resources
14	4319.8	4		X	X	X	X		*Chevron Canada Resources
15	4318.5	4.5		X	X	X	X		*Chevron Canada Resources
16	4313.5	5		X	X	X	X		*Chevron Canada Resources
17	4312.8	5		X	X	X	X		*Chevron Canada Resources
18	4307.8	5		X	X	X	X	X	*Chevron Canada Resources
19	3973.5	5	X					X	*Chevron Canada Resources
20	3942	4	X					X	*Chevron Canada Resources
21	3906.5	4.5	X					X	*Chevron Canada Resources
22	3808.9	4	X		X			X	*Chevron Canada Resources
23	3743	5	X					X	*Chevron Canada Resources
24	3701	3.5	X		X			X	*Chevron Canada Resources

* Sidewall cores temporarily retained by Chevron Canada Resources, 500 5th Avenue S.W., Calgary, Alberta for possible additional analyses. Please contact Phil Nantais at (430) 234-5290.

Newburn H-23
Summary of Sidewall Coring Programme

Well Name Chevron et al Newburn H-23			Hole Size 216 mm (8 1/2")			Date July 23, 2002			
Interval 4405m to 5425m (Run #3)			Requested 25		Number of Sidewall Cores Obtained 22			Lost 3	
Core No.	Depth (m)	Recovery (cm)	Analyses						Final Disposition of Sidewall Cores
			Bio-strat	Routine Core Analysis	Xray Diffraction	Whole Core Photos	Thin Section	Rock Eval	
1	4780.5	4	X					X	*Chevron Canada Resources
2	5213.5	4.5			X	X	X	X	*Chevron Canada Resources
3	5208.5	2			X	X	X	X	*Chevron Canada Resources
4	5203.8	4			X	X	X	X	*Chevron Canada Resources
5	5198.5	3.5			X	X	X	X	*Chevron Canada Resources
6	5195.3	2.5			X	X	X	X	*Chevron Canada Resources
7	5422.5	Lost							*Chevron Canada Resources
8	5408.5	4.5		X	X	X	X		*Chevron Canada Resources
9	5407.5	3		X	X	X	X		*Chevron Canada Resources
10	5407	2.5		X	X	X	X		*Chevron Canada Resources
11	5406.5	4.5		X	X	X	X		*Chevron Canada Resources
12	5403.6	5		X	X	X	X		*Chevron Canada Resources
13	5368	Lost							*Chevron Canada Resources
14	5315.8	4.5	X		X			X	*Chevron Canada Resources
15	5189	4.7			X	X	X	X	*Chevron Canada Resources
16	5186.5	4			X	X	X	X	*Chevron Canada Resources
17	5144.3	Lost							*Chevron Canada Resources
18	5133.8	3			X	X	X	X	*Chevron Canada Resources
19	5129	4.5			X	X	X	X	*Chevron Canada Resources
20	5096	3.5	X		X			X	*Chevron Canada Resources
21	5063	4			X	X	X	X	*Chevron Canada Resources
22	5100.8	5			X	X	X	X	*Chevron Canada Resources
23	4780.4	4.5			X	X	X	X	*Chevron Canada Resources
24	4913.3	4.5		X	X	X	X		*Chevron Canada Resources
25	4960	4.5			X	X	X	X	*Chevron Canada Resources

* Sidewall cores temporarily retained by Chevron Canada Resources, 500 5th Avenue S.W., Calgary, Alberta for possible additional analyses. Please contact Phil Nantais at (430) 234-5290.

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Appendix P – Summary of Sidewall Coring Programme 4

Chevron et al Newburn H-23
Detailed Sidewall Core Descriptions

431.8mm (17") hole section

Interval: 1904m to 3520 m

Attempted: 25

Recovered: 25

Detailed Sidewall Core Descriptions

Core #1: 2104m (5cm)

Claystone: gray brown, firm, amorphous in part, silty, trace carbonaceous.

Core #2: 2413.5m (4cm)

Claystone: gray, silty, firm.

Core #3: 2535m (4.5cm)

Claystone: gray to brownish, firm, trace pyrite, cut by fracture.

Core #4: 3033m (5cm)

Claystone: gray, firm, moderately well indurated, calcareous, silty in part, minor beige argillaceous limestone nodule or inclusions.

Core #5: 3481m (5cm)

Claystone: gray, moderately hard, slightly silty, wkly calcareous, cut by brownish calcareous laminae.

Core #6: 3373m (5cm)

Claystone: medium to dark gray, blocky, dense, rarely silty, weakly calcareous.

Core #7: 3236m (5cm)

Claystone: medium gray, brownish in part, firm to blocky, slightly silty, calcite to locally marly, trace thin marly laminae.

Core #8: 3139m (5cm)

Claystone: medium gray, brownish in part, firm to blocky, slightly silty, calcite to locally marly, trace thin marly laminae.

Core #9: 3004m (5cm)

Marlstone: green gray, argillaceous, blocky, moderately hard, rarely silty.

Core #10: 2903m (4.5cm)

Claystone: medium gray, dark gray in part, dense, blocky, trace pyrite, cut by a fracture.

Core #11: 2883m (5cm)

Marlstone: light gray greenish, dense, common carbonaceous flakes.

Core #12: 2858m (4.5cm)

Claystone: light gray green, blocky, calcareous, cut by a fracture.

Core #13: 2815m (4.8cm)

Marlstone: very light grayish green, dense, common carbonaceous specks.

Core #14: 2759m (4.5cm)

Claystone: gray, firm to dense, calcareous, fractured.

Core #15: 2677m (5 cm)

Claystone: gray, slightly brown, firm, moderately calcareous, trace silty.

Core #16: 2635m (5 cm)

Claystone: brownish gray, firm, calcareous, silty in part, trace pyrite.

Core #17: 2497.3m (5 cm)

Claystone: brown gray, firm, calcareous, slightly silty, trace pyrite.

Core #18: 2364m (5 cm)

Claystone: brown to gray brown, firm.

Core #19: 2323.5m (5 cm)

Claystone: brown, firm to blocky.

Core #20: 2269.5m (5 cm)

Claystone: brown, firm to blocky.

Core #21: 2230.3m (5 cm)

Claystone: brown, firm and blocky.

Core #22: 2199m (5 cm)

Claystone: brown, firm to blocky.

Core #23: 2157m (5 cm)

Claystone: brown, firm to blocky.

Core #24: 2030m (5 cm)

Claystone: gray brown, firm, silty in part.

Core #25: 1944m (4.8 cm)

Claystone: greenish gray, firm, amorphous, slightly silty.

<u>317.5mm (12 1/4") hole section</u>	Interval: 3503m to 4424m
	Attempted: 24
	Recovered: 24

Detailed Sidewall Core Descriptions

Core #1: 4277.7m (5cm)

Claystone: brown gray, firm, slightly calcareous, silty, fracture along long axis of the core.

Core #2: 4233.4m (3cm)

Claystone: dark gray brown, firm, slightly calcareous, very silty, fine carbonaceous specks, fracture along long axis of the core.

Core #3: 4112.8m (5 cm)

Claystone: dark gray brown, firm, very slightly calcareous, silty, quartz and orange feldspar grains, fine disseminated pyrite, exhibits conchoidal fracture.

Core #4: 4043.2m (4.5cm)

Claystone: dark gray brown, firm, very slightly calcareous, silty, fine carbonaceous specks.

Core #5: 3989m (3.5cm) (fractured)

Claystone: medium gray, firm, silty, dolomitic, fine carbonaceous specks.

Core #6: 4317.5m (4.5cm)

Conglomeratic Sandstone: varicoloured gray, firm to hard, fine to pebble size grains, poorly sorted, fine grained matrix, calcareous cement, trace carbonaceous micro-laminations, patchy good – very good visible porosity, no show.

Core #7: 4362.3m (3.5cm)

Claystone: dark gray black, firm, slightly calcareous, silty in part, fracture along long axis of the core.

Core #8: 4353.5m (4.5cm)

Sandstone: gray, firm to hard, very fine to fine grained, well sorted, subrounded, quartz grains, trace feldspar and glauconite, well cemented with calcareous cement or matrix, patchy fair visible porosity, no shows.

Core #9: 4390.0m (4cm)

Claystone: dark gray to gray black, firm, slightly calcareous, silty in part, trace disseminated and nodular pyrite, fracture along long axis of core.

Core #10: 4354.5m (5cm)

Sandstone: light gray, firm to hard, quartz grains, trace glauconite and feldspar grains, fine grained, well sorted, subrounded grains, well cemented with a calcite cement, patchy fair visible porosity, no show; shale and carbonaceous micro laminations along the long axis of the core.

Core #11: 4349.7m (5cm)

Sandstone: light gray, firm to hard, quartz grains, trace glauconite and feldspar grains, fine grained, well sorted, subrounded grains, well cemented with calcite cement, patchy fair visible porosity, no show.

Core #12: 4325.5m (5cm)

Claystone with sandy laminations / sections: dark gray, firm, slightly calcareous, local fine to medium subrounded to subangular quartz grains, patchy poor visible porosity where sandy.

Core #13: 4323m (5cm)

Pebble conglomerate: varicoloured, pebble size (chert, clastics, carbonates) in a strongly calcareous very fine sand matrix, patchy visible porosity in the matrix, no show.

Core #14: 4319.8m (4 cm)

Conglomeratic sandstone: light gray, very fine to very coarse grained, quartz grains, minor lithic fragments, subrounded to subangular, well cemented with a strongly calcareous matrix or cement, patchy very poor visible porosity, no show.

Core #15: 4318.5m (4.5cm)

Sandstone: gray, firm becoming friable, fine to medium quartz grains, poorly sorted, subrounded to subangular, weakly cemented with calcareous cement, patchy visible porosity (it may be better than observed as the sample was covered on the surface with the residue of drilling mud); carbonaceous shale micro-laminations along the long axis of the core.

Core #16: 4313.5m (5cm)

Sandstone: gray, firm becoming friable, very fine to fine quartz grains, poorly sorted, subrounded to subangular, weakly cemented with calcareous cement, patchy visible porosity (it may be better than observed as the sample was covered on the surface with the residue of drilling mud); carbonaceous shale micro-laminations along the long axis of the core.

Core #17: 4312.8m (5cm)

Sandstone: light gray, firm to hard, very fine to fine grained quartz, well sorted, subrounded to subangular grains, well cemented with a very strong calcareous cement, no visible porosity, no show; trace carbonaceous micro-laminations.

Core #18: 4307.8m (5cm)

Claystone: medium to dark gray, soft to firm, very slightly calcareous, silty, trace carbonaceous specks, and micro-laminations.

Core #19: 3973.5m (5cm) (fracture along long axis of core)

Claystone: dark gray black, firm, very slightly calcareous, silty, trace carbonaceous specks.

Core #20: 3942.0m (4cm)

Claystone: dark gray black, firm, slightly calcareous.

Core #21: 3906.5m (4.5cm)

Claystone: dark gray black, firm, slightly calcareous.

Core #22: 3808.9m (4cm)

Claystone: dark gray black, firm, slightly calcareous, it has one beige marly section.

Core #23: 3743.0m (5cm)

Claystone: dark gray black, firm, slightly calcareous.

Core #24: 3701.0m (3.5cm) (broken up)

Claystone: dark gray black, firm, slightly calcareous.

216mm (8 1/2") hole section

Interval: 4405m to 5425m

Attempted: 25

Recovered: 22

Detailed Sidewall Core Descriptions

Core #1: 4780.5 (4cm)

Shale: dark gray to black, silty, carbonaceous in part, blocky.

Core #2: 5213.5 (4.5cm)

Shale: medium gray to black, micromicaceous in part, slightly silty, cut by a limestone stringer.

Limestone: gray white, hard and dense, very fine to fine crystalline, slightly argillaceous.

Core #3: 5208.5 (2cm)

Marlstone: medium gray, hard and dense, argillaceous grading to shale in part, thinly laminated, locally becoming argillaceous limestone.

Core #4: 5203.8 (4 cm)

Claystone: medium gray, brownish in part, blocky, calcareous, partly silty.

Core #5: 5198.5 (3.5 cm)

Shale: medium gray, blocky, calcareous, slightly silty.

Core #6: 5195.3 (2.5 cm)

Limestone: white, hard dense, microcrystalline, 1 cm thick laminae with claystone above and below.

Claystone: medium gray, partly brownish, blocky, calcareous, broken on bedding planes.

Core #7: 5422.5 (lost core)

Core #8: 5408.5 (4.5 cm)

Sandstone: light brownish to off white, very fine to partly fine grained, sub rounded and moderately well sorted, moderately hard and dense, slightly calcareous, trace of glauconite, possible 8 to 10 percent porosity, no visible show.

Core #9: 5407.5 (3 cm)

Sandstone: light brownish, very fine grained to silty, sub rounded and moderately well sorted, hard and dense, very slightly calcareous, silica cement with argillaceous matrix, poor porosity, no show.

Core #10: 5407.0 (2.5 cm)

Sandstone: light brownish, very fine grained to silty, sub rounded and moderately well sorted, hard and dense, very slightly calcareous, trace of glauconite, traces of carbonaceous flakes, silica cement with argillaceous matrix, poor porosity, no show.

Core #11: 5406.5 (4.5 cm)

Sandstone: light brownish white, very fine to partly fine grained, sub rounded and moderately well sorted, moderately hard, trace calcareous, siliceous cement with argillaceous matrix, trace glauconite, poor visible pin point porosity, no show, black shale laminae and possible intraclasts.

Core #12: 5403.6 (5 cm)

Sandstone: light brownish white, very fine grained to silty in part, sub rounded to sub angular, fairly well sorted, hard and dense, slightly calcareous, siliceous cement, argillaceous matrix, common carbonaceous flakes and banding, poor porosity, no shows.

Core #13: 5368.0 (Lost Core)

Core #14: 5315.8 (4.5 cm)

Claystone: light to medium gray, slightly brownish in part, firm to slightly platy, calcareous to locally marly, common trace of pyrite.

Core #15: 5189.0 (4.7 cm)

Claystone: medium gray, calcareous, common trace disseminated pyrite.

Core #16: 5186.5 (4.0 cm)

Shale: medium gray, micromicaceous, calcareous, one fracture parallel to core axis.

Core #17: 5144.3 (Lost Core)

Core #18: 5133.8 (3 cm)

Shale: medium gray, micromicaceous, calcareous, blocky.

Core #19: 5129.0 (4.5 cm)

Shale: medium gray, blocky, calcareous to marly in part, fractured.

Core #20: 5096.0 (3.5 cm)

Claystone: medium gray, blocky, trace calcareous, 2 fractures parallel to core.

Core #21: 5063.0 (4.0 cm)

Shale: black, slightly micromicaceous, sub platy, moderately calcareous, commonly cut by very thin silty laminae.

Core #22: 5100.8

Shale: medium to dark gray, blocky, slightly calcareous, trace silty, one fracture parallel to core.

Core #23: 4780.4 (4.5 cm)

Claystone: medium gray, slightly calcareous, dense, fractured along core axis.

Core #24: 4913.8 (4.5 cm)

Siltstone: medium gray, non calcareous, dense, brittle, hard and siliceous, very argillaceous to shaly in part, fractured along core axis.

Core # 25: 4960.0 (4.5 cm)

Shale: medium to dark gray, sub platy, moderately calcareous, common silty bedding planes, fractured.

165mm (6 1/2") hole section

Interval: 5405m to 6070m

Attempted: 9

Recovered: 9

Detailed Sidewall Core Descriptions

Core #1: 5962.8m (5cm)

Interbedded Sandstone & Shale

Sandstone: gray, hard, quartz grains, appears to be very fine grained, well cemented with calcareous cement, trace fine pyrite.

Shale: dark gray black, soft.

Core #2: 5962.0m (5cm)

Sandstone: gray, firm to hard, quartz and trace feldspar, appears to be upper very fine to lower fine grained, well cemented with calcareous and siliceous cement, calcareous matrix, minor carbonaceous laminations, patchy fair to good visible porosity.

Core #3: 5961.7m (4cm)

Sandstone with a shale stringer

Sandstone: gray, hard, quartz & trace feldspar, appears to be very fine to fine grained, well cemented with calcareous cement, no to poor visible porosity.

Shale: gray black, soft.

Core #4: 5961.2m (5cm)

Sandstone: gray, hard, quartz, appears to be very fine to fine grained, well cemented with calcareous cement, no to poor visible porosity.

Core #5: 5960.5m (4.75cm)

Shale and sandstone (coarse siltstone) (longitudinal contact) (fracture along shale)

Sandstone (coarse siltstone): gray, hard, quartz, appears to be very fine grained, well cemented with calcareous cement, no to poor visible porosity. (May grade to coarse siltstone)

Shale: gray black, soft.

Core #6: 5957.8m (4.5cm)

Interbedded shale & sandstone

Sandstone: gray, hard, quartz, appears to be very fine grained, well cemented with weakly calcareous cement, minor carbonaceous laminations, no to poor visible porosity.

Shale: gray black, soft, trace fine disseminated pyrite.

Core #7: 5940.0m (4.5cm)

Shale: gray, soft, non to slightly calcareous, fine disseminated pyrite.

Core #8: 5797.5m (5cm)

Shale: gray brown, soft, slightly calcareous, trace silt.

Core #9: Approximately 5961m (5cm) Core was taken on run #4, actual depth estimated.

Sandstone: gray, hard, very fine to fine grained, quartz, well cemented with calcareous and siliceous cement, calcareous matrix, no to poor visible porosity. (note: gas observed bubbling from core on recovery.)

Note: Grains size and other features such as rounding and sorting were hard to determine due to the rock flour residue left on the core from the coring procedure; in order to preserve the integrity of the core I did not attempt to remove it at the wellsite.

Appendix Q

Wireline

Logging Reports

Appendix Q
Wireline Logging Reports

Wireline Logging Summary

Logging Suite Number: 1
Wireline Logging Company: Schlumberger **Engineer:** G McIsaac/ F Monegarian/R
District: Dartmouth **Unit Number:** 2052
Witness: C.MacPherson/M Donovan
Was Pressure Control Equipment Utilized: No **Maximum Deviation:** 0.800 °
Was the Logging Job Mechanically Assisted: No **Hole Size:** 431.8
Total Lost Time: 0.00
Loggers' Total Down Time: 0.00
Total Job Time (From Rig up to Rig down): 36.75

	Measured Depth	True Vertical Depth
Casing Depth Driller	1,902.00	1,901.99
Casing Depth Logger	1,904.00	1,903.99
Total Depth Driller (Tally)	3,515.00	3,514.95
Total Depth Driller (Strap or SLM)		

General Remarks:

Logging Run #: 1
Date: Jun 12, 2002

Drilling Fluid Data

Drilling Fluid Type: Paradril
Fluid Density: 1222.0 **Viscosity:** 176 **pH:** **Fluid Loss:**
Mud Resistivity (Rm): @ ° **Maximum Temperature:** 69.0 °
Mud Resistivity (Rm) @ BHT: @ ° **Source (Rmf):**
Mud Filtrate Resistivity (Rmf): @ ° **Source (Rmc):**
Mud Cake Resistivity (Rmc): @ °

Logging Run Information

Date on Bottom: Jun 12, 2002
Total Depth Logger: 3,520.70 (MD) 3,520.00 (TVD)
Logging Tools: PEX-DIS-EMS
Remarks:
Hole Conditions: Very Good

Logging Run #: 2
Date: Jun 13, 2002

Drilling Fluid Data

Drilling Fluid Type:	Paradril				
Fluid Density:	1222.0	Viscosity:	176	pH:	Fluid Loss:
Mud Resistivity (Rm):	@	°			
Mud Resistivity (Rm) @ BHT:	@	°		Maximum Temperature:	79.0 °
Mud Filtrate Resistivity (Rmf):	@	°		Source (Rmf):	
Mud Cake Resistivity (Rmc):	@	°		Source (Rmc):	

Logging Run Information

Date on Bottom: Jun 12, 2002
Total Depth Logger: 3,520.70 (MD) 3,520.70 (TVD)

Logging Tools: CSAT-CSAT-CSAT-GR
Remarks:

Hole Conditions:

Logging Run #: 3
Date: Jun 13, 2002

Drilling Fluid Data

Drilling Fluid Type:	Paradril				
Fluid Density:	1222.0	Viscosity:	176	pH:	Fluid Loss:
Mud Resistivity (Rm):	@	°			
Mud Resistivity (Rm) @ BHT:	@	°		Maximum Temperature:	79.0 °
Mud Filtrate Resistivity (Rmf):	@	°		Source (Rmf):	
Mud Cake Resistivity (Rmc):	@	°		Source (Rmc):	

Logging Run Information

Date on Bottom: Jun 13, 2002
Total Depth Logger: 3,520.70 (MD) 3,520.70 (TVD)

Logging Tools: MSCT, Rotary Sidewall Coring Tool. Cut 25 cores recovered 25 cores, 100% recovery.
Remarks:

Hole Conditions:

Logging Suite Number: 2
Wireline Logging Company: Schlumberger
District: Dartmouth
Witness: Donovan / Mac Dougall
Engineer: McIsaac/Knox/Toma/Wagner
Unit Number: 2052

Was Pressure Control Equipment Utilized: No
Was the Logging Job Mechanically Assisted: No
Maximum Deviation: 8.900 °
Hole Size: 311.0

Total Lost Time: 0.00
Loggers' Total Down Time: 0.00
Total Job Time (From Rig up to Rig down): 32.25

	Measured Depth	True Vertical Depth
Casing Depth Driller	3,402.00	3,401.95
Casing Depth Logger	3,503.00	3,502.95
Total Depth Driller (Tally)	4,418.00	4,416.46
Total Depth Driller (Strap or SLM)		

General Remarks: Very good Logging Run.

