

FINAL WELL REPORT

for the
Onshore Well

NHOC/PanCanadian Port au Port No. 1

These data are considered privileged and any disclosure shall be governed by s 53 of the Petroleum Regulations and/or s 154 of the Petroleum Drilling Regulations.

VOLUME 1

FINAL WELL REPORT

and

Appendix I

Drilling & Engineering Data

RELEASE DATE

AUG 1 1997

Petroleum Resource Development Division
Department of Mines and Energy

NEWFOUNDLAND HUNT OIL COMPANY INC.

JULY 1996

FINAL WELL REPORT

**for the
Onshore Well**

Hunt/PanCanadian PORT AU PORT No. 1

prepared by

**Mr. Michael Fladmark
Staff Engineer**

NEWFOUNDLAND HUNT OIL COMPANY INC.

prepared for

**Government of Newfoundland and Labrador
Department of Natural Resources
Energy Branch**

July 1996

TABLE OF CONTENTS

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
<u>VOLUME 1</u>		
	<u>TITLE PAGE</u>	1
	<u>TABLE OF CONTENTS</u>	3
	<u>LIST OF ATTACHMENTS</u>	5
	<u>APPENDICES</u>	5
	<u>ACRONYMS</u>	7
	<u>CONVERSIONS</u>	7
FINAL REPORT		
1.00	<u>GENERAL OVERVIEW</u>	8
1.01	Introduction	
1.02	Well Location Map	
1.03	General Information	
1.04	Difficulties & Delays	
2.00	<u>DRILLING OPERATIONS</u>	15
2.01	Elevation	
2.02	Total Depth	
2.03	Spud Date	
2.04	Date Drilling Completed	
2.05	Rig Release Date	
2.06	Well Status	
2.07	Hole Sizes & Depths	
2.08	Bit Records	
2.09	Casing & Cementing Record	
2.10	Sidetracked Hole	
2.11	Drilling Fluid	
2.12	Fluid Disposal	
2.13	Fishing Operations	
2.14	Well Kicks	
2.15	Formation Leak-Off Tests	
2.16	Time Distribution	
2.17	Deviation Plot	
2.18	Abandonment/Suspension Plugs	
2.19	Well Schematic	

VOLUME 1 (continued)

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
2.20	Fluid Samples	
2.21	Composite Well Record	
3.00	<u>GEOLOGY</u>	45
3.01	Drill cuttings	
3.02	Cores	
3.03	Lithology	
3.04	Stratigraphic column	
3.05	Biostratigraphic data	
4.00	<u>WELL EVALUATION</u>	50
4.01	Downhole Logs	
4.02	Other Logs	
4.03	Synthetic Seismograms	
4.04	Vertical Seismic Profiles	
4.05	Velocity Surveys	
4.06	Formation Stimulation	
4.07	Formation Flow Tests	
5.00	<u>OTHER</u>	57
5.01	Mud Loggers Report	
5.02	Directional & Deviation Survey Reports	
5.03	Final Legal Survey Plan	
5.04	Core Photos	
5.05	Core Analysis with Digitized Data	
5.06	Fluid Analysis Reports	
5.07	Oil, Gas & Water Analysis Reports	
5.08	Geochemical Report	
5.09	Biostratigraphy Report	
5.10	Petrological Report	
5.11	Palynological Report	
5.12	Paleontological Report	

VOLUME 1 (continued)

LIST OF ATTACHMENTS

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
1-1	Well Location Map	10
1-2	Drilling Program Approval	11
1-3	Authority To Drill A Well	12
1-4	Difficulties & Delays	13
2-1	Well Termination Record	24
2-2	Well Schematic	25
2-3	Bit Record	26
2-4	Drilling Fluids Recap	29
2-5	Time Distribution	33
2-6	Deviation Plot	35
2-7	Fluid Samples	40
3-1	Formation Log Tops	46
3-2	Stratigraphic Column Chart	49
4-1	Production Test Summary	54
5-1	Deviation Survey	59
5-2	Survey Plat	61

APPENDICES

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>SOURCE</u>
-------------	--------------------------	---------------

VOLUME 1 (continued)

I DRILLING & ENGINEERING DATA

I-1	Summary of Daily Drilling Report	NHOC
I-2	Fluids Recap	M-I Drilling Fluids
I-3	Fluids Hydraulics Recap	M-I Drilling Fluids
I-4	Summary of Bottom Hole Assemblies	Datalog Technologies
I-5	Drilling/Engineering Report	Datalog Technologies
I-6	Drilling Data Report	Datalog Technologies

VOLUME 2

II GEOLOGICAL DATA

II-1	Formation Sample Descriptions	Roland Strickland
II-2	Formation Percentage Log	Roland Strickland
II-3	Formation Hydrocarbons Units/ROP Curves	Roland Strickland
II-4	Hydrocarbon Summary	Datalog Technologies

APPENDICES (continued)

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>SOURCE</u>
-------------	--------------------------	---------------

VOLUME 2 (continued)

II - 5	Gas Data	Datalog Technologies
II - 6	Chromatograph Analysis	Datalog Technologies
II - 7	Pixler Plots	Datalog Technologies
II - 8	Geological Well Log	Roland Strickland

VOLUME 3**III DOWNHOLE LOGS**

III - 1	Borehole Compensated Sonic	Schlumberger
III - 2	Compensated Neutron Lithology Density	Schlumberger
III - 3	Dual Laterlog MSFL	Schlumberger
III - 4	Phasor Induction SFL	Schlumberger

NOTE: The above logs are Continuous Spliced Logs"

III - 5	Directional Survey	Schlumberger
III - 6	Synthetic Seismic Logs (3 & 5 in/s)	NHOC
III - 7	MSD Dipmeter Computer Result	Schlumberger

VOLUME 4**IV GEOPHYSICAL DATA**

IV - 1	Biostratigraphy/Palynological/Paleontological Report	E. Burden & H.S. Williams
IV - 2	Rock-Eval/TOC Log Summary	Martin Fowler

V PRODUCTION TEST DATA

V - 1	Sample Collection Field Log	NHOC
V - 2	Report on Oil Sample	Martin Fowler
V - 3	Oil Analysis	Core Lab
V - 4	Gas Analysis	Core Lab
V - 5	Water Analysis	Core Lab
V - 6	DST #1, Field Data	NHOC
V - 7	DST #2, Field Data	NHOC
V - 8	DST #3, Field Data	NHOC
V - 9	DST #4, Field Data	NHOC
V - 10	DST Separator Flow Charts	NHOC
V - 11	Pressure Test Reports	Z.I. Probes
V - 12	Reservoir Fluid Study, DST #4	Core Lab
V - 13	Deposit Analysis	Core Lab

ACRONYMS

Note: The following presents most, but not all, the abbreviations encountered in the text of this report

- ADW Authority To Drill A Well
- BOP blow out preventer
- COND condensate
- d day
- DPA Drilling Program Approval
- GR Gamma Ray
- h hour
- IADC International Association of Drilling Contractors
- kg kilogram
- km kilometer
- LCM lost circulation material
- m meter
- min minute
- mm millimeter
- mW mega Watt
- NAD North America Datum
- NHOC Newfoundland Hunt Oil Company Inc.
- OD outside diameter
- PAP Port au Port
- PCP PanCanadian Petroleum Limited
- RKB rig kelly bushing
- RWP replaceable wear pad
- SPF shots per foot
- UTM Universal
- WTR Well Termination Record
- XO cross-over

CONVERSION FACTORS

<u>English units</u>	to	<u>SI Units</u>	<u>multiply by</u>
bbl		m ³	0.1589873
ft		m	0.3048
hp		W	745.6999
in		mm	25.4
lb		kg	0.4535924
mi		km	4.0234
ppg		kg/m ³	119.8264

dates year - month - day
 time xx hr xx min

FINAL WELL REPORT

NHOC/PanCanadian Port au Port No. 1

1.00 GENERAL OVERVIEW

NEWFOUNDLAND HUNT OIL COMPANY INC.

JULY 1996

1.00 GENERAL OVERVIEW

The SI metric system of units as adopted by the Society of Petroleum Engineers, June 1992, is used in the text of this report. The report summarizes the drilling program for the well per Regulations Guidelines, Newfoundland and Labrador Petroleum Drilling Regulations, 1982. The attachments and appendices may contain data that are in the English system of units and can be converted using the conversion table located on page 6.

1.01 Introduction

The Hunt/PanCanadian Port au Port No. 1 (NHOC/PCP PAP No. 1) was an exploratory well spudded on 94-09-17 and drilled to a total depth of 4699 m on 95-06-06. The well was drilled on Newfoundland Hunt Oil Company Inc.'s (NHOC) Exploration Permit 93-102 located on the Port Au Port Peninsula near Garden Hill about 4 km northeast of Cape St. George. NHOC's partner in the well was PanCanadian Petroleum Limited.

The Noble Drilling (Canada) Ltd.'s land drilling rig OW842E was contracted to drill the well. This is a land based oil well type 840E 1.0 mW SCR rig with a maximum hook load of 408 233 kg and capable of drilling to a depth of 4801 m.

The primary targets were the Tableland and St. Georges group formations encountered from 3701 to 3904 m. The secondary targets included the Long Point Group encountered from 2812 to 3445 m; the Tablehead Mainland sand stones encountered from 3445 to 3482 m; and unknown facies of Ordovician/Silurian/Devonian age encountered from 7825 to 9226 m.

The hole was air-mist drilled from the surface to a depth of 1135 m with the services of Canadian Air Drillers. The hole was then displaced with a water based mud system provided by Macgobar International (MI). The mud program was modified to a water based gel/polymer mud from 2541 m to total depth. Dowell/Schlumberger provided the cementing services for the well. Schlumberger Wireline Services was contracted to provide open hole wireline logging and perforating services. Standard Safety provided safety services on site. DATALOG Technology Inc. provided mud logging services; and Roland Strickland, Stride Consulting, was the wellsite geologist.

Pressure tests were conducted during seven periods with equipment provided and data analyzed by Z.I. Probes, Inc. Production tests were conducted from five intervals between 3949 to 3458 m using Guiberson AVA test equipment. Core Labs conducted fluid analyses of the samples collected during these production tests.

The well was temporarily abandoned on 95-08-01 after 318 days from spud.

1.02 Well Location

Attachment 1-1 presents the well location map for this well on the Port au Port Peninsula of northwestern Newfoundland.

1.03 General Information

The original well name was the Port au Port No. 1. The name was revised to the Hunt/PanCanadian Port au Port No. 1 by request of NHOC and PanCanadian.

The Exploration Permit number is 93-102.

Drilling Program Approval (DPA) number 94-106-1 was approved on 94-08-04. The DPA was revised 95-08-08 to reflect the new well name and was subsequently approved 95-08-18. Attachment 1-2 presents the revised DPA No. 94-106-01-R.

Authority To Drill A Well (ADW) program number 94-106-01-01 was approved on 94-08-04. The ADW was revised 95-08-08 to reflect the new well name and was approved 95-08-18. The revised ADW No. 94-106-01-01-R1 is presented as Attachment 1-3.

The well is located on the Port Au Port Peninsula near Garden Hill about 4 km northeast of Cape St. George. The UTM coordinates for the well are:

Northing	5,372,856.003 m
Easting	335,490.317 m

The drill site and well location survey was conducted by Yates & Woods Ltd., Newfoundland Surveyors, using conventional land surveying equipment. The Department of Energy, Mines and Geodetic Survey of Canada computer program was used to convert the conventional survey points into UTM coordinates using the NAD (1927) spheroid for the Central Meridian 57° west longitude.

1.04 Difficulties & Delays

There were twenty-four significant problems encountered during the drilling of this well which resulted in a total of 59.920 lost days. A summary of these problems is presented in Attachment 1-4.

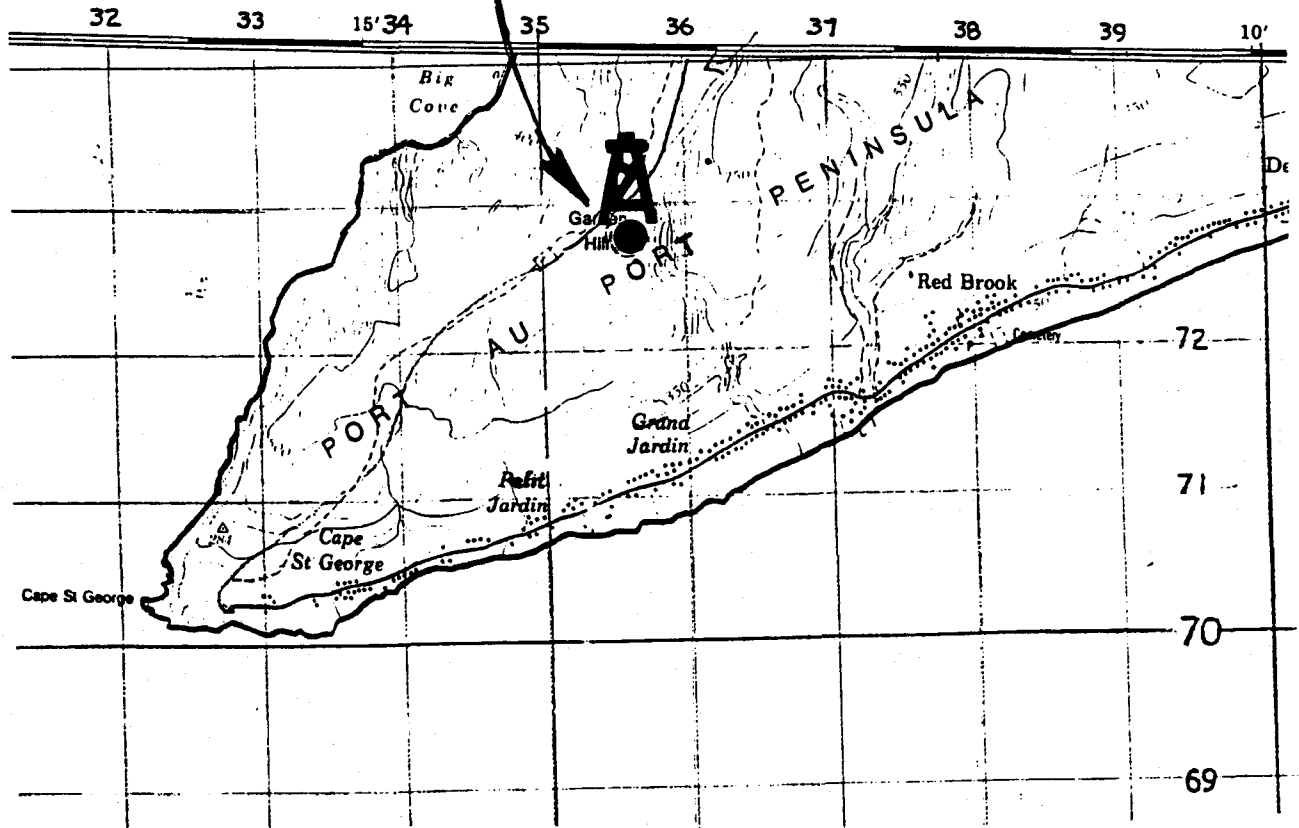
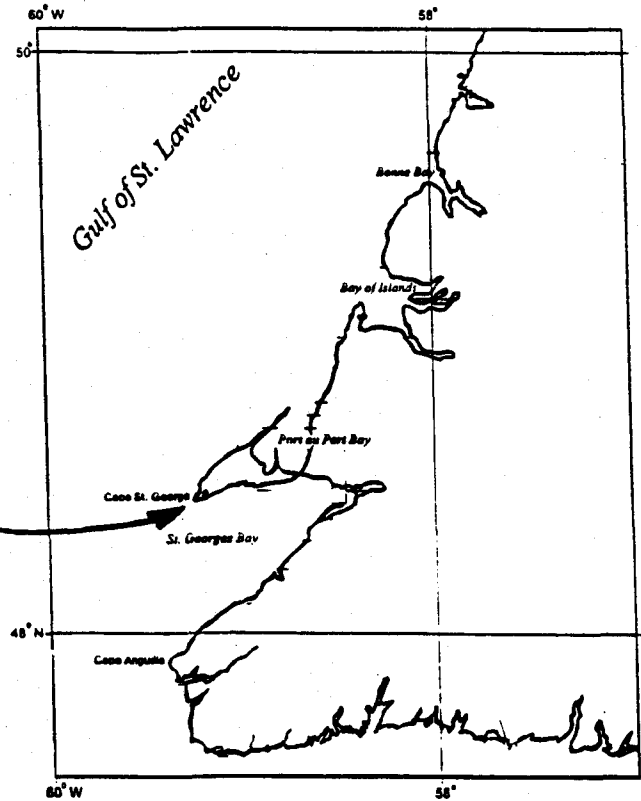
ATTACHMENT 1-1. Well Location Map

WELL LOCATION

well coordinates

5,372,856.000 mN

335,490.317 mE



ATTACHMENT 1-2. Drilling Program Approval



GOVERNMENT OF
NEWFOUNDLAND
AND LABRADOR
Department of
Natural Resources

**DRILLING PROGRAM
APPROVAL**

APPLICATION

Pursuant to sections 8 and 9 of the *Petroleum and Natural Gas Act*,

Newfoundland Hunt Oil Company Inc., as Operator on behalf of Hunt Oil Company and Hunt Overseas Operating Company Inc., holding a subsisting licence, permit or lease issued pursuant to the *Newfoundland and Labrador Petroleum Regulations*, namely; Permit 93-102
(licence, permit, or lease #)

hereby applies for Approval to conduct a drilling program using the drilling rig Noble OW842E and equipment and procedures described in the detailed program dated July 19, 1994.

