



Canada Oil and Gas
Lands Administration

Administration du pétrole
et du gaz des terres du Canada

D.A. 1408

Nova Scotia	☐	West Coast	☐	Exploratory	☒
Newfoundland	☐	Northern	☒	Development	☐
Gulf of St. Lawrence	☐	Hudson Bay	☐	Delineation	☐
				Service	☐

AUTHORITY TO DRILL A WELL

APPLICATION

This application is submitted with Section 82 of the Canada Oil and Gas Drilling Regulations. When approved under Section 83 of the Regulations, it is the requisite authority for the commencement of drilling operations.

Well Name in Full: Shell Celibeta B-12
Operator: Shell Canada Limited
Contractor: Peter Bawden Drilling
Drilling Rig or Unit: 20
Location-Unit: B Section: 12
Coordinates: Lat.: 60° 01' 13.423" Long.: 122° 17' 42.712"
Area: Celibeta, N.W.T., Mainland
Elevation-RT/KB: 416.0 m (ASL)
Approx. Spud Date: February 8, 1990
Anticipated Total Depth: 2015
UWI: 3008126010122150
Drilling Program No: E.L. 328
Permit or Lease No: N89A251
Estimated Well Cost: 1,600,000
Grid Area: 60° 10', 122° 15'
Field/Pool: Exploration
Ground Level: 410.66 m
Estimated Days on Location: 40
Target Horizon(s): Slave Point, Hume

EVALUATION PROGRAM

Ten-metre sample intervals
Five-metre sample intervals From surface to final total depth
Canned sample intervals From surface casing to final total depth
Conventional cores at 36 m core (1528 - 1564 m)
Logs and Tests Log Run 1 @ + 545 m; Phasor, BHCS, XY CAL, SP, GR;
Log Run 2 @ + 2015 m; DLL, BHCS, MSFL, GR, SP; CNL, LDT, Microlog, DAC, GR;
Possible Phasor IND, GR
CASING AND CEMENTING PROGRAM

O.D.	Weight:	Grade:	Setting Depth (mKB)	Cementing Program (Volumes)
508 mm	Conductor			
340 mm	81.10 kg/m		K55 New 135	17m ³
245 mm	53.6 kg/m		K55 New 545	20m ³ (est)
140 mm	25.3 + 23.1 + 20.8 kg/m		K55 MD New 2015	50m ³ (est)

B.O.P. Equipment: 0 - 545 m 508 mm Divertor 3500 KPa
545 - 2015 m 21 MPa BOP stack, including one annular preventer,
two pipe rams, one blind ram, two choke and kill
Other Information: lines (upper and lower)

Signed: [Signature] Title: Manager - Drilling Division
Date: 89-12-22 Company: Shell Canada Limited

APPROVAL

An approved copy of this notice is to be posted at each wellsite

Signed: [Signature] Engineering Branch
Date: 90-01-30
File: 9211-S6-3-1

Department of Energy,
Mines and Resources
Ministère de l'Énergie
des Mines et des Ressources

Department of Indian Affairs
and Northern Development
Ministère des Affaires indiennes
et du Nord canadien

Canada

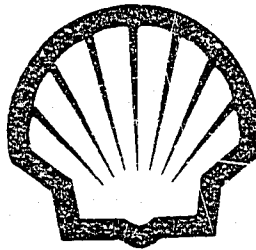
VELL HISTORY REPORT

9811-56-3-1

SHELL CELIBETA B-12

OTTAWA COPY

R. J. MacDonald
R. Trottier
M. Thomas



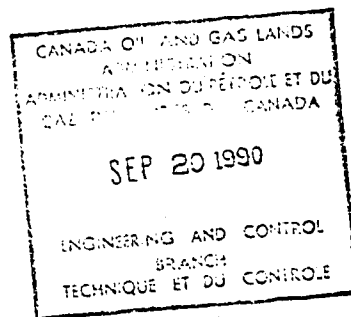
WELL HISTORY REPORT

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SHELL CELIBETA B-12

OTTAWA COPY

R.J. MacDonald
R. Trottier
M. Thomas



Shell Canada Limited - Drilling/Petrophysics Engineering
August, 1990

SHELL CELIBETA B-12

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SHELL CELIBETA B-12

General Data

- i) Well Name: Shell Celibeta B-12
Well Number: DA 1408
Exploration Agreement Number: N89A251
Federal Designation Unit: B-12, 60°10' 122°15'
- ii) Well Location:
- Single shot surveys were used to determine Azimuth and well drift for location. (See Table 1)
- iii) Unique Well Identifier: 300 B12601022150
- iv) Operator: Shell Canada Limited
P.O. Box 100, Stn. 'M'
Calgary, Alberta
T2P 2H5
- Contractor: Noble-Bawden Drilling Canada (Rig 20)
850 - 505 3rd Street S.W.
Calgary, Alberta
T2P 2E6

NOTE: Following subsections do not apply to Celibeta B-12:
Subsection v), vi), vii), and ix)

SHELL CELIBETA B-12

Summary of Drilling Operations

i) Elevations: G.L. - 410.66 m
K.B. - 416.16 m

ii) Total Depth:

Drilled	- 1659 m
Plug-Back	- 1572 m
Logged:	
1) DIL-SP-GR	- 1603- 548
2) PHCS-GR-CAL	- 1597-Sur.
3) Phasor-GR-SP	- 1592-1500
	- 900- 700
4) CNL-LDT-GR	- 1589- 548
5) VSP	- 1580- 548

iii) Spud:

Date:	90-02-01
Hour:	04:00

iv) Date Drilling Completed: 90-03-15

v) Date of Rig Release: 90-03-24

vi) Well Status: Abandoned

vii) Hole Sizes and Depths: (See Table 2)

viii) Casing and Cementing Record: (See Table 3)

x) Drilling Fluids:

Two systems were used to drill the Shell Celibeta well: air and gel/chem mud. Both surface hole and intermediate hole were drilled with gel/chem mud. After drilling out the intermediate shoe, the hole was displaced with air and rotary air drilling was used to 1300 m. Due to an oil show, the hole was displaced to gel/chem mud for a DST.

The hole was displaced with 1190 kg/m³ mud and the mud weight was increased to a maximum of 1310 kg/m³. Mud weight was maintained at 1300 kg/m³ until lost circulation occurred at 1591 m. From 1591 m to 1659 m mud weight was maintained at 1050 - 1100 kg/m³. See Table 4 for drilling fluid properties used for each section of hole.

SHELL CELIBETA B-12

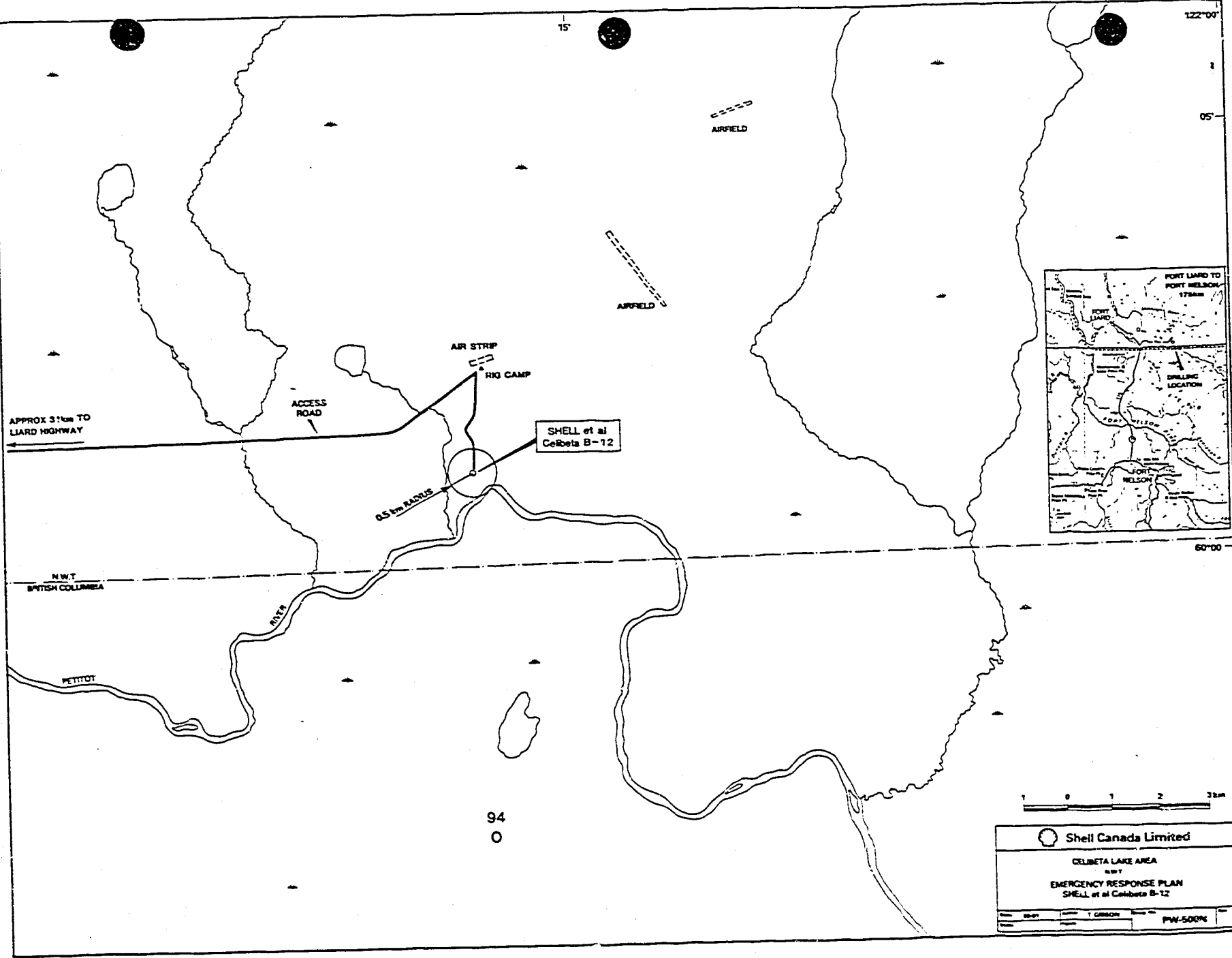
xiii) Formation Leak-Off Tests (FLOT)

After drilling at surface and intermediate casing points, a formation leak-off test was performed. At 141 m, the FLOT value was 20.4 kPa/m using 1070 kg/m³ mud. A FLOT at 548 m, Intermediate Casing Point, with water achieved a FLOT value of 17.5 kPa/m. Surface pressure for the intermediate test was 4250 kPa.

xv) Deviation Survey (See Table 1)

NOTE: Following subsections do not apply to Celibeta B-12:

Subsection ix), xi)



D

DRILLING PROGNOSIS

WELL: SHELL CELIBETA B-12

LOCATION: GRID 60 10' NORTH 122 15' WEST

PREPARED BY: RJ MACDONALD

WORK #: 232- 2547

HOME #: 289-4819

CWO #: WCB62

ELEVATION GL: 410.66

KB: 416.00 (EST)

DATE: 89/12/12

DE. N	FORMATION	DEPTH (m)	HOLE SIZE (mm)	EVALUATION CSG & CMT	DRILLING OFFSET & ENGINEERING	MUD
		TVD/(MD)				
Tolco Single Shots	Banff (Mb)	39	444.5 mm	- gravel maybe present on surface hole - lost circulation, cure with Sawdust and kwikseal (see tab # 2) - increase survey frequency if gravels encountered		Gel/Chem
		135		<u>Samples</u> See Evaluation Program Set 135 m of 339.7 mm k-55 81.1 kg/m StAc w/23 tonne T + 2% CaCl₂		
	Wabamun Group	431	311.2 mm	- Perform FLOT within 10 m of shoe - Must take to leak-off - sloughing shale in the Kolcho		Gel/Chem
	Kolcho (Dke)	474		<u>Logging</u> 1. Phasor-BHCS-XY CAL- -SP-CR Set 545 m of 244.5 mm k-55 53.57 kg/m StAc w/25 tonne T + 2% CaCl₂	BOP DRILLS & TESTS MUST BE CONDUCTED AS PER SHELL CONTRACT REPORT BOP DRILLS AND TESTS ON AM REPORT & TOUR SHEET	
		545		- Perform FLOT within 10 m of shoe - Must take to leak-off - possible deviation at the Kolcho-Tetcho interface - sloughing shale at base of Tetcho		Air
	Tetcho (Dte)	699				
	Muskwa (Dmsk)	1521		- CO₂ anticipated below 1520 m. Treat out with additions of lime		
See Directional Tab	* Slave Point (Dsp)	1528		<u>Coring</u> 3 m of conventional core in the Dsp - Increase mud wt. to 1220 kg/m³ prior to entering the Dsp. Have sufficient Barite on location to wt. up to 1700 kg/m³ - Maximum Slave Point Pressure = 24440 kPa - Gradient = 16.0 kPa		
	Watt Mountain (Dwt)	1636	215.9 mm	- Slave Point Static Temp = 80 °C - H₂S = 0.014% in Dsp - R.R = 0.07 m³/sec		Gel/Chem
	Presqu'ile	1639		<u>Logging</u> 1. DLL-BHCS-MSFL-GR-SP 2. CNL-LDT-Microlog-DAC-CR 3. Possible Phasor Ind-GR	Maximum Hume Pressure = 27330 kPa Maximum Gradient = 14.83 kPa/m	#L@ 10cc
	** Hume (Dh)	1843		<u>Testing</u> Closed Chamber tests in the Dsp and the Dh contingent on hole conditions	- Estimated BHST = 100 °C	
	Bear Rock	1860				
	Alpha Marker	1966				
	PreCambrian	2005				
	T.D.	2015				

139.7 mm casing upon Petrophysical Evaluation

* Primary Objective

** Secondary Objective

EVALUATION PROGRAM
SHELL CELIBETA B-12

Primary Objective: Devonian Slave Point approx. 1528m
sour gas (1-2% H₂S)

Seconadary Objective: Devonian Hume approx. 1843m
sour gas (1-2% H₂S)

F.T.D 2015m

A. SAMPLE REQUIREMENTS

Drilling has requested samples from surface
in order to pick a Banff top.
Government - as per well licence
Shell - samples every 5m from S.C. to F.T.D.
2 washed and dried vials
1 unwashed bag

B. MUD LOGGING

A mud logging unit is require from 1460m
F.T.D.

C. CORING

36m of conventional core in the Slave Point
1526-1562 m.

D. LOGGING

1. Intermediate logging run at 545m has been waived by Ducan
Smith of COGLA on the condition that a SONIC-GR is run
through casing on the final logging run at T.D.

2. Final logging run at F.T.D. 2015

DUAL LATEROLOG	- T.D. - I.C. (545 m) run both 1:600 and 1:240 scales
MICRO LOG	- T.D. - I.C. run 1:600 and 1:240 scales
MSFL	- T.D. - I.C. run 1:240 scale
BHC SONIC	- T.D. - S.C. run 1:240 scale use 300-200-100 scale
CNL & LDT (with curve)	- T.D. - I.C. run Limestone scale .45-0- -.15
DAC	- T.D. - I.C. Calculate a cement volume log for the Engineer on location.
GR	- T.D. - S.C.
SP	- T.D. - I.C.

PHASOR INDUCTION should be taken out to the logging job for a possible second resistivity run.

Proposed Logging Runs at F.T.D.:

1. DLL-BHCS-MSFL-GR-SP (run BHCS-GR to S.C.)
2. CNL-LDT-MICROLOG-DAC-GR
3. POSSIBLE PHASOR IND-GR

Show all calibrations on all logs run.