Logging Run #: 1
Date: Jun 24, 2002

Drilling Fluid Data

Drilling Fluid Type: Paradril
Fluid Density: 1522.7
Viscosity: 187
pH:
Fluid Loss:

Mud Resistivity (Rm): @ °
Mud Resistivity (Rm) @ BHT: @ °
Mud Filtrate Resistivity (Rmf): @ °
Mud Cake Resistivity (Rmc): @ °

Maximum Temperature: 95.0 °
Source (Rmf):
Source (Rmc):

Logging Run Information

Date on Bottom: Jun 25, 2002
Total Depth Logger: 4,424.50 (MD) (TVD)

Logging Tools: AIT- DSI- LDT- CNL- NGS- EMS- M ; 4424m - 3503m
Remarks:

Hole Conditions: Very Good

Logging Run #: 2
Date: Jun 25, 2002

Drilling Fluid Data

Drilling Fluid Type: Paradril
Fluid Density: 1522.7 Viscosity: 187 pH: Fluid Loss:
Mud Resistivity (Rm): @ °
Mud Resistivity (Rm) @ BHT: @ ° Maximum Temperature: 104.0 °
Mud Filtrate Resistivity (Rmf): @ ° Source (Rmf):
Mud Cake Resistivity (Rmc): @ ° Source (Rmc):

Logging Run Information

Date on Bottom: Jun 25, 2002
Total Depth Logger: 4,353.00 (MD) (TVD)

Logging Tools: MDT- GR; Attempt 12 tests 4353m - 4290m; no success
Remarks:

Hole Conditions: Very Good

Logging Run #: 3
Date: Jun 25, 2002

Drilling Fluid Data

Drilling Fluid Type: Paradril
Fluid Density: 1522.7 Viscosity: 190 pH: Fluid Loss:
Mud Resistivity (Rm): @ °
Mud Resistivity (Rm) @ BHT: @ ° Maximum Temperature: 108.0 °
Mud Filtrate Resistivity (Rmf): @ ° Source (Rmf):
Mud Cake Resistivity (Rmc): @ ° Source (Rmc):

Logging Run Information

Date on Bottom: Jun 26, 2002
Total Depth Logger: 4,424.50 (MD) (TVD)

Logging Tools: OBMI-CIS-GR; 4424m - 3503m
Remarks:

Hole Conditions: Very Good

Logging Run #: 4
Date: Jun 27, 2002

Drilling Fluid Data

Drilling Fluid Type:	Paradril				
Fluid Density:	1522.7	Viscosity:	167	pH:	Fluid Loss:
Mud Resistivity (Rm):	@	°			
Mud Resistivity (Rm) @ BHT:	@	°		Maximum Temperature:	97.0 °
Mud Filtrate Resistivity (Rmf):	@	°		Source (Rmf):	
Mud Cake Resistivity (Rmc):	@	°		Source (Rmc):	

Logging Run Information

Date on Bottom: Jun 27, 2002
Total Depth Logger: 4,390.00 (MD) (TVD)

Logging Tools: CIS- MSCT- GR (Rotary sidewall coring tool)
Attempt 24 cores/ recover 24 cores/ 100%

Remarks: Tool indicated low oil after core #24, did not attempt core #25

Hole Conditions: Very Good

Logging Suite Number: 3
Wireline Logging Company: Schlumberger
District:
Witness: M Donovan/C MacPherson
Engineer: G McIssac
Unit Number: 2052

Was Pressure Control Equipment Utilized: No
Was the Logging Job Mechanically Assisted: No
Maximum Deviation: 27.400 °
Hole Size: 216.0

Total Lost Time:
Loggers' Total Down Time:
Total Job Time (From Rig up to Rig down):

	Measured Depth	True Vertical Depth
Casing Depth Driller	4,404.00	4,402.69
Casing Depth Logger	4,405.00	4,403.68
Total Depth Driller (Tally)	5,425.00	5,343.61
Total Depth Driller (Strap or SLM)		

General Remarks: The first logging descent was unable to reach the bottom of the well and therefore did not cross the bottom sandstone which was of the most interest. The OBMI and CMR were run in the shortened hole, in one descent, a clean out trip was necessary to get the other logging tools to bottom.

Logging Run #: 1
Date: Jul 16, 2002

Drilling Fluid Data

Drilling Fluid Type: Paradril
Fluid Density: 1785.0 **Viscosity:** 105 **pH:** **Fluid Loss:**
Mud Resistivity (Rm): @ °
Mud Resistivity (Rm) @ BHT: @ ° **Maximum Temperature:** 144.0 °
Mud Filtrate Resistivity (Rmf): @ ° **Source (Rmf):**
Mud Cake Resistivity (Rmc): @ ° **Source (Rmc):**

Logging Run Information

Date on Bottom: Jul 18, 2002
Total Depth Logger: 5,402.00 (MD) 5,321.00 (TVD)

Logging Tools: OBMI-LDL-CNL-GR-HNGS
Remarks: Could not get all the way to bottom, rubber stand-offs on tool were effected by mud and or gas in mud and were greatly expanded when tool recovered at surface.

Hole Conditions: Very good down to bridge at 5402.

Logging Run #: 2
Date: Jul 16, 2002

Drilling Fluid Data

Drilling Fluid Type:	Paradril	Viscosity:	105	pH:		Fluid Loss:	
Fluid Density:	1785.0						
Mud Resistivity (Rm):	@	°					
Mud Resistivity (Rm) @ BHT:	@	°		Maximum Temperature:	144.0 °		
Mud Filtrate Resistivity (Rmf):	@	°		Source (Rmf):			
Mud Cake Resistivity (Rmc):	@	°		Source (Rmc):			

Logging Run Information

Date on Bottom: Jul 18, 2002
Total Depth Logger: 5,381.00 (MD) 5,301.00 (TVD)

Logging Tools: CMR-GR
Remarks: Could not get all the way to bottom, rubber stand-offs on tool were effected by mud and or gas in mud and were greatly expanded when tool recovered at surface.

Hole Conditions:

Logging Run #: 3
Date: Jul 23, 2002

Drilling Fluid Data

Drilling Fluid Type:	Paradril	Viscosity:	104	pH:		Fluid Loss:	
Fluid Density:	1785.0						
Mud Resistivity (Rm):	@	°					
Mud Resistivity (Rm) @ BHT:	@	°		Maximum Temperature:	144.0 °		
Mud Filtrate Resistivity (Rmf):	@	°		Source (Rmf):			
Mud Cake Resistivity (Rmc):	@	°		Source (Rmc):			

Logging Run Information

Date on Bottom: Jul 24, 2002
Total Depth Logger: 5,426.00 (MD) 5,343.00 (TVD)

Logging Tools: CNL-LDT-GR Logged from 5424.5 to 5325 meters.
Remarks: Clean out trip was required before this descent.

Hole Conditions:

Logging Run #: 4
Date: Jul 23, 2002

Drilling Fluid Data

Drilling Fluid Type: Paradril
Fluid Density: 1785.0

Viscosity: 104

pH:

Fluid Loss:

Mud Resistivity (Rm):

@

°

Mud Resistivity (Rm) @ BHT:

@

°

Maximum Temperature: 148.0 °

Mud Filtrate Resistivity (Rmf):

@

°

Source (Rmf):

Mud Cake Resistivity (Rmc):

@

°

Source (Rmc):

Logging Run Information

Date on Bottom: Jul 23, 2002

Total Depth Logger: 5,425.70 (MD)

5,343.00 (TVD)

Logging Tools: MSCT Cut 25 cores and recovered 22 cores.

Remarks: The coring motor would not start on the first tool run, and it was pulled for a second tool, on testing at 1700 meters the coring motor would not start either, tool pulled and adjusted, it then worked on test as it was run in the hole.

Hole Conditions:

Logging Suite Number: 4
Wireline Logging Company: Schlumberger
District: Dartmouth
Witness: B. Mac Dougall

Engineer: B. Mitchell/G.MacIsaac/B. M
Unit Number: 2052

Was Pressure Control Equipment Utilized: No
Was the Logging Job Mechanically Assisted: No

Maximum Deviation: °
Hole Size: 165.1

Total Lost Time:
Loggers' Total Down Time:
Total Job Time (From Rig up to Rig down): 44.00

	Measured Depth	True Vertical Depth
Casing Depth Driller	5,403.00	5,322.57
Casing Depth Logger	5,405.00	5,324.49
Total Depth Driller (Tally)	6,070.00	5,982.41
Total Depth Driller (Strap or SLM)		

General Remarks:

Logging Run #: 1
Date: Aug 9, 2002

Drilling Fluid Data

Drilling Fluid Type: Paradril IA
Fluid Density:

Viscosity:

pH:

Fluid Loss:

Mud Resistivity (Rm): @ °
Mud Resistivity (Rm) @ BHT: @ °
Mud Filtrate Resistivity (Rmf): @ °
Mud Cake Resistivity (Rmc): @ °

Maximum Temperature: 170.0 °
Source (Rmf):
Source (Rmc):

Logging Run Information

Date on Bottom: Aug 10, 2002
Total Depth Logger: 6,077.00 (MD) (TVD)

Logging Tools: GR/DSI/AIT
Remarks: Good Run

Hole Conditions: Very Good

Logging Run #: 2
Date: Aug 10, 2002

Drilling Fluid Data**Drilling Fluid Type:** Paradril IA**Fluid Density:****Viscosity:****pH:****Fluid Loss:****Mud Resistivity (Rm):**

@

°

Mud Resistivity (Rm) @ BHT:

@

°

Maximum Temperature: 171.0 °**Mud Filtrate Resistivity (Rmf):**

@

°

Source (Rmf):**Mud Cake Resistivity (Rmc):**

@

°

Source (Rmc):**Logging Run Information****Date on Bottom:** Aug 10, 2002**Total Depth Logger:** 6,077.00 (MD)

(TVD)

Logging Tools: GR/CNL/LDT**Remarks:** Good Run, logged with pad in.**Hole Conditions:** Good, some sticking at shoe and on bottom.

Logging Run #: 3**Date:** Aug 10, 2002**Drilling Fluid Data****Drilling Fluid Type:****Fluid Density:****Viscosity:****pH:****Fluid Loss:****Mud Resistivity (Rm):**

@

°

Mud Resistivity (Rm) @ BHT:

@

°

Maximum Temperature: °**Mud Filtrate Resistivity (Rmf):**

@

°

Source (Rmf):**Mud Cake Resistivity (Rmc):**

@

°

Source (Rmc):**Logging Run Information****Date on Bottom:****Total Depth Logger:** (MD)

(TVD)

Logging Tools: MCST**Remarks:** Tool Failure, bit would not rotate.**Hole Conditions:**

Logging Run #: 4**Date:** Aug 10, 2002

Drilling Fluid Data**Drilling Fluid Type:****Fluid Density:****Viscosity:****pH:****Fluid Loss:****Mud Resistivity (Rm):**

@

°

Mud Resistivity (Rm) @ BHT:

@

°

Maximum Temperature:

°

Mud Filtrate Resistivity (Rmf):

@

°

Source (Rmf):**Mud Cake Resistivity (Rmc):**

@

°

Source (Rmc):**Logging Run Information****Date on Bottom:****Total Depth Logger:**

(MD)

(TVD)

Logging Tools: MCST**Remarks:** Tool failure, coring head would not rotate to coring position**Hole Conditions:**

Logging Run #:

5

Date:

Aug 11, 2002

Drilling Fluid Data**Drilling Fluid Type:** Paradril IA**Fluid Density:****Viscosity:****pH:****Fluid Loss:****Mud Resistivity (Rm):**

@

°

Mud Resistivity (Rm) @ BHT:

@

°

Maximum Temperature:

°

Mud Filtrate Resistivity (Rmf):

@

°

Source (Rmf):**Mud Cake Resistivity (Rmc):**

@

°

Source (Rmc):**Logging Run Information****Date on Bottom:**

Aug 11, 2002

Total Depth Logger:

(MD)

(TVD)

Logging Tools: MCST**Remarks:** Gamma ray failure, cut one core on depth.**Hole Conditions:** Good

Logging Run #:

6

Date:

Aug 11, 2002

Drilling Fluid Data

Drilling Fluid Type: Paradril IA
Fluid Density:

Viscosity:

pH:

Fluid Loss:

Mud Resistivity (Rm): @ °
Mud Resistivity (Rm) @ BHT: @ °
Mud Filtrate Resistivity (Rmf): @ °
Mud Cake Resistivity (Rmc): @ °

Maximum Temperature: °
Source (Rmf):
Source (Rmc):

Logging Run Information

Date on Bottom: Aug 11, 2002
Total Depth Logger: (MD) (TVD)

Logging Tools: MCST
Remarks: Cut 8 core, gamma ray failure.

Hole Conditions: Good

Logging Run #: 7
Date: Aug 11, 2002

Drilling Fluid Data

Drilling Fluid Type: Paradril IA
Fluid Density:

Viscosity:

pH:

Fluid Loss:

Mud Resistivity (Rm): @ °
Mud Resistivity (Rm) @ BHT: @ °
Mud Filtrate Resistivity (Rmf): @ °
Mud Cake Resistivity (Rmc): @ °

Maximum Temperature: 172.0 °
Source (Rmf):
Source (Rmc):

Logging Run Information

Date on Bottom: Aug 11, 2002
Total Depth Logger: (MD) (TVD)

Logging Tools: MCST
Remarks: Gamma ray and telemetry head failure after reaching coring point.

Hole Conditions: Good

Appendix R

Wireline Formation

Pressure Reports

Appendix R
Wireline Formation Pressure Tests

Wireline Formation Test Pressure Survey

Well: Chevron et al Newburn H-23
 Hole Size: 317.5mm (12 1/4")
 Date: 25-June-2002
 Tool: MRPS_1
 Probe Type: Large Diameter Probe
 Gauge: BQP1
 Gauge Resolution: 0.010 psi

Test	File	Depth m	TVD m	Drawdown Mobility MD/CP	Mud Pressure		Last read build-up Pressure KPAA	Formation Pressure KPAA	Test Type
					Before KPAA	After KPAA			
1	77	4317.54	4316.99		65867.20	65880.70			Lost Seal
2	78	4313.00	4312.48		65817.12	65841.20			Lost Seal
3	79	4312.00	4311.49		65810.12	65812.00			Lost Seal
4	80	4290.02	4289.61		65459.62	65470.61			Dry Test
5	81	4319.02	4318.47		65930.84	65904.23			Lost Seal
6	82	4319.99	4319.43		65908.88	65904.34			Lost Seal
7	85	4353.37	4352.60		66343.16	66353.75			Lost Seal
8	86	4352.53	4351.76		66349.11	66356.61			Lost Seal
9	87	4351.51	4350.75		66348.30	66355.67			Lost Seal
10	88	4326.97	4326.36		65954.29	65967.67			Lost Seal
11	89	4321.46	4320.89		65885.56	65896.14			Lost Seal
12	90	4335.29	4334.64		66122.86	66120.38			Lost Seal

Appendix S
Sidewall Core Routine
Care Analysis

Appendix S
Sidewall Core - Routine Core Analysis

CORE LABORATORIES

Company : CHEVRON CANADA RESOURCES
Well : CHEVRON ET AL NEWBURN H-23
Location :
Province :

Field : MAHONE
Formation :
Coring Equip.: ROTARY SIDEWALL
Coring Fluid :

File No.: 52131-02-0278
Date : 2002-07-05
Analysts: DJB
Core Dia:

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH m	PERMEABILITY (MAXIMUM) K_{air} mD	POROSITY (HELIUM) fraction	GRAIN DENSITY kg/m ³	DESCRIPTION
RUN NUMBER 1					
SP 18	4307.80	<.01	0.116	2690.	ss vf f lam sid
SP 17	4312.80	0.01	0.101	2710.	ls i
SP 16	4313.50	0.40	0.175	2620.	ss vf f lam shy
SP 6	4317.50	42.4	0.181	2660.	ss vf f m carb pyr
SP 15	4318.50	2.65	0.165	2630.	ss vf f m lam
SP 14	4319.80	0.06	0.089	2660.	ss vf f
SP 13	4323.00	0.18	0.131	2800.	ls i glauc pyr
SP 12	4325.50	0.31	0.093	2650.	ss vf f
SP 11	4349.70	0.42	0.124	2660.	ss vf f calc
SP 8	4353.50	0.28	0.121	2660.	ss vf f calc
SP 10	4354.50	0.80	0.129	2660.	ss vf f shy lam calc
RUN NUMBER 2					
SP 23	4780.40				
SP 24	4913.80				
SP 25	4960.00	0.09	0.094	2670.	ss vf f carb pyr
SP 21	5063.00				
SP 22	5100.80				
SP 19	5129.00				
SP 18	5133.80				
SP 17	5144.30				
SP 16	5186.50				
SP 15	5189.00				
SP 6	5195.30				
					NO SAMPLE

Appendix S
Sidewall Core - Routine Core Analysis

CORE LABORATORIES

Company : CHEVRON CANADA RESOURCES
Well : CHEVRON ET AL NEWBURN H-23

Field : MAHONE
Formation :

File No.: 52131-02-0278
Date : 2002-07-05

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH m	PERMEABILITY (MAXIMUM) K_{air} mD	POROSITY (HELIUM) fraction	GRAIN DENSITY kg/m ³	DESCRIPTION
SP 5	5198.50				
SP 4	5203.80				
SP 3	5208.50				
SP 2	5213.50				
SP 13	5368.00				
SP 12	5403.60				
SP 11	5406.50				
SP 10	5407.00				
SP 9	5407.50				
SP 8	5408.50				
SP 7	5422.50				
RUN NUMBER 3					
SP 6	5957.80	0.02	0.099	2720.	ss vf f shy lam pyr
SP 5	5960.50	0.02	0.117	2670.	ss vf f shy lam pyr
SP 9	5961.00	0.02	0.133	2680.	ss vf f pyr
SP 4	5961.20	0.03	0.088	2680.	ss vf f pyr
SP 3	5961.70	0.03	0.127	2670.	ss vf f shy pyr lam
SP 2	5962.00	<.01	0.088	2670.	ss vf f pyr
SP 1	5962.80	0.01	0.102	2650.	ss vf f shy pyr lam



CODE KEY - DESCRIPTIONS

A	= (Prefix A) Horizontal matrix permeability measured by pressure decay profile	I	= Intercrystalline	SPH	= Humidity analysis of small plug sample at 60 degrees Celsius and 50 percent relative humidity
	permeametry through a probe tip due to induced fractures	Incl	= Inclusions		
ACA	= Removed for advanced core analysis	lam	= Laminar (laminated)	SP	= Small plug (sample drilled from core in maximum horizontal direction and parallel to bedding plane where possible) permeability, porosity and grain density are measured
anhy	= Anhydrite	ls	= Limestone		
arg	= Argillaceous	lv	= Large vug		
AST	= Appears similar to	m	= Medium		
blt	= Bitumen	ml	= Mud invaded		
bk	= Break	mv	= Medium vug		
c	= Coarse	NA	= Not analyzed by request	ss	= Sandstone
calc	= Calcite (calcareous)	NP	= No permeability measurement possible due to poor sample quality	ssdy	= Slightly sandy (<20%)
carb	= Carbonaceous	NR	= Not received	sshy	= Slightly shaly (<20%)
cbl	= Cobble	ool	= Oolitic	sty	= Stylolite (ic)
cgl	= Conglomerate	OB	= Overburden sample (permeability and porosity measured at net overburden stress)	sulf	= Sulphur
cht	= Chert			sv	= Small vug
coal	= Coal/coal inclusion			TEC	= Thermal Extraction Chromatography to determine oil richness
coq	= Coquina				
dol	= Dolomite			TS	= Thin section
f	= Fine			uncon	= Unconsolidated
FD	= Full diameter analysis including three directional permeabilities, porosity and densities	PR	= Preserved for future studies	vc	= Very coarse
foss	= Fossil (fossiliferous)	pbl	= Pebble	vfrac	= Vertical fracture
frac	= Fracture (undifferentiated)	PFD	= Preliminary Full Diameter sample	vf	= Very fine
fri	= Friable	PSP	= Preliminary Small Plug sample	VIS	= Viscosity of oil measured
glau	= Glauconite (glauconitic)	PSA	= Particle size analysis	VOB	= Vertical overburden sample (vertical permeability measured at net overburden stress)
grnl	= Granule	ppv	= Pinpoint vug	vshy	= Very shaly (>40%)
gyp	= Gypsum	pyr	= Pyrite (pyritic)	VSP	= Vertical small plug drilled from whole core to measure vertical permeability and occasionally porosity
hfrac	= Horizontal fracture	pyrbt	= Pyrobitumen		
hal	= Halite (salt)	ru	= Rubble		
IFD	= Inner Full Diameter, (a Full diameter sample is drilled from the bulk portion of the core in the vertical direction for permeability and porosity measurements)	SA	= Sieve analysis		
		sdv	= Sandy		
		SEM	= Scanning electron microscope analysis		
		sh	= Shale		
		shy	= Moderately shaly (20% - 40%)		
		sls	= Siltstone		
		slst	= Siltstone		
		sly	= Silty		
		SPT	= Small Plug used for tracer analysis		
				vug	= Vuggy (vuggy)
				ws	= Water sand
				XRD	= X-ray diffraction
					= Perm unavailable due to broken core
				10240	= Permeability >10 Darcies; (maximum routine permeability measurement)