The undersigned Operator's Representative hereby declares that, to the best of the Operator's knowledge, the information contained herein and in the attached detailed program is true, accurate and complete.

Signed: Benny Slight Date: Aug 4, 1995
Operator's Representative *BS*

APPROVAL

Pursuant to sections 8 and 9 of the *Petroleum and Natural Gas Act*, the Operator named in the Application is hereby authorized to conduct the proposed drilling program subject to the following conditions:

1. This Drilling Program Approval shall, unless otherwise extended or terminated, expire upon the 4th day of August, 1997;
2. This Authorization shall be prominently displayed at the well site at all times during which operations are being conducted;
3. Evidence of financial responsibility, as required pursuant to Section 14 of the *Newfoundland and Labrador Petroleum Drilling Regulations, 1982*, shall be provided by the Operator to the Minister of Natural Resources;
4. The Operator shall use the equipment and procedures described in the detailed program dated July 19, 1994, unless a change in the equipment or procedures is approved in writing by the Director;
5. The Operator shall comply with such other conditions as are appended to this Approval; and
6. Notwithstanding condition #4, the Operator shall comply with all the requirements of the *Newfoundland and Labrador Petroleum Drilling Regulations, 1982* unless a deviation from same is approved in writing by the Director.

Signed: H.H. Stanley Effective Date: 1995 08 18
Director

Drilling Program Approval No. 94-106-01-R1

ATTACHMENT 1-3. Authority to Drill A Well



GOVERNMENT OF
NEWFOUNDLAND
AND LABRADOR

Department of
Natural Resources

AUTHORITY TO
DRILL A WELL

APPLICATION

Pursuant to sections 8 and 9 of the *Petroleum and Natural Gas Act* and in compliance with section 31 of the *Newfoundland and Labrador Petroleum Drilling Regulations, 1982*,

Newfoundland Hunt Oil Company Inc., as Operator,
hereby applies for Authority to Drill a Well to be known as Hunt-PanCanadian Port Au Port No. 1
using the equipment and procedures described in the well program dated July 22, 1994.

Permit, Licence or Lease to which this Program applies: 93-102

Area: Port Au Port Peninsula		CO-ORDINATES	
Field/Pool: Wildcat	Long:	UTM	
	Lat:	Northing: 5,372,856.003	
		Easting: 335,490.317	
Drilling Rig: 1400hp SCR	ELEVATION		DEPTH
Rig Type: Oil well type 840E	RT/KB/RF: 8.23 m	T.D. 4600m:	
Drilling Contractor: Noble Drilling	G.L.: 212.39	TVD: 4600m	
ESTIMATES		TARGET HORIZONS	
Spud Date: 8/1/94	Well Cost: \$8,000,000	Tablehead and St. George Group 3701-3940m	
Days on Location: 130 days			

EVALUATION PROGRAM

Ten-metre sample intervals: 0-2350m	Conventional cores at: N/A
Five-metre sample intervals: 2350-4600m	Logs and Tests: Phasor induction, BHC Sonic O-TD
Canned sample intervals: Across show intervals	CNL/D/DAC: Diameter/EMS/Velocity Survey Across Shows

CASING AND CEMENTING PROGRAM

O.D. (mm)	Weight (Kg/m)	Grade	Setting Depth (m)	Cementing Program
508	158.63	K-55	20	Ready mix to surface
339.7	101.29	L-55	500	Class G w/2% CaCl ₂ 25% over caliper
244.5	70.01	L-80	2000	Class G lite + Class G + Fluid loss additive/100m above pay + 25%
177.8	47.66	T-95	4600	Class G + 35% Silica Sand-100m above pay + 25% excess
B.O.P. Equipment: 1-346mm 34,500 KPa Shaffer Annular, 1-346mm 68,940 KPa Cameron				
Model Type U Double Gate, 1-346mm 68,940 KPa Cameron Model Type U Single Gate				
Other information: Choke Manifold 18-76.2mm 68,940 KPa Cameron Values w/2-76.2mm 68,940				
Choke inlet lines and 4 flare outlet lines.				

The undersigned Operator's Representative hereby declares that, to the best of the Representative's knowledge, the information contained herein and in the attached detailed program is true, accurate and complete.

Signed: [Signature] Operator's Representative Date: 8-4-95

AUTHORIZATION

Whereas the Minister of Natural Resources is successor in jurisdiction to the Minister responsible for the Petroleum Directorate and has jurisdiction under *The Newfoundland and Labrador Petroleum Drilling Regulations, 1982* ("the Regulations").

In accordance with section 36 of the Regulations, the Operator named in the Application is authorized to undertake the proposed well program described above subject to the following conditions:

- This Authorization shall be prominently displayed at the well site at all times during which operations are being conducted;
- Copies of all logs and well test data shall be submitted to the Director by the Operator promptly after their acquisition;
- The Operator shall comply with all conditions of the Drilling Program Approval No. 94-106-01-R1 under which the above well is to be drilled;
- The Operator shall comply with such other conditions as are appended to this Authorization;
- No change in the well program hereby approved may be made unless it is first approved by the Director in writing; and
- This Authorization is conditional on the operator commencing drilling within 120 days of the effective Authorization date.

Signed: [Signature] Director Effective Date: 16/5 08 15

Authority to Drill a Well No. 94-106-01-01-R1

ATTACHMENT 1-4. Difficulties & Delays (1 of 2)

	<u>Date</u>	<u>Description of Delay or Difficulty</u>
1.	94-09-24:	lost 240 h (10 d). Displaced cement for surface casing and blew cement head when pressured up.
2.	94-10-14:	lost 7.5 h (0.312 d) because packed bottom hole assembly would not go in hole.
3.	94-10-19:	Ran light on bit weight from 1294 to 1780 m which probably lost 32% of penetration rate. No lost time was attributed to this action.
4.	94-11-04:	lost 21.5 h (0.896 d) when drill string twisted off in box of 181 mm drill collars.
5.	94-11-05:	lost 4.9 h when an extra GR-Sonic log was run to determine depth.
6.	94-11-09:	lost 104.5 h (4.354 d) when a roller was lost off of reamer.
7.	94-11-10:	lost 15.5 h (0.646 d) due to high winds.
8.	94-11-16:	lost 20.0 h (0.833 d) when drill pipe twisted off in jars.
9.	94-11-18:	lost 12.0 h (0.500 d) to trip for cracked cross-over (XO) sub in drill string.
10.	94-11-26:	lost 10.5 h (0.438 d) to run a magnet to recover pieces lost from replaceable wear pad (RWP) stabilizer.
11.	94-11-29:	lost 11.5 h (0.479 d) to trip for washout in 165 mm drill collar.
12.	94-12-03:	lost 78.0 h (3.250 d) after losing RWP pad in hole.
13.	94-12-09:	lost 14.0 h (0.583 d) due to high winds preventing a trip.
14.	94-12-12:	lost 12.5 h (0.521 d) due to high winds preventing a trip.
15.	94-12-22:	unable to airdrill due to disturbed zone just below casing. No lost time for this event.

ATTACHMENT 1-4. Difficulties & Delays (2 of 2)

	<u>Date</u>	<u>Description of Delay or Difficulty</u>
16.	95-01-20:	lost 158.0 h (6.583 d) due to drilling break from 3457 to 3459 m. Mud weight increase due to high gas cut resulted in lost circulation. Penetration rate reduced from 31 m/d previous 30 days to 13 m/d during next 50 days due to lost circulation problems.
17.	95-01-28:	lost 144.0 h (6.000 d) for unscheduled logging run.
18.	95-02-03:	lost 48.0 h (2.000 d) to conduct a Diaseal M squeeze to 1426 kg/m ³ equivalent mud density.
19.	95-02-07:	lost 60.0 h (2.500 d) to spot lost circulation material (LCM) pill.
20.	95-02-12:	lost 120.0 h (5.000 d) due to lost circulation above 3759 m.
21.	95-02-13:	lost 19.5 h (0.813 d) due to high winds not allowing trip.
22.	95-02-22:	lost 96.0 h (4.000 d) due to lost circulation during drilling break from 3914 to 3917 m.
23.	95-02-28:	lost 120.0 h (5.000 d) to run third unscheduled log after drilling with losses at 4023 m.
24.	95-03-08:	lost 120.0 h (5.000 d) when hole broke down after attempting to unplug bit.

FINAL WELL REPORT

NHOC/PanCanadian Port au Port No. 1

2.00 DRILLING OPERATIONS

NEWFOUNDLAND HUNT OIL COMPANY INC.

JULY 1996

2.00 DRILLING OPERATIONS

A summary of the daily drilling operations is presented in Appendix I.

2.01 Elevation

Elevations presented are from "above mean sea level" for the following well markers:

- natural ground level: 212.4 m
- casing head: 212.4 m
- rig's rotary kelly bushing (RKB): 220.6 m

2.02 Total Depth

The following depths are measured from the RKB:

- total drilled depth: 4698.8 m
- total logged depth: 4694.8 m
- plugged back depth: 3502.2 m

2.03 Spud Date

The well was spudded on 94-09-18 at 02 h 30 min.

2.04 Date Drilling Completed

The total depth was reached on 95-06-07 at 01 h 00 min.

2.05 Rig Release Date

The drilling rig was released on 95-08-01 at 24 h 00 min.

2.06 Well Status

The well was temporarily abandoned. The 73 mm production tubing was left in the hole with a FG plug set in the F nipple of the Guiberson Uni 6 packer at a depth of 3384 m; tubing displaced with 1.89 m³ of diesel to a depth of 2616.5 m; and with a bridge plug set in the tubing hanger at a depth of 0 m.

The details of the temporary abandonment are presented in Attachment 2-1 which is a copy of the Well Termination Record (WTR) dated 96-02-23 and Attachment 2-2 which is the well schematic "Configuration for Temporary Abandonment" which was the attachment to the WTR.

2.07 Hole Sizes & Depths

The following depths are measured from the RKB and hole sizes are OD of the drill bit.

<u>hole section</u>	<u>hole size (mm)</u>	<u>depth (m)</u>
• surface hole	444	495
• intermediate hole	311	2510
• section 4	216	4252
• section 5	165	4635
• section 6	156	4699

2.08 Bit Records

Attachment 2-3 presents the NHOC Bit Record for the well. Datalog's "Drilling/Engineering Report" and "Bottom Hole Assembly Report" are included as supplementary information in Appendix I.

The 444 mm hole was drilled 495 m with two (2) bits using air mist.

The 311 mm hole was drilled 2015 m with twenty-two (22) bits, one of which was rerun after drilling junk and cement. In addition, a total of seven (7) mills were run in two different sections of the hole. One (1) 216 mm and two (2) 171 mm bits were also run to drill a pilot hole in cement over junk inside casing.

The 216 mm hole was drilled 1711.8 m with twenty (20) bits, one of which was rerun after a change from air mist to a gel/polymer mud system, and one was run solely for conditioning the hole.

The 165 mm hole was drilled 382.8 m with twenty-four (24) bits, one rerun with a downhole motor, and three to drill out cement and a retainer. In addition one (1) mill was run on junk.

The 156 mm hole was drilled 64 m with five (5) bits.

2.09 Casing & Cementing Record

The following is a summary of the casing runs and cementing programs for this well. This information is also presented in the WTR (Attachment 2-1), the Well Schematic (Attachment 2-2), and in the Daily Drilling Report (Appendix I):

2.09 (continued)

Conductor:

Two (2) joints of 508 mm 12.65 kg/m X-56 PE B&W line pipe were driven to a depth of 25.6 m. Ready mix cement was circulated to surface.

Surface Casing:

Thirty-seven (37) joints of 339.7 mm 9.4 kg/m J-55 ST&C casing were run to a depth of 491.3 m. A Weatherford float collar inserted at 481.3 m, one (1) joint above Weatherford float shoe. Three (3) centralizers were installed: one each installed at 481.6 m, 468.2 m, and 454.5 m. No scratchers were installed. The casing washed to bottom and picked up about 0.3 m to circulate cement, circulated one hour with no returns to surface.

The initial cement job used 1296 sacks of OWG cement with 1% CaCl₂ in mixing water with a slurry volume and weight of 42.1 m³ at 1893 kg/m³ respectively. The initial interval cemented was from 495 m to a calculated top at 295 m. Due to a mechanical failure of the cement pumping equipment, this cement job was stopped. The initial cement job was both milled (due to junk in hole) and drilled out.

The remedial cement job for the surface casing used 600 sacks of Class "G" cement through the annulus between surface and conductor casing from top of initial cement job at 295 m to surface.

During drilling out of cement and milling for junk, a hole in the surface casing at 495 m was indicated by recovered pieces of casing metal in a junk basket. The remedial cement job consisted of 150 sacks of Class "G" cement with 1% CaCl. The top of cement was tagged at 443 m and drilled 1 m into formation below the shoe.

Intermediate Casing:

One hundred eighty-nine (189) joints of 244.5 mm 6.5 kg/m L-80 LT&C casing were run to a set depth of 2508.5 m. A Weatherford float collar was inserted at 2481.9 m, two (2) joints above Weatherford float shoe. Fifteen (15) centralizers were installed from 2502.4 to 2133.6 m covering 368.8 m. with one (1) centralizer was installed at the middle of the shoe joint, one (1) was installed at collar of shoe joint, twelve (12) were installed every other joint, and one (1) was installed 18.3 m below test. No scratchers were installed. Top of cement was confirmed by log at 2360 m.