Tape all logs and provide an LIS tape and listing with the field prints. The logs will be sent in using LOGNET.

Repeat all logs over at least 60m.

Include thermometers on each tool in the hole.

A PRE-LOGGING SAFETY MEETING MUST BE HELD BEFORE LOGGING STARTS.

Petrophysical Engineer: Nancy Harrison 232-3982
276-2798 (home)
294-4345 (pager)

Schlumberger Calgary Contact: Neil McLafferty 231-9703
Schlumberger Grande Prairie 403-539-5060

E. TESTING

- 1 Closed chamber DST will be run in the Slave Point
- 1 Closed chamber DST will be run in the Hume

Schlumberger Testers out of Grande Prairie will run the DST 24 hr number 1-403-539-7710.

Delta P will perform the closed chamber analysis 234-7554
All bottom hole samples will be sent to C & G Labs. for analysis.

Calgary Contact: Larry Heikel 291-3024



Canada Oil and Gas
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Nova Scotia	☐	West Coast	☐	Exploratory	☐
Newfoundland	☐	Northern	☐	Development	☐
Gulf of St. Lawrence	☐	Hudson Bay	☐	Distillation	☐
				Service	☐

AUTHORITY TO DRILL A WELL

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Operator: Shell Canada Limited Drilling Program No.: E.L. 328
Contractor: Peter Barden Drilling Permit or Lease No.: N89A251
Drilling Rig or Unit: 20 Estimated Well Cost: 1,600,000
Location-Unit: B Section: 12 Gnd Area: 60° 10', 122° 15'
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Log Run 2 @ + 2015 m; DLL, BHCS, MSFL, GR, SP; CNL, LDT, Microlog, LAC, GR;
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		Setting Depth (mK3)		Cementing Program (Volumes)	
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508 mm	Conductor				
340 mm	91.10 kg/m	K55	New	135	17 ³
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B.O.P. Equipment: 0 - 545 m 508 mm Divertor 3500 KPa
545 - 2015 m 21 Mpa BOP stack, including one annular preventer,
two pipe rams, one blind ram, two choke and kill
lines (upper and lower)
Other Information:

Signed: [Signature] Title: Manager - Drilling Division
Date: 89-12-22 Company: Shell Canada Limited

APPROVAL

An approved copy of this notice is to be posted at each wellsite

Signed: [Signature]
Engineering Branch
Date: 90-01-30
File: 9211-S6-3-1

Department of Energy,
Mines and Resources
Ministère de l'Énergie
des Mines et des Ressources

Department of Indian Affairs
and Northern Development
Ministère des Affaires indiennes
et du Nord canadien

Canada

DRILLING PROGNOSIS

SHELL CELIBETA B-12

General Information

- Shell Celibeta is a Level 2 Sour Gas well.
- The primary objective for this exploration well is the Devonian Slave Point Member. The secondary objective is the Devonian Hume Member.

Release Rate

- The potential sour zones are the Slave Point and the Hume. These formations have a combined flow of 0.07 m³/sec at 1.75% H₂S.

Formation Leak-Off

- A formation leak-off test must be conducted within 10 m of the surface and intermediate casing shoe. The actual leak-off gradient should be determined.

Surface Hole

- Drill 444.5 mm hole to 135 metres.
- Offset locations have experienced minor L.C. prior to entering the Banff. Additions of sawdust and Kwik seal will be on location.
- Cement to surface with 23 tonnes of C:1:0 with 2% CaCl₂. Displacement rate of 4.0 m³/min with two trucks.

Intermediate Hole

- Drill 311.2 mm hole to 545 m.
- Due to the high possibility of water influx air drilling will not be attempted on intermediate hole. Minor shale sloughing in the Kotcho and minor deviation in the Wabamun has been encountered.
- Cement to surface casing with 20.5 tonnes of 0:1:0 with 2% CaCl₂. Displacement rate of 2.33 m³/min is required to achieve 80 m/min in gauge hole. Volumes for cementing will be based on 30% excess (COGIA Regulations).

Main Hole

- Drill 219.1 mm hole to ¹⁴⁵⁰~~1500~~ m and 215.9 mm to 2010 m.
- When making up BHA for air drilling caliper all ID's and OD's. Ensure that all ID's are larger than the landing ring ID for the survey barrel.
- Air Drilling will be discontinued prior to entering the Muskwa. See air drilling program for proper mud-up procedure. After mud-up initial gels are to be maintained > 5 Pa.
- The Slave Point is anticipated to be slightly over-pressured. The Slave Point pressure gradient average is controlled with mud weight of 1200 kg/m³ and the maximum is 1700 kg/m³.
- Sloughing shale is expected after mud-up from the Tetcho. Circulate the hole clean prior to tripping and trip slow through these formations.
- Static Bottom Hole Temperature is 110 degrees Celcius.

Evaluation

- COGLA has granted a waiver for logging at intermediate casing point. At T.D. a normal suite of logs will be run and a Check-Shot survey will be run.
- A maximum of 36 m of core will be cut in the Slave Point. Pending hole conditions, DST's may also be run to further evaluate potential of objectives.

Drilling Optimization

- Using contractor's pressure limits and liner sizes, the hydraulics program optimizes nozzle selection by maximizing hydraulic horsepower at the bit.
- Bit program includes conventional drilling bits in the event Air-Drilling is unsuccessful. Bit program is based on bit records and area experience.

RJM/dal

COGLA Notification

- COGLA requires notification of Spud date and time. Daily drilling and geological reports are to be submitted to Yellowknife. Geological reports, logs, and DST results are to be submitted to Ottawa.

TCA
50/02/08

Recommend

R.T. Staysko

R.T. Staysko

90-02-08

Recommend

R. van Baaren

R. van Baaren

90-02-08

Recommend

G.W. Borkowsky

G.W. Borkowsky

90-02-13

Approve

J.R. Tilbe

J.R. Tilbe

90-02-12

RJM/dal



Canada Oil and Gas
Lands Administration

Administration du pétrole
et du gaz des terres du Canada

P.O. Box 1500
Yellowknife, N.W.T.
X1A 2P3

C.P. 1500
Yellowknife (T.N.-O.)
X1A 2P3

Your file Your reference

Our file Your reference

Mr. J.R. Tilbe
Manager, Drilling Division
Shell Canada Ltd.
P.O. Box 100, Station M
Calgary, Alberta
T2P 2H5

1990-01-30

Dear Mr. Tilbe:

Re: Shell Celibeta B-12 ADM 1408

Enclosed please find an approved copy of the Authority to Drill a Well (ADM 1408) for Celibeta B-12.

Please note the following reporting requirements:

- daily drilling and geological reports are to be submitted to COGLA, Yellowknife (telecopier 403-873-8707)
- geological reports, logs and DST results are to be submitted to COGLA, Ottawa, (attention F. Lepine, telecopier 613-993-9897)

Please also note that a velocity survey (check shot or VSP) must be run at total depth.

If you have any questions or concerns please contact this office at 403-920-8175.

Yours truly,

Maurice D. Thomas
Manager,
Northern Region

encls. (1)

c.c. G. Yungblut (w/encl)

Department of Energy,
Mines and Resources

Ministère de l'Énergie,
des Mines et des Ressources

Department of Indian Affairs
and Northern Development

Ministère des Affaires indiennes
et du Nord canadien

Canada

JAN 31 '90 13:25

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North Coast	☐	West Coast	☐	Exploratory	☐
Newfoundland	☐	Northern	☐	Development	☐
Gulf of St. Lawrence	☐	Madison Bay	☐	Drilling	☐
				Service	☐

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Anticipated Total Depth: 2015 Target Horizon: Slave Point, Bums
UWI: 3009126010122150

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Cased sample intervals From surface casing to final total depth
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Possible Phasor IND, GR
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Other Information:

Signed: [Signature] Title: Manager - Drilling Division
Date: 89-12-22 Company: Shell Canada Limited

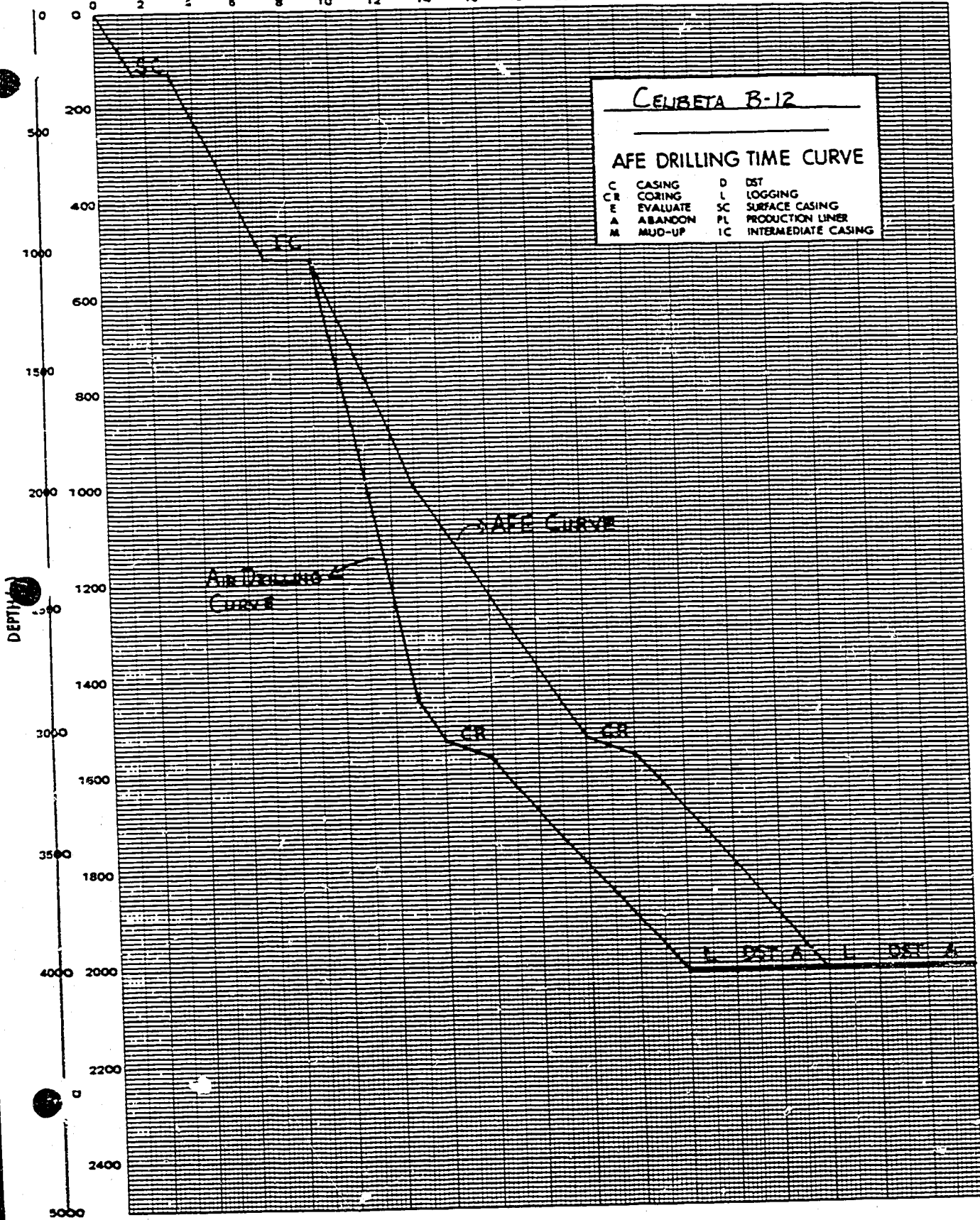
APPROVAL

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Signed: [Signature]
Engineering Branch
Date: 90-01-30
File: 9211-S6-3-1

TIME (DAYS)

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180
 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90
 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36



CENBETA B-12

AFE DRILLING TIME CURVE

C	CASING	D	DST
CR	CORING	L	LOGGING
E	EVALUATE	SC	SURFACE CASING
A	ABANDON	PL	PRODUCTION LINER
M	MUD-UP	IC	INTERMEDIATE CASING

SAFE CURVE

AIR DRILLING CURVE

CR

CR

L DATA L DATA

COST (\$M)

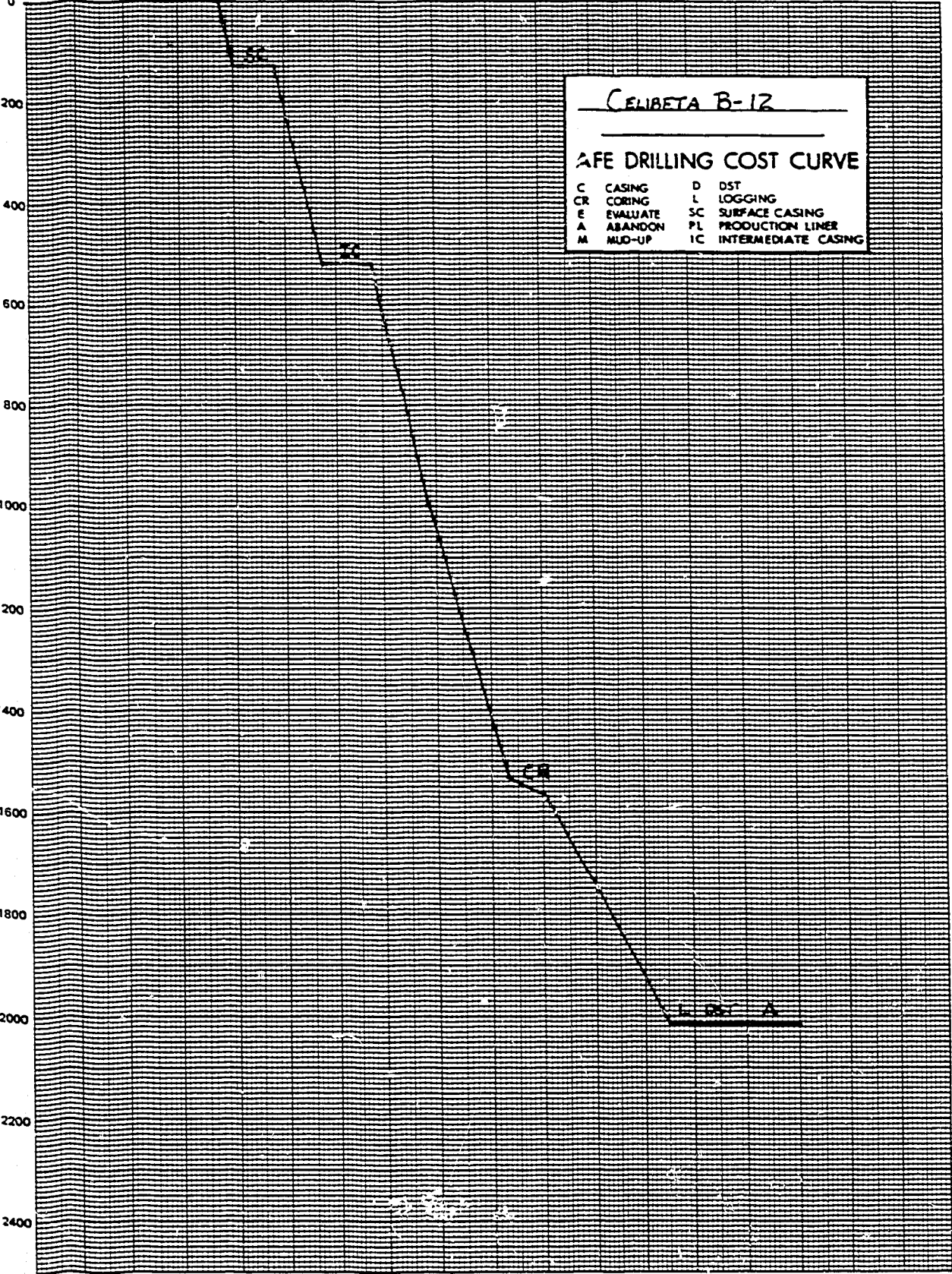
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DEPTH (ft)
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
2600
2800
3000
3200
3400
3600
3800
4000
4200
4400
4600
4800
5000

CELIBETA B-12

WFE DRILLING COST CURVE

C	CASING	D	DST
CR	CORING	L	LOGGING
E	EVALUATE	SC	SURFACE CASING
A	ABANDON	PL	PRODUCTION LINER
M	MUD-UP	IC	INTERMEDIATE CASING



Survey and Target Information

Surface and Intermediate Hole

On surface hole take Totco single shots every 30 m. On intermediate hole Magnetic single surveys to be taken every 50 m as intermediate hole is drilled.