Appendix T

Sidewall X-ray

Diffraction Analysis

Appendix T
Sidewall Core – X-Ray Diffraction Analysis

X-Ray Diffraction Results 12 ¼" Hole Section - Sands

X-Ray Diffraction Analysis (Combined Whole Rock and Clay)

Company: Chevron Texaco
Well: Chevron et al Newburn H-23



Sample ID Depth	6 4317.5	8 4353.5	10 4354.5	11 4349.7	12 4325.5	13 4323
Whole Rock Weight %						
Quartz	65	52	63	64	38	52
Plagioclase	23	22	21	16	17	12
K-Feldspar	0	0	0	0	2	1
Calcite	1	18	4	9	1	17
Dolomite	Trace	Trace	0	0	Trace	Trace
Siderite	1	Trace	1	1	3	7
Pyrite	1	0	1	1	3	3
Total Clay	9	8	10	9	36	8
Relative Clay %						
Smectite	Trace	Trace	Trace	1	0	1
Illite / Smectite *	11	11	17	9	14	17
Illite & Mica	22	19	21	17	32	30
Kaolinite	47	50	46	51	36	37
Chlorite	20	20	16	22	18	15

* Illite / Smectite Mixed-Layer Clay

100	100	100	100	100	100
100	100	100	100	100	100

X-Ray Diffraction Results 12 ¼" Hole Section – Sands (continued)

X-Ray Diffraction Analysis (Combined Whole Rock and Clay)

Company: Chevron Texaco
Well: Chevron et al Newburn H-23



Sample ID Depth	14 4319.8	15 4318.5	16 4313.5	17 4312.8	18 4307.8
Whole Rock Weight %					
Quartz	64	62	50	46	40
Plagioclase	10	19	28	22	8
K-Feldspar	3	1	1	1	1
Calcite	15	1	Trace	21	0
Dolomite	0	0	0	0	0
Siderite	1	3	3	1	13
Pyrite	0	0	1	2	0
Total Clay	7	14	17	7	38
Relative Clay %					
Smectite	1	2	1	0	0
Illite / Smectite *	11	12	15	12	17
Illite & Mica	19	21	32	34	37
Kaolinite	48	48	38	36	32
Chlorite	21	17	14	18	14

* Illite / Smectite Mixed-Layer Clay

100	100	100	100	100
100	100	100	100	100

X-Ray Diffraction Results 8 1/2" Hole Section - Sands



X-Ray Diffraction Analysis (Combined Whole Rock and Clay)

Company: CHEVRON
Well: Chevron et al Newburn H-23

Sample ID	3	2	12	11	10	9	8
Depth	5208.5	5213.5	5403.6	5406.5	5407	5407.5	5408.5
Whole Rock Weight %							
Quartz	36	44	61	70	59	84	77
Plagioclase	16	13	12	12	12	6	9
K-Feldspar	1	Trace	0	0	0	0	0
Calcite	15	20	2	1	Trace	1	2
Dolomite	0	0	0	0	0	0	0
Siderite	1	1	Trace	Trace	3	0	Trace
Pyrite	3	4	1	1	2	0	1
Total Clay	28	18	24	16	24	9	11
Relative Clay %							
Smectite	1	1	0	0	0	0	0
Illite / Smectite *	14	13	2	1	13	2	2
Illite & Mica	44	29	5	5	29	8	6
Kaolinite	21	25	38	40	29	44	36
Chlorite	20	32	55	54	29	46	56

* Illite / Smectite Mixed-Layer Clay

100 100 100 100 100 100 100 100

X-Ray Diffraction Analysis
(Combined Whole Rock and Clay)



Company: CHEVRON
Well: Chevron et al Newburn H-23

Sample ID	24	25	21	22	19	18	16	15	6	5	4
Depth	4913.8	4960	5063	5100.8	5129	5133.8	5186.5	5189	5195.3	5198.5	5203.8
Whole Rock Weight %											
Quartz	55	32	39	39	27	30	35	29	37	31	40
Plagioclase	10	4	4	8	3	3	5	6	12	7	9
K-Feldspar	2	Trace	Trace	2	1	0	1	1	1	1	1
Calcite	1	31	24	6	40	36	25	34	13	31	9
Dolomite	0	0	0	0	0	0	0	0	0	1	0
Siderite	2	5	2	Trace	1	1	1	1	2	1	2
Pyrite	1	2	3	2	2	2	3	2	3	1	2
Total Clay	29	26	28	43	26	28	30	27	32	27	37
Relative Clay %											
Smectite	1	1	1	1	2	2	1	1	1	1	1
Illite / Smectite *	13	10	9	11	11	13	11	10	14	17	15
Illite & Mica	32	39	25	32	36	27	32	30	31	37	32
Kaolinite	35	32	41	35	30	40	33	34	33	27	32
Chlorite	19	18	24	21	21	18	23	25	21	18	20

* Illite / Smectite Mixed-Layer Clay

100	100	100	100	100	100	100	100	100	100	100	100
100	100	100	100	100	100	100	100	100	100	100	100

X-Ray Diffraction Results 6 ½" Hole Section – Sands

X-Ray Diffraction Analysis (Combined Whole Rock and Clay)

Company: Chevron
Well: Chevron et al. Newburn H-23



Sample ID Depth	1 5952.8	2 5962	3 5961.7	4 5961.2	5 5960.5	6 5957.8	9 5961
Whole Rock Weight %							
Quartz	60	78	62	67	57	54	74
Plagioclase	14	6	12	10	15	13	10
K-Feldspar	1	1	2	1	1	2	0
Calcite	0	1	0	0	0	Trace	1
Dolomite	0	0	Trace	0	0	0	0
Siderite	1	0	Trace	0	1	5	Trace
Pyrite	0	0	0	0	1	2	0
Total Clay	24	14	24	22	25	24	15
Relative Clay %							
Smectite	0	0	0	0	0	0	0
Illite / Smectite *	11	10	10	9	11	14	5
Illite & Mica	19	20	21	18	25	34	14
Kaolinite	29	20	20	18	16	19	18
Chlorite	41	50	49	55	48	33	63

* Illite / Smectite Mixed-Layer Clay

100	100	100	100	100	100	100
100	100	100	100	100	100	100

X-Ray Diffraction Results All hole sections - Shales

X-Ray Diffraction Analysis (Combined Whole Rock and Clay)

Company: Chevron
Well: Chevron et al. Newburn H-23



Sample ID	10	8	7	6	5	24	22
Depth	2903.5	3139	3236	3373	3481	3701	3808.9
	Whole Rock Weight %						
Quartz	41	44	56	46	42	41	44
Plagioclase	3	3	1	10	5	5	4
K-Feldspar	3	2	2	1	3	4	2
Calcite	16	11	3	3	5	3	1
Dolomite	0	0	0	0	0	0	0
Siderite	1	4	4	1	4	2	2
Pyrite	5	3	2	2	3	2	2
Total Clay	31	33	32	37	38	43	45
	Relative Clay %						
Smectite	0	0	0	0	0	0	0
Illite / Smectite *	10	7	7	6	7	9	7
Illite & Mica	27	24	21	17	26	25	27
Kaolinite	42	40	44	48	42	41	43
Chlorite	21	29	28	29	25	25	23

* Illite / Smectite Mixed-Layer Clay

100	100	100	100	100	100	100	100
100	100	100	100	100	100	100	100

X-Ray Diffraction Results All hole sections – Shales (Continued)

X-Ray Diffraction Analysis (Combined Whole Rock and Clay)

Company: Chevron
Well: Chevron et al. Newburn H-23



Sample ID Depth	5A 3989	3 4112.8	2 4233.4	23 4780.4	20 5098	14 5315.8
	Whole Rock Weight %					
Quartz	39	37	47	51	38	36
Plagioclase	5	6	9	7	8	12
K-Feldspar	3	1	2	2	4	0
Calcite	1	3	1	1	3	23
Dolomite	0	0	0	0	0	3
Siderite	4	1	10	3	2	1
Pyrite	1	8	2	1	0	4
Total Clay	47	44	29	35	45	21
	Relative Clay %					
Smectite	0	0	0	0	0	0
Illite / Smectite *	9	12	17	15	6	20
Illite & Mica	34	47	49	37	32	43
Kaolinite	42	23	22	28	41	22
Chlorite	15	18	12	21	21	15

* Illite / Smectite Mixed-Layer Clay

100	100	100	100	100	100
100	100	100	101	100	100

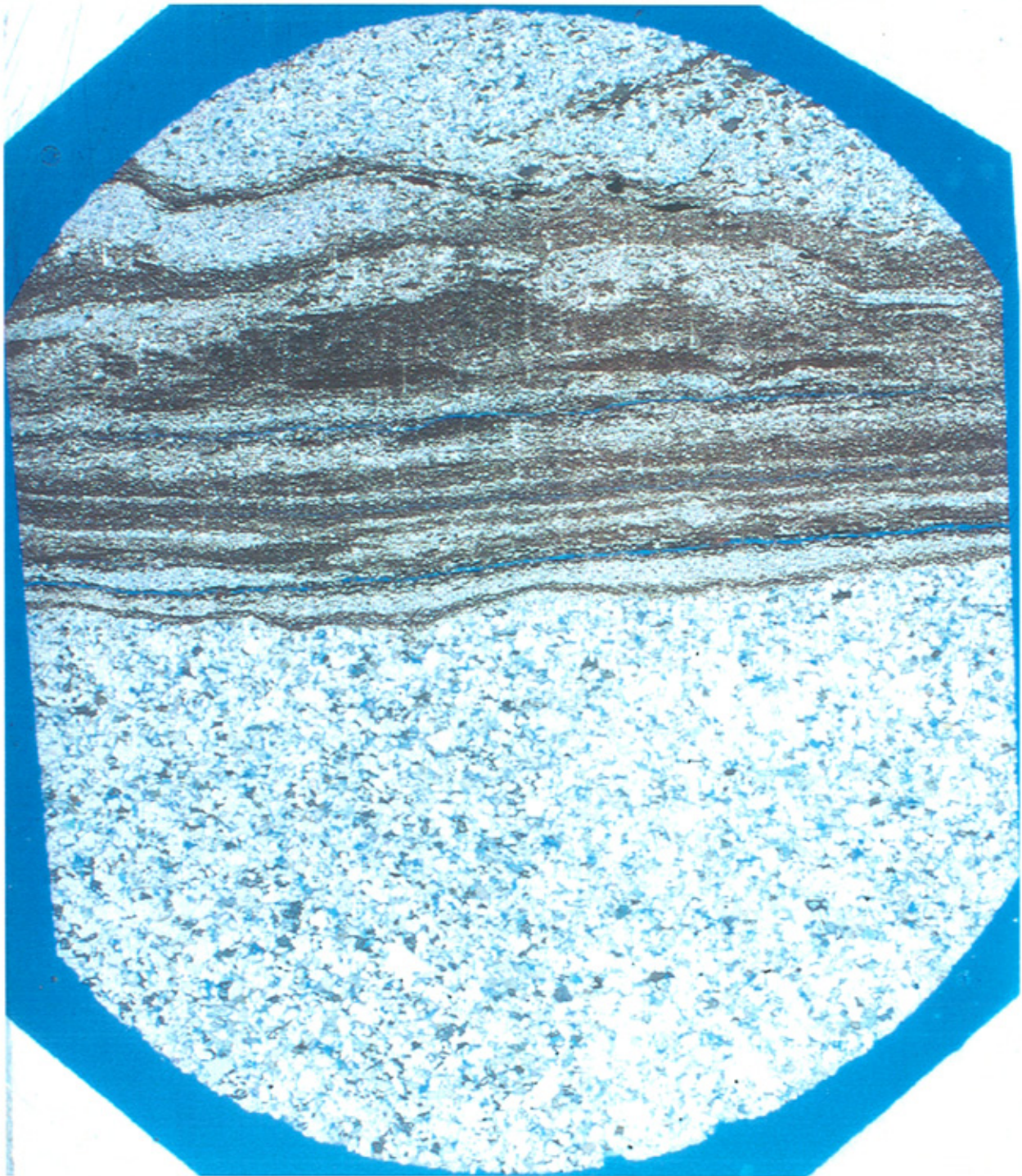
Appendix U

Sidewall Core Photographs

Appendix U
Sidewall Core Photographs

Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3523



Sample:
Depth (m):

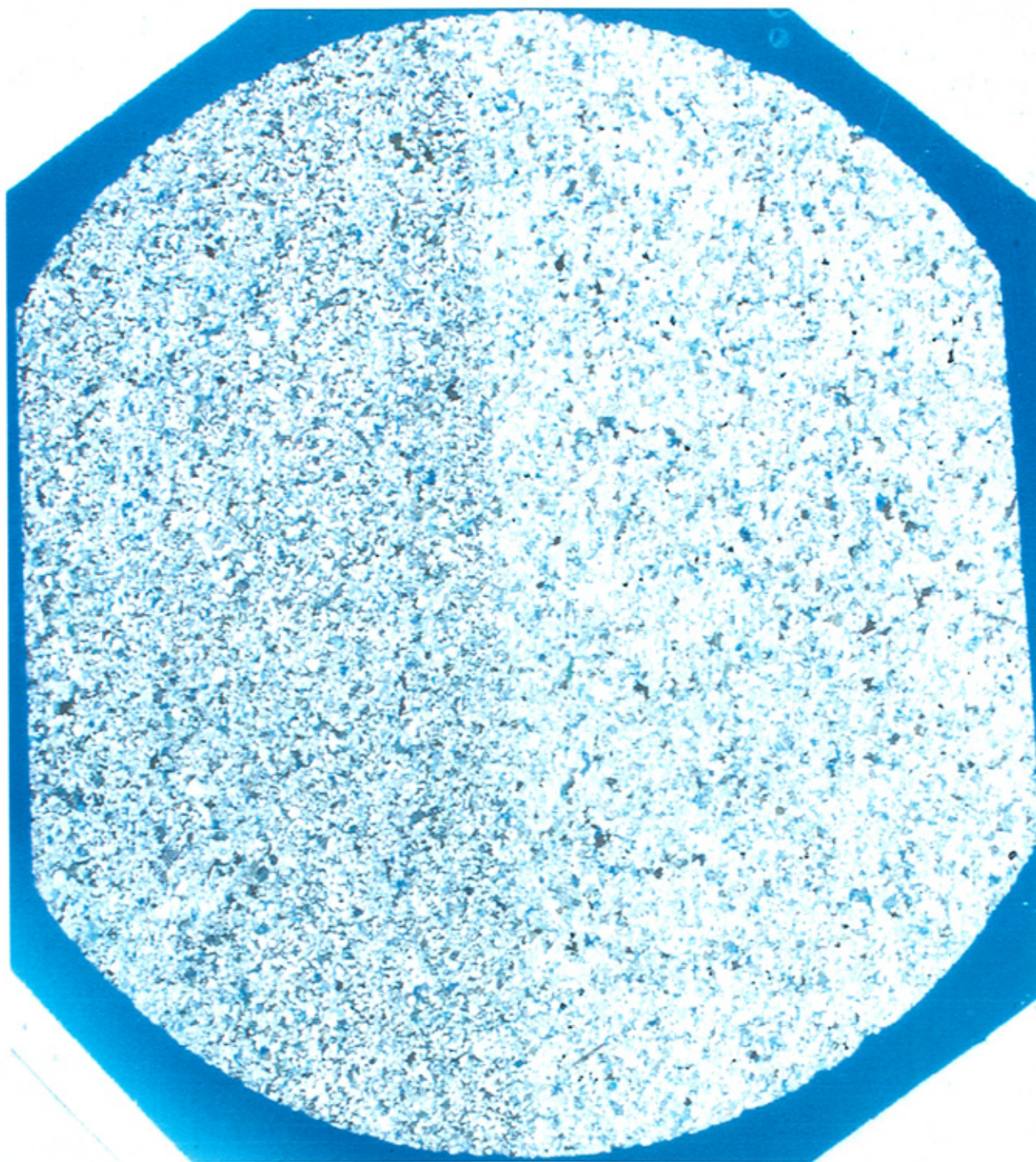
SP 10
4354.50

4 mm



Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3523



Sample:
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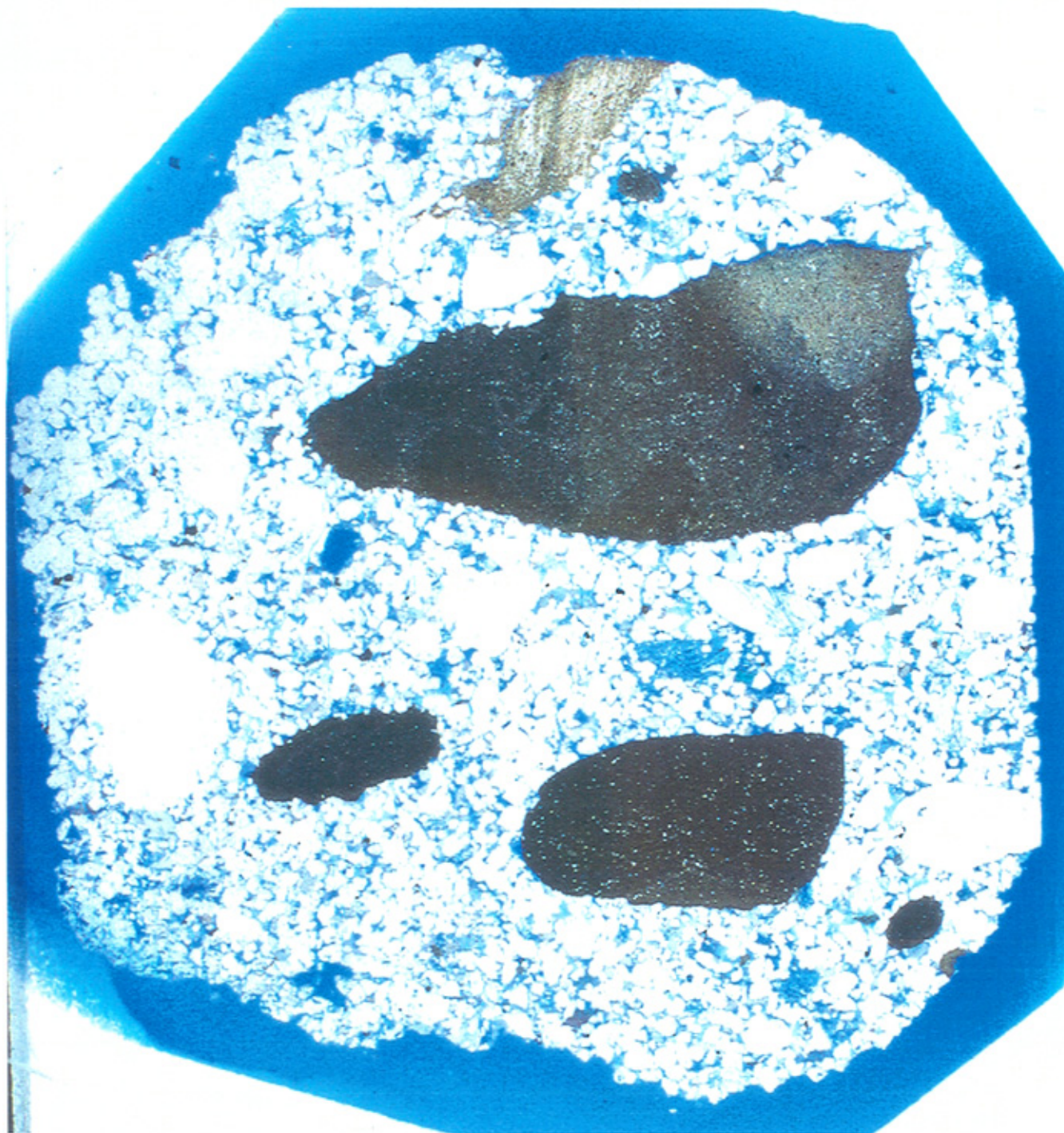
SP 8
4353.50