The lead cement consisted of 1645 sacks of Class G cement blended with 12% gel, 0.03% D-65, and 0.4% D-81. The slurry volume was 42.1 m³ at 1893 kg/m³

Tail cement consisted of 180 sacks of Class G blended with 12% gel, 0.03%

2.09 D-65, 0.6% D-81 and 0.25% D-160. The slurry volume was 95.5 m³ at 1522 kg/m³. Tagged top of cement at 8134 ft and then drilled 2.5 m into formation.
(continued)

Liner:

One hundred forty-eight (148) joints of 193.7 mm 5.4 kg/m T-95 HYDRIL SLX liner was run to a depth of 4195.3 m and hung off at 2359.5 m. The liner was cemented through the shoe with 468 sacks of HI-LITE 1300 with 0.3% D-59, 0.4% D-65, 0.1% D-136, 0.3% D-800 and 0.2% D-46 additives at 1330 kg/m³ with partial cement returns to surface.

A cement bond log was run and determined the top of cement at 3730 m. A perforating control log was then run to confirm top of liner at 2360 m. A tubing gun was run and the liner was perforated 3576 m with 4 SPF. An Elder retainer was run and set at 3560 m. Drill pipe with a stinger was then run into the hole and stung into the retainer to pump cement.

The lead cement was 750 sacks of class "G" with 8% gel 0.2% D-13 at 1582 kg/m³. The tail cement was 150 sacks of class "G" with 0.7% D-160 0.45% D-13 0.74 g/s D-13 at 1582 kg/m³ pumped at 0.4 m³/min at 600 psi with full returns.

A cement bond log was run to 3556 mt. An injection rate into the top of the liner was established at 0.2 m³/min with 19 995 kPa. The top of liner was cemented with 100 sacks of class "G" cement with 0.35% D-160 and 0.23% D-13 at 1893 kg/m³ with a max pump pressure of 20 684 kPa at 0.2 m³/min. Top of cement was tagged at 2345 m and drilled to 2358 m where the liner lap was tested to 19 995 kPa for 0.5 hour. Cement was then tagged at 3548 m and drilled to 3560 m to drill through the retainer, then drilled cement from 3561 to 3577 m. Perforations behind cement were then tested to 13 790 kPa for 0.5 hour. Then drilled cement to landing collar at 4167 m, pressure tested landing collar to 13 790 kPa for 0.5 hours. Cement was drilled to 4186 m.

The formation was then perforated in four separate zones and stimulated for production tests from 3951 to 3459 m. These zones were subsequently cement squeezed, drilled out and pressure tested for integrity. The shoe at 4199 ft was drilled out and pressure tested to 1450 kg/m³ equivalent mud weight for 0.5 hour. After drilling a 165 mm/ 155 mm hole to a depth of 4699 m a cement plug was set in the liner from 4069 to 4142 m consisting of 50 sacks of G cement w/0.55% D-13 additives. A gauge ring was run to 3516 m followed with a bridge plug set to the PBSD from 3505 m.

Production Tubing:

One hundred five (105) joints of 73 mm 1.1 kg/m L-80 BTS tubing were run to a depth of 1012.5 m and above two hundred forty-seven (247) joints of 73 mm 0.9 kg/m L-80 BTS tubing were run to a depth of 3384.2 m and set in a

Guiberson UNI-6 with type XL on-off tool with an "F" profile. 102 m³ of m packer fluid with 28% HCL were displaced with 10 m³ of packer fluid. The packer was set at 3384 m and tubing hung on packer with 9072 kg.

2.10 Sidetracked Hole

Not applicable. There were no sidetracks during the drilling of this well.

2.11 Drilling Fluid

The Drilling Fluids Hydraulics and Fluids Recaps prepared by MI Drilling Fluids are located in Appendix I. The recap summarizes the products used and the mud properties maintained daily for each section of the well drilled with a mud system.

A product summary for each well section is presented as Attachment 2-4. M-I Bar (barite) was used for weight control. M-I Gel and XCD were used as viscosifiers. Fluid loss was controlled with Drispac. Products used for Lost Control Material (LCM) included Diaseal M, FLAKE, Kwik Seal M, LoLoss, Magco Mica, PLUG Med and Sawdust. PH and Contamination control products included Acetic Acid, Caustic Soda, Lime, Soda Ash and Sodium BiCarbonate. Thinners included LIG and SPERSENE CF. Specialty products used included Alcomer 120 L, BABCBAN II, CONQOR 404, Defoam-X, OSIL and POLY PLUS.

The conductor and surface hole were drilled with an air mist system to a depth of 469 m. The 311 mm hole was mudded up to assist in the milling of cemented and parted surface casing. On completion of milling, the well was air drilled to a depth of 1139 m when the hole was displaced to mud to maintain hole stability and drilled to 2510 m. The intermediate casing was then run and cemented.

The 216 mm hole was initially air drilled from the casing seat, but hole instability required the hole to be displaced to mud. The remainder of the well was drilled with a water based gel/polymer mud system.

Lost circulation occurred during drilling of the Aguathuna pay zone from 3459 to 3476 m. A total of 358 m³ of mud were lost before control was obtained using LCM and reduced mud weight. A major lost circulation zone was also encountered during the drilling of the Watts Bight formation from 3916 to 3951 m. A total of 867 m³ of mud was lost in this zone. LCM and reduced mud weight were also used to control the fluid loss.

2.12 Fluid Disposal

The production tubing was displaced with 1.89 m³ of diesel fluid, a FG plug

was run and set in F nipple at 3385.4 m. The tubing was pressure tested to 10 342 kPa for 1 hour. Tubing was then bled to zero pressure and a one-way BP valve was installed and well capped.

A total of 418 m³ of reserve pit mud was pumped down the annulus between the tubing and intermediate casing.

2.13 Fishing Operations

The following is a summary of the fishing operations per IADC coding conducted during the drilling of this well.

- 94-09-29 Ran in hole with magnet to 495 m and recovered allen head screw and pieces of metal. 01 hr 30 min.
- 94-11-04 Twisted off second 181 mm drill collar from the top while air drilling the 311 mm hole. Top of fish of 84.2 m in length was located at a depth of 1617 m. The fish was engaged with fishing tools and recovered to the drill floor. 3 hr 00 min.
- 94-11-09 Lost roller - pin and block of 3-point reamer. Ran in hole twice with magnet to 1842 m. Then ran in hole with mills (five trips) and milled junk in hole. 40 hr 30 min.
- 94-11-16 Drilling at 1919 m when drill pipe torqued and lost 11 340 kg and 6895 kPa. Down jar parted at body and left 1.5 m of body and remainder of bottom hole assembly in hole. Up jar cracked in same place. Ran 298 mm overshot with 229 mm grapple. Recovered fish to drill floor. 1 hr 00 min.
- 94-11-26 Lost two pieces from RWB in hole after survey at 7053 m. Ran in hole with magnet and junk basket and recovered junk to the drill floor. 1 hr 00 min.

2.14 Well Kicks

There were no significant kicks during the drilling of this well. There were several incidents during drilling from 11421 to 12333 ft when small volumes gas cut mud flowed for short periods of time (less than 9 m³ total). These were all controlled using a combination of lost circulation materials and increasing mud weight.

2.15 Formation Leak-Off Tests

The following pressure tests were conducted below the referenced casing seats before drilling ahead:

1. 94-10-07: Performed 30 min leakoff test to 2413 kPa after drilling formation from 496 to 497 m. Previously drilling cement from 482 to 496 m inside surface casing.
2. 94-12-20: Performed 30 min leakoff test to 15 969 kPa with 1522 kg/m³ mud after drilling formation from 2510 to 2513 m. This was an equivalent mud weight of 1090 kg/m³. Previously drilling cement from 2479 to 2510 m inside intermediate casing.
3. 94-03-30: Tested the liner landing collar to 13 790 kPa for 0.5 hours.
4. 94-05-06: Tested the shoe to 1450 kg/m³ equivalent mud weight at 4255 m.

There were several cement squeeze jobs related to closing off perforations after formation flow tests. All squeeze jobs were pressure tested to ensure wellbore integrity.

2.16 Time Distribution

Attachment 2-5 presents the time distribution by hours and percent for each phase of the well per IADC Daily Drilling Reports. This information was prepared by Roland Strickland, Wellsite Geologist and summarized below:

- 444 mm Phase: 0 to 495 m:
A total of 408 hours with 36% for drilling, 21% for tripping, 11% reaming, and 32% (in descending order) for nipple up BOP, other, circulate & condition mud, wait on cement, test BOP, deviation survey, lubricate rig, wireline logging, run casing & cement, fishing, and cut & slip drill line.
- 311 mm Phase: 495 to 2510 m.:
A total of 1728 hours with 59% for drilling, 29% for tripping, and 12% (in descending order) for circulate & condition mud, fishing, other, test BOP, lubricate rig, wireline logging, run casing & cement, repair rig, deviation survey, reaming, nipple up BOP, cut & slip drill line, and wait on cement.

- 216 mm Phase: 2510 to 4252 m.:
A total of 1364.5 hours with 39% for drilling, 25% for tripping, and 41% (in descending order) for wireline logging, coring, circulate & condition mud, nipple up BOP, run casing & cement, reaming, test BOP, repair rig, other, deviation survey, cut & slip drill line, lubricate rig, and wait on cement.
- 165 mm Phase: 4252 to 4699 m:
A total of 792 hours with 47% for drilling, 41% for tripping, and 12% (in descending order) for reaming, wireline logging, lubricate rig, circulate & condition mud, wait on cement, other, test BOP, deviation survey, drill stem test, rig repair, run casing & cement, squeeze cement, and cut & slip drill line.

2.17 Deviation Plot

Four deviation surveys were conducted by Schlumberger. The final survey was logged on 95-06-07 and determined the bottom hole location was 74.63 m north and 2.06 m west of the tie-in location at the surface casing seat. The hole was vertically deviated 0.2° with an azimuth of 190° at the tie-in point and the surface coordinates were assumed to be the same. The exact radius of curvature method was used to calculate the bottom hole location.

The bottom hole coordinates are:

Northing 5,372,930.63 m
Easting 335,488.25 m

Attachment 2-6 presents a plan view and four vertical views (south - north, southwest - northeast, west - east, and northwest - southeast) showing the location of the well bore with respect to the tie-in point and wellhead. A copy of the final survey log is located in Appendix IV.

2.18 Abandonment/Suspension Plugs

Attachment 2-1, the Well Termination Record (WTR) provides the details for plugs set in the temporary abandonment of the well. These were as follows:

- A cement plug of 50 sacks of Class 'G' cement with 55% D-13 additive was set from 4142 to 4211 m (69 m) and tagged with drillpipe to confirm top.
- A bridge plug was set at 3505 m and tested to 1700 psi.

- Tubing was left in the hole with a packer set at 3384 m. A FWG plug was set in the F nipple at 3385 m and tested to 1500 psi. Pressure was bled off and tested for negative flow.
- A bridge plug was set in the tubing hanger at the surface (0 m).

2.19 Well Schematic

The wellbore schematic, "Configuration for Temporary Abandonment", was submitted as part of the WTR and is Attachment 2-2.

2.20 Fluid Samples

Four drill stem production tests were conducted. The fluid samples collected are summarized in Attachment 2-7 and in the following table:

<u>DST</u>	<u>ZONE</u>	<u>NUMBER OF SAMPLES</u>			
		<u>OIL</u>	<u>COND</u>	<u>GAS</u>	<u>WATER</u>
1	Watts Bight Member	-	-	-	2
2	Aquathuna Member	-	-	-	2
3	Table Point - Spring Inlet Member	-	12	6	5
4	Table Point - Upper Interval	16	-	2	7

A total of 1491 m³ of oil were produced from the above tests.

2.21 Composite Well Record

Not applicable. A composite well record was not required.

ATTACHMENT 2-1: Well Termination Record



GOVERNMENT OF
NEWFOUNDLAND
AND LABRADOR
Department of
Natural Resources

WELL TERMINATION
RECORD

WELL DATA

Well Name: Port au Port #1 (NHOC PCP)	CO-ORDINATES	
Operator: Newfoundland Hunt Oil Co.	UTM	
Drilling Rig: 0W842	Long: Lat:	Northing: 5,372,856.00 Easting: 335,490.317
Rig Type: Oil Well 842	ELEVATION	
Drilling Contractor: Noble	RTCB/RF: 8.23M GL: 212.39	TD: 4698.8M TVD: 4698.8M
FOR NDNR USE ONLY		
Spud Date: 9-19-94 TD Date: 6-7-95 Rig Release Date: 8-1-95 Well Termination Date: 8-1-95	For the purpose of interpretation section 140 of the Newfoundland and Labrador Petroleum Drilling Regulations (1983), the rig release date is deemed to be: Aug 1st 1995	

CASING AND CEMENTING PROGRAM

O.D. (mm)	WEIGHT (Kg/m)	GRADE	SETTING DEPTH (m)	CEMENTING DETAILS
508	158.63	X52	24.38	Ready mix circulated
339.7	101.29	J55	49.5	1300SX G + 1% CaC ₂
244.5	70.01	L-80	2508.5	1645SX 1:12 G; 180SX 1:0 G
193.7	58.09	T-95	4196	400SX G

PLUGGING PROGRAM

Approval of the following program was obtained by (person) C.R. Weaver
from (person) Joe Gorman of the Department of Natural Resources by means of
FAX (709) 729-2325 dated August 10, 1995

Type of Plug	Interval	Test/Pressure Tested	Cement and Additives
Cement	4142-4211		50SX G w/.55% D-13
Bridge Plug	3505	1700 PSI	
FWG Tubing Plug	3385	1500 PSI	
Back Pressure	Tree		

Last Circulation: 3467-4122

Downhole Completion/Workover Equipment:
Gulberson Uni. 6.2 3384... 73 MM 9.67 Kg/m L80 RT6 6 3384-1012, 73mm 11.74 Kg/m
L-80 RT6 6 1012-0... R nipple 8 3399... F nipple 9 3389... F nipple 8 3385
Back Pressure valve in tree.....

(Describe and Attach Sketch) Displaced tubing with diesel and ran a FWG plug and set in
F nipple at 3385m... Tested plug to 1500 PSI ok. Bled off pressure and did
negative flow test OK... Installed a BP valve in the tubing hang... Chained
the master valve closed... Fenced off the wellhead and the entrance to the
location.

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.