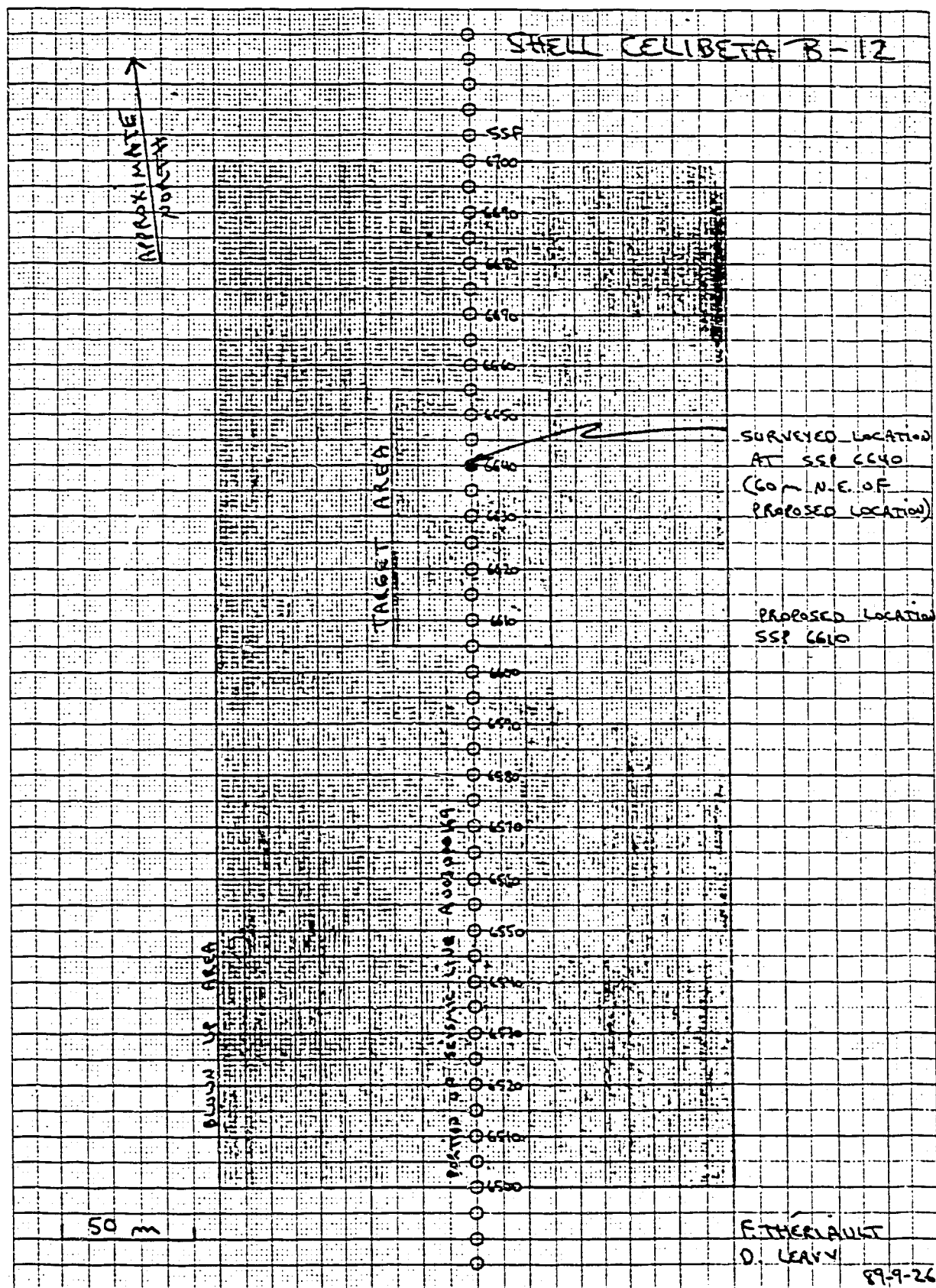
Main Hole

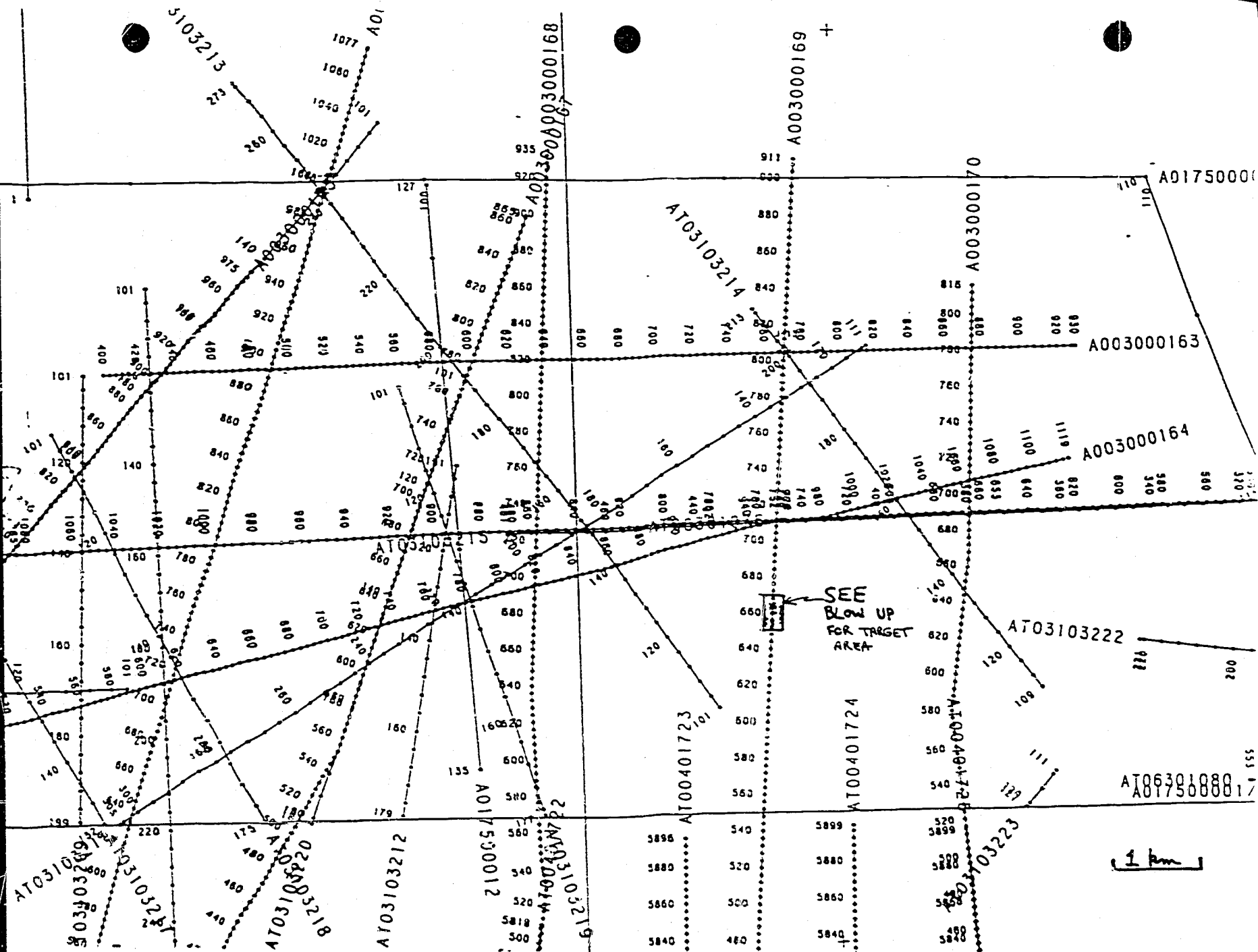
Surveys must be taken every 150 m on main hole as per COGLA regulations . If deviation increases above 3 degrees increase survey frequency .

Exploration has specified a 60 x 100 m target with shot point 6640 on seismic line A003000169 being the target.

461510

1602 104 FEL & ASSN CO MARINUS





Petro-Canada Inc.

P.O. Box 2844
Calgary, Alberta T2P 3E3
Telephone (403) 298-8000
Telex 03-825753

Petro-Canada Inc.

C.P. 2844
Calgary (Alberta) T2P 3E3
Téléphone (403) 298-8000
Télex 03-825753

WELL REQUIREMENTSDATE: NOVEMBER 28, 1989WELL NAME AND LOCATION: SHELL CELIBETA B-12 60°15N x 122°15'W (grid)PCI INTEREST: Farmout (50% before earning - 20% after earning)

<u>PRIOR TO SPUD</u>	<u>COPIES</u>	<u>AFTER DRILLING</u>	<u>COPIES</u>
Geological Program	1	Drillstem Test Reports	1
Drilling Program	1	Final Analyses	1
Survey Plan	1	Final Prints of Logs	1
Application to Drill	1	Final Geological Report	1
Well Licence	1	Final Drilling Report	1

DURING DRILLING

Daily Drilling Reports	1
Sample Descriptions	1
Core Descriptions	1
Preliminary Analyses	1
Field Prints of Logs	2

COMPLETION AND PRODUCTION

Completion Program	1
Daily Completion Reports	1
Final Completion Report	1
Final Prints of Logs	1
Initial Production Logs	1

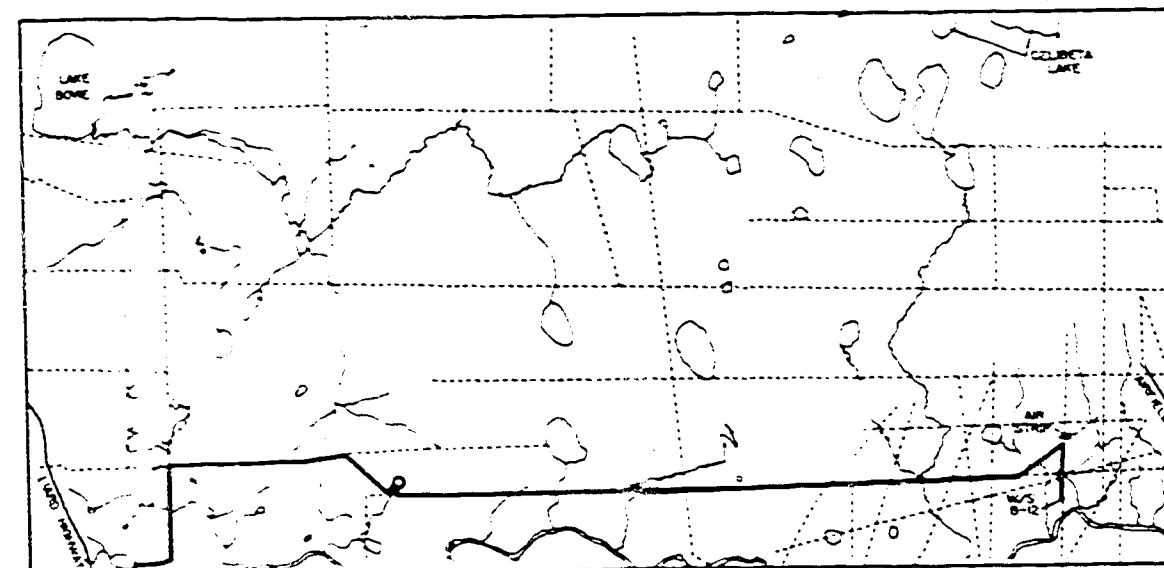
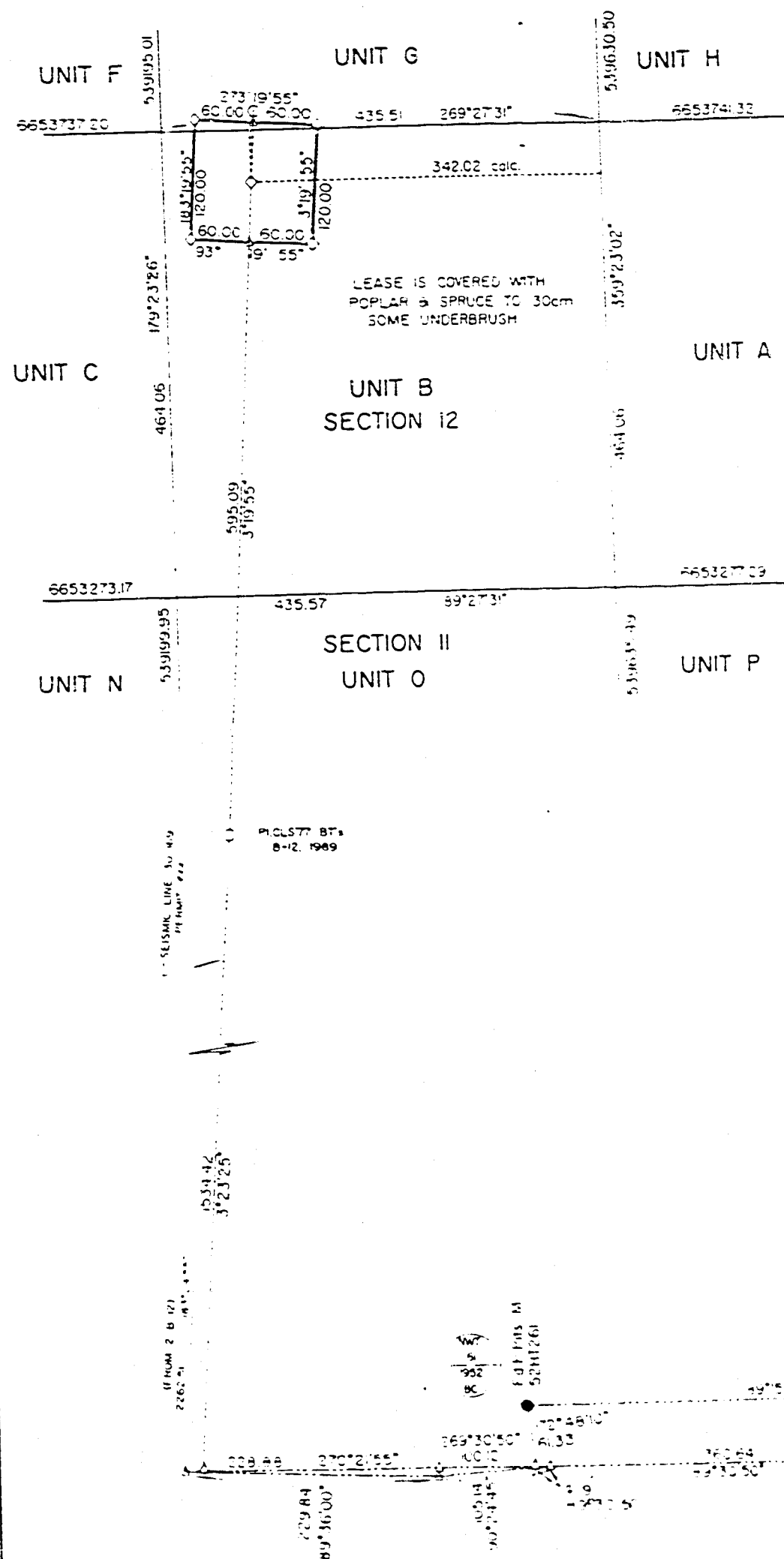
Sample cutting are not required unless otherwise specified, provided the operator's set will be available for our examination.