4 mm



Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3523



Sample:
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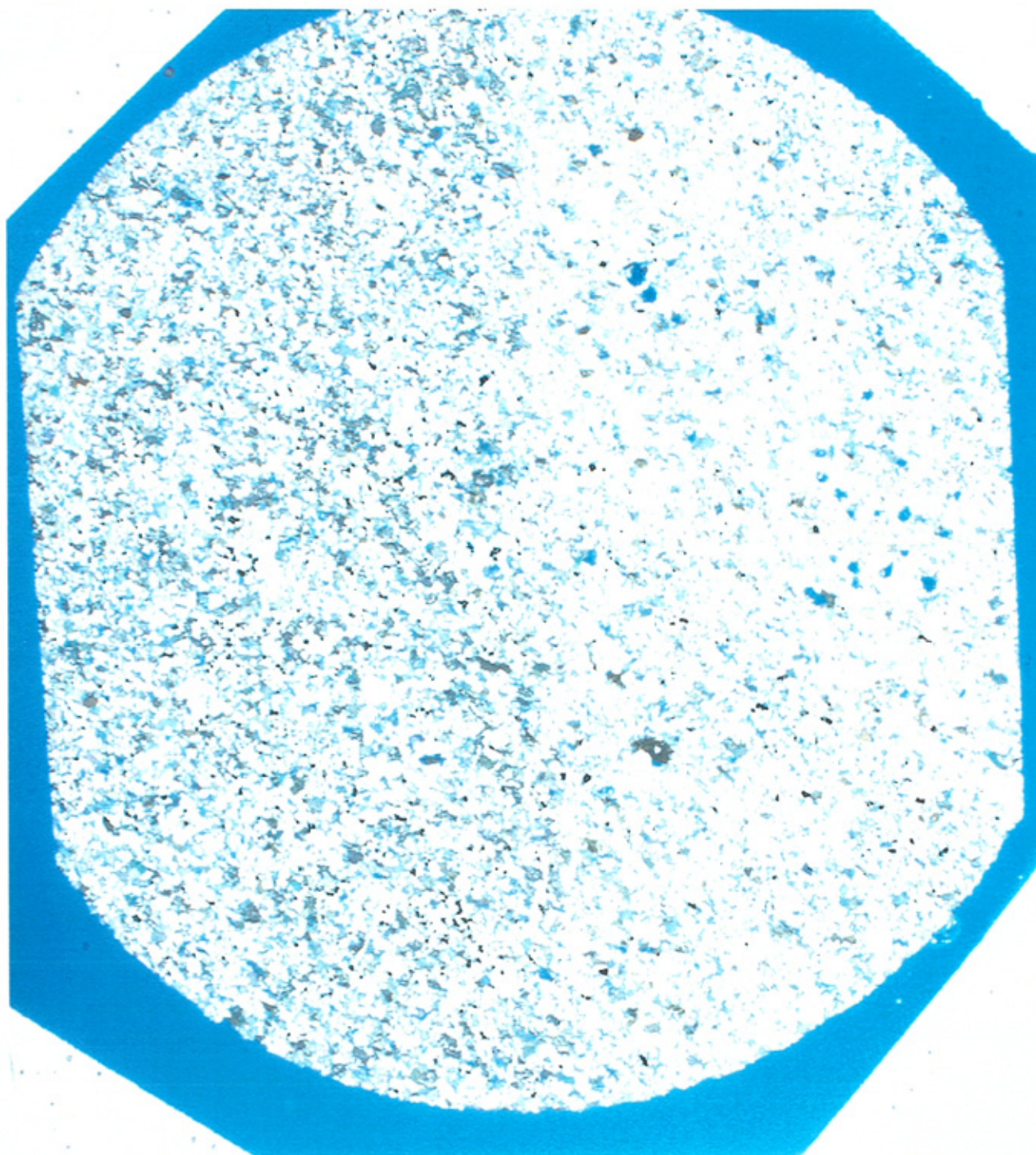
SP 6
4317.50

4 mm



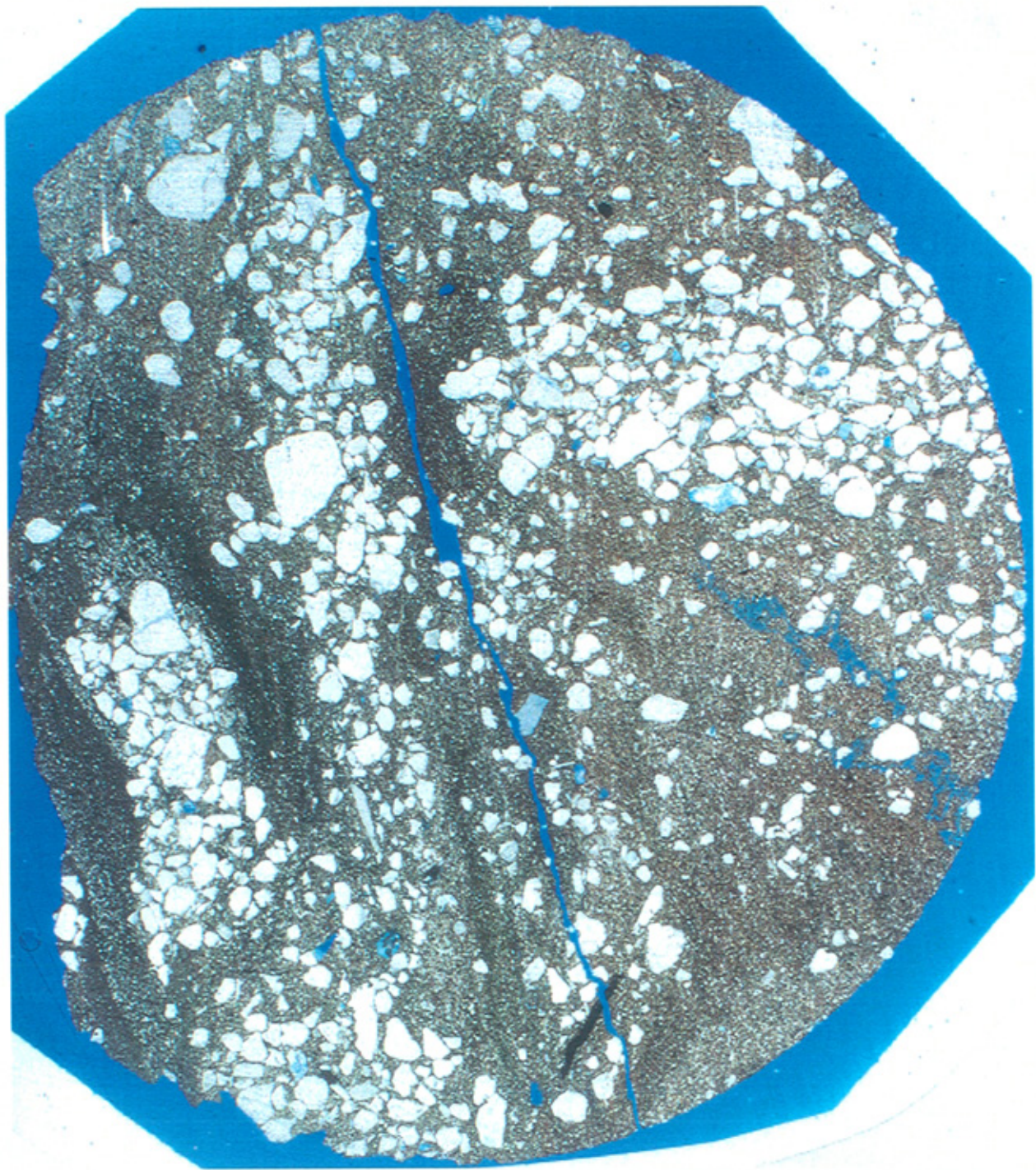
Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3523



Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3523



Sample:
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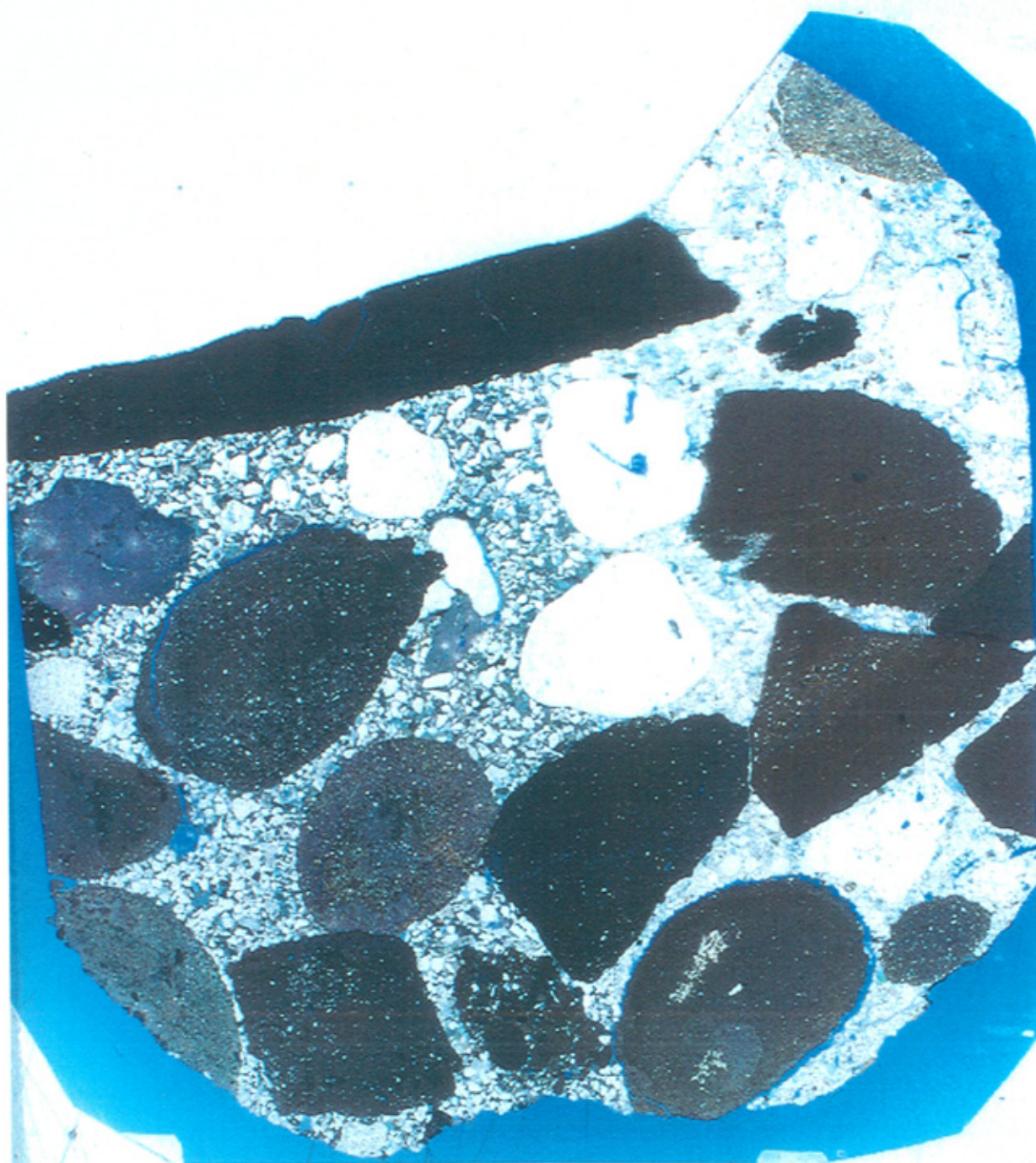
SP 12
4325.50

4 mm



Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3523



Sample:
Depth (m):

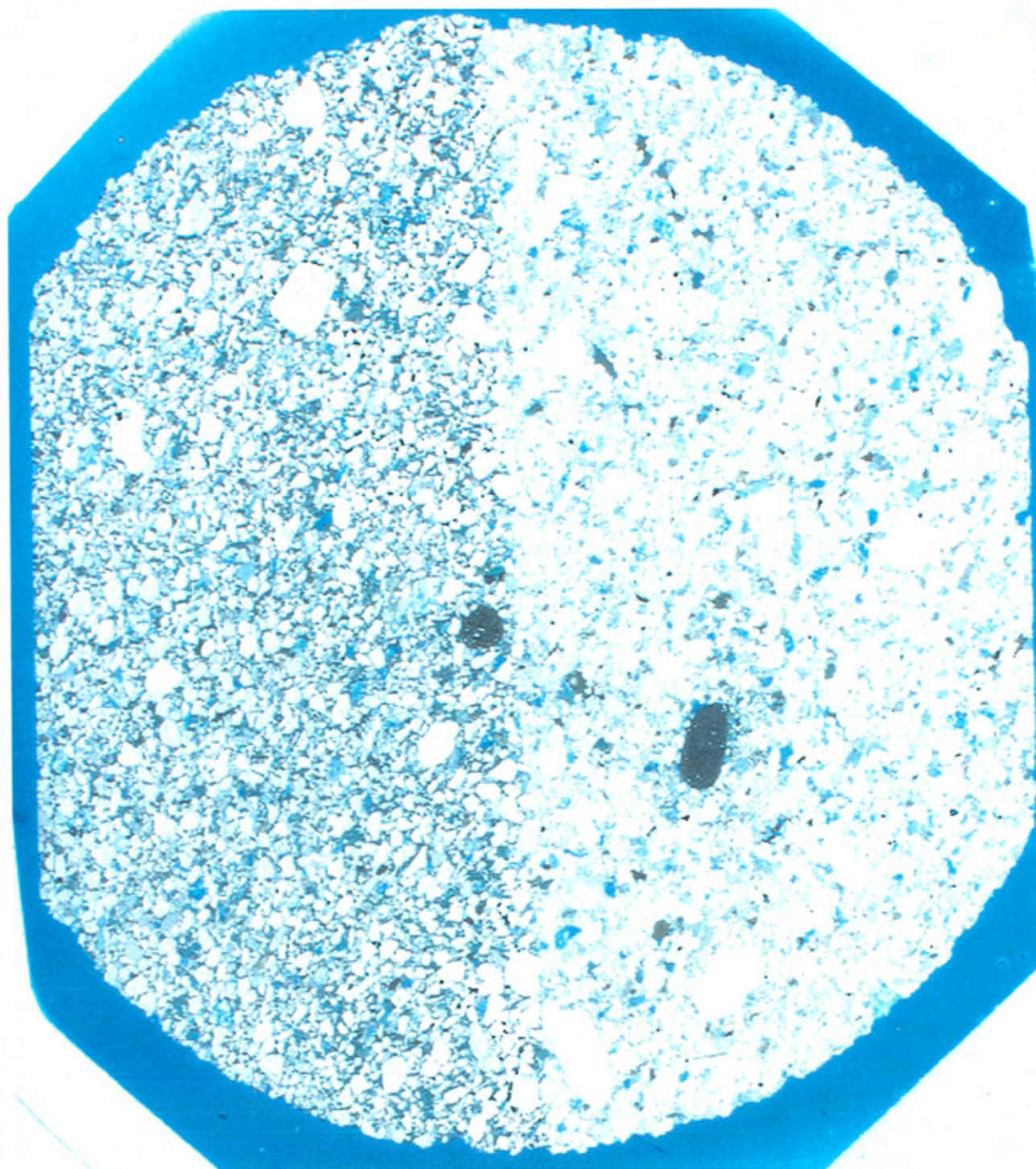
SP 13
4323.00

4 mm



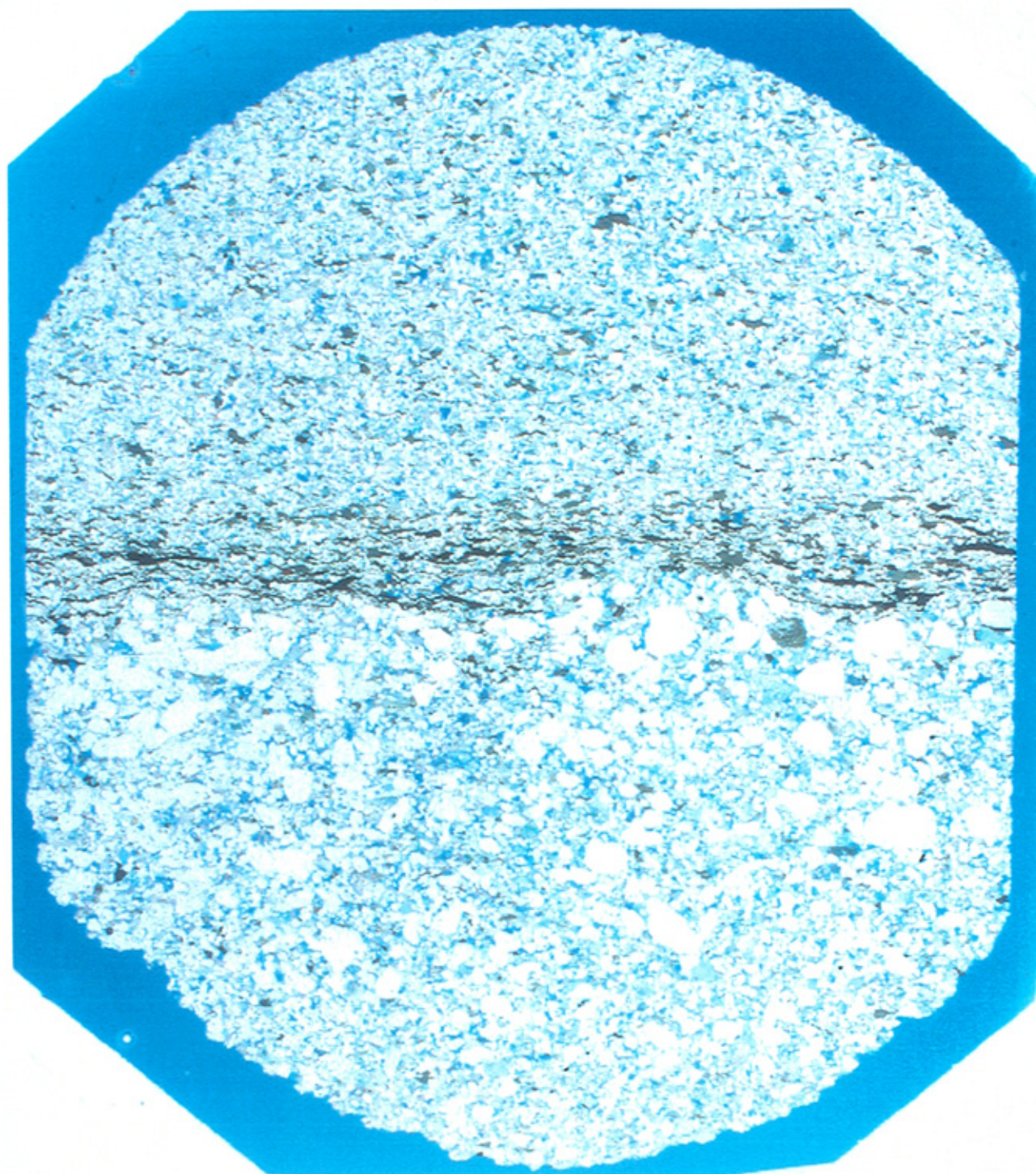
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Well: CHEVRON ET AL NEWBURN H-23

52135-02-3523



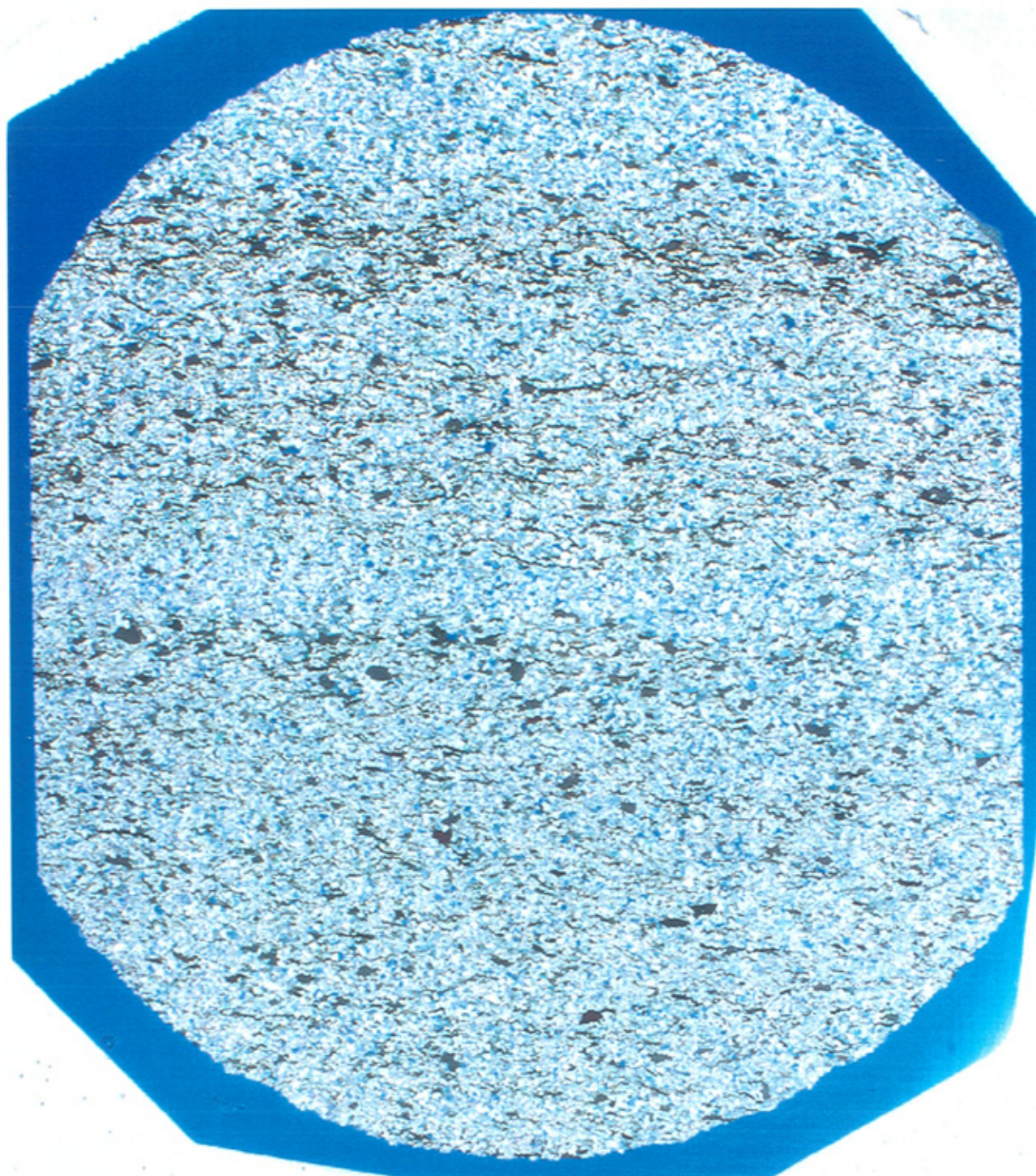
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Well: CHEVRON ET AL NEWBURN H-23