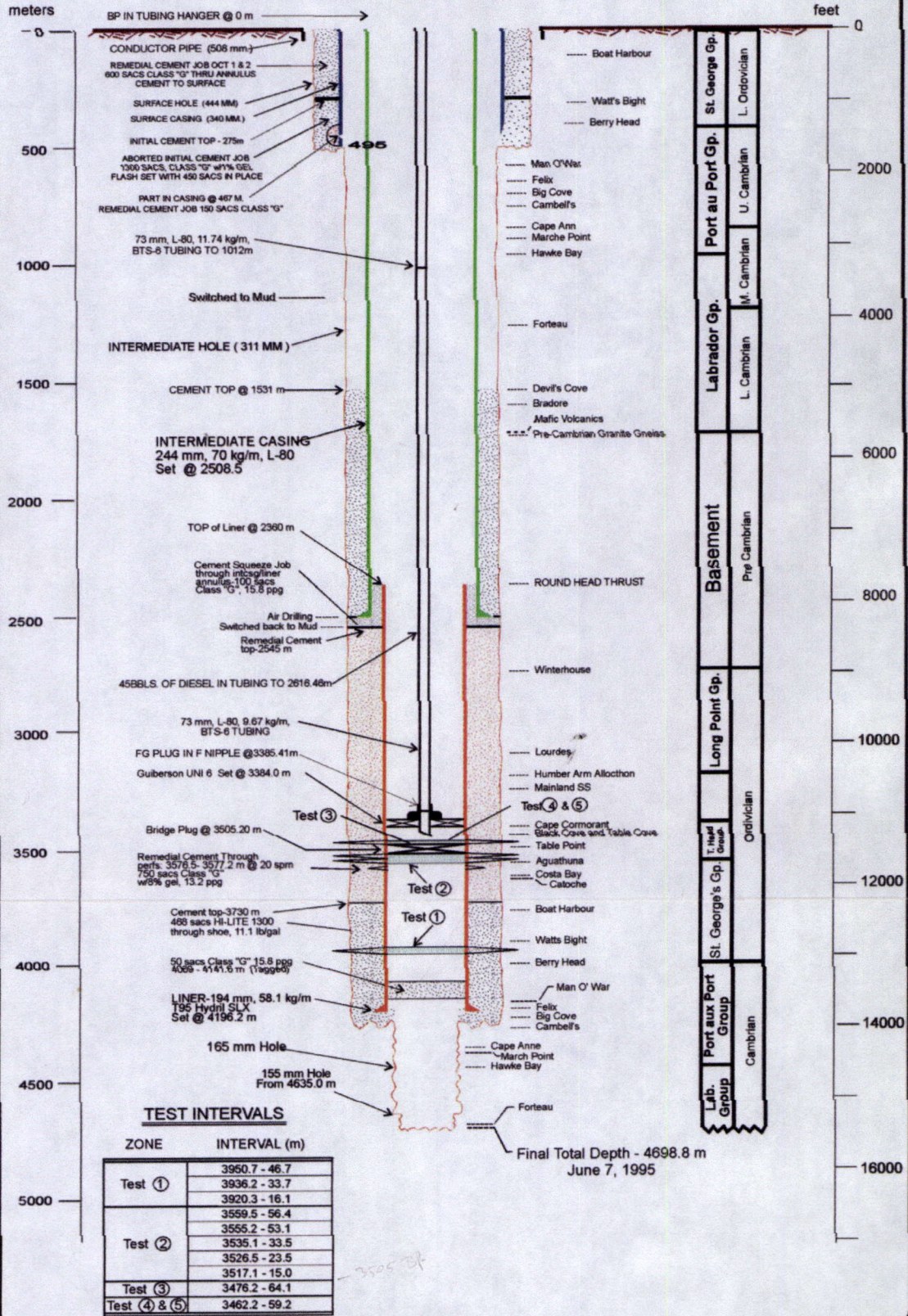
Signed C.R. Weaver Title Drilling Manager
Operator's Representative

Name C.R. Weaver Date February 23, 1996

ACKNOWLEDGEMENT

Acknowledged by [Signature] Date 1996/10
Director, Petroleum Resource Development Division

HUNT-PANCANADIAN PORT AU PORT NO. 1



ATTACHMENT 2-3: Bit Record (1 of 3)

LEASE	NHOC/PCP PORT-AU-PORT		WELL	SEC.	TWP	RGE	COUNTY		STATE PROVINCE		CONTRACTOR		PUMP	MAKE	MODEL	LINER	
	NO	SIZE					MECH	TOOL	JTS	Q.D.	I.D.	NO					NO
DATE	NO	SIZE	MFG	TYPE	SERIAL	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
09/19/94	1A	12-1/4	8TC	H 4552	KJ 6443	12	2.0	4.0									
09/19/94	1	17-1/2	8TC	H 4582	KJ 6302	722	37.0	19.5	4	18	1	400				4200 CFM	
09/20/94	2	17-1/2	8TC	H 4552	KJ 6031	814	64.0	12.7	4	20	50%	400				4200 CFM	
09/20/94	3	12-1/4	8TC	80024	LC 0250	1085	22.0	48.0	10	70	0	2000				DRFG CNT & JANK	
09/20/94	4	9-1/2	8TC	HP 83	200778	1538	2	4.0	0.5	25	1	3000				DRFG JANK	
09/20/94	5	6-3/4	8TC	FDT	LA 8620	1838	19	22.5	0.8	20	0	2100				DRFG PILOT HOLE ON JANK	
10/1/94	6	6-3/4	8TC	F 2	LA 7085	1555	11	18.5	0.6	65	3	2000				DRFG PILOT HOLE ON JANK	
10/2/94	MILL #1	6-1/8	WEITH	BLADED													COULD NOT GET INTO CSG
10/2/94	MILL #2	5-1/2		TAPERED													
10/3/94	MILL #3	12-1/4		TAPERED													
10/4/94	MILL #4	11-1/2		FLAT BIT													
10/4/94	7	12-1/4	8TC	HP 210	TW 2710	58	9.0	6.4	6	78	2	750				DRFG JANK & CNT	
10/6/94	7RR	12-1/4	8TC	HP 210	TW 2710	178	9.0	19.5	16	70	2	70				DRFG CNT	
10/7/94	8	12-1/4	8TC	H 4552	KJ 6443	1631	598	33.5	17.8	25	3	440					
10/7/94	9	12-1/4	8TC	H 4552	KJ 6308	2228	1065	97.5	15.7	25	3	420					
10/8/94	10	12-1/4	8TC	H 4552	KJ 6305	3044	429	26.5	15.0	25	0	1118					
10/14/94	11	12-1/4	8TC	F 15	NB 5520	3723	30	8.5	3.51	60	5	2	1118				
10/15/94	12	12-1/4	8TC	F 37 D	NC 1191	3753	338	43.0	7.8	60	7	34					
10/17/94	13	12-1/4	8TC	F 37	CC 2510	4091	164	97.0	3.8	60	3	1					
10/19/94	14	12-1/4	8TC	F 2 D	KV 5783	4245	265	53.0	0.8	78	3	1					
10/22/94	15	12-1/4	8TC	BP 51H	BM 6343	4510	648	103.5	4.3	12/15	0	1/8					
10/26/94	16	12-1/4	8TC	BP 51H	TW 4897	4956	382	97.0	3.8	12/15	100	7	1/4				
11/01/94	17	12-1/4	8TC	F 15	LG 8227	513	252	81.8	4.8	10/20	115	4	E 16				
11/02/94	18	12-1/4	8TC	BP 51H	CB 4857	5540	654	65.8	6.0	25/30	80	0	F 34				
11/1/94	MILL #5	11-1/2	HOMOCD	FL BTM													
11/2/94	MILL #6	11-1/2	HOMOCD	FL BTM													

ATTACHMENT 2-4: Mud Recap (1 of 4)

M-I DRILLING FLUIDS PRODUCT SUMMARY

Operator : HUNT OIL CO. Contractor : NOBLE OW-842 Description : EAST COAST CANADA
 Well Name : PORT AU PORT #1 Field/Area : NEWFOUNDLAND Location :

SUMMARY OF PRODUCT USAGE FOR INTERVAL FROM 09/29/94 - 06/13/95, 1539 - 15416 ft

<u>WATER-BASE PROD</u>	<u>SIZE</u>	<u>AMOUNT</u>
Acetic Acid	1@	45
Alcomer 120 L	5G CAN	5
BACBAN II	5G CAN	23
CONQOR 404	55G DRM	4
Caustic Soda	50# SK	349
Caustic Soda	55# SK	102
Defoam-X	5G CAN	28
Diaseal M	40# SK	1530
Drispac	50# SK	239
Engineer Charge	1@	268
FLAKE	25# SK	75
Kwik Seal M	40# SK	1408
LIG	50# SK	413
Lime	50# SK	28
LoLoss	50KG SK	1620
M-I BAR	80# SK	22654
M-I GEL	80# SK	3456
Magco Mica	50# SK	205
Misc. Charges	5G CAN	21
OSIL		247.5
PLUG Med	50# SK	608
POLY PLUS	50# SK	387
SPERSENE CF	50# SK	185
Sawdust	25# SK	375
Soda Ash	80# SK	230
Sodium Bicarb	50# SK	93
Sodium Bicarb	100# SK	30
XCD	55# SK	392

M-I Drilling Fluids L I DRILLING FLUIDS DATA MANAGEMENT SY P0001 June 23, 1995

ATTACHMENT 2-4: Mud Recap (2 of 4)**M-I DRILLING FLUIDS PRODUCT SUMMARY**

Operator : HUNT OIL CO. Contractor : NOBLE OW-842 Description : EAST COAST CANADA
 Well Name : PORT AU PORT #1 Field/Area : NEWFOUNDLAND Location :

SUMMARY OF PRODUCT USAGE FOR INTERVAL FROM 09/29/94 - 10/06/94, 1539 - 1624 ft

<u>WATER-BASE PROD</u>	<u>SIZE</u>	<u>AMOUNT</u>
Defoam-X	5G CAN	1
Engineer Charge	1@	5
Kwik Seal M	40# SK	30
M-I GEL	80# SK	267
Sawdust	25# SK	25
Soda Ash	80# SK	26

SUMMARY OF PRODUCT USAGE FOR INTERVAL FROM 10/12/94 - 12/17/94, 3490 - 8230 ft

<u>WATER-BASE PROD</u>	<u>SIZE</u>	<u>AMOUNT</u>
Acetic Acid	1@	6
Alcomer 120 L	5G CAN	5
Caustic Soda	50# SK	140
Drispac	50# SK	84
Engineer Charge	1@	67
Kwik Seal M	40# SK	8
LIG	50# SK	58
M-I BAR	80# SK	1521
M-I GEL	80# SK	1331
POLY PLUS	50# SK	47
SPERSENE CF	50# SK	16
Sawdust	25# SK	70
Soda Ash	80# SK	69
Sodium Bicarb	50# SK	3
XCD	55# SK	8

M-I Drilling Fluids L I DRILLING FLUIDS DATA MANAGEMENT SY P0001 June 23, 1995

ATTACHMENT 2-4: Mud Recap (3 of 4)**M-I DRILLING FLUIDS PRODUCT SUMMARY**

Operator : HUNT OIL CO. Contractor : NOBLE OW-842 Description : EAST COAST CANADA
 Well Name : PORT AU PORT #1 Field/Area : NEWFOUNDLAND Location :

SUMMARY OF PRODUCT USAGE FOR INTERVAL FROM 12/22/94 - 03/30/95, 8351 - 13950 ft

<u>WATER-BASE PROD</u>	<u>SIZE</u>	<u>AMOUNT</u>
BACBAN II	5G CAN	14
Caustic Soda	50# SK	200
Caustic Soda	55# SK	89
Defoam-X	5G CAN	23
Diaseal M	40# SK	1530
Drispac	50# SK	135
Engineer Charge	1@	120
FLAKE	25# SK	75
Kwik Seal M	40# SK	1370
LIG	50# SK	98
Lime	50# SK	28
LoLoss	50KG SK	1620
M-I BAR	80# SK	15736
M-I GEL	80# SK	1578
Magco Mica	50# SK	205
PLUG Med	50# SK	608
POLY PLUS	50# SK	321
SPERSENE CF	50# SK	60
Sawdust	25# SK	280
Soda Ash	80# SK	48
Sodium Bicarb	50# SK	33
XCD	55# SK	232

M-I Drilling Fluids L.I DRILLING FLUIDS DATA MANAGEMENT SY P0001 June 23, 1995

ATTACHMENT 2-4: Mud Recap (4 of 4)

M-I DRILLING FLUIDS PRODUCT SUMMARY

Operator : HUNT OIL CO. Contractor : NOBLE OW-842 Description : EAST COAST CANADA
 Well Name : PORT AU PORT #1 Field/Area : NEWFOUNDLAND Location :

SUMMARY OF PRODUCT USAGE FOR INTERVAL FROM 05/06/95 - 06/07/95, 14033 - 15416 ft

<u>WATER-BASE PROD</u>	<u>SIZE</u>	<u>AMOUNT</u>
BACBAN II	5G CAN	3
Caustic Soda	50# SK	2
Caustic Soda	55# SK	13
Drispac	50# SK	20
Engineer Charge	1@	33
LIG	50# SK	2
M-I BAR	80# SK	2289
M-I GEL	80# SK	93
POLY PLUS	50# SK	14
SPERSENE CF	50# SK	7
Soda Ash	80# SK	36
XCD	55# SK	39

SUMMARY OF PRODUCT USAGE FOR INTERVAL FROM 06/08/95 - 06/13/95, 15416 - 15416 ft

<u>WATER-BASE PROD</u>	<u>SIZE</u>	<u>AMOUNT</u>
BACBAN II	5G CAN	3
CONQOR 404	55G DRM	4
Engineer Charge	1@	6
OS1L		247.5
POLY PLUS	50# SK	4
XCD	55# SK	2

M-I Drilling Fluids L.I. DRILLING FLUIDS DATA MANAGEMENT SY P0001 June 23, 1995

ATTACHMENT 2-5: Time Distribution (1 of 2)17 1/2" phase. (0 ft - 1624 ft)

From 00:00 hrs on September 18, 1994, up to 00:00 hours
October 08, 1994.

<u>Code</u>	<u>Time</u>	<u>Percentage</u>
1. Rig up and tear down	---.--- hrs	---.--- %
2. Drilling	148.00 hrs	36.27 %
3. Reaming	45.50 hrs	11.15 %
4. Coring	---.--- hrs	---.--- %
5. Circulate/condition mud	15.00 hrs	03.67 %
6. Tripping	86.50 hrs	20.95 %
7. Lubricate rig	5.50 hrs	01.35 %
8. Repair rig	---.--- hrs	---.--- %
9. Cut & slip drill line	1.00 hrs	00.25 %
10. Deviation survey	7.00 hrs	01.71 %
11. Wireline logging	4.50 hrs	01.10 %
12. Run casing and cement	2.00 hrs	00.49 %
13. Wait on cement	8.00 hrs	01.96 %
14. Nipple up BOP	40.50 hrs	09.93 %
15. Test BOP	7.50 hrs	01.84 %
16. Drill Stem Test	---.--- hrs	---.--- %
17. Plug back	---.--- hrs	---.--- %
18. Squeeze cement	---.--- hrs	---.--- %
19. Fishing	1.50 hrs	00.36 %
20. Directional Work	---.--- hrs	---.--- %
21. Others	33.50 hrs	08.70 %
	----- hrs	----- %
	408.00 hrs	100.00 %

12 1/4" phase (1624 - 8236 ft)

From 00:00 hrs on October 08, 1994, up to 04:00 hrs on
December 14, 1994.

<u>Code</u>	<u>Time</u>	<u>Percentage</u>
1. Rig up and tear down	---.--- hrs	---.--- %
2. Drilling	1025.00 hrs	59.12 %
3. Reaming	21.00 hrs	01.22 %
4. Coring	---.--- hrs	---.--- %
5. Circulate/condition mud	50.00 hrs	02.89 %
6. Tripping	357.75 hrs	20.78 %
7. Lubricate rig	31.25 hrs	01.81 %
8. Repair rig	22.50 hrs	01.40 %
9. Cut & slip drill line	08.50 hrs	00.49 %
10. Deviation survey	22.50 hrs	01.30 %
11. Wireline logging	29.50 hrs	01.75 %
12. Run casing and cement	25.00 hrs	01.45 %
13. Wait on cement	03.50 hrs	00.20 %
14. Nipple up BOP	20.00 hrs	01.16 %
15. Test BOP	34.00 hrs	01.97 %
16. Drill Stem Test	---.--- hrs	---.--- %
17. Plug back	---.--- hrs	---.--- %
18. Squeeze cement	---.--- hrs	---.--- %
19. Fishing	42.50 hrs	02.45 %
20. Directional Work	---.--- hrs	---.--- %
21. Others	35.00 hrs	02.01 %
	----- hrs	----- %
	1728.00 hrs	100.00 %

ATTACHMENT 2-5: Time Distribution (2 of 2)

8 1/2 phase (8236 -13,950 ft)

From 00:04 hrs on December 14,1994, up to 24:00 hrs on March 28, 1995.