DAILY DRILLING REPORTS TO: Julie Irwin by telephone 296-8261 or PHONEFAX 296-8260.DAILY COMPLETION REPORTS TO: Steve Benko by telephone 296-8212 or PHONEFAX 296-8260.

NOTICE OF INTENTION TO CORE, LOG, TEST, OR ABANDON WILL BE DIRECTED TO:
Steve Benko (Office: 296-8212, Residence: 284-9698, CELLULAR 540-1001).
(Alternate) Leigh Cotterill (Office: 296-8205, Residence: 285-4739).

ALL WELL INFORMATION WILL BE SENT TO: PETRO-CANADA INC.
6th Floor, West Tower
150 - 6th Avenue, S.W.
Calgary, Alberta T2P 3E3

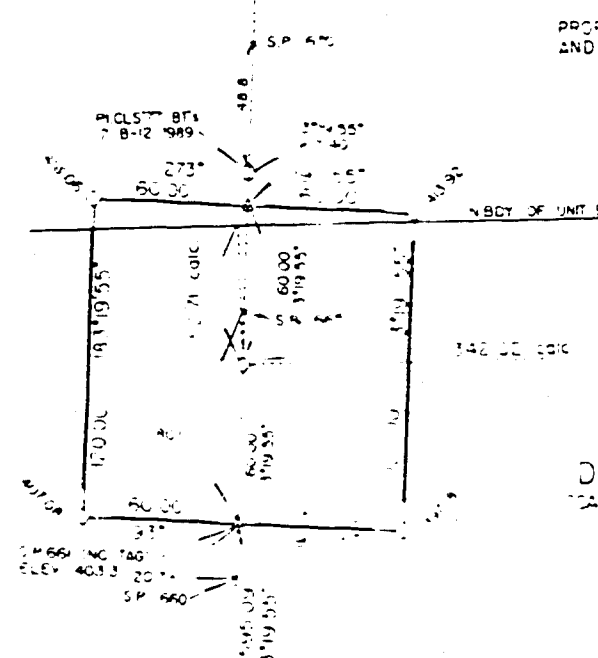
Attention: Julie Irwin



PROPOSED ACCESS ROAD

SCALE 1:250000

PROPOSED 100 m ACCESS ROAD IS SHOWN THUS
AND IS APPROX 44.9 km LONG AND CONTAINS APPROX 44.9 ha



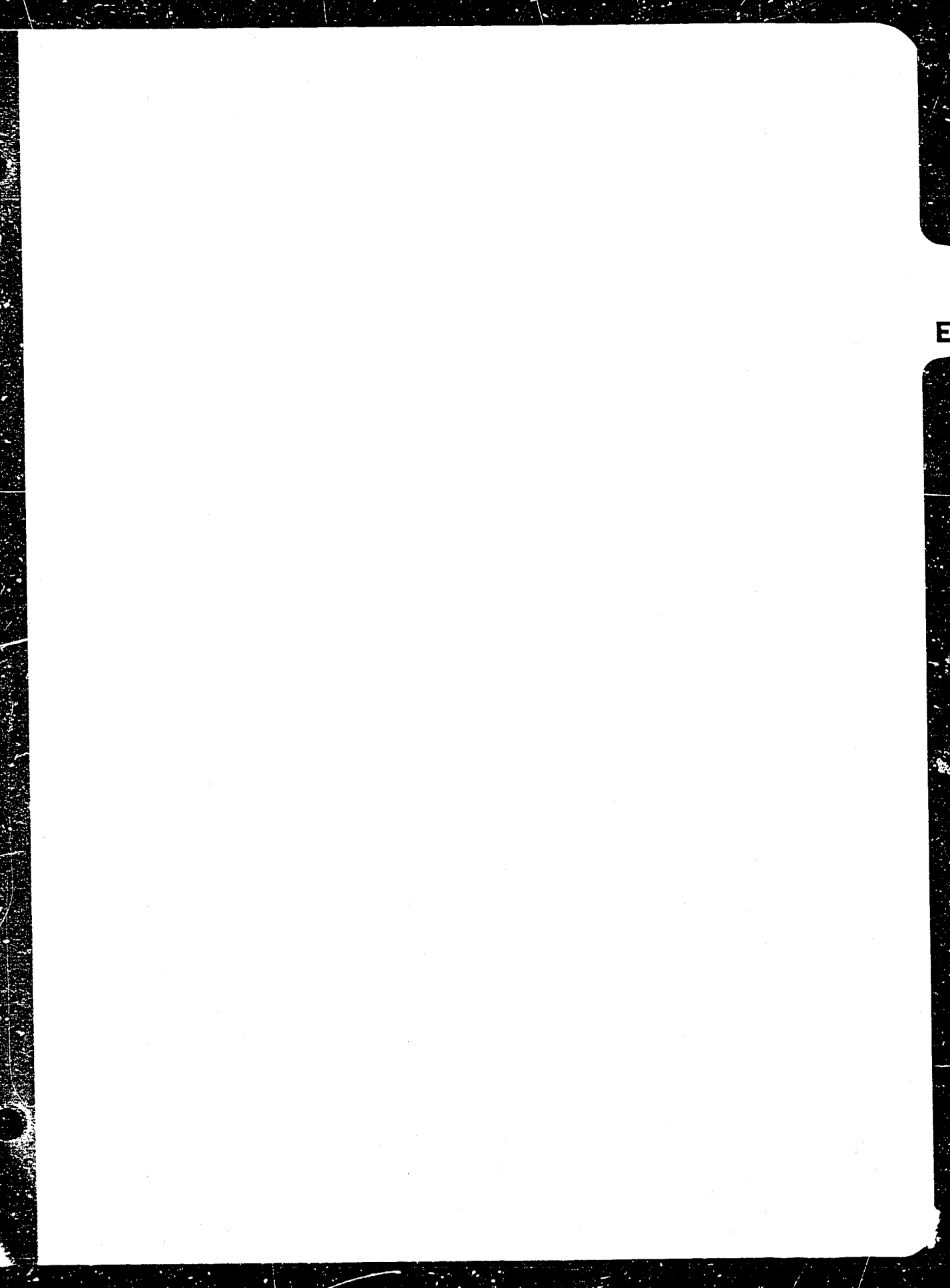
DETAIL

SCALE 1:2500

NOTE: Bearings are true, derived from Monuments A and B2.
Measured distances shown are ground.

REVISIONS DATE NO.

N.T.S. MAP SHEET: 95 B/1		METRIC	NORTHWEST TERRITORIES
SHELL CANADA LIMITED			
PRELIMINARY PLAN SHOWING WELL LOCATION			
SHELL ET AL CELIBETA B-12			
UNIT B, SECTION 12, GRID AREA 60°10', 122°15'			
SHELL CANADA LIMITED		CERTIFIED CORRECT	
<i>R. J. McNeil</i> <i>R. J. McNeil</i> 89-10-06		THIS 5 DAY OF OCTOBER, 1989 <i>[Signature]</i> JAMES JAMES SURVEYOR	
ELEVATION		GEOGRAPHIC CO-ORDS.	U.T.M. CO-ORDINATES
ON GROUND	NORTH LATITUDE	60° 09' 42.2" N	NORTHING 6653685.376
AT WELL-HEAD	WEST LONGITUDE	122° 17' 42.72" W	EASTING 539289.063
LEGEND		H I W SURVEYS LTD.	
Survey Monument found	WELL SITE	072 - 100th Street - Grande Prairie - Alberta	
Survey Monument placed	CAMP SITE	GRANDE PRATHE, ALBERTA YELLOWKNIFE, N.W.T.	
Traverse station	FUEL SITE	SHELL FILE NO. P2094-54 FILE NO. 89210	
SCALE 1:1000		DATE 23 B 1989	



ENGINEERING SUMMARY

Casing and Tubing Record Summary

TABLE 1

*** WELL BORE CALCULATIONS ***

** METHOD - MINIMUM CURVATURE

WELL : SHELL CELIBETA		DEPTH : 1700 M		DATE : 19		PROJECTION AT AZIMUTH : 360.000 DEG									
KB : 416.16 M															
MEASURED DEPTH	DRIFT ANGLE	DRIFT DIRECTION	COURSE LENGTH	T.V.D.	T.V.D. SUB SEA	LOSS	RECTANGULAR COORDINATES			DOGLEG SEVERITY	BUILD RATE	BIT WALK	PROJECTION		
DEPTH	ANGLE	DIRECTION	LENGTH	M	M	M	M	N/S	M	E/W	DEG/30M		M		
0.0	0.00	0.00	0.0	0.0	416.2	0.0	0.00	N	0.00	E	0.00	0.00	0.0		
							0.45	N	0.16	E	0.03	0.03	2.73		
220.0	0.25	20.00	220.0	220.0	196.2	0.0	0.69	N	0.10	E	0.12	0.00	124.29		
290.0	0.25	310.00	70.0	290.0	126.2	0.0	0.77	N	0.13	E	0.27	0.00	-127.50		
342.0	0.25	89.00	52.0	342.0	74.2	0.0	0.88	N	0.19	E	0.22	0.00	124.66		
400.0	0.25	330.00	58.0	400.0	16.2	0.0	0.97	N	0.13	E	0.15	-0.15	17.40		
450.0	0.00	359.00	50.0	450.0	-33.8	0.0	1.03	N	0.13	E	0.08	0.08	0.00		
500.0	0.13	359.00	50.0	500.0	-83.8	0.0	2.94	N	0.19	E	0.21	0.21	-67.36		
659.0	1.25	2.00	159.0	659.0	-242.8	0.0	5.78	N	-0.23	W	0.18	0.14	92.43		
770.0	1.75	344.00	111.0	769.9	-353.8	0.1	8.64	N	-0.98	W	0.08	-0.07	0.87		
874.0	1.50	347.00	104.0	873.9	-457.7	0.1	12.85	N	-0.94	W	0.15	0.05	-66.12		
1026.0	1.75	12.00	152.0	1025.8	-609.7	0.2	17.31	N	-0.07	W	0.01	0.00	-0.40		
1175.0	1.75	10.00	149.0	1174.8	-758.6	0.2	22.05	N	0.45	E	0.07	0.05	-1.44		
1321.0	2.00	3.00	146.0	1320.7	-904.5	0.3	25.30	N	0.84	E	0.21	-0.19	2.59		
1437.0	1.25	13.00	116.0	1436.7	-1020.5	0.3	27.41	N	1.98	E	0.18	0.00	8.16		
1551.0	1.25	44.00	114.0	1550.6	-1134.5	0.4									
HORIZONTAL DEVIATION AT 1551.0 M IS 27.5 M AT N 4 SE															

HORIZONTAL DEVIATION AT 1551.0 M IS 27.5 M AT N 4 SE

TABLE 2

HOLE SIZES AND DEPTHS							
Shell Celibeta B-12							
BIT NUMBER	MAKE	TYPE	SIZE (mm)	ROTARY HOURS	DEPTH IN (m)	DEPTH OUT (m)	METERAGE DRILLED (m)
1	Smith	SDS	444.5	8.0	0	141	141
2	Smith	SDG	311.2	22.0	141	432	291
3	HW	J3	311.2	6.75	432	487	55
4	Security	DS84	311.2	8.75	487	548	61
5	HW	JD8	219.1	1.75	548	558	10
6	Mission	MDC	219.1	8.25	558	721	163
7	Mission	MDC	219.1	31.00	721	1300	579
8	Security	S84F	215.9	25.00	1300	1450	150
RR 8	Security	S84F	215.9	7.00	1450	1480	30
9	Reed	HP13GJ	215.9	11.50	1480	1528	48
10	Smith	F3	215.9	6.00	1528	1551.6	23
11	Sperry-Sun	CWCBG	215.0	2.75	1551.6	1555.4	3.8
12	Sperry-Sun	CRCB	215.0	7.00	1555.4	1562.4	7
RR10	Smith	F3	215.9	7.25	1562.4	1591	29
13	HW	JD4	215.9	.25	1591.0	1592	1
RR13	HW	JD4	215.9	10.25	1592	1624	32
14	HW	J33	215.9	6.0	1624	1659	35
15	HW	JG4	215.9	0.0	1659	1659	0

TABLE 3

CASING AND CEMENT TABLE							
Shell Celibeta B-12							
HOLE SIZE (mm)	CASING SIZE (mm)	WEIGHTS - # JOINTS (kg/m)	GRADE & THREAD	MAKE	SETTING DEPTH (m)	CEMENT VOLUME (m ³)	CEMENT TYPE AND ADDITIVES
444.5	339.7	81.1-12 jts	K-55 LT&C	Algoma	141	30.3	23t 'G' + 2% CaCl ₂
311.2	244.5	53.6-42 jts	K-55 ST&C	Algoma	548	33.6	25.5t 'G' + 1% CaCl ₂
215.9	139.7	23.1-114 jts	K-55	Algoma	*1571	26.3	20.0t 'G' + .3% D59 + .1% D136 + .1% D13
						40.5	45.0t 1:1:2 + 1% D60

* 139.7mm Float Collar and Shoe @ 1572 m

TABLE 4

DRILLING FLUIDS								
Shell Celibeta B-12								
TYPE	INTERVAL (m)	WEIGHT (Kg/m ³)	VISCOSITY (sec)	W.L. (cc)	Y.P. (Pa)	P.V. (mPs's)	GELS (Pa)	VALUE
Gel/Chem	0 - 141	1120 1160 1140	37 72 54					Low High
Gel/Chem	141 - 548	1050 1150 1130	29 81 67	- - -	13 12 10	25 27 22	3/15 4/20 4/16	Low High Avg.
Air	548 - 1300	35 m ³ /min @ 1300 kPa 50 m ³ /min @ 2000 kPa 44 m ³ /min @ 1700 kPa						Low High Avg.
Gel/Chem	1300 - 1591	1260 1310 1305	74 94 76	9.6 8.6 6.2	14 14 17	42 52 76	5/12 4/12 7/19	Low High Avg.
Gel/Chem	1591 - 1659	1050 1070 1055	120 70 90	11.0 8.0 9.0	12 14 22	31 46 52	5/21 6/14 5/8	Low High Avg.