52135-02-3523



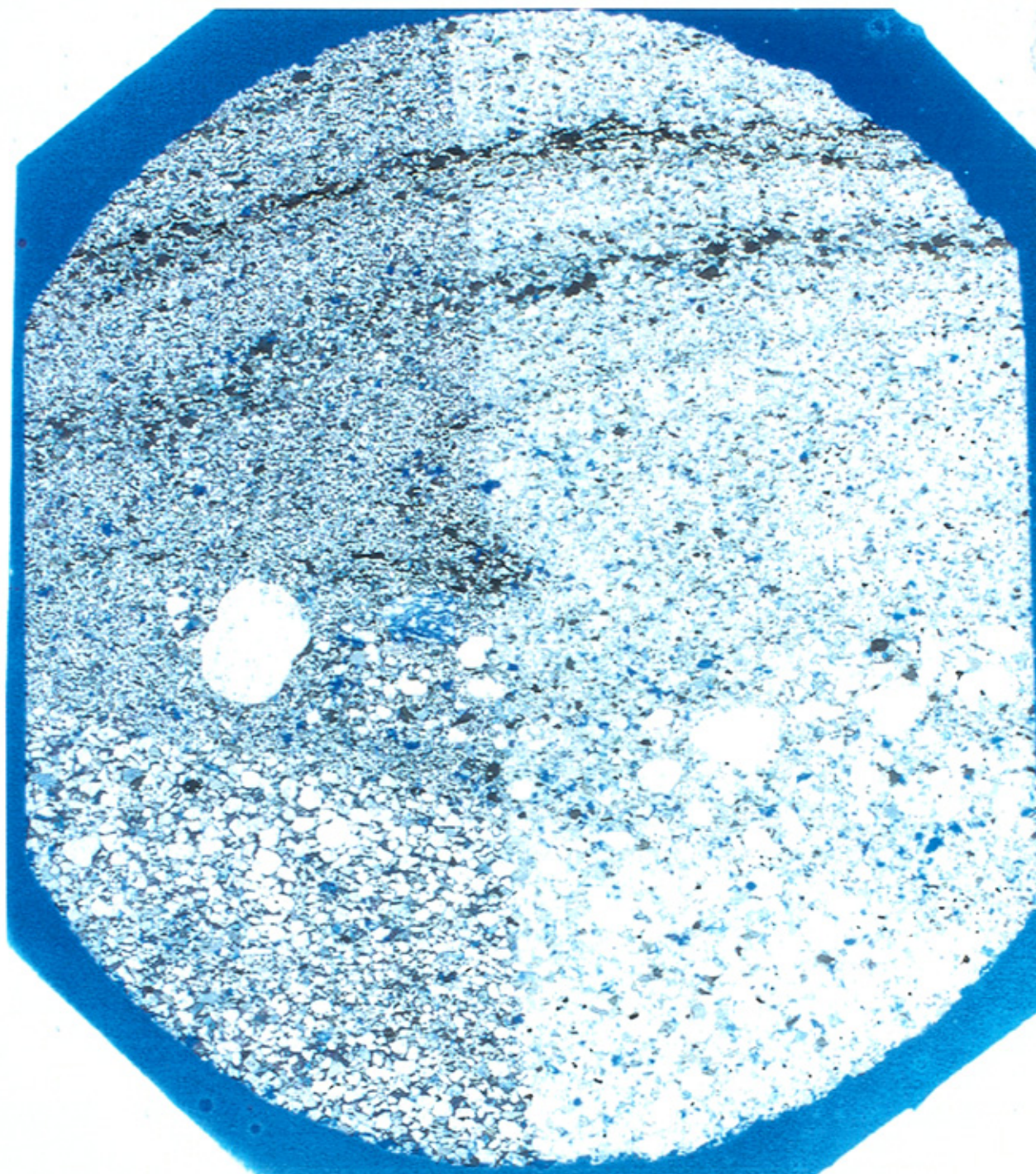
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Well: CHEVRON ET AL NEWBURN H-23

52135-02-3523



Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3523



Sample:
Depth (m):

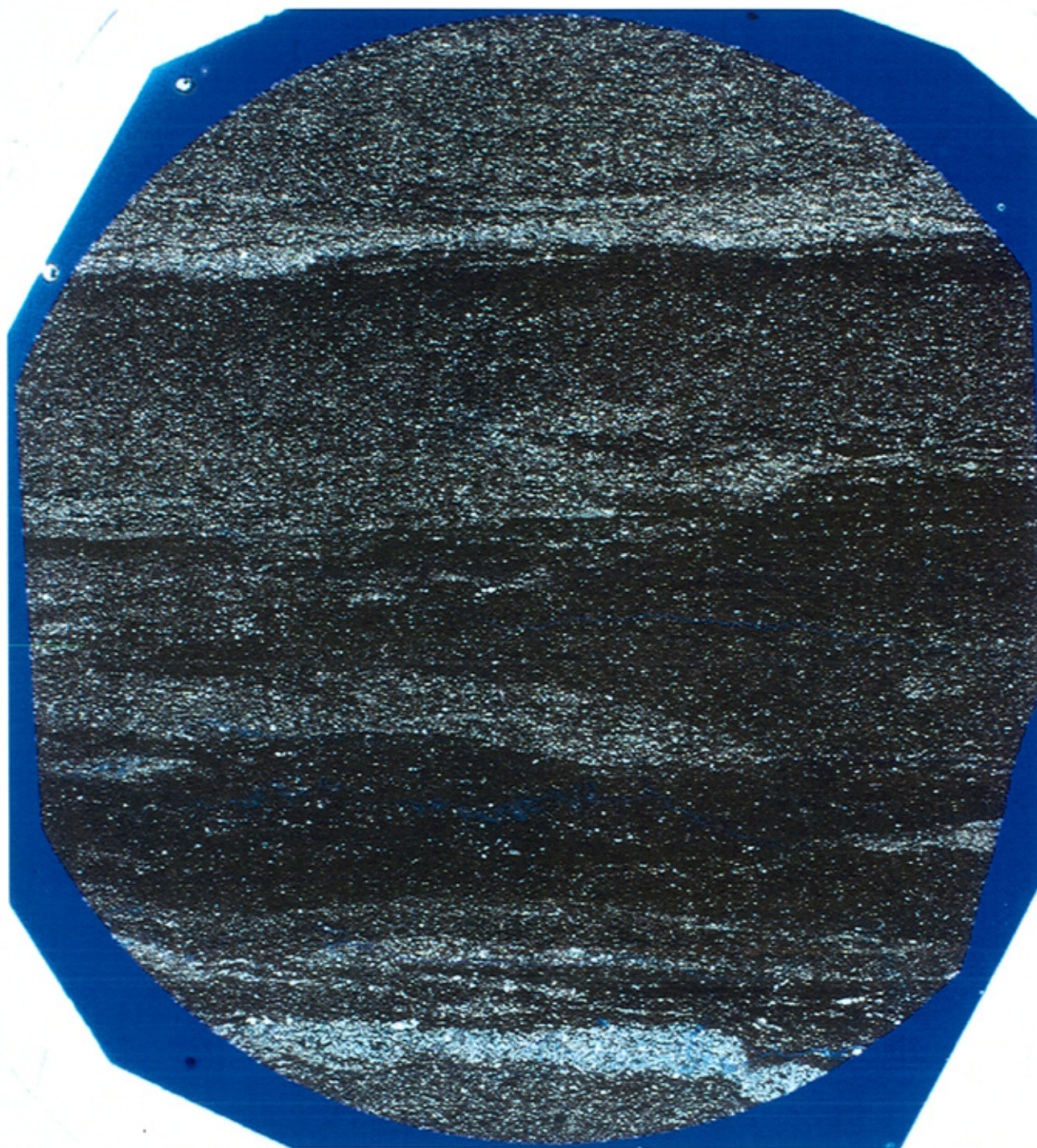
SP 17
4312.80

4 mm



Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

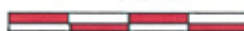
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Sample:
Depth (m):

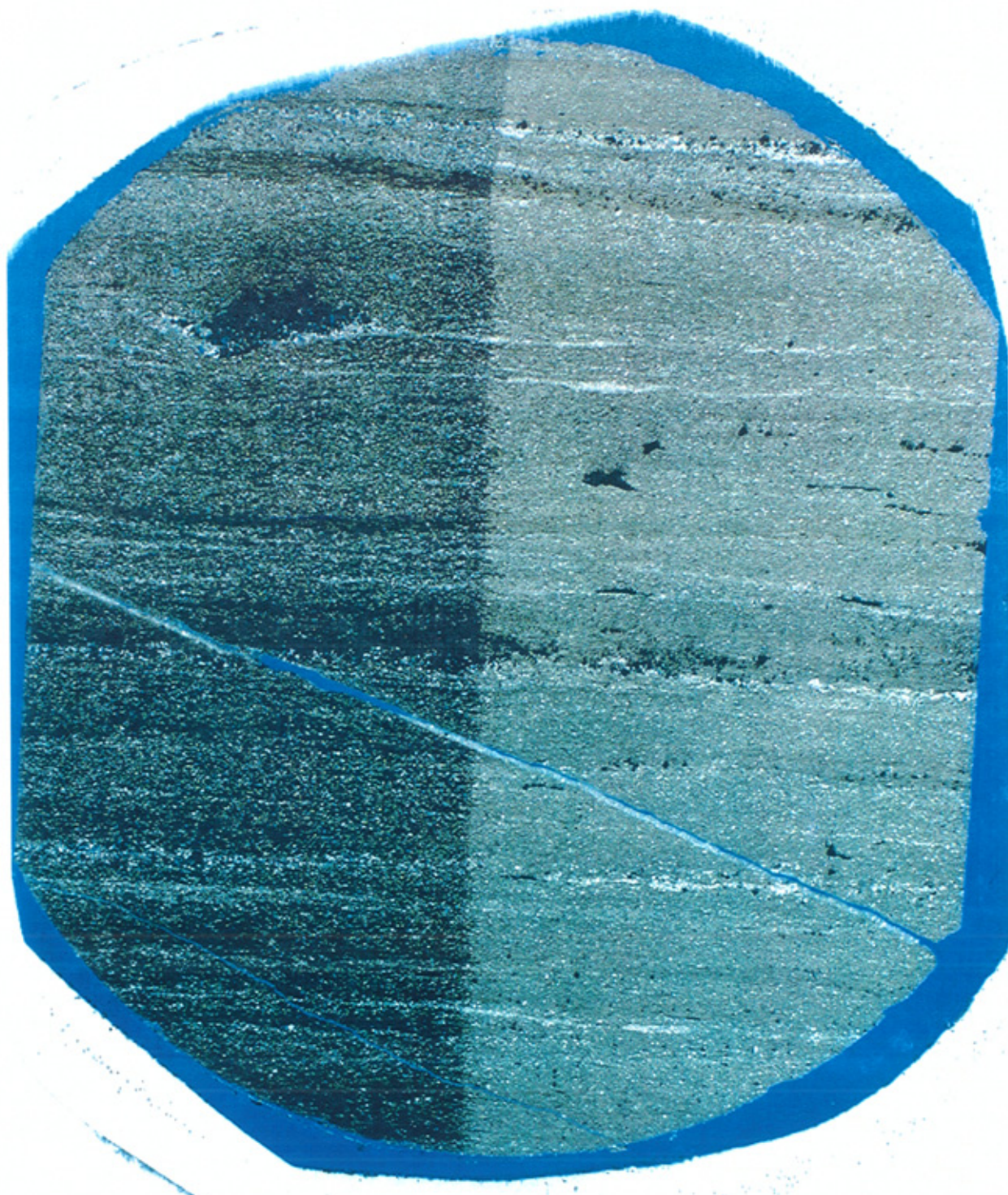
SP 18
4307.80

4 mm



Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3575



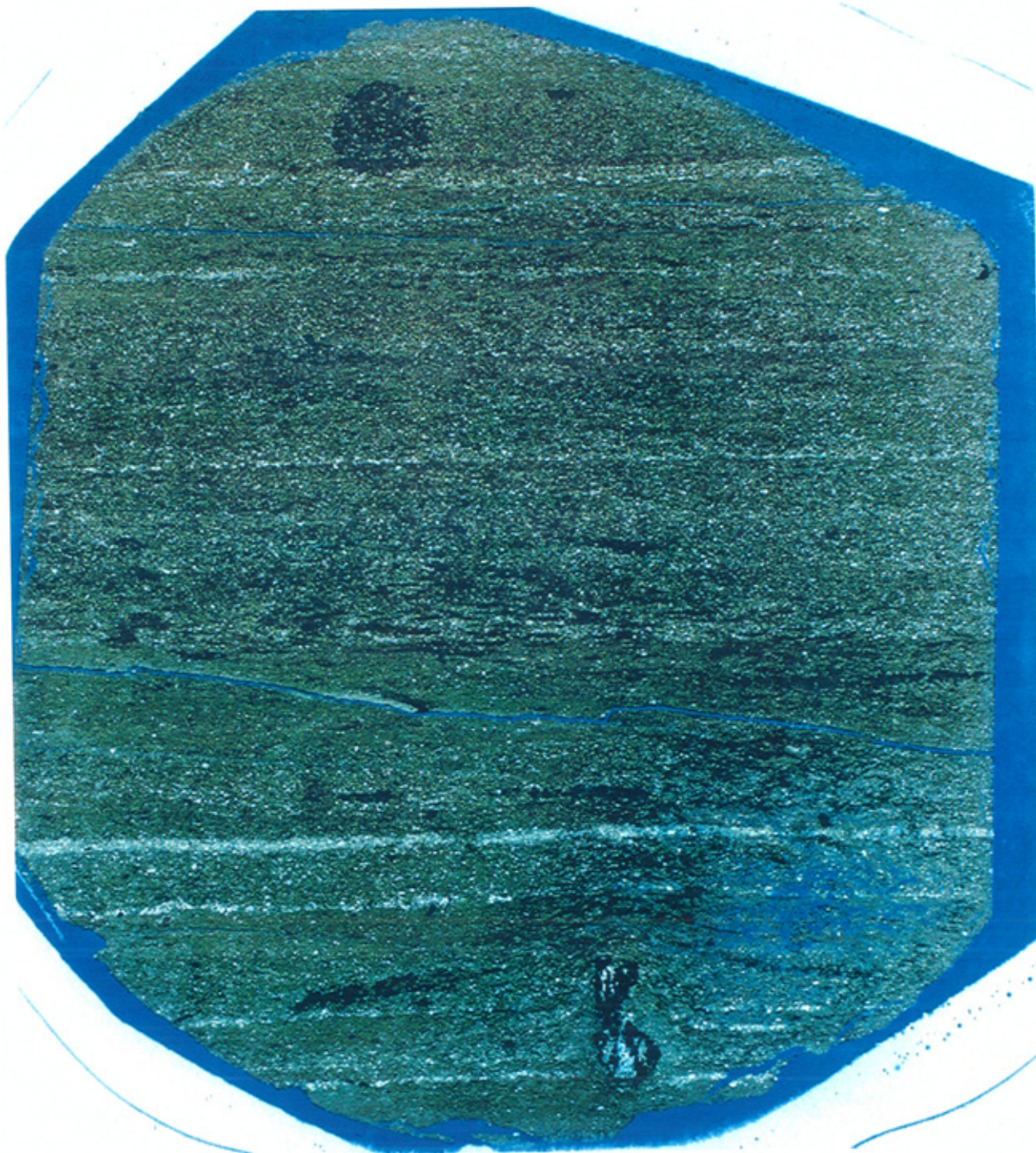
Sample: 16
Depth (m): 5186.50
Core porosity (%): N/A
Kair (mD): N/A