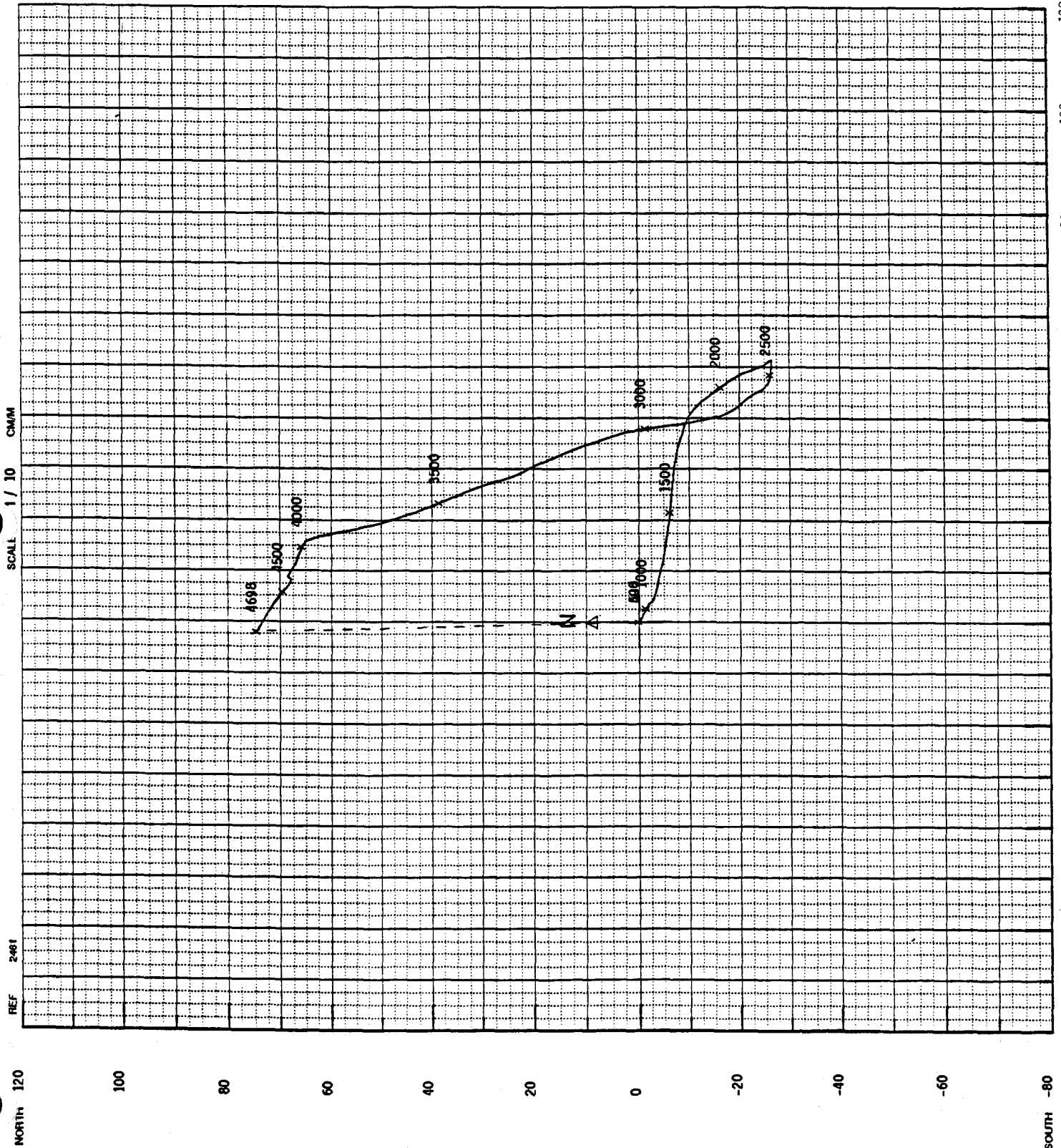
<u>Code</u>	<u>Time</u>	<u>Percentage</u>
1. Rig up and tear down	--.-- hrs	--.-- %
2. Drilling	533.75 hrs	39.22 %
3. Reaming	45.75 hrs	03.35 %
4. Coring	69.75 hrs	05.15 %
5. Circulate/condition mud	62.75 hrs	04.65 %
6. Tripping	333.00 hrs	24.50 %
7. Lubricate rig	05.25 hrs	00.38 %
8. Repair rig	30.75 hrs	02.25 %
9. Cut & slip drill line	07.50 hrs	00.55 %
10. Deviation survey	21.25 hrs	00.64 %
11. Wireline logging	86.50 hrs	06.34 %
12. Run casing and cement	52.50 hrs	03.85 %
13. Wait on cement	04.25 hrs	00.31 %
14. Nipple up BOP	62.50 hrs	04.58 %
15. Test BOP	33.75 hrs	02.47 %
16. Drill Stem Test	--.-- hrs	--.-- %
17. Plug back	--.-- hrs	--.-- %
18. Squeeze cement	--.-- hrs	--.-- %
19. Fishing	--.-- hrs	--.-- %
20. Directional Work	--.-- hrs	--.-- %
21. Others	15.25 hrs	01.12 %
	-----	-----
	1364.50 hrs	100.00 %

6 1/2 phase (13,950 ft - 15,418 ft)

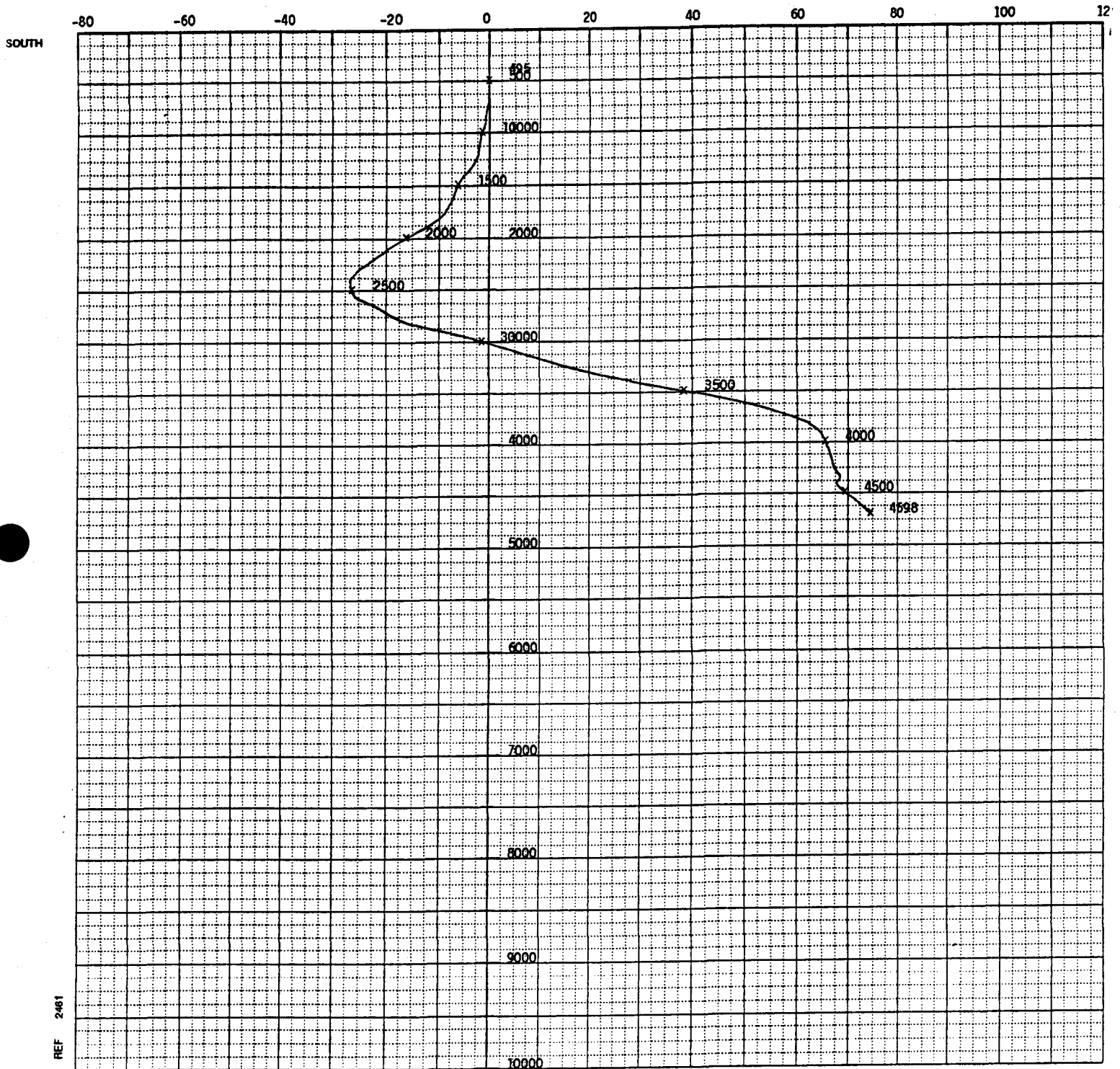
From 00:00 hrs on May 05, 1995 up to 24:00 hrs on June 06,1995.

<u>Code</u>	<u>Time</u>	<u>Percentage</u>
1. Rig up and tear down	--.-- hrs	--.-- %
2. Drilling	372.00 hrs	47.10 %
3. Reaming	35.00 hrs	04.30 %
4. Coring	--.-- hrs	--.-- %
5. Circulate/condition mud	8.50 hrs	01.00 %
6. Tripping	327.50 hrs	40.50 %
7. Lubricate rig	11.50 hrs	01.40 %
8. Rig repair	2.00 hrs	00.20 %
9. Cut & slip drill line	1.00 hrs	00.10 %
10. Deviation survey	2.50 hrs	00.30 %
11. Wireline logging	25.50 hrs	03.10 %
12. Run casing and cement	1.50 hrs	00.10 %
13. Wait on cement	6.00 hrs	00.70 %
14. Nipple up BOP	--.-- hrs	--.-- %
15. Test BOP	5.00 hrs	00.60 %
16. Drill Stem Test	2.00 hrs	00.20 %
17. Plug back	--.-- hrs	--.-- %
18. Squeeze cement	1.00 hrs	00.10 %
19. Fishing	--.-- hrs	--.-- %
20. Directional Work	--.-- hrs	--.-- %
21. Others	6.00 hrs	00.70 %
	-----	-----
	792.00 hrs	100.00 %

ATTACHMENT 2-6: Deviation Plot - Plan View (1 of 5)



ATTACHMENT 2-6: Deviation Plot - Profile View (2 of 5)



PROJECTION ON VERTICAL PLANE

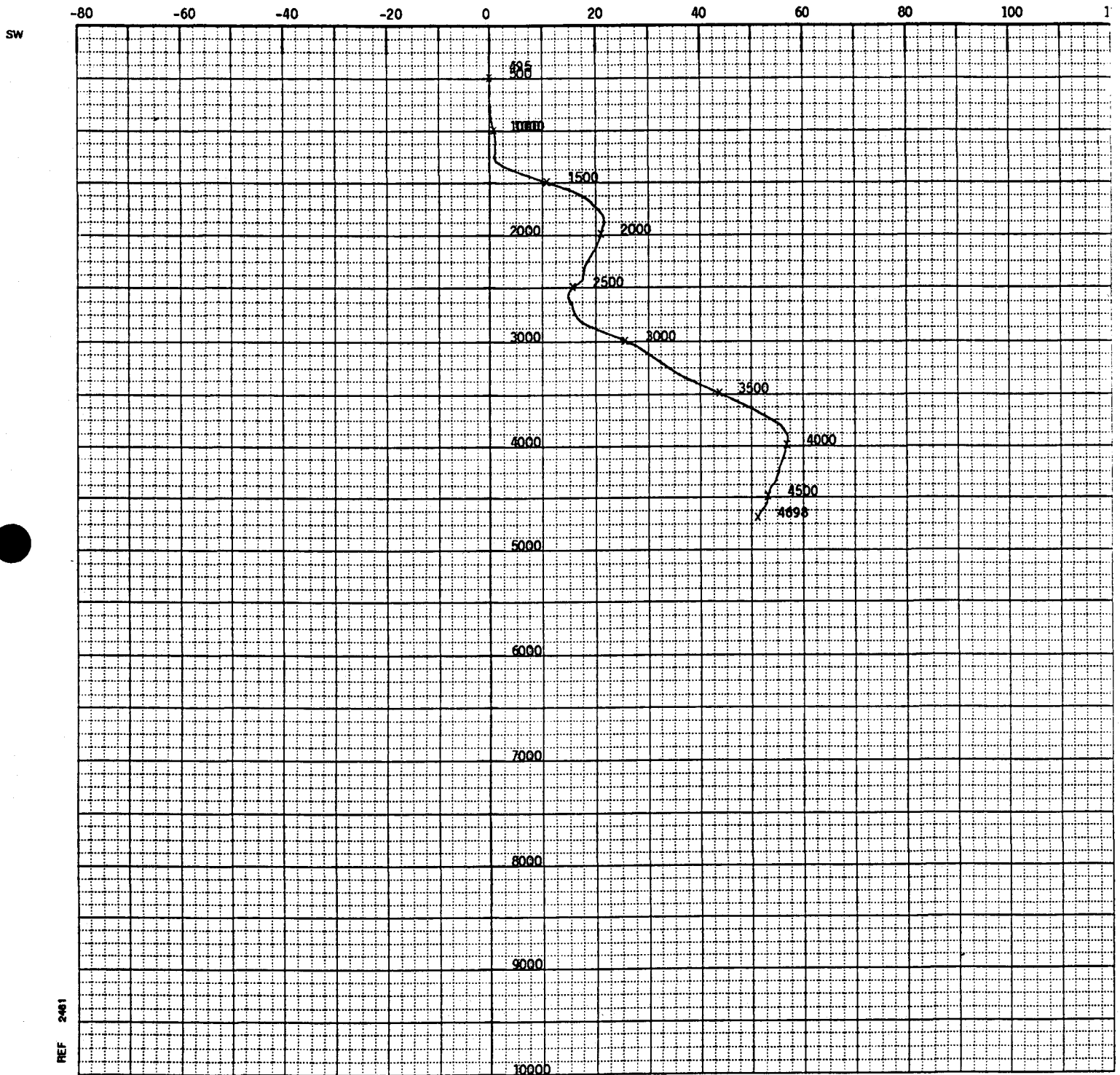
SOUTH - NORTH

SCALED IN VERTICAL DEPTHS

HORIZ SCALE = 1/10

CMM

ATTACHMENT 2-6: Deviation Plot - Profile View (3 of 5)