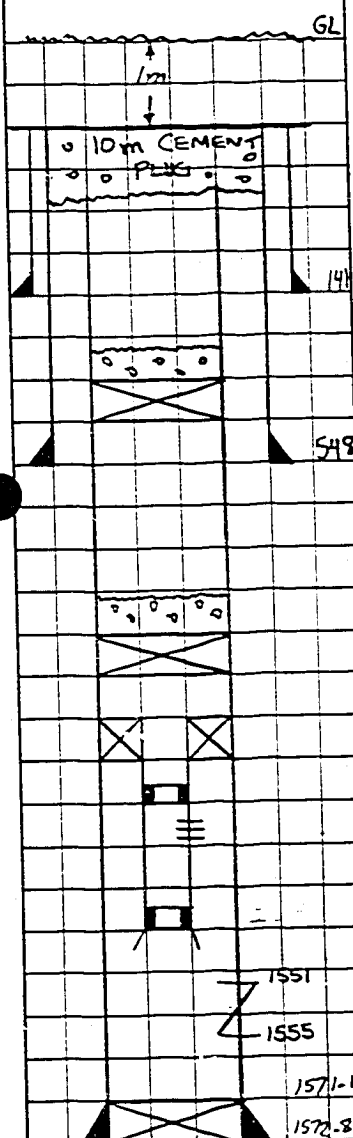
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WELL DETAILS AND SUMMARY

WELL NAME / LOCATION SHELL CELISETA 3-12 GRID 60°10' N 122°15' W COMPLETION DATE 18 MAR 90
 K.B. ELEVATION 416.1 m T.D. 1572.8 WORKOVER DATES _____
 G.L. ELEVATION 410.66m P.B.T.D. 1m BELOW GL DATE TUBING DETAILS CORRECT 24 APR 90
 DATE PREPARED 24 APR 90 GWL _____

SCHEMATIC (show depths)

WELLHEAD

MAKE N/A WP _____ MPa

CASING / LINER DETAILS

		LENGTH	K.B. DEPTH
SURFACE	339.7mm 81.1kg/m K55	141	141
INTERMEDIATE	244.5mm 53.6kg/m K55	548	548
PRODUCTION	139.7mm 23.1kg/m K55	1572	1572

TUBING KB to

- 12.7mm CAP PLATE WELDED ONTO TOP OF CASING STRINGS
- 10m CLASS 'G' CEMENT PLUG APPROX 1m BELOW GL
- BAKER MODEL 'S' SIZE 2AA BRIDGE PLUG C/W 8m CLASS 'G' CEMENT CAP PLUG@ 420m TOC 412m
- BAKER MODEL 'S' SIZE 2AA BRIDGE PLUG C/W 8m CLASS 'G' CEMENT CAP PLUG@ 1490m TOC 1482m
- BAKER FB-1 SIZE 45-30 PACKER C/W IMPREGON 218
- BAKER SEALBORE EXTENSION C/W IMPREGON 218
- BAKER MILLOUT EXTENSION C/W IMPREGON 278
- 3m POP JOINT, HCSCB BOX x PIN, C/W IMPREGON 278, 9.7kg/m L80
- 13mm OTIS 'X' MAPLE, HCSCB BOX x PIN, INCOLOY 925
- 1 JOINT 13mm 9.7kg/m L80 HCSCB BOX x PIN C/W IMPREGON 278, TOP HALF PERFORATED
- 13mm OTIS 'XV' MAPLE, HCS BOX x EYE PIN, INCOLOY 925
- 13mm EYE BOX RE-ENTRY GUIDE

REMARKS

Set down on packer N/A daNAnnulus fluid INHIBITED

FRESH WATER - TRANS T48000.251

T.V. correction _____ m @ _____ m

PERFORATION, STIMULATION & FLOW SUMMARY

FORMATIONS

A. DEVONIAN SLAVE POINT

1542 m to 1606 m

B.

m to _____ m

C.

m to m

D.

m to m

DATE	PERFORATION DETAILS (interval, type of gun, shots, under/over balanced, phasing and other remarks)	PETROPHYSICAL SUMMARY (net/gross pay, porosity, Sw)
18 MAR 90	1551-1555 m, THRI-TUBING, HSC, 0° PHASING,	
	13 SPM	

DATE	OPEN INTERVAL	STIMULATION AND/OR FLOW DETAILS Includes - flow rate before and after stimulation - volume and type of acid and additives - all pertinent remarks	INJECTION RATES			FLOW RATES			
			Avg. Rate (m ³ /min)	Avg. Pres. (MPa)	Max. Pres. (MPa)	Oil Cond (m ³ /d)	Gas (10 ³ m ³ /d)	Water (m ³ /d)	THP (MPa)
2 MAR 90	1551-1555	NO PRESSURE OR FLOW IMMEDIATELY AFTER PERFORATING							
		2m ³ 28% HCl ACID WASH WITH CTU. SQUEEZED INTO FORMATION WITH 3m ³ INHIBITED FRESH WATER (GRAVS T480@ 0.25%)	0.09	5.2	5.7	—	—	SEG BELOW	—
		UNLOADED WELL WITH N ₂ UNTIL 20 MAR 90 RECOVERED: 69.06m ³ WATER OR 61.65m ³ WATER OVER THE LOAD FLUID — NO THP EVIDENT							
		SERVICE COMPANY—DOWELL SCHLUMBERGER							



AGAT Laboratories



CALGARY

EDMONTON

GRANDE PRAIRIE

GAS ANALYSIS

CONTAINER IDENTIFICATION

AGAT 17415

LABORATORY NUMBER

GG1025A

OPERATOR NAME

SHELL CANADA LIMITED

UNIQUE WELL IDENTIFIER

WELL NAME

ELEVATIONS QRO m

415.10

410.66

FIELD OR AREA

POOL OR ZONE

NAME OF SAMPLER

COMPANY

CELIBETA

SLAVE POINT

HALLIBURTON

TEST TYPE

NO

TEST RECOVERY

DST

1

TEST INTERVAL OR PERFS

1551.0-1555.0

mKB

SAMPLING POINT

SEPARATOR

GAUGE PRESSURE kPa

80

TEMPERATURE °C

26

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

80

26

215

22

DATE SAMPLED (Y-M-D)

90-03-20

DATE RECEIVED (Y-M-D)

90-03-27

DATE REPORTED (Y-M-D)

90-03-30

ANALYST

DG HU

OTHER INFORMATION

DEVONIAN 23:30 HRS

COMP	MOLE FRACTION		PETROLEUM LIQUID CONTENT (ML = 100 G)
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	
H ₂	TRACE	TRACE	
H ₂	TRACE	TRACE	
H ₂	0.9657	0.9919	
CO ₂	0.0264	0.0000	
H ₂ S	TRACE	TRACE	
C ₁	0.0076	0.0078	
C ₂	0.0002	0.0002	
C ₃	0.0001	0.0001	0.4
C ₄	0.0000	0.0000	0.0
NC ₄	0.0000	0.0000	0.0
C ₅	0.0000	0.0000	0.0
NC ₅	0.0000	0.0000	0.0
C ₆	0.0000	0.0000	0.0
C ₇ +	0.0000	0.0000	0.0
C ₈			
C ₉			
C ₁₀ +			
TOTAL	1.0000	1.0000	0.4

GROSS HEATING VALUE (MJ/M³)
15°C AND 101.3 kPa

MOISTURE AND ACID GAS FREE

MEASURED

CALCULATED

DETERMINED DEW POINT

VAPOUR PRESSURE PENTANES PLUS

0.32

0.32

°C

0.0 kPa

ACTUAL GROSS HEATING VALUE:

0.31

RELATIVE DENSITY

MOISTURE FREE AS SAMPLED

MOISTURE AND ACID GAS FREE

MEASURED

CALCULATED

MEASURED

CALCULATED

0.979

0.964

PSEUDO CRITICAL PROPERTIES (CALCULATED)

AS SAMPLED

ACID GAS FREE

DPC (kPa)

DTC

DPC (kPa)

DTC

3514 kPa

131.3 °C

3409 kPa

126.7 °C

RELATIVE MOLECULAR MASS

TOTAL GAS

C₇ +

28.3

0.0

H₂S (ppm)

0.00

REMARKS

EXCEED NORMAL LIMITS : N2

FIELD H₂S = 3 PPM

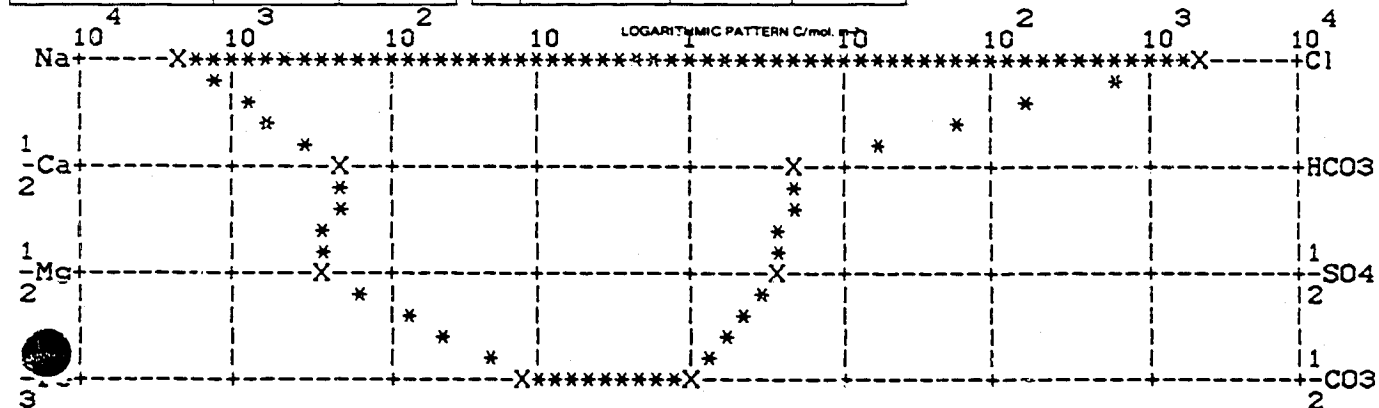
CONTAINER IDENTITY PLASTIC		SAMPLE POINT I.D. # 		LABORATORY NUMBER 90-4825-1	
CENCE NO 		OPERATOR NAME AND ADDRESS SHELL CANADA LIMITED			
CPA NUMBER 		WELL NAME CELIBETA B-12		ELEVATIONS METERS KB 416.1 GRD 410.66	
FIELD OR AREA 		POOL OR ZONE DEVONIAN SL. POINT		NAME OF SAMPLER 	
				COMPANY HALIBURTON	
TEST RECOVERY 					
TEST TYPE MULTIPLE RECOVERY ☒		SAMPLING POINT SIGHT GLASS		MUD RESISTIVITY @ 25°C	
INTERVAL/PERFORATIONS FROM 1551 m TO 1553 m FROM m TO m		TYPE OF PRODUCTION PUMPING ☐ FLOWING ☐ GAS LIFT ☐ SWAB ☐			
PRODUCTION RATES WATER m ³ /d OIL m ³ /d GAS 10m ³ /d					
GAUGE PRESSURE - KPa SEPARATOR TREATER AS RECEIVED 					
TEMPERATURES °C SEPARATOR TREATER AS RECEIVED 					
DATE SAMPLED Y M D H M 90-03-19 1500		DATE RECEIVED Y M D 90-03-20		DATE REPORTED Y M D 90-03-20	
				ANALYST S.M.	

ION	C g. m ⁻³	MASS FRACTION	C mol. m ⁻³
Na	48000		2087.0
	2900		74.4
Ca	4500		112.5
Mg	3900		162.5
Ba			
Sr			
Fe	250		4.5

ION	C g. m ⁻³	MASS FRACTION	C mol. m ⁻³
Cl	105457		2970.6
Br			
I			
HCO ₃	345		5.7
SO ₄	228		2.4
CO ₃	<1		
OH	<1		
H ₂ S	ABSENT		

TOTAL SOLIDS C/g. m ⁻³	
BY EVAPORATION @ 110 °C	BY EVAPORATION @ 180 °C
AT IGNITION 173480	CALCULATED 165405

PROPERTIES	
RELATIVE DENSITY 1.137 @ 25 °C	REFRACTIVE INDEX 1.362 @
OBSERVED PH 5.5 @ 25 °C	RESISTIVITY Ω _m 0.052 @ 25 °C



REMARKS

SHELL CANADA LIMITED

WELL STATUS REPORT NO. 1

Confidential: (Yes/No)

1. Well Name SHELL CELIBETA B-12 Date of Work 14 MAR 90
2. Current Operation WAITING ON SCHLUMBERGER
3. P.B.T.D. 1571.1 K.B. Elev. 416.1
4. Completion Interval 1551-1555 Formation DS Perfs or Open Hole?
5. Perforations & No. of Shots
- 6.

7.	Tubing Head		Meter Run Size				Calc Rate Gas Grav			
	Pressure	Temp	Static	Diff	Temp	Orifice	Oil/Cond	Water	Gas	
8.	Time	Units								
9.	2:00-0700		NIPPLE UP BOP'S							
10.			PT BOP'S TO 120 MPa AGAINST TBS HANGER CHW 2-WAY CHECK VALVE							
11.										
12.										
13.										
14.										
15.										
16.										
17.										
18.										
19.										
20.										
21.										
22.										
23.										
24.										
25.										
26.										
27.										
28.										

Note: Flow rate and other data may be estimates only and are subject to correction as more information becomes available.

29. Operations Forecast RUN PACKER AND TAILPIPE

30.

Summary of Production/Injection Volumes for Test Interval since Last Report

31. Oil/Cond. Produced
32. Water Produced
33. Total Load Injected
34. Net Liquid Remaining
35. Gas Produced
36. Gas Flared (Yes/No)

m³

m³

m³

m³

m³

Flare Permit-Limit

-Max. Rate

Cumulative

m³

m³

m³

m³

m³

m³

m³

m³/d

Reported by:

BOB ATKINS

Recorded in Office By

GRANT LYND S

Local 4989

Date

14 MAR 90

SHELL CANADA LIMITED

WELL STATUS REPORT NO. 2

Confidential: (Yes/No)

1. Well Name SHELL CELIBETA B-12 Date of Work 15 MAR 90
 2. Current Operation PUNNING CEMENT PACKER
 3. P.B.T.D. 1571.1 K.B. Elev. 416.1
 4. Completion Interval 1551-1555 Formation DS Perfs or Open Hole ?
 5. Perforations & No. of Shots
 6.

7.	Tubing Head		Meter Run Size				Calc Rate Gas Grav			
	Pressure	Temp	Static	Diff	Temp	Orifice	Oil/Cond	Water	Gas	
8.	Time	Units								
9.	0700		WAIT ON SCHLUMBERGER							
10.	1815		RU SCHLUMBERGER							
11.			RIH W/ GAUGE KING AND JUNK BASKET TO 1562m							
12.			RIH W/GR/CCL							
13.	2230		REHEAD FOR GREASE INJECTION							
14.	0015		RIH W/ CEMENT - 2 RUNS - 1 WITH NO PRESSURE							
15.			- 1 WITH 7MPa PRESSURE PASS							
16.	0430		PICK UP PACKER AND TAILPIPE							
17.			WORK ON SETTING TOOL							
18.										
19.			TAG P.B.T.D @ 1569m WITH BOND LOG TOOLS							
20.										
21.			CEMENT QUALITY - 100% BOND INDEX FROM APPROX 1548 TO P.B.T.D							
22.			- 80% APPROX 1548 FOR A 2-3m							
23.			INTERVAL							
24.										
25.			LOG TOC @ 1000m							
26.			STRINGERS TO ≈ 400m							
27.			CALCULATED TOC WAS 624m							
28.										

Note: Flow rate and other data may be estimates only and are subject to correction as more information becomes available.

29. Operations Forecast SET PACKER, RUN TUBING
 30.

Summary of Production/Injection Volumes for Test Interval since Last Report			Cumulative	
	m ³		m ³	
31. Oil/Cond. Produced			m ³	
32. Water Produced			m ³	
33. Total Load Injected			m ³	
34. Net Liquid Remaining			m ³	
35. Gas Produced			m ³	
36. Gas Flared (Yes/No)		Flare Permit - Limit	m ³	
		-Max. Rate	m ³ /d	

Reported by: BOB ATKINS
 Recorded in Office By: GRANT LINDS Local 4998
 Date: 16 MAR 90

SHELL CANADA LIMITED
WELL STATUS REPORT NO. 3

Confidential: (Yes/ No)

1. Well Name SHELL CELIBETA R-12 Date of Work 16 MAR 90
2. Current Operation RUNNING TUBING
3. P.B.T.D. 1569 K.B. Elev. 416.1
4. Completion Interval 1551-1555 Formation DS Perfs or Open Hole ?
5. Perforations & No. of Shots
- 6.