Chevron

Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

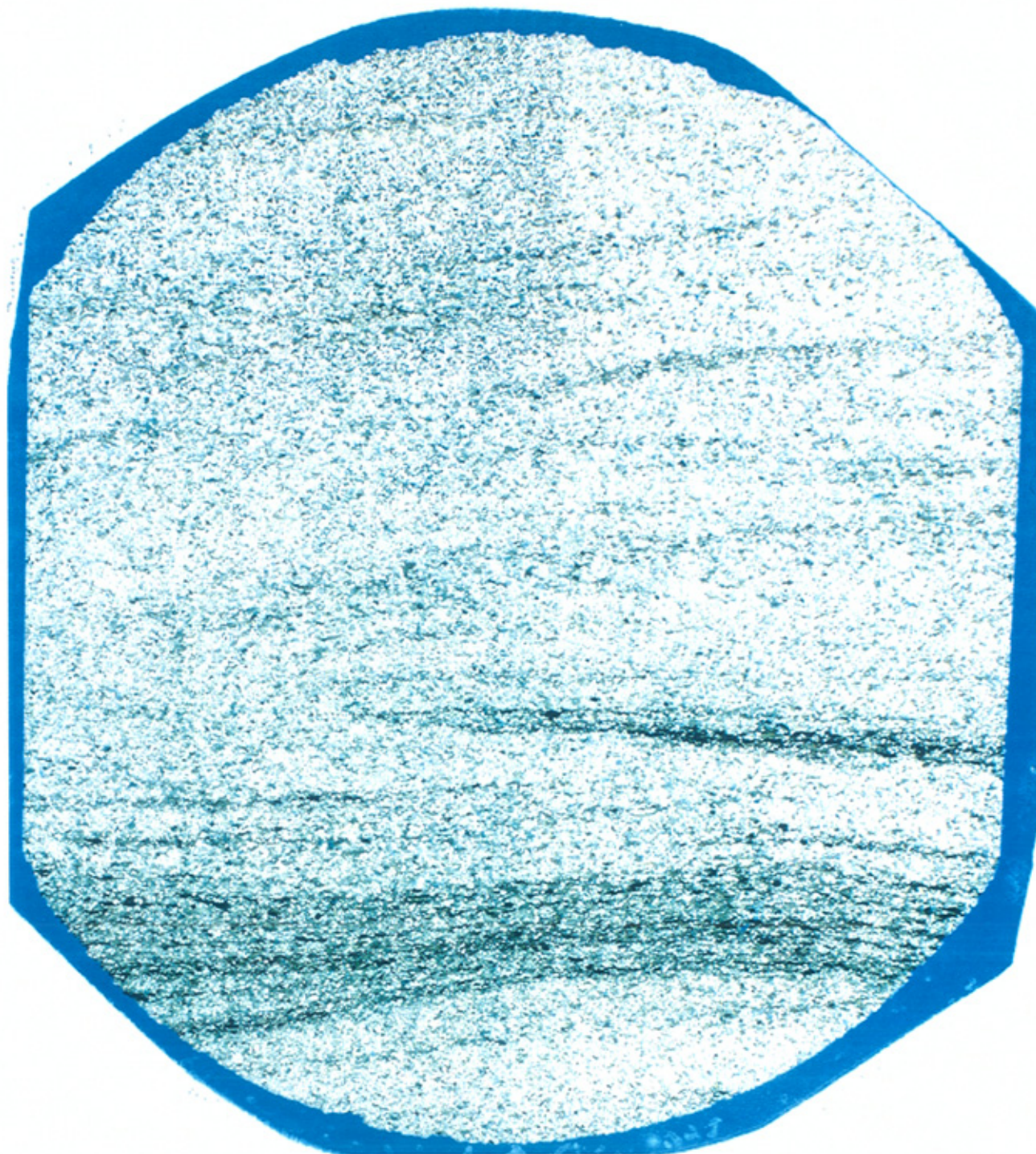
52135-02-3575



Sample: 15
Depth (m): 5189.00
Core porosity (%): N/A
Kair (mD): N/A

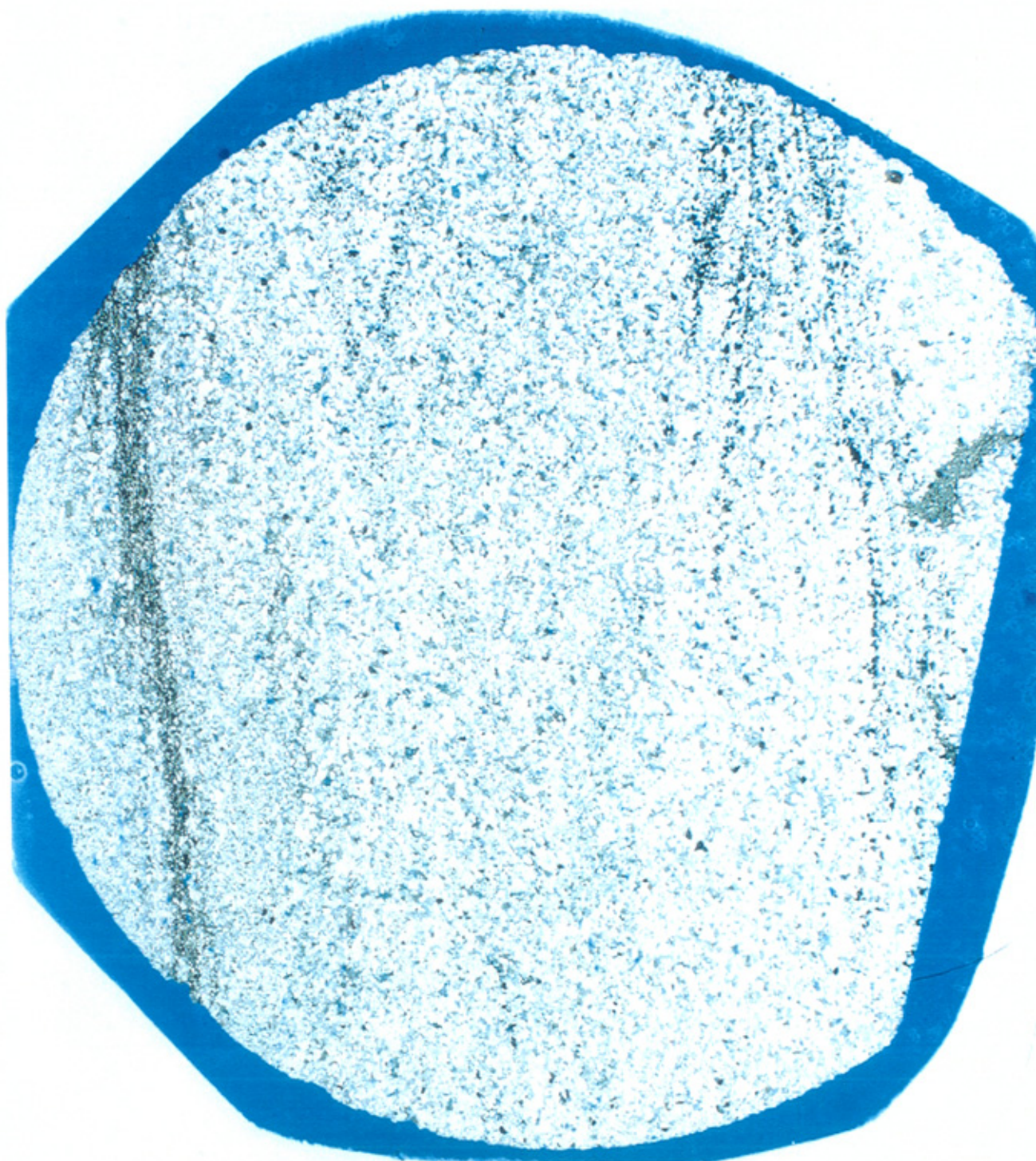


Chevron



Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3575



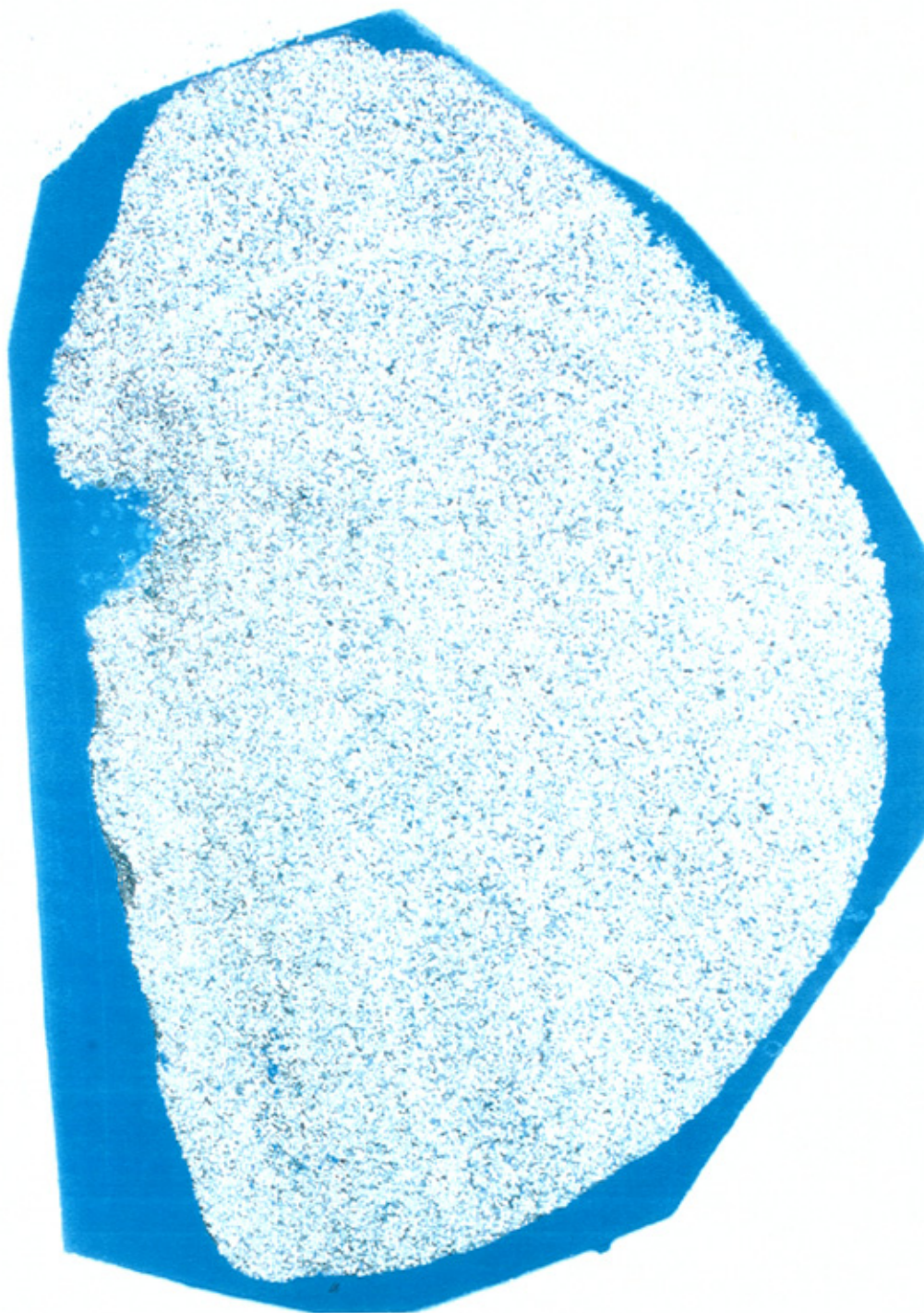
Sample: 11
Depth (m): 5406.50
Core porosity (%): 9.1
Kair (mD): 0.04



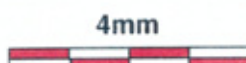
Chevron

Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3575

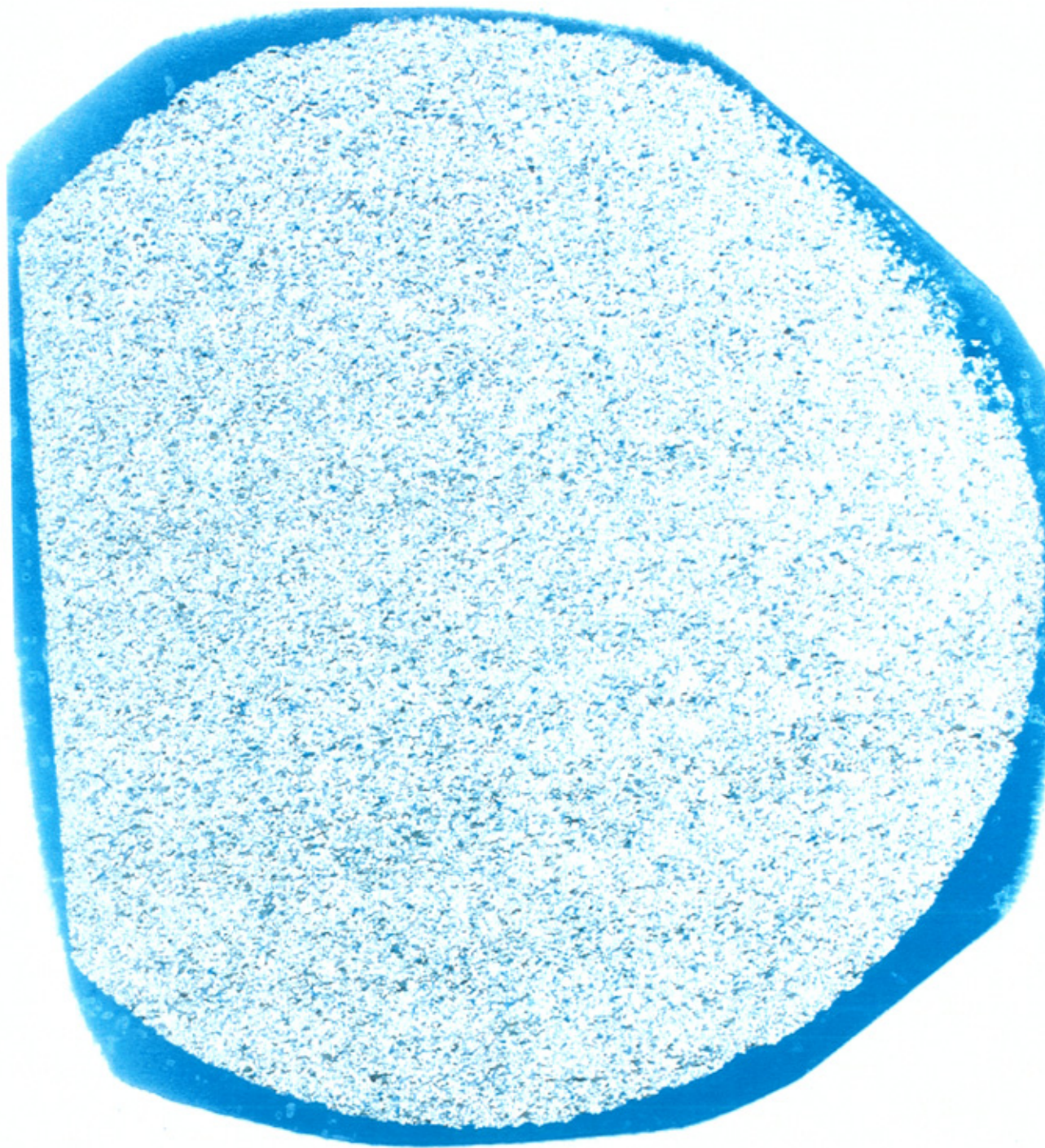


Sample: 10
Depth (m): 5407.00
Core porosity (%): 17.0
Kair (mD): 0.15



Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3575



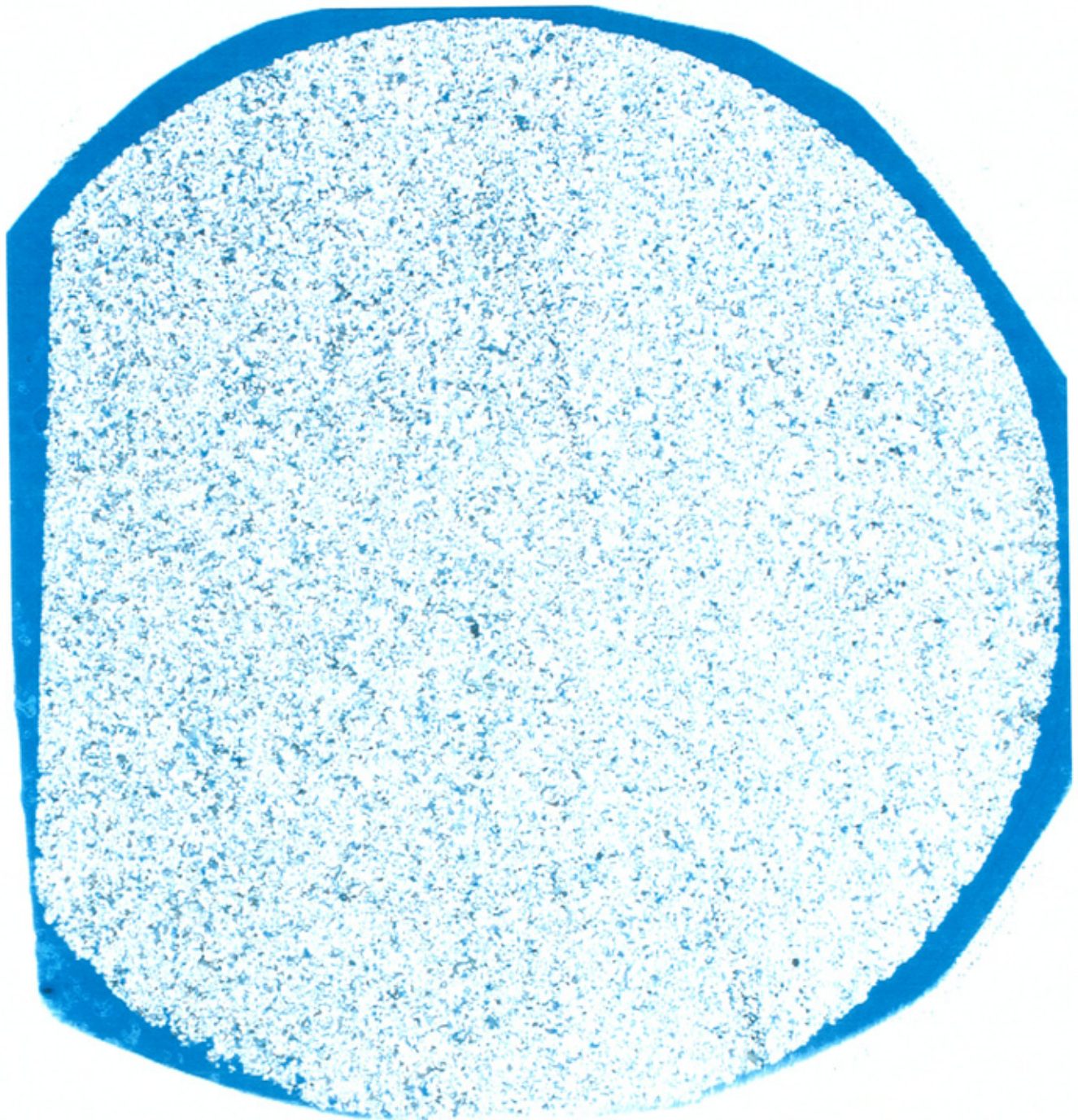
Sample: 9
Depth (m): 5407.50
Core porosity (%): 18.9
Kair (mD): 5.73



Chevron

Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3575



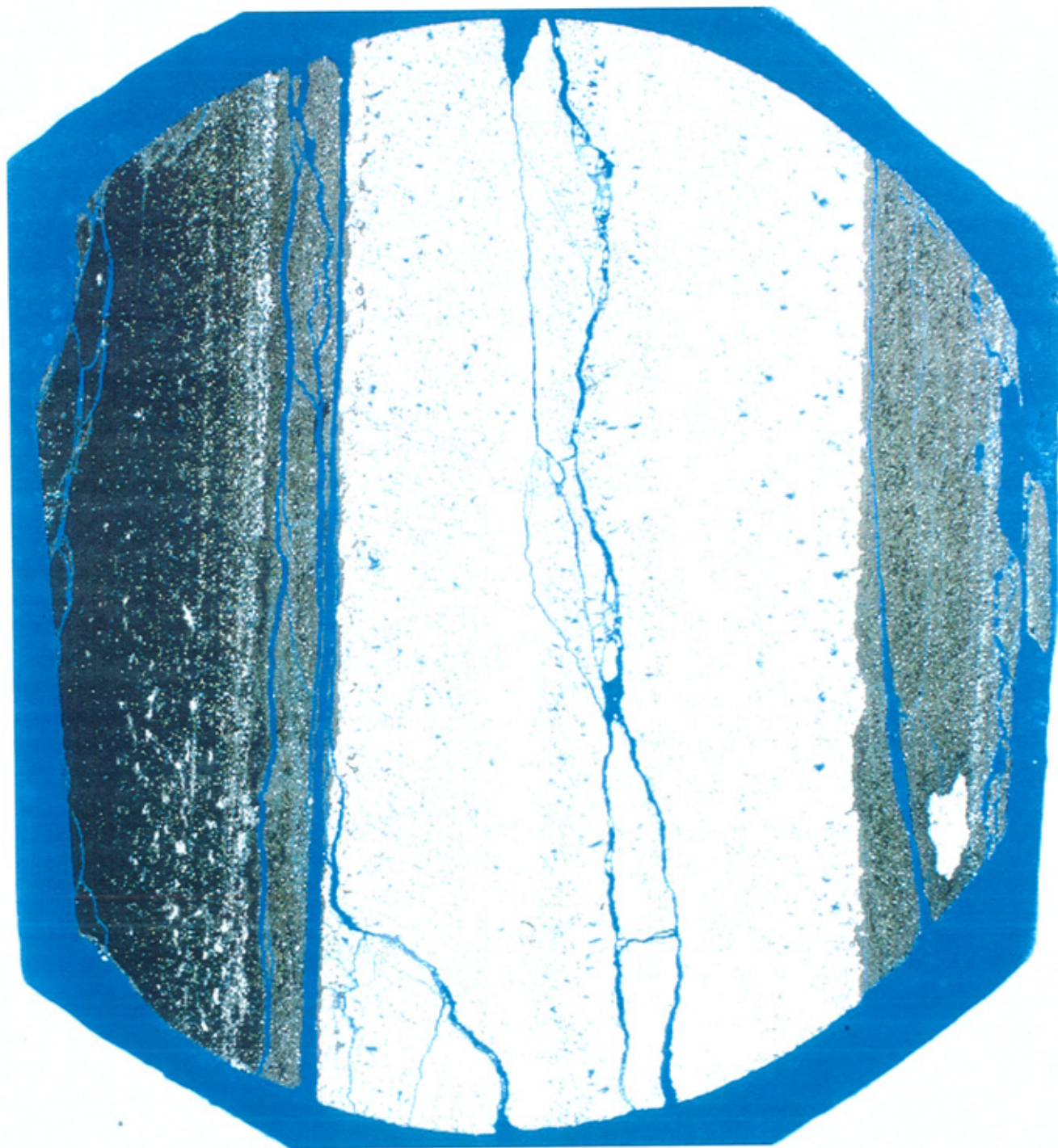
Sample: 8
Depth (m): 5408.50
Core porosity (%): 17.9
Kair (mD): 6.43