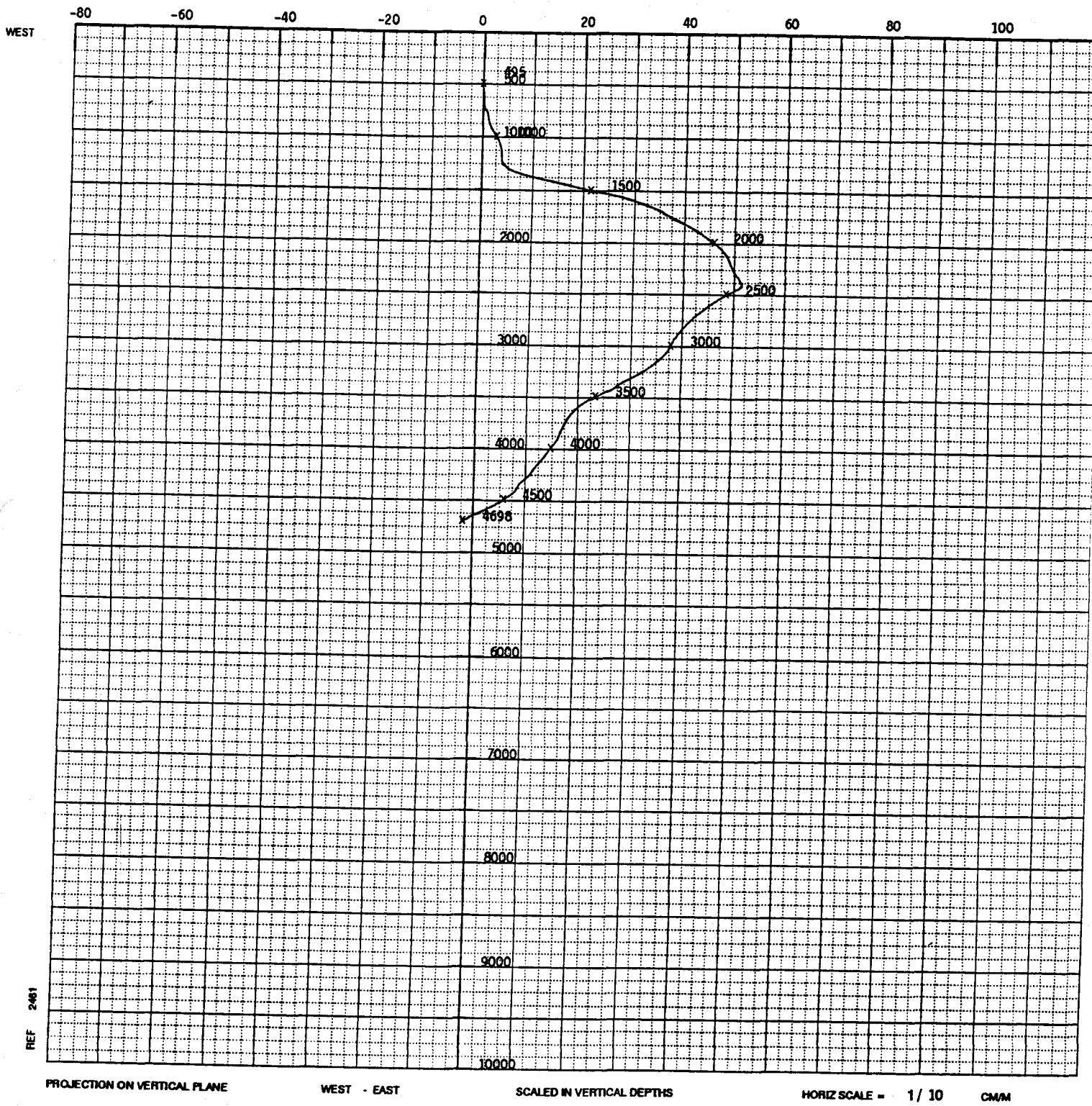
PROJECTION ON VERTICAL PLANE

SW - NE

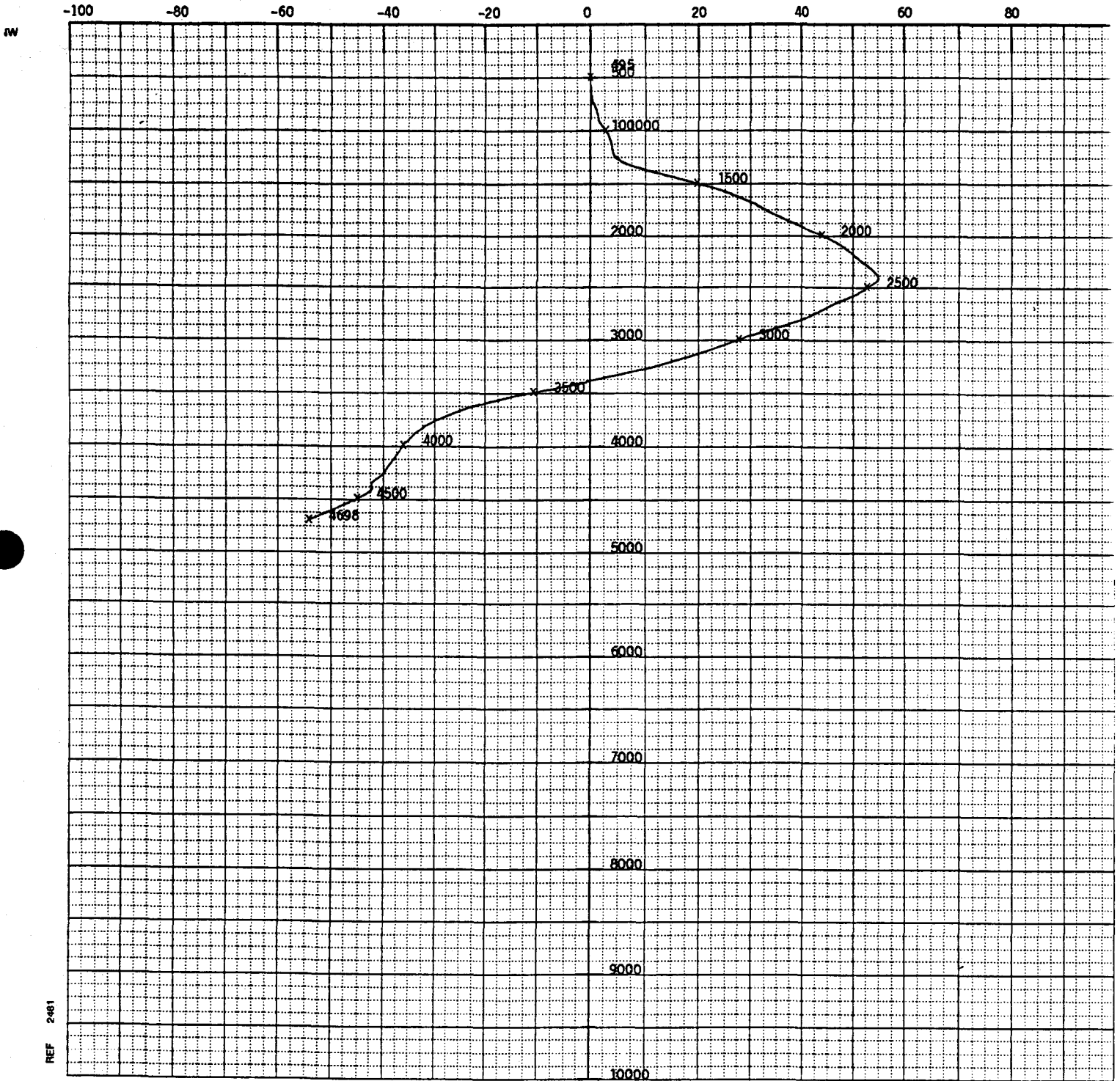
SCALED IN VERTICAL DEPTHS

HORIZ SCALE = 1/10 CM/M

ATTACHMENT 2-6: Deviation Plot - Profile View (4 of 5)



ATTACHMENT 2-6: Deviation Plot - Profile View (5 of 5)



REF 2481

PROJECTION ON VERTICAL PLANE

NW - SE

SCALED IN VERTICAL DEPTHS

HORIZ SCALE = 1 / 10 CM/M

ATTACHMENT 2-7: Fluid Samples (1 of 5)DST #1: Watts Bight Member95-04-14

Sample 1-1: Water collected from choke manifold at 0 psi in 1 L plastic container. Sent to Core Lab.

Sample 1-2: Water collected from choke manifold at 0 psi in 1 L plastic container. Sent to Core Lab.

DST #2: Aguathuna Member95-04-14

Sample 2-1: Water collected from choke manifold at 0 psi in 1 L plastic container. Sent to Core Lab.

Sample 2-2: Water collected from choke manifold at 0 psi in 1 L plastic container. Sent to Core Lab.

DST #3: Table Point Zone - Springs Inlet Member95-04-14

Sample 3-1: Gas collected at 10 h 00 min from separator m.r. at 70 psi, 10°C in 500 cm³ stainless steel container (V 390). Sent to Core Lab.

Sample 3-2: Gas collected at 10 h 00 min from separator m.r. at 70 psi, 9°C in 500 cm³ stainless steel container (V 3688). Sent to Core Lab.

Sample 3-3: Gas collected at 21 h 45 min from separator m.r. at 205 psi, 9°C in 500 cm³ stainless steel container (V 3255). Sent to Core Lab.

Sample 3-4: Gas collected at 21 h 45 min from separator m.r. at 205 psi, 9°C in 500 cm³ stainless steel container (V 2998). Sent to Core Lab.

Sample 3-5: Condensate collected at 21 h 45 min from separator s.g. at 205 psi, 9°C in 500 cm³ stainless steel container (V 2580). Sent to Core Lab. Sample water contaminated.

ATTACHMENT 2-7: Fluid Samples (2 of 5)

- Sample 3-6: Condensate collected at 21 h 45 min from separator s.g. at 205 psi, 9°C in 500 cm³ stainless steel container (V 2940). Sent to Core Lab. Sample water contaminated.
- Sample 3-7: Condensate collected at 21 h 45 min from separator s.g. at 205 psi, 9°C in 500 cm³ stainless steel container (V 2036). Sent to Core Lab. Sample water contaminated.
- Sample 3-8: Condensate collected at 21 h 45 min from separator s.g. at 205 psi, 9°C in 500 cm³ stainless steel container (V 462). Sent to Core Lab. Sample water contaminated.
- Sample 3-9: Water collected at 21 h 45 min from choke manifold at 0 psi in 1 L plastic container. Sent to Core Lab.
- Sample 3-10: Water collected at 21 h 45 min from choke manifold at 0 psi in 1 L plastic container. Sent to Core Lab.
- Sample 3-11: Condensate collected at 21 h 45 min from choke manifold at 0 psi in 1 L plastic container. Sent to Core Lab.
- 95-04-15
- Sample 3-12: Gas collected at 12 h 40 min from separator m.r. at 200 psi, 9°C in 500 cm³ stainless steel container (V 5205). Sent to Core Lab.
- Sample 3-13: Gas collected at 12 h 40 min from separator m.r. at 200 psi, 9°C in 500 cm³ stainless steel container (V 071). Sent to Core Lab.
- Sample 3-14: Condensate collected at 12 h 40 min from separator s.g. at 200 psi, 9°C in 500 cm³ stainless steel container (20220). Sent to Core Lab. Sample water contaminated.
- Sample 3-15: Condensate collected at 12 h 40 min from separator s.g. at 200 psi, 9°C in 500 cm³ stainless steel container (12904). Sent to Core Lab. Sample water contaminated.

ATTACHMENT 2-7: Fluid Samples (3 of 5)

Sample 3-16: Condensate collected at 12 h 40 min from separator s.g. at 200 psi, 9°C in 500 cm³ stainless steel container (19379). Sent to Core Lab. Sample water contaminated.

Sample 3-17: Condensate collected at 12 h 40 min from separator s.g. at 200 psi, 9°C in 500 cm³ stainless steel container (12196). Sent to Core Lab. Sample water contaminated.

Sample 3-18: Condensate collected at 12 h 40 min from separator at 0 psi in 1 L plastic container. Sent to Core Lab.

Sample 3-19: Water collected at 12 h 40 min from choke manifold at 0 psi in 1 L plastic container. Sent to Core Lab.

Sample 3-20: Water collected at 12 h 40 min from choke manifold at 0 psi in 1 L plastic container. Sent to Newfoundland Government.

Sample 3-21: Condensate collected at 12 h 40 min from choke manifold at 0 psi in 1 L plastic container. Sent to Newfoundland Government.

Sample 3-22: Water collected at 12 h 40 min from choke manifold at 0 psi in 1 L plastic container. Sent to Canadian Government.

Sample 3-23: Condensate collected at 12 h 40 min from choke manifold at 0 psi in 1 L plastic container. Sent to Canadian Government.

DST #4 - April 20, 1995: Table Point Zone (Upper Interval)

Sample 4-1: Water collected at 09 h 20 min from stock tank #1 at 0 psi 1 L plastic container. Sent to Core Lab.

Sample 4-2: Water collected at 11 h 00 min from separator at 0 psi 1 L plastic container. Sent to Core Lab.

Sample 4-3: Water collected at 11 h 00 min from separator at 0 psi 1 L plastic container. Sent to Core Lab.

Sample 4-4: Water collected at 11 h 00 min from separator at 0 psi 1 L plastic container. Sent to Newfoundland Government.

ATTACHMENT 2-7: Fluid Samples (4 of 5)

- Sample 4-5: Water collected at 11 h 00 min from separator at 0 psi 1 L plastic container. Sent to Newfoundland Government.
- Sample 4-6: Water collected at 11 h 00 min from separator at 0 psi 1 L plastic container. Sent to Canadian Government.
- Sample 4-7: Water collected at 11 h 00 min from separator at 0 psi 1 L plastic container. Sent to Canadian Government.
- Sample 4-8: Oil collected at 11 h 00 min from choke manifold at 0 psi 1 L plastic container. Sent to Core Lab. Sample was heated.
- Sample 4-9: Oil collected at 11 h 00 min from choke manifold at 0 psi 1 L plastic container. Sent to Core Lab. Sample was heated.
- Sample 4-10: Oil collected at 11 h 00 min from choke manifold at 0 psi 1 L plastic container. Sent to Core Lab. Sample was heated.
- Sample 4-11: Oil collected at 11 h 00 min from choke manifold at 0 psi 1 L plastic container. Sent to Core Lab. Sample was heated.
- Sample 4-12: Gas collected at 11 h 45 min from separator m.r. at 204 psi, 7°C in 500 cm³ stainless steel container (2403). Sent to Core Lab. Sample was heated.
- Sample 4-13: Gas collected at 11 h 45 min from separator m.r. at 204 psi, 7°C in 500 cm³ stainless steel container (2 34). Sent to Core Lab. Sample was heated.
- Sample 4-14: Oil collected at 11 h 45 min from separator s.g. at 204 psi, 7°C in 500 cm³ stainless steel container (V 1868). Sent to Core Lab.
- Sample 4-15: Oil collected at 11 h 45 min from separator s.g. at 204 psi, 7°C in 500 cm³ stainless steel container (V 2577). Sent to Core Lab.
- Sample 4-16: Oil collected at 11 h 45 min from separator s.g. at 204 psi, 7°C in 500 cm³ stainless steel container (V 6879). Sent to Core Lab.

ATTACHMENT 2-7: Fluid Samples (5 of 5)

- Sample 4-17: Oil collected at 11 h 45 min from separator s.g. at 204 psi, 7°C in 500 cm³ stainless steel container (V 3340). Sent to Core Lab.
- Sample 4-18: Oil collected at 11 h 45 min from separator s.g. at 204 psi, 7°C in 500 cm³ stainless steel container (V 5728). Sent to Core Lab.
- Sample 4-19: Oil collected at 11 h 45 min from separator s.g. at 204 psi, 7°C in 500 cm³ stainless steel container (V 5941). Sent to Core Lab.
- Sample 4-20: Oil collected at 11 h 45 min from separator at 0 psi in zolitic act. container. Sent to Core Lab.
- Sample 4-21: Oil collected at 11 h 45 min from separator at 0 psi in zolitic act. container. Sent to Core Lab.
- Sample 4-22: Oil collected at 11 h 45 min from separator at 0 psi in zolitic act. container. Sent to Core Lab.
- Sample 4-23: Oil collected at 11 h 45 min from separator at 0 psi in zolitic act. container. Sent to Core Lab.
- Sample 4-24: Oil collected at 11 h 45 min from separator at 0 psi in zolitic act. container. Sent to Newfoundland Government.
- Sample 4-25: Oil collected at 11 h 45 min from separator at 0 psi in zolitic act. container. Sent to Canadian Government.