7.	Tubing Head		Meter Run Size				Calc Rate Gas Grav			
	Pressure	Temp	Static	Diff	Temp	Orifice	Oil/Cond	Water	Gas	
8. Time	Units									
9. 0700										
10.										
11.										
12. 0930										
13. 1115										
14. 1900										
15. 2030										
16.										
17.										
18. 2230										
19. 0115										
20.										
21.										
22.										
23.										
24.										
25.										
26.										
27.										
28.										

Note: Flow rate and other data may be estimates only and are subject to correction as more information becomes available.

29. Operations Forecast RH W/ TUBING, PT ON THE WAY W TO TRY AND
30. LOCATE LEAK

Summary of Production/Injection Volumes for Test Interval since Last Report

	m^3	Cumulative	m^3
31. Oil/Cond. Produced			
32. Water Produced			
33. Total Load Injected			
34. Net Liquid Remaining			
35. Gas Produced			
36. Gas Flared (Yes/No)			
	Flare Permit - Limit		
	-Max. Rate		

Reported by: BOB ATKINS

Recorded in Office By: GRANT LYND Local 4988

Date: 17 MAR 90

SHELL CANADA LIMITED

WELL STATUS REPORT NO. 4

Confidential: (Yes / No)

1. Well Name SHELL CELIBETA 3-12 Date of Work 17 MAR 90
2. Current Operation PRESSURE TESTING
3. P.B.T.D. 1569 K.B. Elev. 416.1
4. Completion Interval 1551-1555 Formation DS ☒ Perfs or Open Hole ?
5. Perforations & No. of Shots _____
6. _____

7.	Tubing Head		Meter Run Size _____				Calc Rate Gas Grav _____				
	Pressure	Temp	Static	Diff	Temp	Orifice	Oil/Cond	Water	Gas		
8.	Time	Units									
9.	0700		RUN TBG TO ABOVE PACKER - LAND IN TUBING HANGER								
10.			PT TO 17 MPa - OK								
11.			PULL OUT 'PX' PLUG FROM SSD								
12.			REV CIRC 9m ³ INHIBITED WATER								
13.			LAND TBG IN HANGER W/ 5000 DAN COMPRESSION								
14.			PT TBG - LEAKED OFF - RETURNS JP ANNULUS								
15.			PT ANNULUS TO 17 MPa FOR 15 MIN - OK								
16.			RIG AND SET 'PX' PLUG IN TAILPIPE								
17.			PT TBG TO 17 MPa FOR 70 MIN - OK								
18.			RIG AND PULL 'PX' PLUG								
19.	2030		PT TBG TO 17 MPa FOR 1 HR - OK								
20.			PT ANN TO 17 MPa FOR 15 MIN - OK								
21.			PT TBG TO 17 MPa FOR 30 MIN - OK								
22.			RIG OUT POWER TONGS AND RAPID W/L								
23.			INSTALL 2-WAY CHECK IN TBG HANGER, REMOVE ROP'S INSTALL WH.								
24.			PT EXTENDED NECK SEALS TO 39.5 MPa - OK								
25.			PT WELLHEAD TO 39.5 MPa - OK - REMOVE 2-WAY CHECK								
26.			RIG IN HRS., ESD, AND PRODUCTION LINE								
27.			RIG IN SCHLUMBERGER								
28.			PT LUBRICATOR TO 20 MPa								

Note: Flow rate and other data may be estimates only and are subject to correction as more information becomes available.

29. Operations Forecast PERFORATE
30. _____

Summary of Production/Injection Volumes for Test Interval		Cumulative	
	since Last Report		
31. Oil/Cond. Produced	m ³	m ³	
32. Water Produced	m ³	m ³	
33. Total Load Injected	m ³	m ³	
34. Net Liquid Remaining	m ³	m ³	
35. Gas Produced	m ³	m ³	
36. Gas Flared (Yes/No)	Flare Permit - Limit	m ³ /d	
	-Max. Rate		

Reported by: BOB ATKIN

Recorded in Office By GRANT LYND Local 4982

Date 15 MAR 90

SHELL CANADA LIMITED

WELL STATUS REPORT NO. 5

Confidential: (Yes/No)

1. Well Name SHELL CENBETA B-12 Date of Work 18 MAR 90
2. Current Operation UNLOADING WELL
3. P.B.T.D. 1569 m K.B. Elev. 416.1
4. Completion Interval 1551 Formation DS (Perfs or Open Hole?)
5. Perforations & No. of Shots
- 6.

Time	Units	Tubing Head		Meter Run Size				Calc Rate Gas Grav		
		Pressure	Temp	Static	Diff	Temp	Orifice	Oil/Cond	Water	Gas
0700		RIH AND PERFORATE 1551-1555m @ 13SPM, 10" PHASING,								
		54mm HSC, DECENTRALIZED								
		2 RUNS REQUIRED- FIRST RUN WAS A MISRUN								
1145		RIG OUT SCHLUMBERGER								
		RIG IN DIS CTU - SAFETY MTG								
		PT TO 31 MPa								
1430		RIH W/ CTU TO 1555m								
		SPOT 2m ³ 28% HCl ACROSS PERFS								
		PULL UP TO 1425m								
		SQUEEZE WITH 5m ³ INHIBITED WATER @ 0.09m ³ /min								
		AVG PRESSURE 5200 kPa								
		MAX PRESSURE 5700 kPa								
1900		BLOW DOWN W/ N ₂ TO 1475m								
		RECOVERED 7.97m ³								
		POOH WITH CTU								
		RIG OUT DIS								
		OPEN TO SEPARATOR - TSTM								
0500		RIH W/ RAPID W/L								
		TAG FL @ 206m								
0600		RIG IN DIS CTU								

Note: Flow rate and other data may be estimates only and are subject to correction as more information becomes available.

29. Operations Forecast RIH W/ CTU AND BLOW DOWN W/ N₂
- 30.

Summary of Production/Injection Volumes for Test Interval since Last Report

	m ³	Cumulative	m ³
31. Oil/Cond. Produced	m ³		m ³
32. Water Produced	m ³		m ³
33. Total Load Injected	m ³		m ³
34. Net Liquid Remaining			m ³
35. Gas Produced	m ³		m ³
36. Gas Flared (Yes/No)			m ³
	Flare Permit-Limit		m ³
	-Max. Rate		m ³ /d

Reported by: BOB ATKINS

Recorded in Office By: GRANT LYND Local 1188

Date: 19 MAR 90

COST TO DATE. \$192,841

SHELL CANADA LIMITED

WELL STATUS REPORT NO. 6

Confidential: (Yes / No)

1. Well Name SHELL CELBERTA B-12 Date of Work 19 MAR 90
2. Current Operation BLOWING DOWN WELL w/N₂
3. P.B.T.D. 1569 m K.B. Elev. _____
4. Completion Interval 1551-1555 Formation D3 (Perfs or Open Hole?)
5. Perforations & No. of Shots 1551-1555 m
6. _____

7.	Time	Units	Tubing Head		Meter Run Size				Calc Rate Gas Grav		
			Pressure	Temp	Static	Diff	Temp	Orifice	Oil/Cond	Water	Gas
8.											
9.	0700		PT CTU TO 20 MPa								
10.			RTH TO 1555 m AND UNLOAD w/N ₂								
11.			RECOVERED 7.55 m ³ 190,000 ppm WATER								
12.	1000		SHOT DOWN N ₂ WAITING w/CTU @ 1475 m								
13.	1200		LOWER CT TO 1555 m AND BLOW DOWN w/N ₂								
14.			RECOVERED 3.11 m ³ 195,000 ppm PH=5 WATER								
15.	1245		SHUT DOWN N ₂ GO TO 1475 m								
16.			RECOVERED 3.65 m ³ 192,500 ppm PH=5								
17.			RAN OUT OF N ₂								
18.			POOH w/CT								
19.	1615		RIG OUT CTU								
20.			WELLHEAD OPEN TO SEPARATOR								
21.	0500		RIG CTU TO WELLHEAD								
22.	0600		WAIT ON N ₂								
23.											
24.											
25.											
26.											
27.											
28.											

Note: Flow rate and other data may be estimates only and are subject to correction as more information becomes available.

29. Operations Forecast BLOW DOWN w/N₂ : ANALYZE WATER
30. _____

Summary of Production/Injection Volumes for Test Interval since Last Report

		Cumulative	
31. Oil/Cond. Produced	m ³	m ³	
32. Water Produced	14.3 m ³	22.27 m ³	
33. Total Load Injected	m ³	m ³	
34. Net Liquid Remaining		m ³	
35. Gas Produced	m ³	m ³	
36. Gas Flared (Yes/No)		m ³ /d	
	Flare Permit-Limit		
	-Max. Rate		

Reported by: BOB ATKINS

Recorded in Office By: GRANT LYND Local 4988

Date: 20 MAR 90

SHELL CANADA LIMITED
WELL STATUS REPORT NO. 1

Confidential: (Yes / No)

1. Well Name SHELL CELIBETA B-12 Date of Work 20 MAR 90
 2. Current Operation BLOWING DOWN WELL WITH N₂
 3. P.B.T.D. 1569 m K.B. Elev. 416.1 m
 4. Completion Interval DS ☒ Rerts or Open Hole?
 5. Perforations & No. of Shots 1551-1555 m
 6. _____

7.	Time	Units	Tubing Head		Meter Run Size				Calc Rate Gas Grav		
			Pressure	Temp	Static	Diff	Temp	Orifice	Oil/Cond	Water	Gas
8.											
9.	0700		WAIT ON N ₂ - BAD ROAD CONDITIONS								
10.	1430		START CTU								
11.			BLOW DOWN TO 1555 m w/ N ₂								
12.	1615		RECOVERED	5.4 m ³	178,000 ppm	PH=5	WATER				
13.	1700		RECOVERED	2.5 m ³	WATER						
14.	1800		RECOVERED	5 m ³	WATER						
15.	2000		RECOVERED	9.65 m ³	WATER						
16.	2100		RECOVERED	4.39 m ³	WATER						
17.	2200		RECOVERED	3.76 m ³	WATER						
18.	2300		RECOVERED	4.91 m ³	WATER						
19.	2400		RECOVERED	4.91 m ³	174,000 ppm	PH=5	WATER				
20.	0100		RECOVERED	4.6 m ³	WATER						
21.			POOH W/CTU								
22.	0136		OUT OF HOLE 1.67 m ³ WATER IN SEPARATOR BOOT								
23.			WELL OPEN TO SEPARATOR								
24.	0400		NO GAS - (0 SEPARATOR PRESSURE)								
25.	0700		SHUT IN WELL								
26.											
27.											
28.											

Note: Flow rate and other data may be estimates only and are subject to correction as more information becomes available.

29. Operations Forecast
- RUN PRESSURE RECORDERS

30. _____

Summary of Production/Injection Volumes for Test Interval since Last Report m³

31. Oil/Cond. Produced

46.79 m³

32. Water Produced

33. Total Load Injected

34. Net Liquid Remaining

35. Gas Produced

36. Gas Flared (Yes/No)

Flare Permit-Limit

-Max. Rate

Cumulative m³69.06 m³

Reported by:

BOB ATKINS

Recorded in Office By

GRANT LYND

Local 9988

Date

21 MAR 90

SHELL CANADA LIMITED

WELL STATUS REPORT NO. 8

Confidential: (Yes / No)

1. Well Name SHELL CELIBETA B-12 Date of Work 21 MAR 90
2. Current Operation WAITING ON PRESSURE BUILD-UP
3. P.B.T.D. 1569 M K.B. Elev. 416.1 m
4. Completion Interval 1551-1555 Formation Ds ☒ Perf or Open Hole?
5. Perforations & No. of Shots
- 6.

7.	Time	Units	Tubing Head		Meter Run Size				Calc Rate		
			Pressure	Temp	Static	Diff	Tamp	Orifice	Oil/Cond	Water	Gas
8.											
9.	0700		RIG IN RAPID W/L								
10.			RUN 90 HR 21 MPa TANDEM RECORDER'S @ 1516m								
11.			ON BOTTOM @ 1105 HRS 90-03-21								
12.			HRS RECORDING THP - NONE AT SURFACE								
13.			RIG OUT HRS!								
14.			NO INDICATION ON DEADWEIGHT - NEED 50' PSI								
15.											
16.											
17.											
18.											
19.			NOTE H.R.S. HALLIBURTON RESERVOIR SERVICES								
20.											
21.											
22.											
23.											
24.											
25.											
26.											
27.											
28.											

Note: Flow rate and other data may be estimates only and are subject to correction as more information becomes available.

29. Operations Forecast
- 30.
- Summary of Production/Injection Volumes for Test Interval since Last Report
- | | | | |
|--------------------------|--|------------|-----------------------------|
| 31. Oil/Cond. Produced | <u> </u> m ³ | Cumulative | <u>69.06</u> m ³ |
| 32. Water Produced | <u> </u> m ³ | | <u>7.41</u> m ³ |
| 33. Total Load Injected | <u> </u> m ³ | | |
| 34. Net Liquid Remaining | <u> </u> m ³ | | |
| 35. Gas Produced | <u> </u> m ³ | | |
| 36. Gas Flared (Yes/No) | <u> </u> m ³ | | |
- Flare Permit - Limit m³
- Max. Rate m³/d

Reported by: BOB ATKINS

Recorded in Office By GRANT LYND Local 4988

Date 22 MAR 90

SHELL CANADA LIMITED

WELL STATUS REPORT NO. 9

Confidential: (Yes/No,)

1. Well Name SHELL CELIBETA B-12 Date of Work 22 MAR 90
2. Current Operation WAITING ON PRESSURE BUILD-UP
3. P.B.T.D. 1569m K.B. Elev. 416.1m
4. Completion Interval 1551-1555 Formation DS Perfs or Open Hole?
5. Perforations & No. of Shots
- 6.

7.	Tubing Head		Meter Run Size _____				Calc Rate Gas Grav _____				
	Pressure	Temp	Static	Diff	Temp	Orifice	Oil/Cond	Water	Gas		
8.	Time	Units									
9.	0700		RECORDERS STILL IN HOLE								
10.	2200		RIG IN RAPID W/L								
11.			PULL RECORDERS @ 2255 HRS								
12.			PULL MANDEL + RECOVERED SOME LCM - SAWDUST								
13.			RIG OUT RAPID								
14.	0330		INSTALL 2-WAY CHECK VALVE								
15.			REMOVE WELLHEAD								
16.			INSTALL BOP'S								
17.											
18.											
19.											
20.											
21.											
22.											
23.											
24.											
25.											
26.											
27.											
28.											

Note: Flow rate and other data may be estimates only and are subject to correction as more information becomes available.

29. Operations Forecast ABANDON WELL

30.

Summary of Production/Injection Volumes for Test Interval
since Last Report

31. Oil/Cond. Produced
32. Water Produced
33. Total Load Injected
34. Net Liquid Remaining
35. Gas Produced
36. Gas Flared (Yes/No)

m³

m³

m³

m³

m³

Flare Permit - Limit

- Max. Rate

Cumulative

m³

69.06 m³

7.41 m³

m³

m³

m³

m³/d

Reported by: BOB ATKINS

Recorded in

Office By: GRANT LYND Local: 4188Date: 23 MAR 90

SHELL CANADA LIMITED

WELL STATUS REPORT NO. 10

Confidential: (Yes/No)

1. Well Name SHELL CELIBETA B-12 Date of Work 23 MAR 90
 2. Current Operation ABANDONING WELL
 3. P.B.T.D. 1569m K.B. Elev. 416.1m
 4. Completion Interval 1551-1555m Formation Ds Perfs or Open Hole?
 5. Perforations & No. of Shots
 6.