Chevron

Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3575



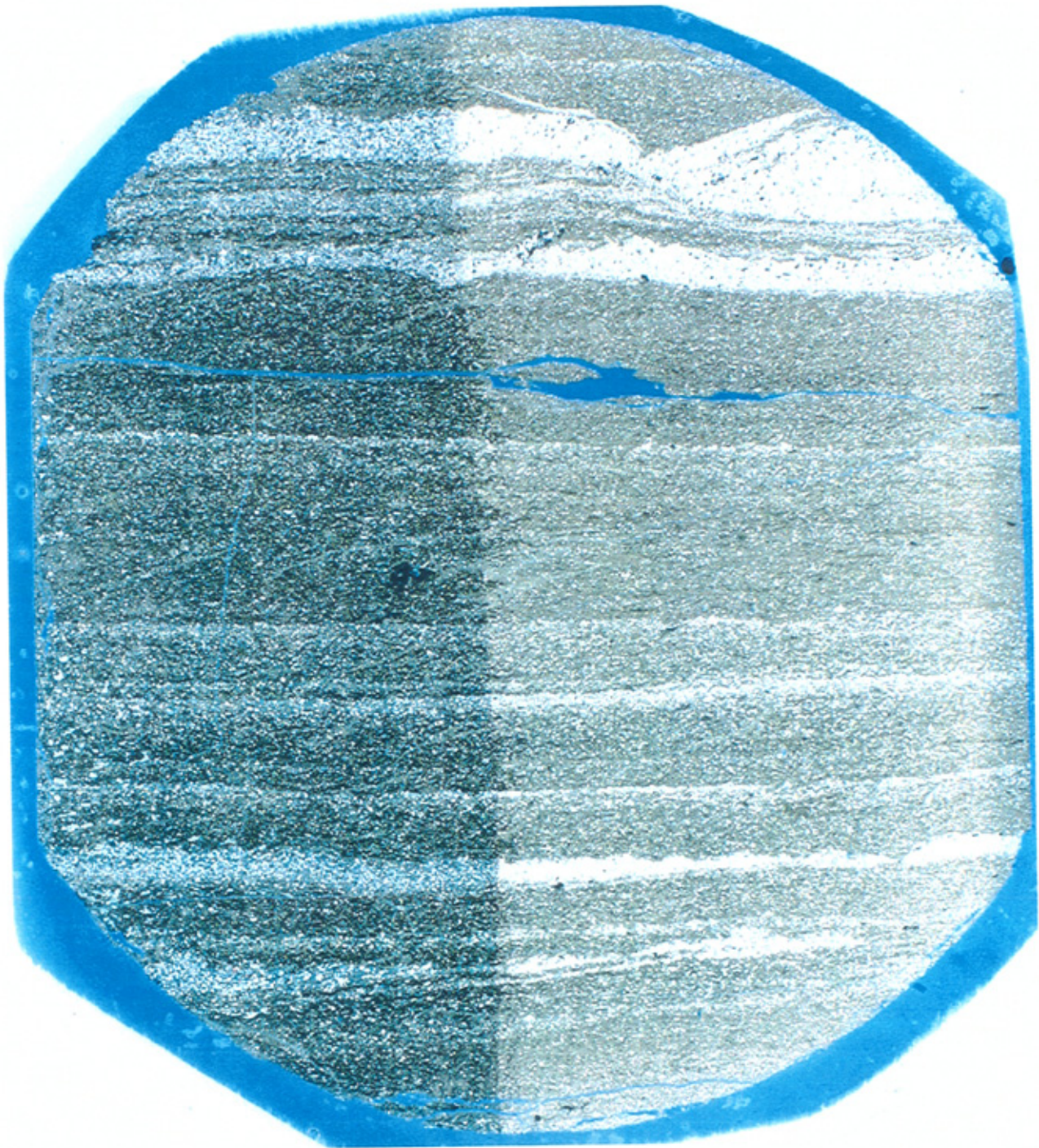
Sample: 6
Depth (m): 5195.30
Core porosity (%): N/A
Kair (mD): N/A



Chevron

Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3575



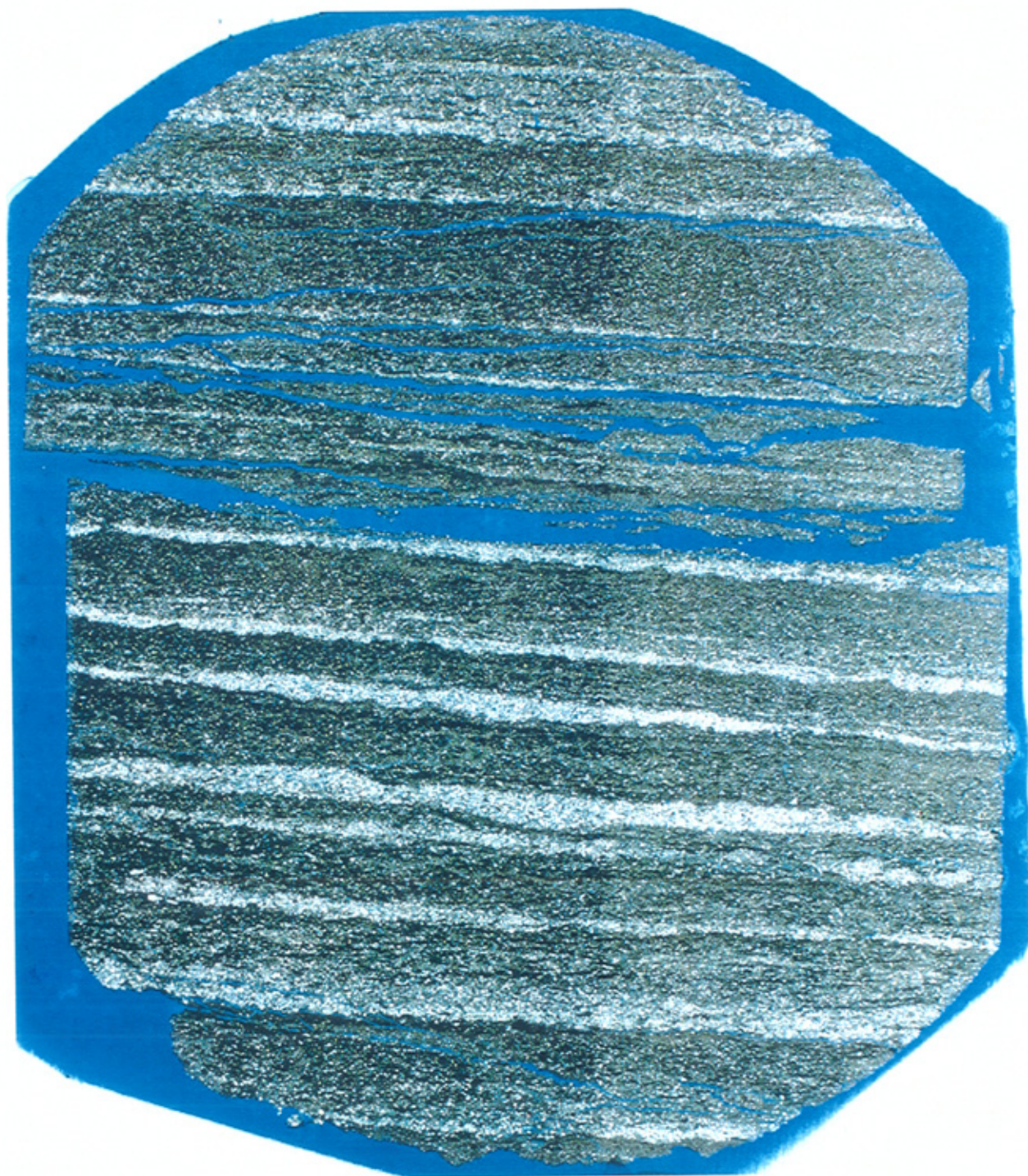
Sample: 5
Depth (m): 5198.50
Core porosity (%): N/A
Kair (mD): N/A



Chevron

Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3575



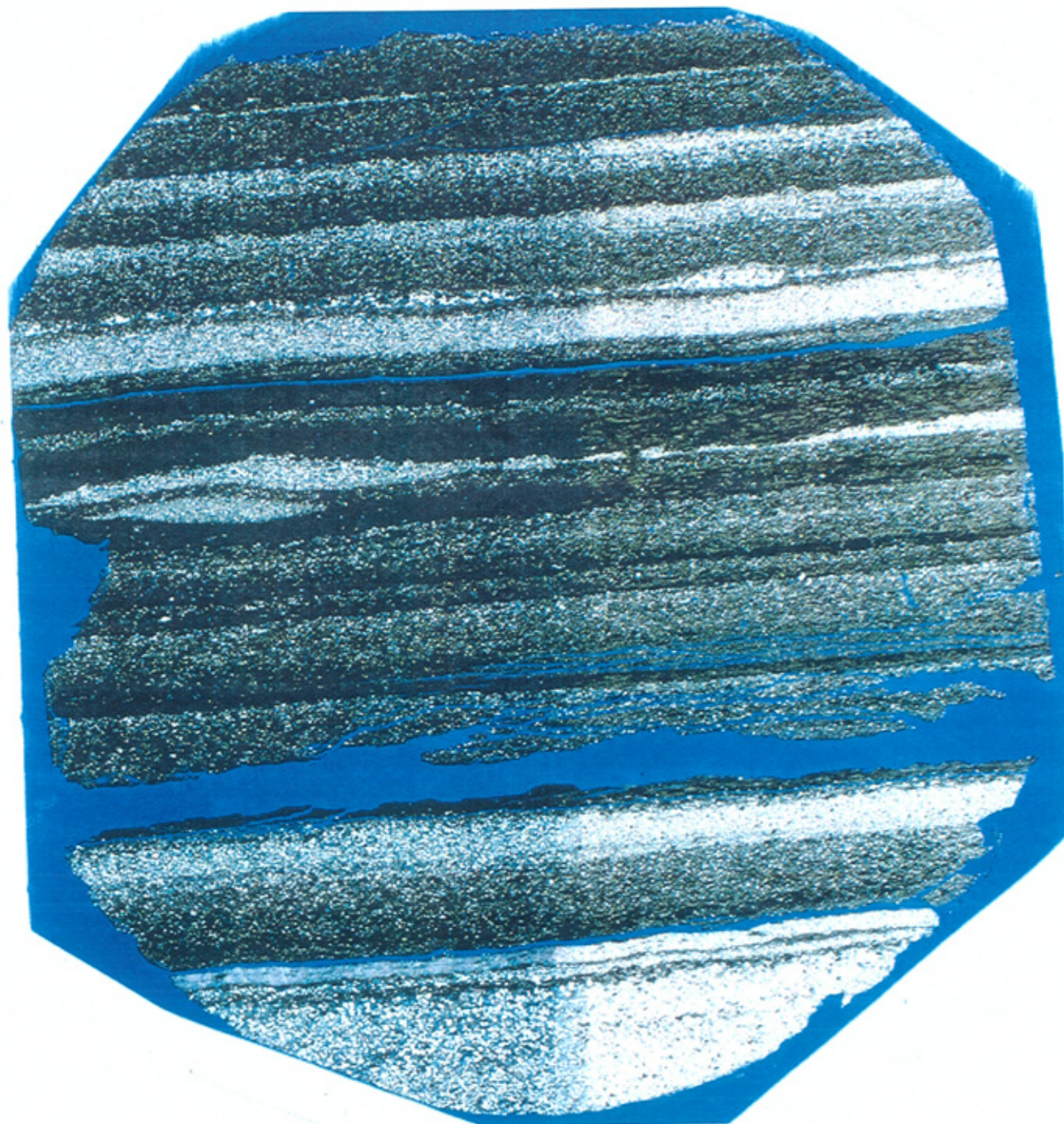
Sample: 4
Depth (m): 5203.80
Core porosity (%): N/A
Kair (mD): N/A

4mm



Company: CHEVRON CANADA RESOURCES
Well: CHEVRON ET AL NEWBURN H-23

52135-02-3575

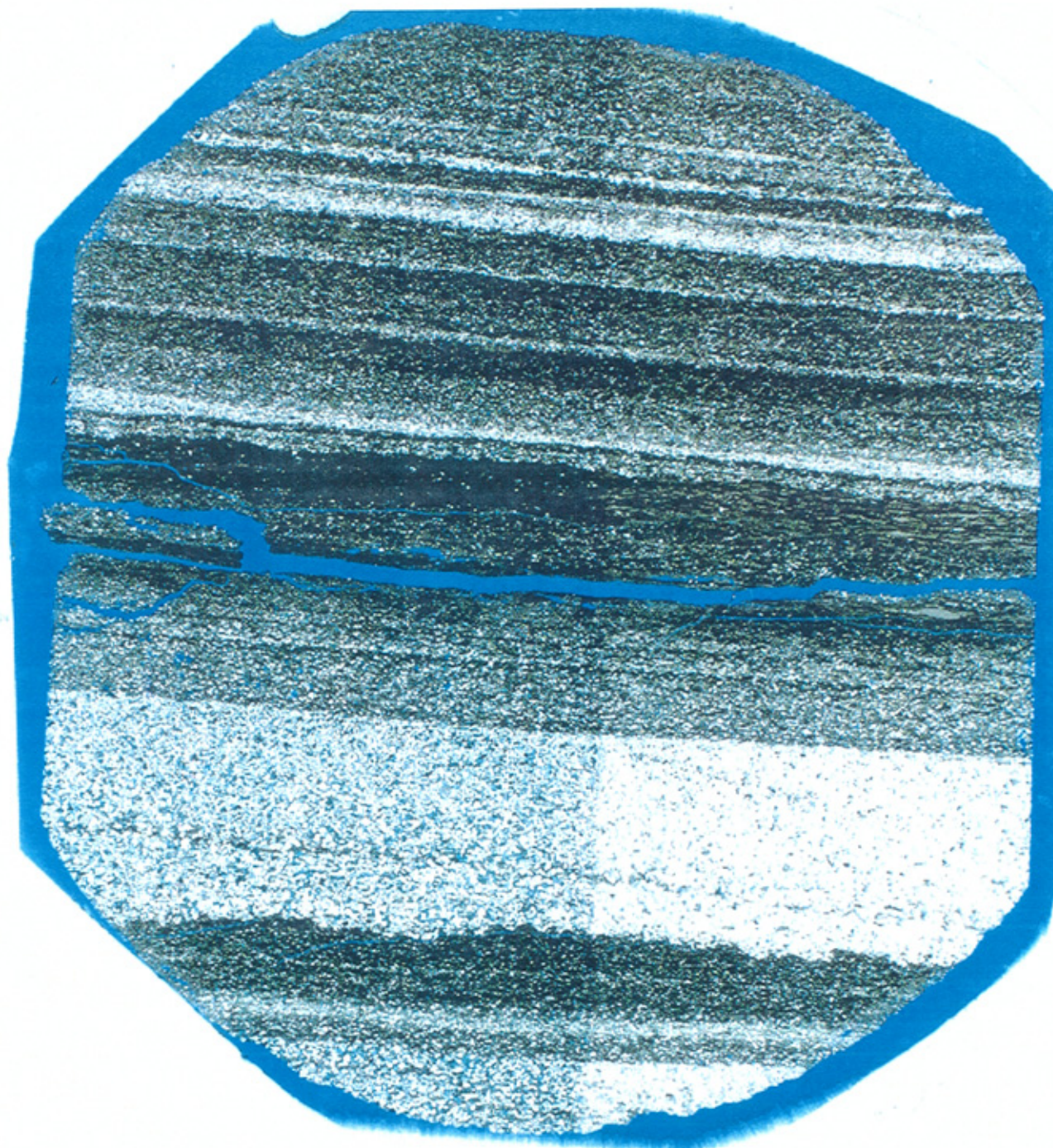


Sample: 3
Depth (m): 5208.50
Core porosity (%): N/A
Kair (mD): N/A



Company: CHEVRON CANADA RESOURCES
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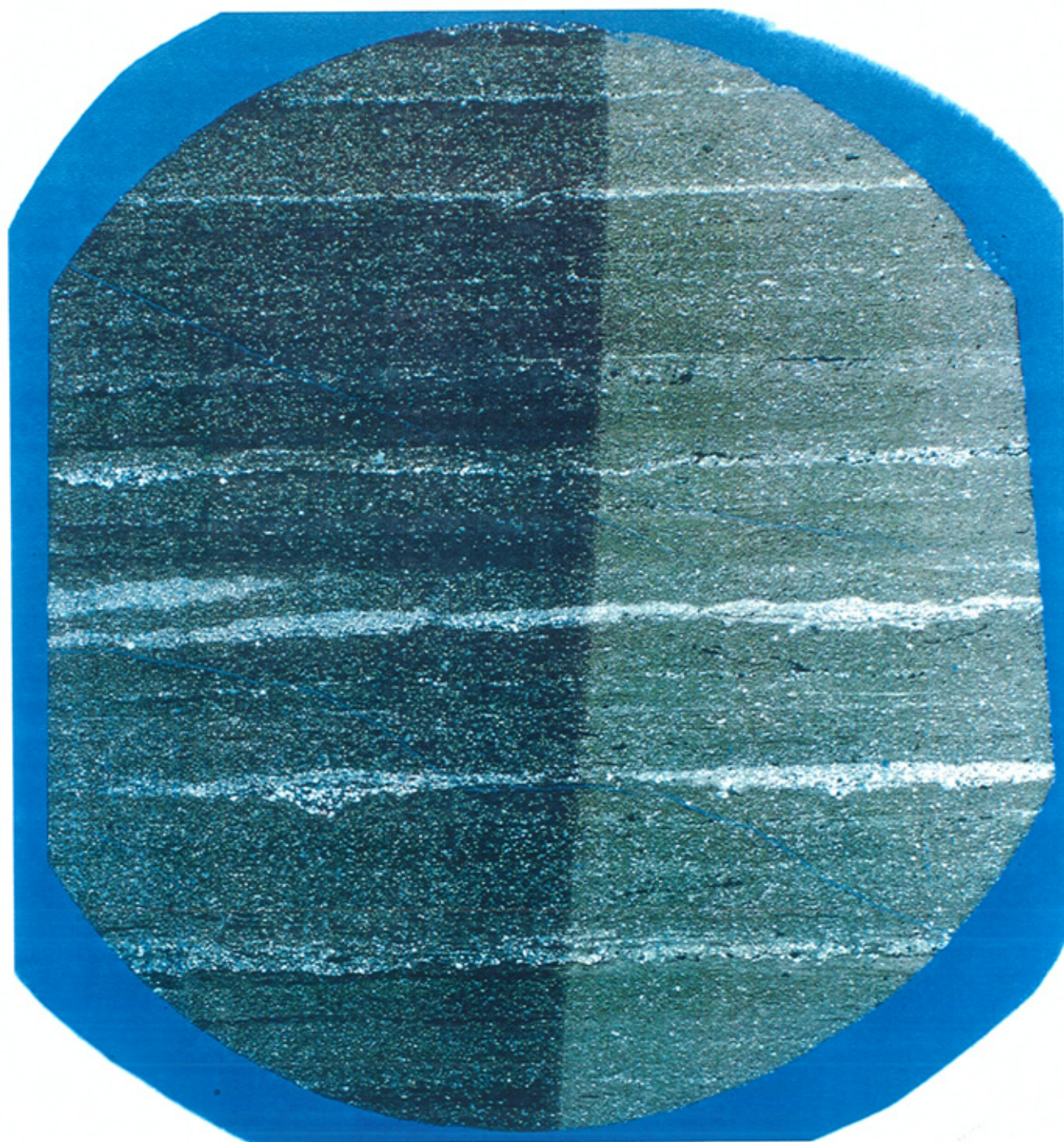