FINAL WELL REPORT

NHOC/PanCanadian Port au Port No. 1

3.00 GEOLOGY

NEWFOUNDLAND HUNT OIL COMPANY INC.

JULY 1996

3.00 GEOLOGY**3.01 Drill Cuttings**

Drill cuttings were collected by Datalog as part of the mudlogging program which also included providing field gas chromatography, sample description, lithology, ROP & WOB, and PVT equipment.

Two (2) bags and two (2) vial samples were collected every 5 m starting at 35 m to TD at 4698.9 m.

One (1) plastic lined bag for paleontological samples was collected every five m from to TD. These samples were shipped to the attention of Dr. Henry Williams & Dr. Elliott Burden, Department of Earth Science, Alexander Murray Building, Memorial University, St. John's, Newfoundland A1B 3X5.

A one (1) L plastic container for source rock samples was collected every 10 m from 35 m to TD. These samples were shipped to the attention of Dr. Martin Fowler, Institute of Sedimentary and Petroleum Geology, The Geological Survey of Canada, 3303 - 33rd Street N.W., Calgary, Alberta T2L 2A7.

3.02 Cores

Not Applicable. There were no conventional cores or sidewall cores taken during the drilling of this well.

3.03 Lithology

Lithographic description of the well was provided by Roland Strickland, Wellsite Geologist, and is presented in Appendix II. Attachment 3-1 presents a summary of the formation tops encountered including dip angle direction.

3.04 Stratigraphic Column

The final stratigraphic column is presented in Attachment 3-2. Information is plotted against a vertical depth scale in feet and meters and includes the formation name with top elevation and special comments related to drilling and location of fault thrusts, drilling thickness and true thickness, dominant lithology of section, formation group, and age. The casing seats for each string of casing are also presented.

3.05 Biostratigraphic Data

Attachment 3-2 presents biostratigraphic data along the left side of the chart with the location of grapholites, palynomorphs and conodonts; and CAI/TAI value ranges with reference to lithostratigraphic picks in the well.

ATTACHMENT 3-1: Formation Log Tops (1 of 3)

LOG TOPS					
FORMATION	THICK- NESS	THICK - NESS	E - LOG TOP	DIP ANGLE DIRECTION	
	feet	meters	meters feet		
	380 T.T.	115 T.T.			
CATOCHE(SPUD)	410 D.T.	125 D.T.			
BOAT HARBOUR	532 T.T.	162 T.T.	125		
	607 D.T.	185 D. T.	410		
WATTS BIGHT	253 T.T.	77 T.T.	310		
	311 D.T.	95 D.T.	1017		
BERRY HEAD	476 T.T.	145 T.T.	405	35° NW	
	559 D.T.	170 D.T.	1329		
MAN O' WAR	194 T.T.	59 T.T.	575	36° NW	
	226 D.T.	69 D.T.	1887		
FELIX	158 T.T.	48 T.T.	644	36° NW	
	186 D.T.	57 D.T.	2113		
BIG COVE	138 T.T.	42 T.T.	700	30° NW	
	162 D.T.	49 D.T.	2297		
CAMPBELLS	276 T.T.	84 T.T.	750	32° NW	
	321 D.T.	98 D.T.	2461		
CAPE ANN	108 T.T.	33 T.T.	848	35° NW	
	128 D.T.	39 D.T.	2782		
MARCHE POINT	203 T.T.	62 T.T.	887	33° NW	
	236 D.T.	72 D.T.	2910		
HAWKE BAY	768 T.T.	234 T.T.	959	40° NW	
	939 D.T.	286 D.T.	3146		
FORTEAU	817 T.T.	249 T.T.	1245	40° NW	
	968 D.T.	295 D.T.	4085		
DEVIL'S COVE	39 T.T.	12 T.T.	1540	44° NW	
(BASAL FORTEAU)	46 D.T.	14 D.T.	5053		
BRADORE	430 T.T.	131 T.T.	1554	40° NW	
	511.5 D.T.	159 D.T.	5099		
PRECAMBRIAN	1695 T.T.	442 T.T.	1710	44° NW	
GNEISS(BASEMENT)	2018 D.T.	615 D.T.	5611		
ROUND HEAD			2325		
THRUST			7628	16° NW	

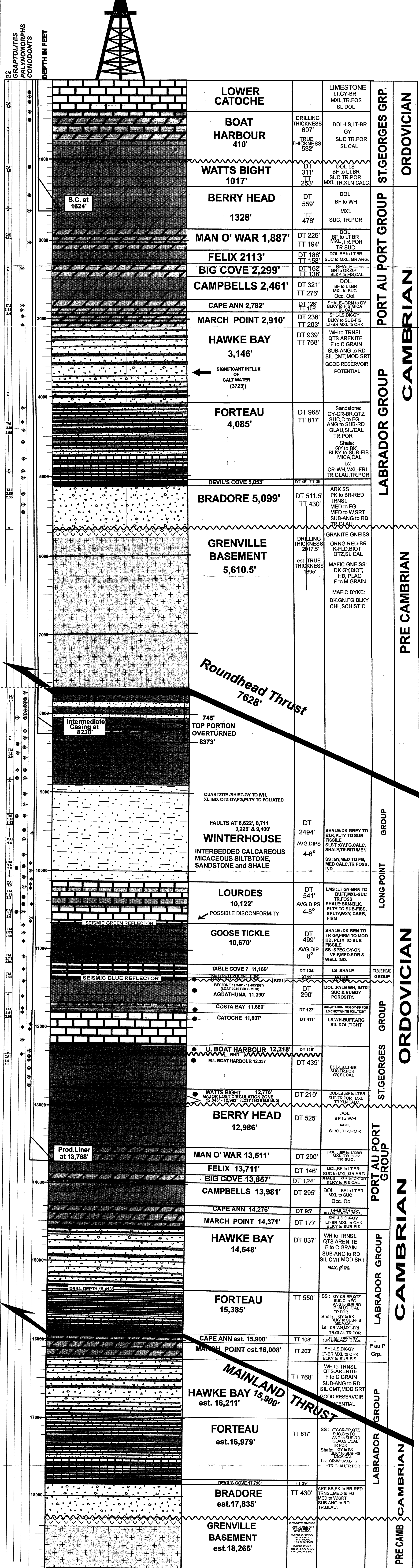
ATTACHMENT 3-1: Formation Log Tops (2 of 3)

LOG TOPS					
FORMATION	THICK- NESS	THICK - NESS	E - LOG TOP	DIP ANGLE	DIRECTION
			meters		
	feet	meters	feet		
WINTERHOUSE	1847 T.T.	563 T.T.	2325	42°	NW - SE
	2494 D.T.	760 D.T.	7628		
LOURDES	541 T.T.	165 T.T.	3082	4° - 8°	
	541 D.T.	165 D.T.	10,112		
GOOSE TICKLE	499 T.T.	152 T.T.	3252	8°	
	499 D.T.	152 D.T.	10,670		
TABLE COVE	135 T.T.	41 T.T.	3404	4° - 8°	
	135 D.T.	41 D.T.	11,169		
TABLE POINT	44 T.T.	13.5 T.T.	3445	4° - 8°	
	44 D.T.	13.5 D.T.	11,303		
SPRINGS INLET	43 T.T.	13 T.T.	3,459	4° - 8°	
	43 D.T.	13 D.T.	11,347		
AGUATHUNA	289 T.T.	88 T.T.	3472	4° - 8°	
	289 D.T.	88 D.T.	11,392		
COSTA BAY	126 T.T.	38.5 T.T.	3560	4° - 8°	
	126 D.T.	38.5 D.T.	11,680		
CATOCHE	412 T.T.	126 T.T.	3598.5	4° - 6°	
	412 D.T.	126 D.T.	11,807		
CATOCHE	9.8 T.T.	3 T.T.	3643	4° - 8°	
POROSITY ZONE	9.8 D.T.	3 D.T.	11,953		
BOAT HARBOUR	118 T.T.	36 T.T.	3724	4° - 8°	
	118 D.T.	36 D.T.	12,218		
BOAT HARBOUR DISCONFORMITY	440 T.T.	134 T.T.	3760	6°	
	440 D.T.	134 D.T.	12,337		
WATTS BIGHT	210 T.T.	64 T.T.	3894	4° - 8°	
	210 D.T.	64 D.T.	12,776		
BERRY HEAD	525 T.T.	160 T.T.	3958	4° - 8°	
	525 D.T.	160 D.T.	12,986		
MAN O' WAR	200 T.T.	61 T.T.	4118	4° - 10°	
	200 D.T.	61 D.T.	13,511		

ATTACHMENT 3-1: Formation Log Tops (3 of 3)

LOG TOPS					
FORMATION	THICK- NESS	THICK - NESS	E - LOG TOP	DIP ANGLE DIRECTION	
			meters		
	feet	meters	feet		
FELIX	146 T.T.	44.6 T.T.	4178.8	5° - 9°	
	146 D.T.	44.6 D.T.	13,711		
BIG COVE	124 T.T.	37.9 T.T.	4223.4	4° - 8°	
	124 D.T.	37.9 D.T.	13,857		
CAMPBELLS	294' T.T.	89.7 T.T.	4261.3	3° - 9°	
	294' D.T.	89.7 D.T.	13981		
CAPE ANN	95' T.T.	29 T.T.	4351	8° - 10°	
	95' D.T.	29 D.T.	14,276		
MARCH POINT	177' T.T.	54 T.T.	4380	6° - 9°	
	177' D.T.	54 D.T.	14,371		
HAWKE BAY	838' T.T.	255.5 T.T.	4434	9°	
	838' T.T.	255.5 D.T.	14,548		
FORTEAU			4689.5	10° - 14°	
			15,386		
TOTAL DEPTH			4697.5		
			15,413		
BOTTOM HOLE TEMPERATURE = 65°C (149° F)					

HUNT PCP PORT AU PORT # 1



FINAL WELL REPORT

NHOC/PanCanadian Port au Port No. 1

4.00 WELL EVALUATION

NEWFOUNDLAND HUNT OIL COMPANY INC.

JULY 1996

4.00 WELL EVALUATION**4.01 Downhole Logs**

Schlumberger Wireline Services provided all wireline logging services during the drilling of this well. The following logging runs were made:

• <u>Run #1</u>		<u>94-09-23</u>
Borehole Compensated Sonic	120	- 478 m
Phasor Induction - SFL	27	- 490 m
• <u>Run #2</u>		<u>94-11-04</u>
Borehole Compensated Sonic	30	- 1702 m
• <u>Run #3</u>		<u>94-12-14</u>
Borehole Compensated Sonic	495	- 2508 m
Phasor Induction - SFL	495	- 2508 m
• <u>Run #4</u>		<u>95-01-27</u>
Borehole Compensated Sonic	2509	- 3482 m
Phasor Induction - SFL	2509	- 3482 m
CNL - LDT	2509	- 3482 m
MSFL	3425	- 3494 m
FMS - Scanner	2509	- 3500 m
• <u>Run #5</u>		<u>95-02-28</u>
Borehole Compensated Sonic	3250	- 4237 m
CNL - LDT	3420	- 3994 m
Dual Laterlog	3425	- 4001 m
• <u>Run #6</u>		<u>95-03-18</u>
Borehole Compensated Sonic	3440	- 4237 m
Dual Laterlog	3440	- 4244 m
• <u>Run #7</u>		<u>95-06-07</u>
Borehole Compensated Sonic	4198	- 4792 m
Phasor Induction - SFL	4198	- 4671 m
CNL - LDT	4198	- 4697 m

• Consolidated Logs

Copies of the following consolidated logs are provided in Appendix III:

- Borehole Compensated Sonic: Runs 1-2-3-4-5-6-7;
- Compensated Neutron Lithology Density (CNL - LDT): Runs 3-4-5-7;
- Dual Laterlog - MSFL: Runs 5-6; and
- Phasor Induction - SFL: Runs 1-3-4-7.

4.02 Other Logs

The following logs were run in addition to those listed in Section 4.02.

Directional Surveys

Run #3	94-12-15	1624	-	23 m
Run #4	95-02-02	1624	-	23 m
Run #6	95-03-24	1624	-	23 m
Run #7	95-06-07	1624	-	23 m

Dipmeter Computed Result MSD Logs

Run #3	94-12-14	494	-	2509 m
Run #4	95-02-02	2504	-	3500 m
Run #6	95-03-18	3440	-	4244 m
Run #7	95-06-08	4198	-	4703 m

A copy of the Dipmeter Run #7 is included in Appendix III.

4.03 Synthetic Seismograms

A synthetic seismogram was prepared using Sonic data collected during logging Run #7. A copy of the synthetic seismograph in both 3-inch and 5-inch formats is presented in Appendix IV.

4.04 Vertical Seismic Profiles

Not Applicable. There were no vertical seismic profiles taken during the drilling of this well.

4.05 Velocity Surveys

Not Applicable. There were no velocity surveys taken during the drilling of this well.

4.06 Formation Stimulation

Four (4) potential oil producing zones were perforated and stimulated prior to production flow tests. A summary of the stimulation results is included in the Attachment 4-1.

The first zone evaluated was the St. Georges - Watts Bight Member. The formation was perforated at 3946.7 to 3950.7 m, 3932.2 to 3936.7 m, and 3916.1 to 3920.3 m were shot at 2 SPF (81 shots - 54 mm 14 g decentralized) with 0° phasing. The zone was acidized with 5.5 m³ of 28% HCl and jetted in with nitrogen at 0.4 m³/s through coil tubing for 11.5 hours.

The second zone evaluated was the St. Georges - Aguathuna Member. The formation was perforated at 3556.4 to 3559.5 m, 3553.1 to 3555.2 m, 3533.5 to 3535.1 m, 3523.5 to 3526.5 m and 3515.0 to 3517.1 m were shot at 2 SPF (83 shots - 54 mm 14 g decentralized) with 0° phasing. The zone was acidized with 5.6 m³ of 28% HCl and jetted in with nitrogen at 0.4 m³/s through coil tubing.

The third zone evaluated was the Table Point Dolomitized Zone - Springs Inlet Member. The zone was perforated at 3471.7 to 3476.2 m was shot at 2 SPF (54 mm 14 g decentralized) with 0° phasing. The zone was acidized with 5.9 m³ of 15% HCl. The well was flowed 9 hours to clean up, then shut in for bottom hole pressure tests, and was then followed by an extended flow test.

The fourth zone evaluated was the Table Point Zone - Upper Interval. One (1) set of perforations at 3459.2 to 3462.2 m was shot at 2 SPF (54 mm 14 g decentralized) with 0° phasing. The zone was initially acidized with 5.9 m³ of 15% HCl. The well was flowed to clean up, shut in for bottom hole pressure test, and then followed by a 50 hour flow test. The zone was then squeeze cemented for additional drilling. The zone was reperfdrated at the same depth and SPF. The well had been shut in for 55 days. The well test lasted 9.5 days. *shots per foot*

4.07 Formation Flow Tests

The four (4) formations listed in Section 4.06 were flow tested for hydrocarbons.

Five (5) production tests were conducted on the above zones and the test results are summarized in Attachment 4-1. Copies of the field data recorded during the flow tests and the lab results of samples collected are included in Appendix V.

The Watts Bight and Aguathuna Zones had good deliverability but produced only water. The Springs Inlet Zone was hydrocarbon productive with moveable water and the test confirmed the oil-water transition zone was below 3473 m.