7.	Time	Units	Tubing Head		Meter Run Size			Calc Rate Gas Grav			
			Pressure	Temp	Static	Diff	Temp	Orifice	Oil/Cond	Water	
8.											
9.	0700		PT	BOP'S	TO	20 MPa					
10.	0730		PV	TO	INJECT	WATER					
11.			INJECT	74.79m ³	@	14.8 MPa	@	0.3m ³ /min		PRODUCED WATER	
12.			DISPLACE	W/ 6m ³	INHIBITED	FRESH WATER					
13.	1300		RO	DOWELL	RIG	TO	PULL	TBG			
14.			PULL	AND	L.D.	78mm	HCS	TBG			
15.			RO	POWER	TONGS						
16.	1800		RI	NORWEST	SHOOTERS						
17.			RUN	AND	SET	139.7 mm	BAKER	MODEL 'S' BP	@ 1490m		
18.			PT	TO	7MPa						
19.			DUMP	BAIL	8m	CEMENT					
20.			RUN	AND	SET	139.7mm	BAKER	MODEL 'S' BP	@ 420m		
21.			PT	TO	7MPa						
22.			DUMP	BAIL	8m	CEMENT					
23.			REMOVE	BOP'S	AND	TBG	SPOOL				
24.			ATTEMPT	TO	DEEIPEN	SUMP	- SET	10m	CEMENT PLUG		
25.										AT SURFACE	
26.											
27.											
28.											
			</								

Note: Flow rate and other data may be estimates only and are subject to correction as more information becomes available.

29. Operations Forecast SURFACE ABANDONMENT AFTER LOGISTICS MOVES IN
 30.

Summary of Production/Injection Volumes for Test Interval since Last Report

		Cumulative	
31. Oil/Cond. Produced	m ³	m ³	
32. Water Produced	m ³	19.06 m ³	
33. Total Load Injected	m ³	7.41 m ³	
34. Net Liquid Remaining		m ³	
35. Gas Produced	m ³	m ³	
36. Gas Flared (Yes/No)	Flare Permit - Limit	m ³	
	- Max. Rate	m ³ /d	

FINAL REPORT

Reported by: BOB ATKINS
 Recorded in Office By: GRANT LYND Local: 4988
 Date: 24 MAR 90

SUBSURFACE PRESSURE MEASUREMENTS

1

1. BASIC DATA

COMPANY : SHELL CANADA LIMITED
 ADDRESS : 400 - 4th AVE S.W. CALGARY
 FIELD & POOL : UNDEFINED / SLAVE POINT
 TYPE OF TEST : PRE FLEX
 PROD. INT. mCF: 1545.56- 1549.56
 ELEV.(OF),m : 410.66 (KB),m : 416.1
 KR - CF,m : 5.44
 POOL DATUM (SUBSEA),m :

WELL NAME : SHELL DELIBETA B-12
 LOCATION : B-12
 STATUS : GAS
 DATE OF TEST : MAR. 21/90
 PROD. THROUGH : 73.0mm TUBING
 MID-POINT OF PROD. INT.mCF : 1547.56
 TUBING : 73.0 mm @ mCF
 DATUM DEPTH,mCF :

2. STATIC TEST

TUBING PRESSURE, kPag : 724
 CASING PRESSURE, kPag :
 RUN DEPTH, mCF : SURFACE
 B.H. TEMP. (C) :

SHUT-IN DATE :
 DATE ON BOT : MAR. 21/90 @ 09:47
 DATE OFF BOT : MAR. 21/90 @ 10:01
 SURFACE TEMP. :

TOP RECORDER

SERIAL NO: 23985 RANGE: 0 TO 20684 kPa CLOCK RANGE: 3 HRS
 DATE OF LAST CALIBRATION (Y-M-D): 90 - 3 - 13 EQUATION: $418.071 * D + (-13.486)$

DATE	ACC.TIME hours	TIME hr-min	DEFLECTION mm	CALC PRESS kPag	F-FC kPag	PRESSURE kPag
MAR.21/90	0.00	10:01	1.590	651.2	12.7	663.9

BOTTOM RECORDER

SERIAL NO: 23986 RANGE: 0 TO 20684 kPa CLOCK RANGE: 3 HRS
 DATE OF LAST CALIBRATION (Y-M-D): 90 - 3 - 13 EQUATION: $427.016 * D + (11.021)$

DATE	ACC.TIME hours	TIME hr-min	DEFLECTION mm	CALC PRESS kPag	F-FC kPag	PRESSURE kPag
MAR.21/90	0.00	10:01	1.610	698.5	-6.4	692.1

REMARKS :

SURVEY COMPANY : RAPID WIRELINE SERVICES LTD.
 INTERPRETATION BY : P.D.G. SERVICES LTD.

1. BASIC DATA

COMPANY : SHELL CANADA LIMITED
 ADDRESS : 400 - 4th AVE S.W. CALGARY
 FIELD & POOL : UNDEFINED / SLAVE POINT
 TYPE OF TEST : 36hr BUILDUP
 PROD. INT. mCF : 1545.56- 1549.56
 ELEV.(CF),m : 410.66 (F.B),m : 416.1
 KB - CF,m : 5.44
 POOL DATUM (SUBSEA),m :

WELL NAME : SHELL CELIBETA B-12
 LOCATION : B-12
 STATUS : GAS
 DATE OF TEST : MAR. 21/90 TO MAR. 22/90
 PROD. THROUGH : 73.0mm TUBING
 MID-POINT OF PROD. INT.mCF : 1547.56
 TUBING : 73.0 mm @ mCF
 DATUM DEPTH,mCF :

2. STATIC TEST

TUBING PRESSURE, kPag : 724
 CASING PRESSURE, kPag :
 RUN DEPTH, mCF : 1512.2
 B.H. TEMP. (C) : 108.9

SHUT-IN DATE : MAR. 21/90 @ 11:05
 DATE ON BOT : MAR. 21/90 @ 11:05
 DATE OFF BOT : MAR. 22/90 @ 22:55
 SURFACE TEMP. :

TOP RECORDER

SERIAL NO: 23985 RANGE: 0 TO 20684 kPa CLOCK RANGE: 90 HRS
 DATE OF LAST CALIBRATION (Y-M-D): 90 - 3 - 13 EQUATION: $418.071 * D + (-13.486)$

DATE	ACC.TIME hours	TIME hr-min	DEFLECTION mm	CALC PRESS kPag	F-FC kPag	PRESSURE kPag
------	-------------------	----------------	------------------	--------------------	--------------	------------------

RECORDERS ON BOTTOM @ 11:05 MAR 21/90
 WELL SHUT IN

MAR.21/90	0.00	11:05	34.186	14278.7	-9.3	14269.4
	0.25	11:20	34.189	14279.9	-9.3	14270.6
	0.50	11:35	34.193	14281.6	-9.3	14272.3
	0.75	11:50	34.195	14282.5	-9.3	14273.2
	1.00	12:05	34.198	14283.7	-9.3	14274.4
	1.25	12:20	34.200	14284.5	-9.3	14275.2
	1.50	12:35	34.200	14284.5	-9.3	14275.2
	1.75	12:50	34.200	14284.5	-9.3	14275.2
	2.00	13:05	34.200	14284.5	-9.3	14275.2
	2.50	13:35	34.200	14284.5	-9.3	14275.2
	3.00	14:05	34.200	14284.5	-9.3	14275.2
	3.50	14:35	34.203	14285.8	-9.3	14276.5
	4.00	15:05	34.203	14285.8	-9.3	14276.5
	5.00	16:05	34.204	14286.2	-9.3	14276.9
	6.00	17:05	34.204	14286.2	-9.3	14276.9
	7.00	18:05	34.204	14286.2	-9.3	14276.9
	8.00	19:05	34.204	14286.2	-9.3	14276.9
	9.00	20:05	34.201	14285.0	-9.3	14275.7
	10.00	21:05	34.199	14284.1	-9.3	14274.8
	11.00	22:05	34.195	14282.5	-9.3	14273.2
MAR.21/90	12.00	23:05	34.195	14282.5	-9.3	14273.2

REMARKS :

FLUID @ 185 m.KB WHEN RUN

SUBSURFACE PRESSURE MEASUREMENTS

2

COMPANY : SHELL CANADA LIMITED
 WELL NAME : SHELL DELIBETA B-12
 LOCATION : B-12

TYPE OF TEST : 36hr BUILDUP
 DATE OF TEST : MAR. 21/90 TO MAR. 22/90
 RUN DEPTH mCF : 1512.2

TOP RECORDER

SERIAL NO: 23985 RANGE: 0 TO 20684 kPa CLOCK RANGE: 90 HRS
 DATE OF LAST CALIBRATION (Y-M-D): 90 - 3 - 13 EQUATION: $418.071 * D + (-13.486)$

DATE	ACC. TIME hours	TIME hr min	DEFLECTION mm	CALC PRESS kPag	P-FC kPag	PRESSURE kPag
MAR. 22/90	13.00	00:05	34.193	14281.6	-9.3	14272.3
	14.00	01:05	34.193	14281.6	-9.3	14272.3
	15.00	02:05	34.193	14281.6	-9.3	14272.3
	16.00	03:05	34.189	14279.9	-9.3	14270.6
	17.00	04:05	34.186	14278.7	-9.3	14269.4
	18.00	05:05	34.181	14276.6	-9.3	14267.3
	19.00	06:05	34.177	14274.9	-9.3	14265.6
	20.00	07:05	34.171	14272.4	-9.3	14263.1
	21.00	08:05	34.171	14272.4	-9.3	14263.1
	22.00	09:05	34.171	14272.4	-9.3	14263.1
	23.00	10:05	34.166	14270.3	-9.3	14261.0
	24.00	11:05	34.161	14268.2	-9.3	14258.8
	25.00	12:05	34.159	14267.4	-9.3	14258.0
	26.00	13:05	34.156	14266.2	-9.3	14256.7
	27.00	14:05	34.153	14264.9	-9.3	14255.5
	28.00	15:05	34.153	14264.9	-9.3	14255.5
	29.00	16:05	34.153	14264.9	-9.3	14255.5
	30.00	17:05	34.153	14264.9	-9.3	14255.5
	31.00	18:05	34.153	14264.9	-9.3	14255.5
	32.00	19:05	34.153	14264.9	-9.3	14255.5
	33.00	20:05	34.153	14264.9	-9.3	14255.5
	34.00	21:05	34.153	14264.9	-9.3	14255.5
	35.00	22:05	34.153	14264.9	-9.3	14255.5
MAR. 22/90	35.83	22:55	34.153	14264.9	-9.3	14255.5

RECORDERS OFF BOTTOM @ 22:55 MAR 22/90

1. BASIC DATA

COMPANY : SHELL CANADA LIMITED
 ADDRESS : 400 - 4th AVE S.W. CALGARY
 FIELD & POOL : UNDEFINED / SLAVE POINT
 TYPE OF TEST : 36hr BUILDUP
 PROD. INT. mCF : 1545.56- 1549.56
 ELEV. (OF), m : 410.66 (KB), m : 416.1
 KB - CF, m : 5.44
 POOL DATUM (SUBSEA), m :

WELL NAME : SHELL DELIBETA B-12
 LOCATION : B-12
 STATUS : GAS
 DATE OF TEST : MAR. 21/90 TO MAR. 22/90
 PROD. THROUGH : 73.0mm TUBING
 MID-POINT OF PROD. INT. mCF : 1547.56
 TUBING : 73.0 mm @ mCF
 DATUM DEPTH, mCF :

2. STATIC TEST

TUBING PRESSURE, kPag : 724
 CASING PRESSURE, kPag :
 RUN DEPTH, mCF : 1514.0
 B.H. TEMP. (C) : 108.9

SHUT-IN DATE : MAR. 21/90 @ 11:05
 DATE ON BOT : MAR. 21/90 @ 11:05
 DATE OFF BOT : MAR. 22/90 @ 22:55
 SURFACE TEMP. :

BOTTOM RECORDER

SERIAL NO: 23986 RANGE: 0 TO 20684 kPa CLOCK RANGE: 90 HRS
 DATE OF LAST CALIBRATION (Y-M-D): 90 - 3 - 13 EQUATION: 427.016 *D+(11.021)

DATE	ACC.TIME hours	TIME hr-min	DEFLECTION mm	CALC PRESS kPag	P-FC kPag	PRESSURE kPag
------	-------------------	----------------	------------------	--------------------	--------------	------------------

RECORDERS ON BOTTOM @ 11:05 MAR 21/90
 WELL SHUT IN

MAR.21/90	0.00	11:05	33.385	14267.0	-15.1	14251.9
	0.25	11:20	33.389	14268.7	-15.1	14253.6
	0.50	11:35	33.393	14270.4	-15.1	14255.3
	0.75	11:50	33.396	14271.7	-15.1	14256.5
	1.00	12:05	33.399	14272.9	-15.1	14257.8
	1.25	12:20	33.401	14273.8	-15.1	14258.7
	1.50	12:35	33.401	14273.8	-15.1	14258.7
	1.75	12:50	33.401	14273.8	-15.1	14258.7
	2.00	13:05	33.401	14273.8	-15.1	14258.7
	2.50	13:35	33.401	14273.8	-15.1	14258.7
	3.00	14:05	33.401	14273.8	-15.1	14258.7
	3.50	14:35	33.401	14273.8	-15.1	14258.7
	4.00	15:05	33.403	14274.6	-15.1	14259.5
	5.00	16:05	33.404	14275.1	-15.1	14260.0
	6.00	17:05	33.409	14277.2	-15.1	14262.1
	7.00	18:05	33.414	14279.3	-15.1	14264.2
	8.00	19:05	33.414	14279.3	-15.1	14264.2
	9.00	20:05	33.414	14279.3	-15.1	14264.2
	10.00	21:05	33.414	14279.3	-15.1	14264.2
	11.00	22:05	33.414	14279.3	-15.1	14264.2
MAR.21/90	12.00	23:05	33.416	14280.2	-15.1	14265.1

REMARKS :

FLUID @ 165 m.KB WHEN RUN

SUBSURFACE PRESSURE MEASUREMENTS

2

COMPANY : SHELL CANADA LIMITED
WELL NAME : SHELL CELIBETA B-12
LOCATION : B-12

TYPE OF TEST : 36hr BUILDUP
DATE OF TEST : MAR. 21/90 TO MAR. 22/90
RUN DEPTH mOF : 1514.0

BOTTOM RECORDER

SERIAL NO: 23986 RANGE: 0 TO 20684 kPa CLOCK RANGE: 90 HRS
DATE OF LAST CALIBRATION (Y-M-D): 90 - 3 - 13 EQUATION: $427.016 * D + (11.021)$