Sample: 2
Depth (m): 5213.50
Core porosity (%): N/A
K_{air} (mD): N/A



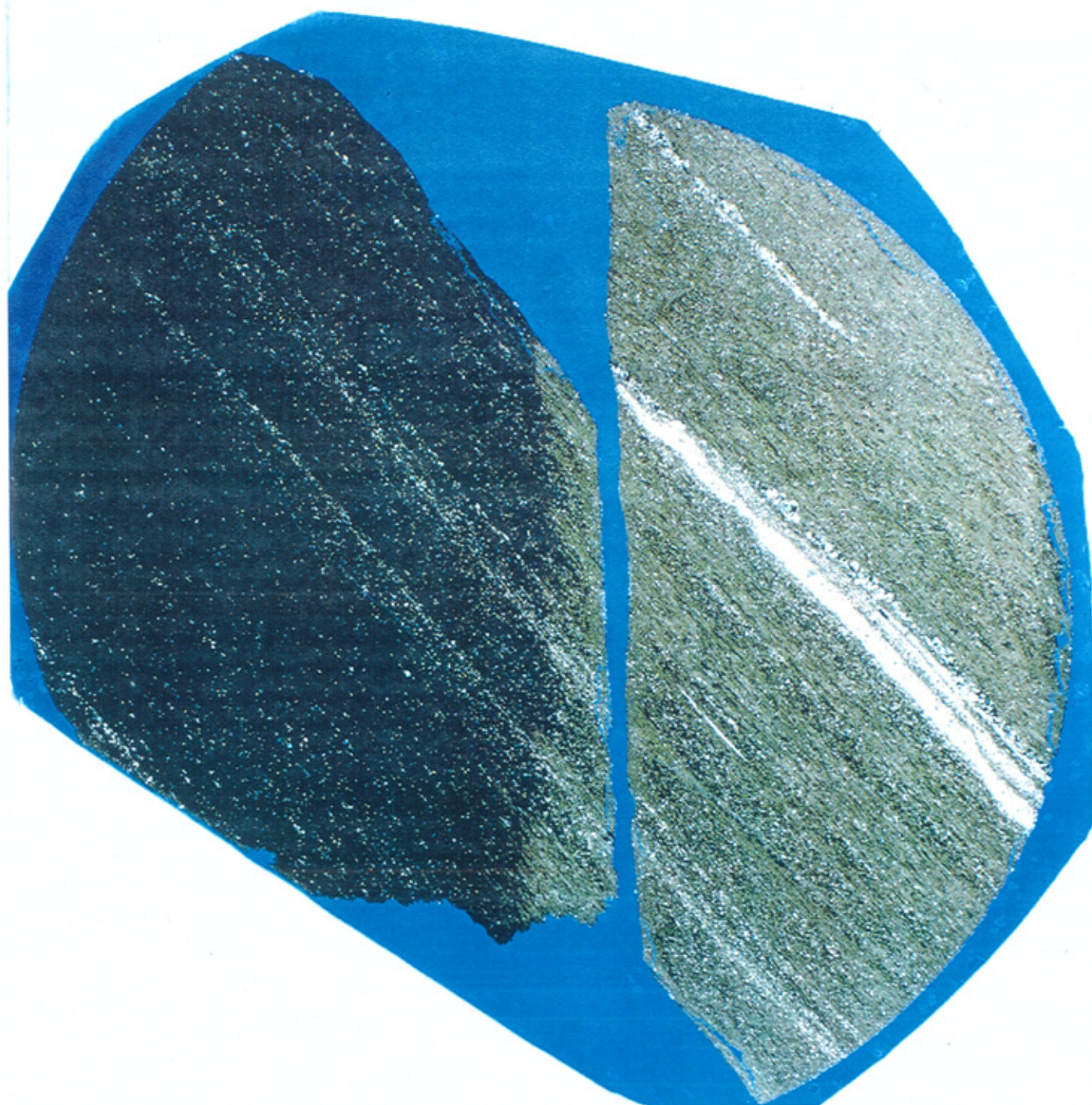
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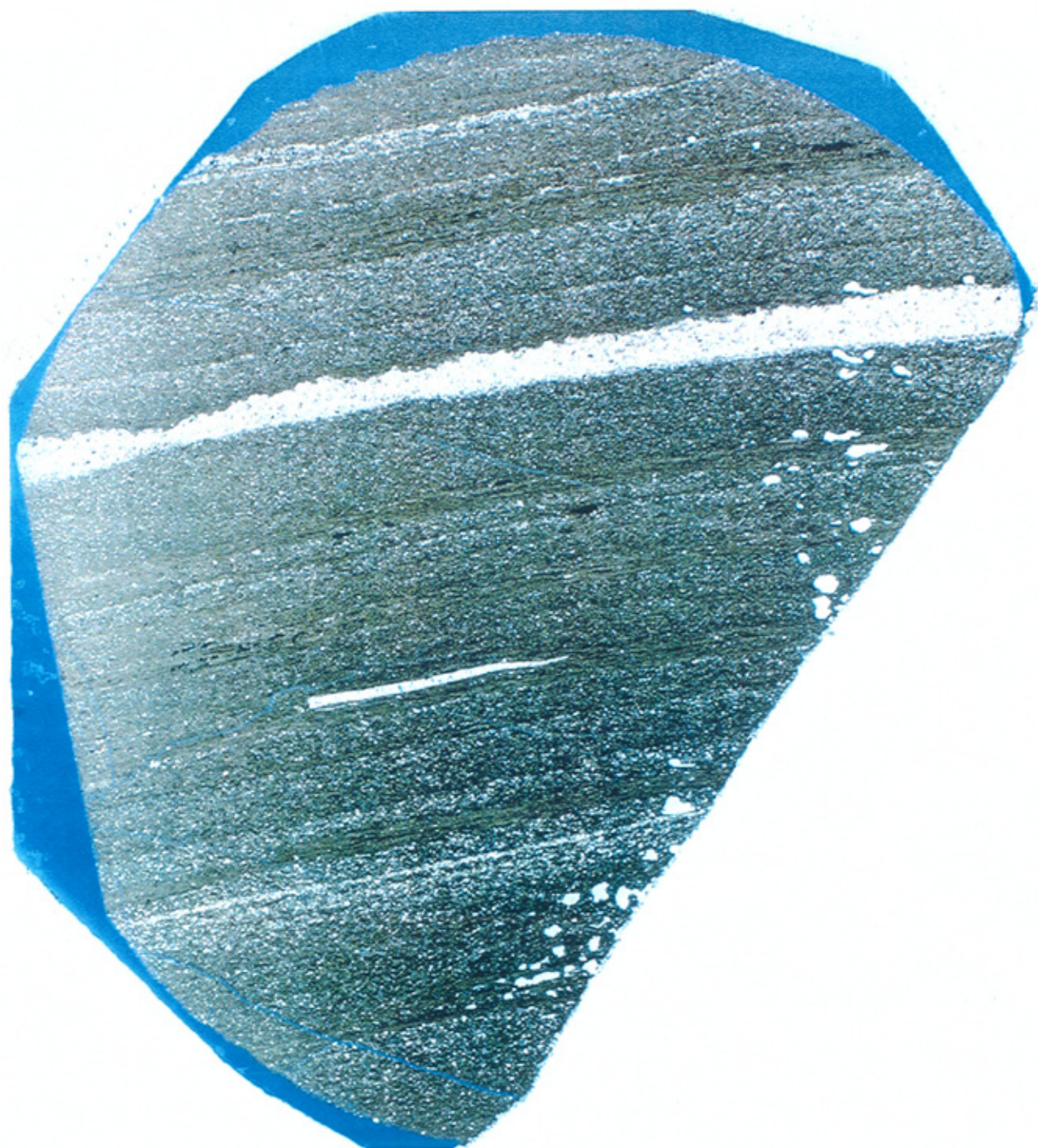
Sample: 19
Depth (m): 5129.00
Core porosity (%): N/A
Kair (mD): N/A



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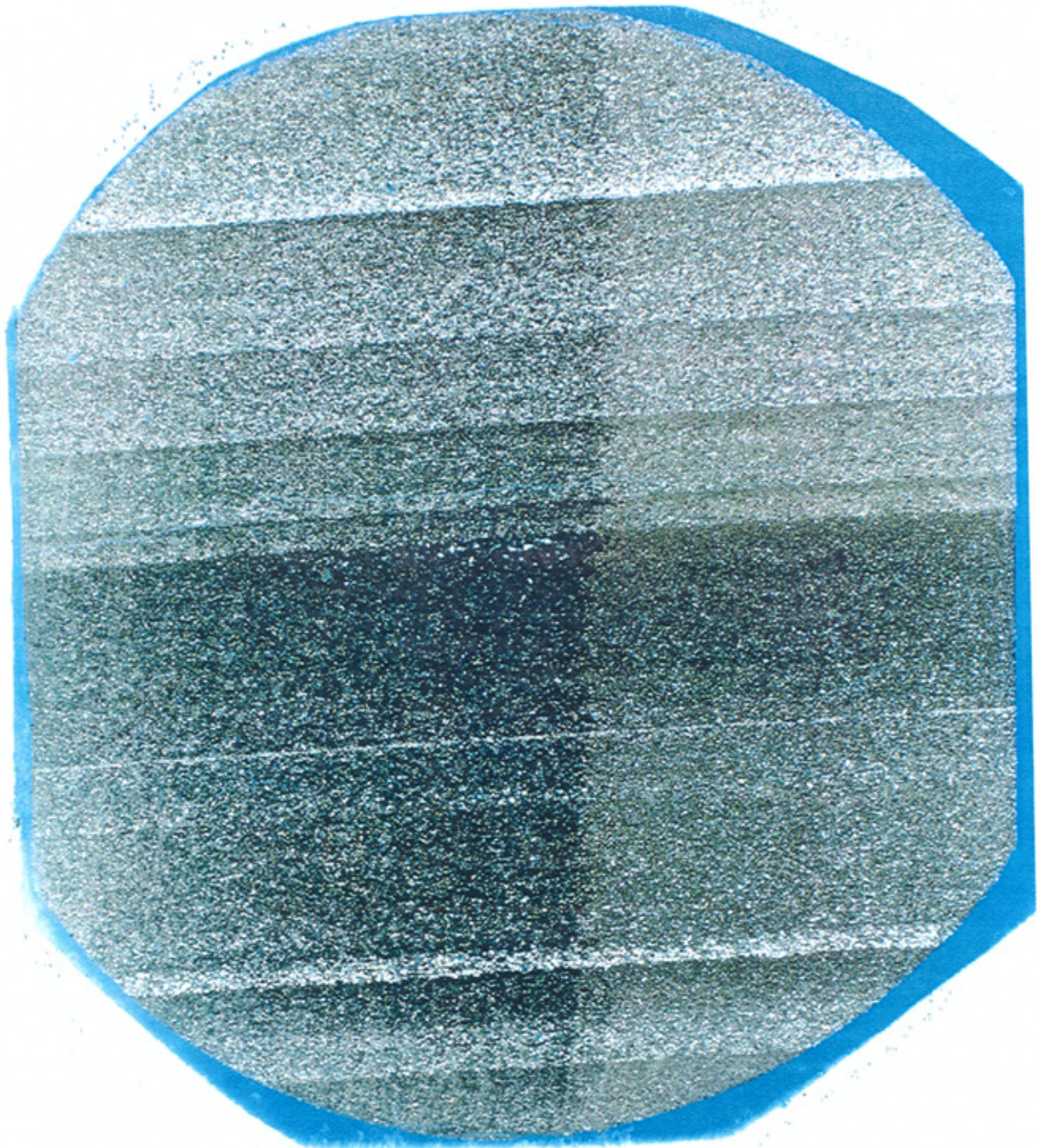
Sample: 21
Depth (m): 5063.00
Core porosity (%): N/A
Kair (mD): N/A



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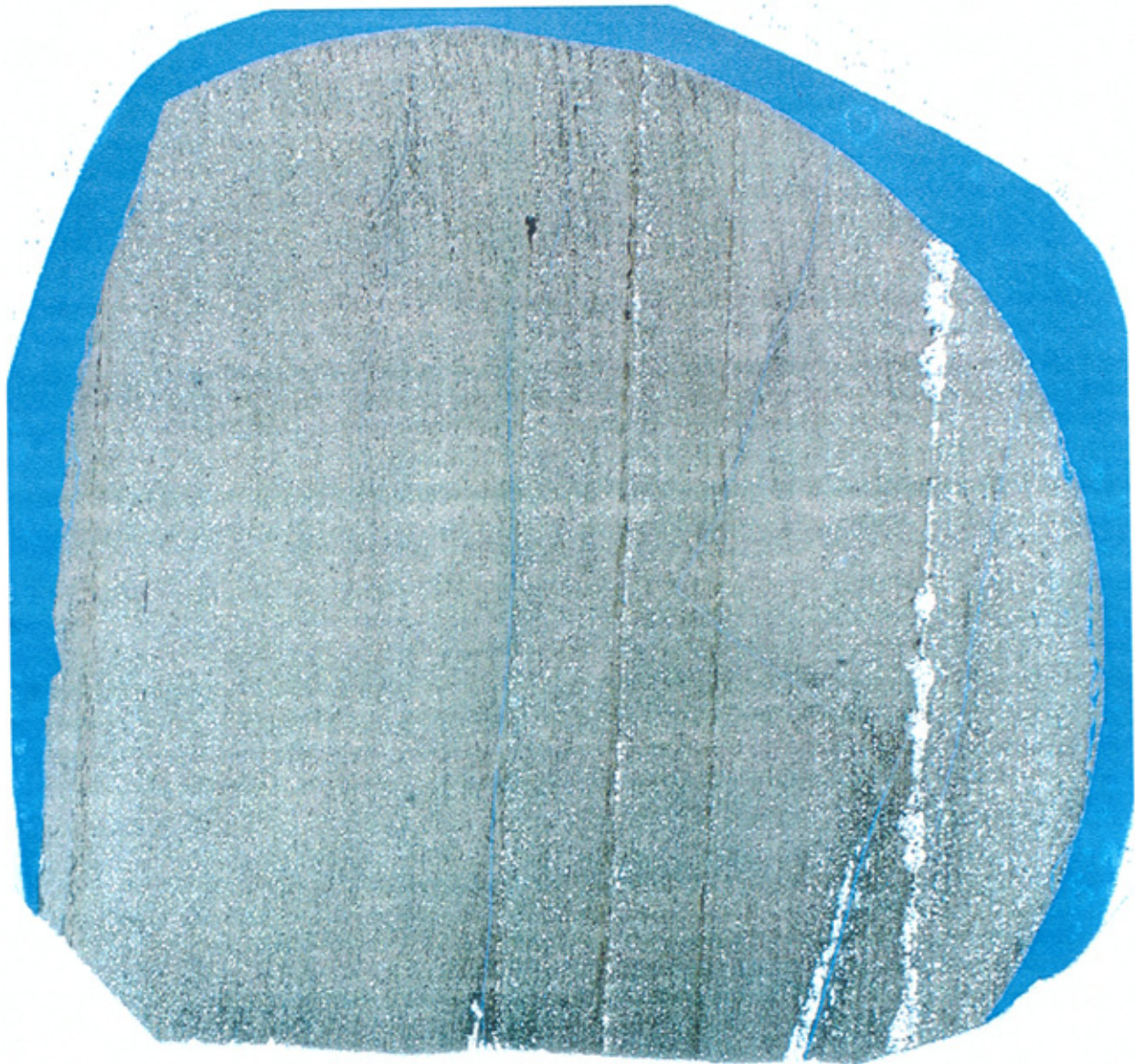
Sample: 23
Depth (m): 4780.40
Core porosity (%): N/A
Kair (mD): N/A



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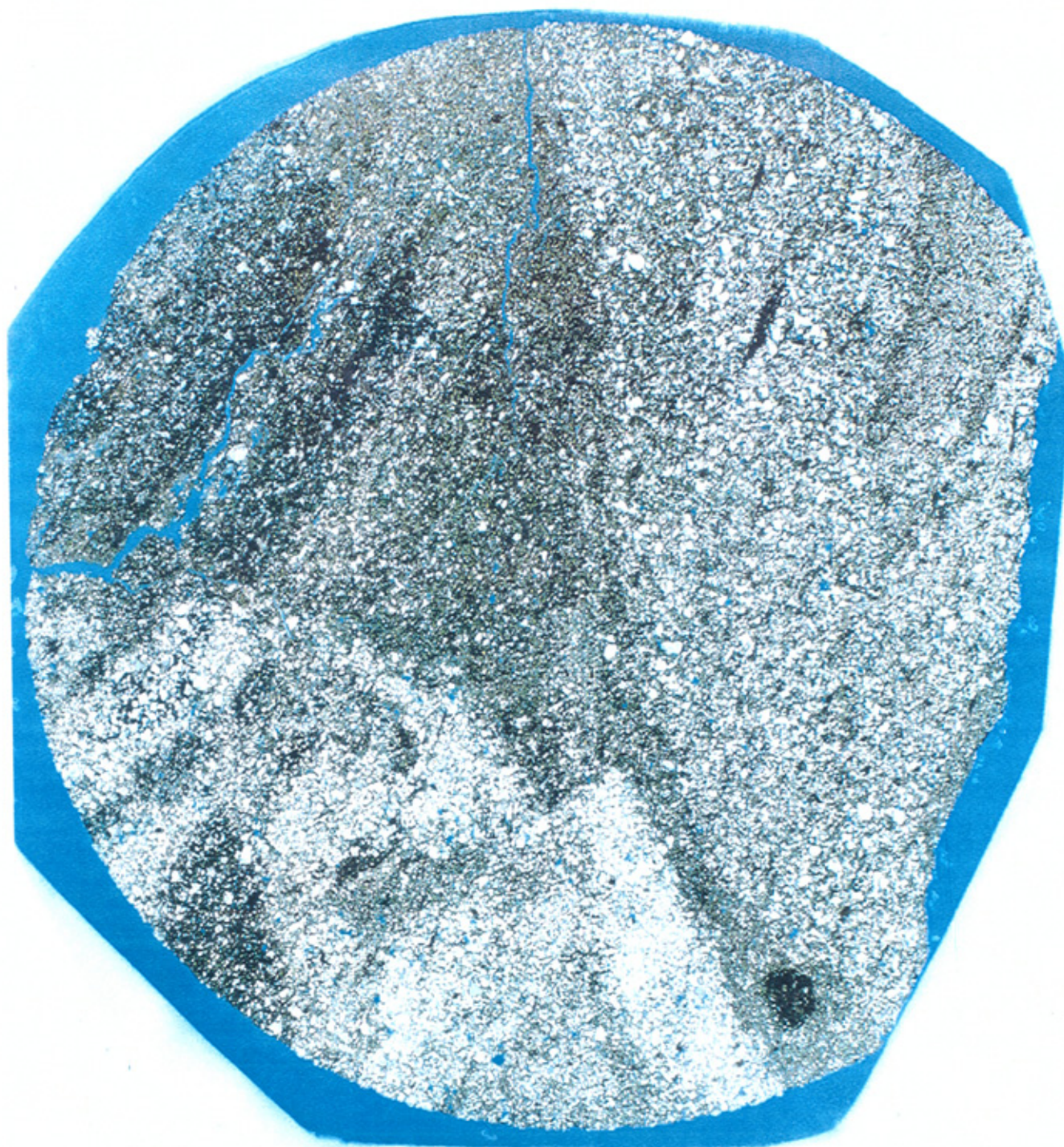
Sample: 22
Depth (m): 5100.80
Core porosity (%): N/A
Kair (mD): N/A



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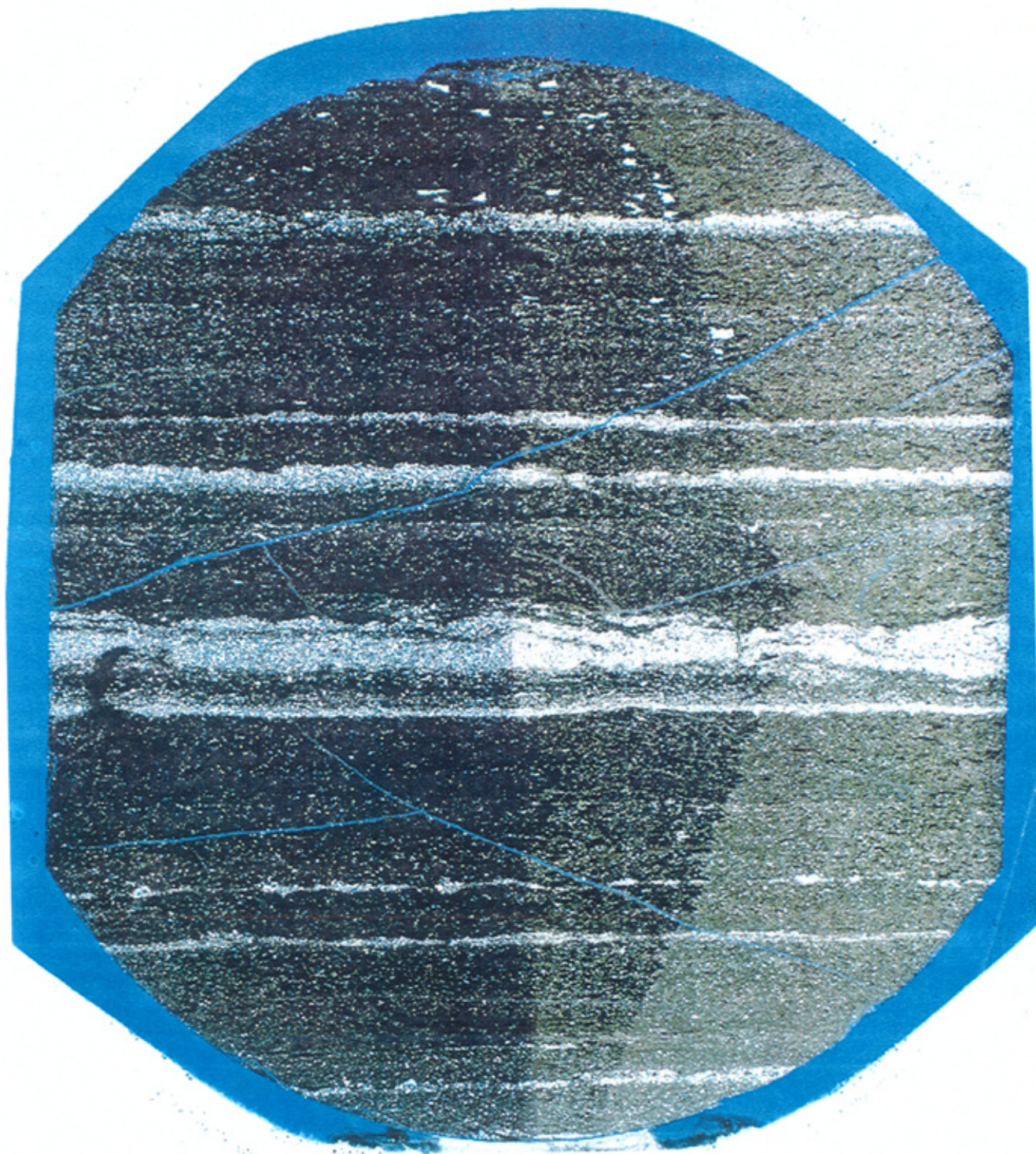
Sample: 24
Depth (m): 4913.80
Core porosity (%): 9.4
Kair (mD): 0.09



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Thin section photographs from the 165mm (6.5 inch) hole section were not received as of November 22, 2002. They will be forwarded separately when completed.