The Table Point Zone initial flow test of 50 hours confirmed a productive oil reservoir with good transmissibility characteristics consisting of an under saturated oil. Bottom hole pressure data indicated a possible limited reservoir or nearby boundary effects from complex geology. The extended test of 9.5 days after 55 days shut in produced 797 m³ of oil, 435 m³ of water and 4339 m³ gas. The well was depleting during the test and dropped below the bubble point of 4650 psia. The production was also choked off by

paraffin and salt buildup in the tubing.

In addition to the production tests, several flow (F) and buildup pressure (BU) tests were conducted. The following table summarizes the Pressure Test Reports by Z.I. Probes. Field data and final reports are located in Appendix V.

<u>Test</u>	<u>Date</u>	<u>Probe Depth</u>		<u>BU Press.</u>	<u>Max Temp.</u>
		<u>(m RKB)</u>	<u>Probe</u>	<u>kPag</u>	<u>°C</u>
1. F/BU	95-04-09	3354.8	M47	37 060.6	55.2
		3355.9	N12	37 075.7	55.6
2. F/BU	95-04-15	3382.8	M47	33 735.4	54.7
		3383.9	N12	33 737.8	55.2
3. F/BU	95-04-18	3381.9	N12	31 045.3	54.3
4. F/BU	95-04-22	3380.8	M47	32 449.6	50.7
		3381.9	N12	32 453.3	51.5
5. Core Lab	95-04-23	3382.0	M47	na	53.0
6. F/BU	95-06-14	3396.5	M47	28 876.7	55.3
		3398.3	N12	28 934.3	55.0
7. F/BU	95-07-09	3391.8	M47	27 466.0	54.1
		3389.9	N12	27 545.4	53.9

ATTACHMENT 4-1: Production Test Summary (1 of 3)**● TEST 1 - ST. GEORGES - WATTS BIGHT MEMBER**

- Objective - Determine reservoir productivity characteristics
- Procedure - Perforated 40' between ³⁹¹⁶12,848' and ³⁹⁵⁵12,961'
 - Acidized with 1,500 Gallons 28% HCL
 - On 9 hour test flowed (with nitrogen assist) at rate of 2,500 BWPD with a drawdown of about 360 psi

Pressure Buildup Data

9 hour Shut in
 Kh = 960 md-ft
 P* = 6,390 psia at mpp
 Negative Skin

Fluid Quality

Salt water 9.7 lb./gal.
 Productivity Index = 6.9 BPD/psi

Conclusion - zone has excellent deliverability.

● TEST 2 - ST. GEORGES - AGUATHUNA MEMBER

- Objective - Determine reservoir productivity characteristics
- Procedure - Perforated 40' between 11,532' and 11,678'
 - Acidized with 1,500 of 28% HCL
 - On 8 hour test flowed (with nitrogen assist) at rate of 1,100 BWPD with draw down of about 550 psi.

Pressure Buildup Data

13.7 hour Shut in
 Kh = 649 md-ft.
 P* = 5,738 psia at mpp
 Negative Skin

Fluid Quality

Salt water 10.5 lb./gal.
 Productivity Index = 2.0 BPD/psi

Conclusion - zone has good deliverability.

ATTACHMENT 4-1: Production Test Summary (2 of 3)**TEST 3 - TABLE POINT DOLOMITIZED ZONE-SPRINGS INLET MEMBER**

- Objective - Determine fluid type and productivity; confirm oil-water transition zone indicated by logs before testing oil zone separately.
- Procedure - Perforate 15' from 11,390 - 11,405'
 - Acidize with 1,500 Gallons of 15% HCl
 - Flowed a total of 1,824 bbls of fluid, 1,109 bbls of oil, 715 bbls water in 17.4 hrs. - Averaged 2,513 BPD total fluid, 1,528 BPD oil. Stable gas rate 2.6 MM/D, 1,700 GOR.
 - Max drawdown 1,535 psi

Pressure Buildup Data

12 hour Shut in
 Kh = 302 md-ft
 Estimated P* = 5,299 psia @ 11,377'
 Negative skin

Fluid Quality

Salt water 10.2 lb/gal.
 Crude oil 51 °API
 Gas gravity 0.75
 Productivity Index = 1.6 BPD/psi

- Conclusion - Zone is hydrocarbon productive with movable water. Test confirms oil-water transition zone below 11,395'

ATTACHMENT 4-1: Production Test Summary (3 of 3)● TEST 4 - TABLE POINT ZONE (UPPER INTERVAL)

- Objective** - Determine fluid type and productivity
- Procedure** - Perforate 10' from 11,349' - 11,359'
- Acidize with 1,500 Gallons 15% HCl
 - On 50 hour test flowed 1,559 BO, 1,023 BW (243 BW over load), Stabilized 800 psi FTP on 22/64 ck, 1,032 BOPD, 336 BWPD 24.6% SW 1,780 Mcf/D with a drawdown of approximately 1,250 psi 1,725 CF/B GOR
 - Obtained surface and bottom hole fluid samples
 - Final 2 hour flow rate on 32/64: ck, 1,742 BOPD, 252 BWPD, BS&W 13%, 2,310 MCFPD, GOR 1,326 CF/B, FTP 600 psig.

Pressure Buildup DataFluid Quality

50 hour Shut in
 Dual porosity effect, possible depletion
 ISIP = 5,328 psia at 11,377'
 Estimated P* = 5,000 psia @ 11,377'
 Negative Skin
 Kh = 211 md-ft

Salt Water 10.2 lb./gal.
 Crude Oil 51° API
 Gas Gravity 0.75

Productivity Index = 1.1 BPD/psi

Conclusion: Zone was connected with lower interval (Test 3) as evidenced by recovery of water volumes injected into test 3 interval. Oil appears to be an under-saturated oil. Reservoir has good transmissibility characteristics, however, BHP data suggests a possible limited reservoir or nearby boundary effects that may result from complex geology.

● TEST 5 - TABLE POINT ZONE (UPPER INTERVAL)

- Objective** - Long term flow test to verify reservoir size and producing problems.
- Procedure** - Reperforated 10' 11349 - 11359'
- Measured pressure after 55 days shut in: 5250 psia @ 11377'
 - Flowed 9½ days
 - Paraffin/salt choked well off
 - Produced 5012 BO, 2734 BW, 9194 MCF
 - Well Shut in 14½ days

Pressure Buildup Data

345 hour Shut in
 FSIP 4282 psia @ 11377'
 Estimated P* = 4507 psia @ 11377'
 Negative skin
 Kh = 31 md-ft

Conclusion: Well is depleting, dropped below bubble point of 4650 psi. Kh reduced due to relative perm effects of higher gas saturations (note: using lower viscosity for oil since receiving fluid data analysis from core labs.)

FINAL WELL REPORT

NHOC/PanCanadian Port au Port No. 1

5.00 OTHER

NEWFOUNDLAND HUNT OIL COMPANY INC.

JULY 1996

5.00 OTHER**5.01 Mud Loggers Report**

A Mud Loggers Report was prepared daily on the rig by Datalog Technology Inc.. The final Mud Loggers Report was prepared by Roland Strickland and is located in Appendix II.

5.02 Directional & Deviation Survey Reports

A Deviation Survey Report was prepared by Roland Strickland based on surveys conducted during drilling and is presented as Attachment 5-1

5.03 Final Legal Survey Plan

The final legal survey of the well site is located in Attachment 5-2.

5.04 Core Photos

Not Applicable. No cores were taken during the drilling of this well.

5.05 Core Analysis With Digitized Data

Not Applicable. No cores were taken during the drilling of this well.

5.06 Fluid Analysis Reports

A report is included in Appendix V prepared by Martin Fowler presenting distillation, gas chromatography and gas chromatography-mass spectrometry analysis. The data indicated that the oil from the well is mature and unbiodegraded.

The PVT properties of the reservoir fluid from DST #4 were determined by Core Lab and is presented in Appendix V. Core Lab also provided a report, located in Appendix V, evaluating the solid and wax deposits recovered from the production tubing during the production tests.

5.07 Oil, Gas & Water Analysis Reports

Lab analysis reports of oil, gas and water samples are located in Appendix V. These reports were prepared by Core Lab.

5.08 Geochemical Report

The Geochemical Report providing TOC data for this well was prepared by Martin Fowler, Geological Survey of Canada (Calgary) and is located in Appendix IV.

5.09 Biostratigraphy Report

Biostratigraphic data and analysis was provided by Elliott T. Burden and S. Henry Williams, Registered Professional Geoscientists, in their final report "Biostratigraphy and Thermal Maturity of Strata in Hunt-PanCanadian Port Au Port Well #1" and is located in Appendix IV.

5.10 Petrological Report

Not Applicable. No cores collected for thin section work.

5.11 Palynological Report

Palynological data and analysis was included in the report referenced in Item 5.09 and located in Appendix IV.

5.12 Paleontological Report

Paleontological data and analysis was included in the report referenced in Item 5.09 and located in Appendix IV.

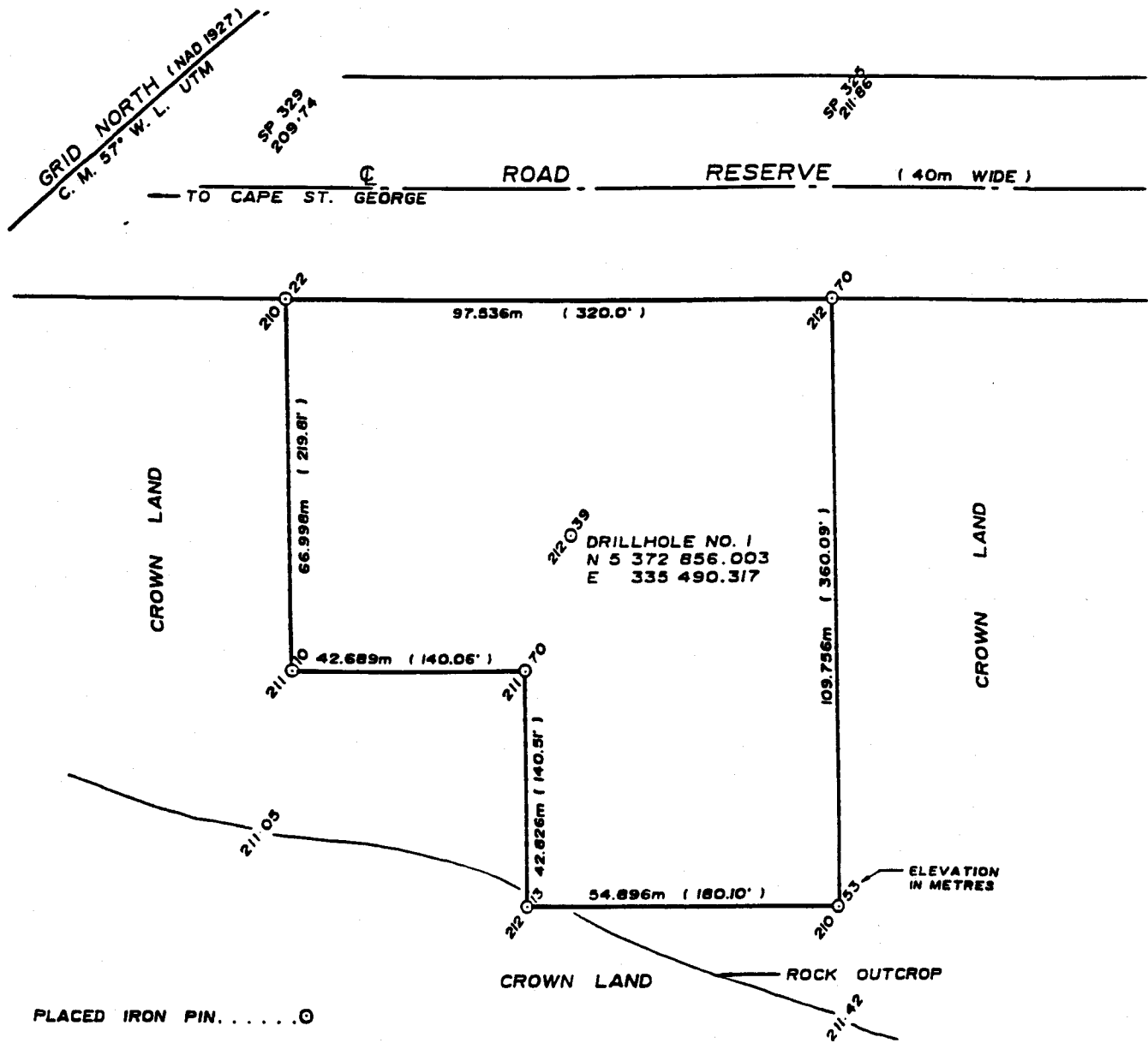
ATTACHMENT 5-1: Deviation Survey (1 of 2)

HUNT PCP OIL COMPANY						
PORT AU PORT # 1 WESTERN NEWFOUNDLAND						
DEVIATION SURVEY REPORT						
	DEPTH		DEPTH			ANGLE
	METERS		FEET			DEGREES
1.	18		60			0.5
2.	59		192			0.25
3.	91		298			0.25
4.	109		359			0.25
5.	137		450			0.25
6.	164		538			0.5
7.	202		663			1
8.	230		755			0.5
9.	259		850			0.5
10.	282		925			0.5
11.	326		1070			0.75
12.	421		1381			0.25
13.	487		1598			0.5
14.	536		1759			0.25
15.	669		2195			0.25
16.	816		2677			0.25
17.	1192		3911			0.25
18.	1240		4068			1
19.	1286		4219			2.5
20.	1307		4288			2.5
21.	1343		4406			3
22.	1361		4485			4
23.	1390		4561			4.5
24.	1418		4653			4.5
25.	1436		4712			4.25
26.	1474		4836			4.88
27.	1494		4902			4.5
28.	1522		4994			4.78
29.	1551		5087			3.88
30.	1579		5181			4
31.	1608		5274			3
32.	1637		5371			2.88
33.	1666		5466			2.75
34.	1702		5584			2.5
35.	1731		5679			2
36.	1769		5804			2
37.	1816		5958			2.5
38.	1822		5978			2.5
39.	1863		6113			2.75

ATTACHMENT 5-1: Deviation Survey (2 of 2)

HUNT PCP OIL COMPANY						
PORT AU PORT # 1 WESTERN NEWFOUNDLAND						
DEVIATION SURVEY REPORT						
	DEPTH			DEPTH		ANGLE
	METERS			FEET		DEGREES
40	1920			6300		2
41.	1957			6421		2
42.	2015			6611		2.5
43.	2061			6762		1.75
44.	2109			6920		2.25
45.	2150			7054		2
46.	2194			7199		1
47.	2242			7356		0.88
48.	2295			7530		1.75
49.	2338			7671		1.25
50.	2376			7796		1
51.	2412			7914		0.5
52.	2450			8038		2.13
53.	2469			8101		2.5
54.	2501			8206		3
55.	2728			8951		2.75
56.	2772			9095		2.25
57.	2836			9305		4
58.	2877			9439		4.75
59	2961			9715		5.25
60.	2995			9827		4.5
61.	3033			9951		4
62	3072			10079		4
63.	3245			10647		4.25
64.	3395			11139		5.75
65.	3481			11421		6.5
66.	3512			11523		6
67.	3657			11999		4
68.	3759			12333		2
69.	3859			12661		2
70.	4109			13482		1
71.	4319			14171		1.75
72.	4435			14551		1.25
73.	4486			14719		2.5
74.	4614			15139		3
75.	4650			15257		2.88

ATTACHMENT 5-2: Survey Plat



PLOT PLAN PREPARED FOR HUNT OIL

PLAN PREPARED BY YATES & WOODS LTD. NEWFOUNDLAND LAND SURVEYOR'S JUNE 9, 1994 DWG. NO. 94070-1

SCALE 1 : 1000



- END OF REPORT -