DATE	ACC.TIME hours	TIME hr-min	DEFLECTION mm	CALC PRESS kPag	P-PC kPag	PRESSURE kPag
MAR.22/90	13.00	00:05	33.419	14281.5	-15.1	14266.4
	14.00	01:05	33.421	14282.3	-15.1	14267.2
	15.00	02:05	33.421	14282.3	-15.1	14267.2
	16.00	03:05	33.421	14282.3	-15.1	14267.2
	17.00	04:05	33.419	14281.5	-15.1	14266.4
	18.00	05:05	33.416	14280.2	-15.1	14265.1
	19.00	06:05	33.413	14278.9	-15.1	14263.8
	20.00	07:05	33.413	14278.9	-15.1	14263.8
	21.00	08:05	33.413	14278.9	-15.1	14263.8
	22.00	09:05	33.410	14277.6	-15.1	14262.5
	23.00	10:05	33.406	14275.9	-15.1	14260.8
	24.00	11:05	33.406	14275.9	-15.1	14260.8
	25.00	12:05	33.406	14275.9	-15.1	14260.8
	26.00	13:05	33.406	14275.9	-15.1	14260.8
	27.00	14:05	33.404	14275.1	-15.1	14260.0
	28.00	15:05	33.404	14275.1	-15.1	14260.0
	29.00	16:05	33.404	14275.1	-15.1	14260.0
	30.00	17:05	33.404	14275.1	-15.1	14260.0
	31.00	18:05	33.404	14275.1	-15.1	14260.0
	32.00	19:05	33.404	14275.1	-15.1	14260.0
	33.00	20:05	33.409	14277.2	-15.1	14262.1
	34.00	21:05	33.409	14277.2	-15.1	14262.1
	35.00	22:05	33.409	14277.2	-15.1	14262.1
	35.83	22:55	33.409	14277.2	-15.1	14262.1

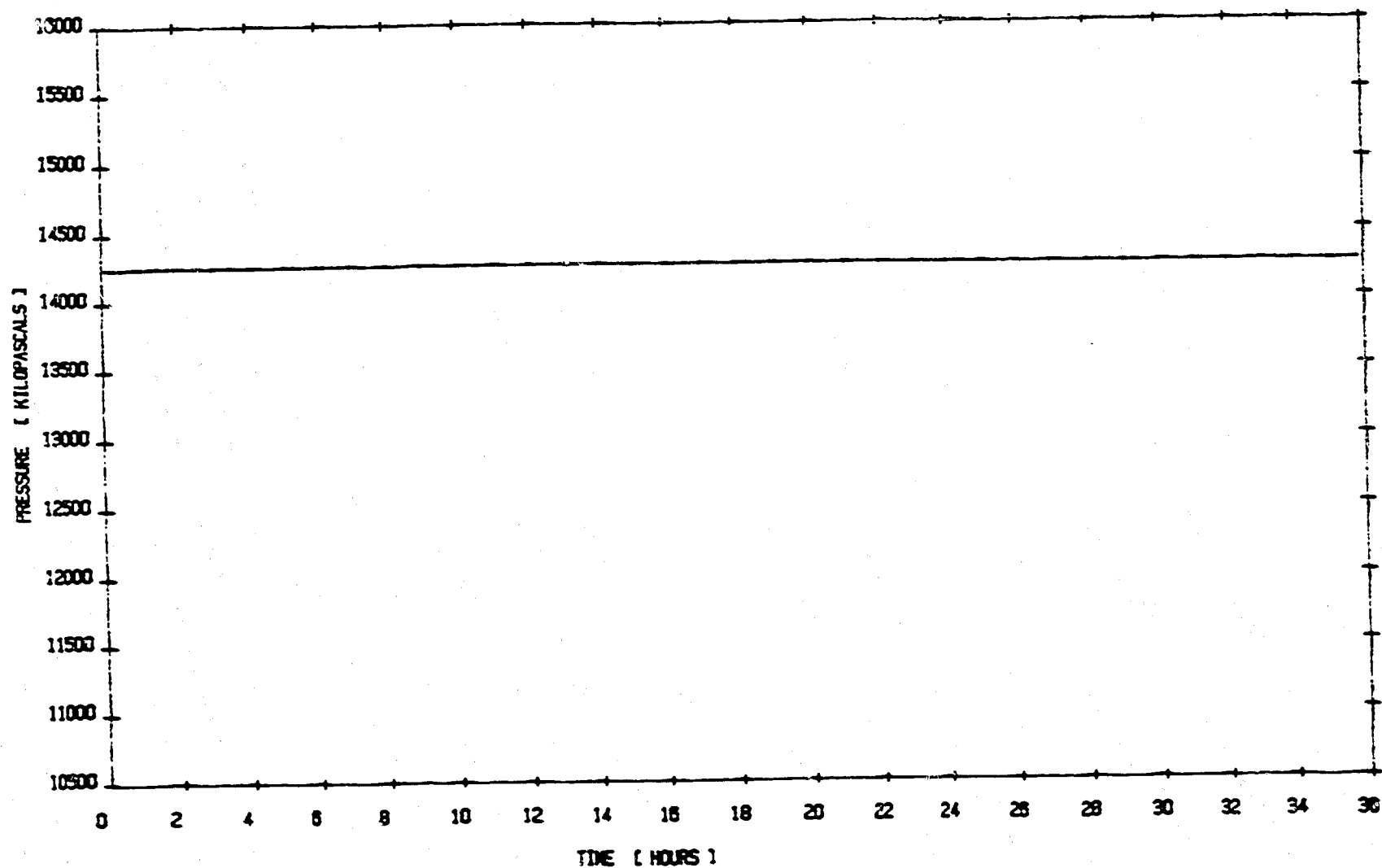
RECORDERS OFF BOTTOM @ 22:55 MAR 22/90

TIME VERSUS PRESSURE

SHELL CELIBETA 8-12
B-12

GAUGE #23986

36hr BUILDUP
90-03-21 TO 90-03-22



SUBSURFACE PRESSURE MEASUREMENTS

1

1. BASIC DATA

COMPANY : SHELL CANADA LIMITED
 ADDRESS : 400 - 4th AVE S.W. CALGARY
 FIELD & POOL : UNDEFINED / SLAVE POINT
 TYPE OF TEST : POST FLEX
 PROD. INT. mCF : 1545.56 - 1549.56
 ELEV.(CF),m : 410.66 (KB),m : 416.1
 KB - CF,m : 5.44
 POOL DATUM (SUBSEA),m :

WELL NAME : SHELL CELIBETA B-12
 LOCATION : B-12
 STATUS : GAS
 DATE OF TEST : MAR. 22/90
 PROD. THROUGH : 73.0mm TUBING
 MID-POINT OF PROD. INT.mCF : 1547.56
 TUBING : 73.0 mm @ mCF
 DATUM DEPTH,mCF :

2. STATIC TEST

TUBING PRESSURE, kPag : 3427
 CASING PRESSURE, kPag :
 RUN DEPTH, mCF : SURFACE
 B.H. TEMP. (C) :

SHUT-IN DATE : MAR. 21/90 @ 11:05
 DATE ON BOT : MAR. 22/90 @ 12:05
 DATE OFF BOT : MAR. 22/90 @ 12:10
 SURFACE TEMP. :

TOP RECORDER

SERIAL NO: 23985 RANGE: 0 TO 20684 kPa CLOCK RANGE: 3 HRS
 DATE OF LAST CALIBRATION (Y-M-D): 90 - 3 - 13 EQUATION: $4.0071 * D + (-13.486)$

DATE	ACC.TIME hours	TIME hr-min	DEFLECTION mm	CALC PRESS kPag	P-FC kPag	PRESSURE kPag
MAR.22/90	0.00	12:10	7.740	3222.4	9.3	3231.8

BOTTOM RECORDER

SERIAL NO: 23986 RANGE: 0 TO 20684 kPa CLOCK RANGE: 3 HRS
 DATE OF LAST CALIBRATION (Y-M-D): 90 - 3 - 13 EQUATION: $427.016 * D + (11.021)$

DATE	ACC.TIME hours	TIME hr-min	DEFLECTION mm	CALC PRESS kPag	P-FC kPag	PRESSURE kPag
MAR.22/90	0.00	12:10	7.550	3235.0	10.5	3245.5

REMARKS :

SURVEY COMPANY : RAPID WIRELINE SERVICES LTD.
 INTERPRETATION BY : P.D.G. SERVICES LTD.

GEOLOGICAL FORMATION TOPS

KB:

Sample

Wireline Logs

Pleistocene

Mississippian

Devonian

* Ds Slave Point

** Dpq Presqu'ile

** Dh Hume

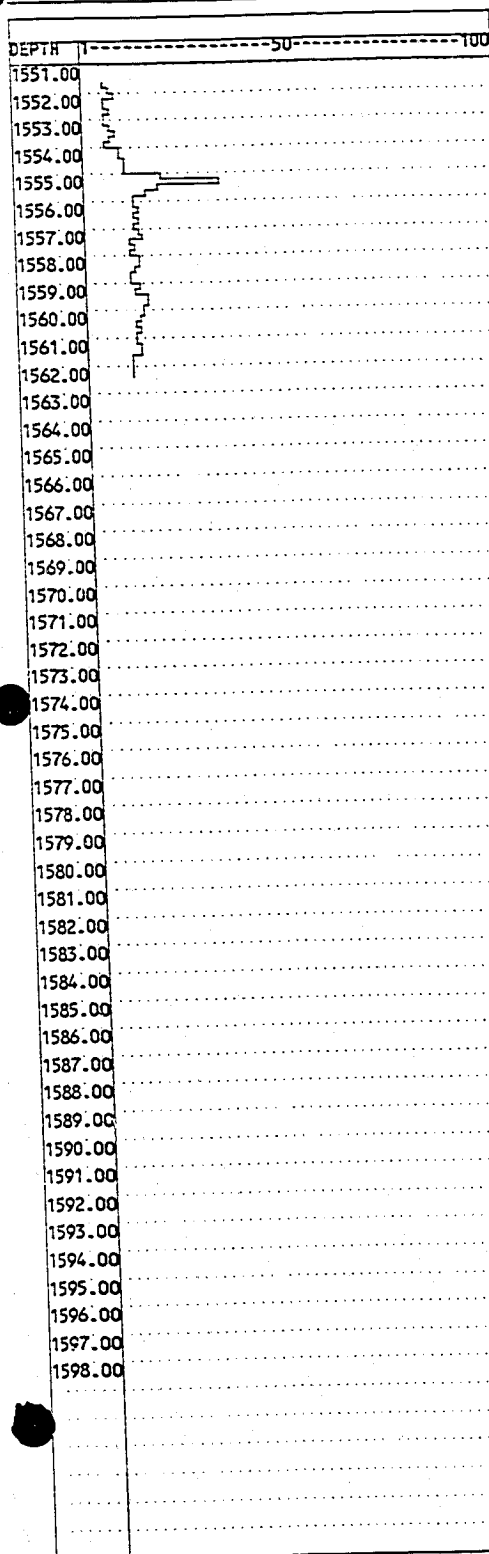
Precambrian

Total Depth

CORE SUMMARY

CORE DETAIL ROP GRAPH

WELLNAME: Shell Celibeta B-12 LOCATION: 8-12:60o10'N122o10'W FIELD/AREA: Celibeta C.W.O. #: WCB62
 DATE: 90/02/22 TIME: 1800 EXAMINER: Peter Thomas GRND: 410.66
 FORMATION: Slave Pt. CORE NO.: 1&2 INTERVAL: 1551.60 TO 1562.40 RECOVERY: 10.7 m K.B.: 416.14
 TYPE SDWLL SAMPLER: N/A SDWLL REC. - NO. OF SHOTS: N/A NO. RECOV: N/A CORE SIZE: 111mm
 NO. OF BOXES: 9



CORE DETAIL REPORT

WELLNAME: Shell Celibeta B-12

LOCATION: B-12:60o10'N122o10'W FIELD/AREA: Celibeta C.W.O. #: WCB62

GRND: 410.66

DATE: 90/02/22

TIME: 1800

EXAMINER: Peter Thomas

K.B.: 416.14

FORMATION: Slave Pt.

CORE NO.: 182

INTERVAL: 1551.60 TO 1562.40 RECOVERY: 10.7 m

CORE SIZE: 111mm

TYPE SDWLL SAMPLER: N/A

SDWLL REC. - NO. OF SHOTS: N/A NO. RECOV: N/A

NO. OF BOXES: 9

INTERVAL	ROCK DESCRIPTION	SHOWS		FLUOR.		CUT		FLUORAVG.	#SYM	COMMENTS & FRAC/DIP STRUCTURES
		% HC	ODOR	% INTENCL	COLOR	FLUOR	AVG.			
	Core #1 1551.6m - 1555.4m Slave Pt. cut 3.80m rec. 3.70m 2.75hrs.									
1551.6	DOL DK GRY,S&P,F-MED XL,I-1/III,SL CALRUS,TR ARG MAT COTG XL IP(ASPHC?) DOL REPL,TR FOSS REPL?,TR STYL TR c POR,FR d POR (VUG),TR FRAC POR, VUG FLD W XLN QTZ&DOL&TR PYR,OPEN FRAC LINED W XLN MIN(QTZ,DOL,&TR PYR , TR DD ASPHC W POR,NO FLUOR,NO CUT	0	0	0	0	0	0	0	X	FRACTURES:1551.75-1551.87 (Vert) 1552.67-1552.85 (Vert) 1553.20-1553.40 (Vert) Occasional traces closed vertical fractures; Minor open horizontal fractures (possible large vugs?)
1554.0	DOL DK GRY,VF-F XL,I-1/III,SL CALRUSO DOL REPL FEATURE,TR ARG MAT COTG XL IP(POSS ASPHC?),TR SCAT VUG,VUG FLD /LINED W XLN MIN(QTZ,DOL,&TR PYR), TR c&TR d POR,NO FLUOR,NO CUT	0	0	0	0	0	0	0	X	
1554.35	DOL DK GRY,VF-F,OCC MED XL,I-1/III, TR CALRUS,TR ARG MAT COTG XL IP(POSS ASPHC?),COM VUG,VUG FLD W WH XLN MIN (DOL,QTZ&TR PYR),TR FRAC?,TR STYL, TR FOSS REPL FEATURE, NO FLUOR,NO CUT	0	0	0	0	0	0	0	X	Trace horizontal fractures (pos- sible large vugs?). Core milled at site of fractures?
1555.30	End core #1 Note: heavy mud cake on all of core. Core #2 1555.4-1562.4 Slave Point cut 7.0m rec. 7.0m 7.0hrs Note!!: top of core#2 fits & orients to the bottom of core #1.									
1555.3	DOL DK GRY,VF-F(OCC MED) XLN MTRX W COM-ABT FOSS FRAG(STROM,CORL?),I/III -I,(FOSS GRST GRAD BDST),DOL REPL FEATURES,SPTY PR d(VUG)POR,TR b(PP) POR,VUG LINED W XLN DOL&QTZ&TR PYR IP,TR DD ASPH(PYBIT?) ASSOC W POR, SL CALRUS,ARG MAT COTG XL IP(ASPH?), NO FLUOR,NO CUT	0	0	0	0	0	0	0	X	VERT FRACTURES (CLOSED & OPEN FROM 1557.5-1562.4). FRACTURES LINED & OCCASIONALLY INFILLED WITH QTZ,PYR,& DOL CRYSTALS.
1557.75	DOL DK GRY,VF-F(OCC TR MED) XL,I/III -I(GRST),MNR FOSS FRAG,TR DOL REPL	0	0	0	0	0	0	0	X	COMMON VERTICAL FRACTURES AS ABOVE

CORE DETAIL REPORT

WELLNAME: She'll Celibeta B-12

LOCATION: B-12:60o10'N122o10'W FIELD/AREA: Celibeta C.W.O. #: WCB62

DATE: 90/02/22

TIME: 1800

EXAMINER: Peter Thomas

GRND: 410.66

K.B.: 416.14

FORMATION: Slave Pt.

CORE NO.: 1&2

INTERVAL: 1551.60 TO 1562.40 RECOVERY: 10.7 m

CORE SIZE: 111mm

TYPE SDWLL SAMPLER: N/A

SDWLL REC. - NO. OF SHOTS: N/A NO. RECOV: N/A

NO. OF BOXES: 9

[illegible]

SHELL CELIBETA B-12

60-01-13.42-122 17 42.71

ANALYSIS OF CORES #1 AND #2

SLAVE POINT FORMATION





SHELL CELIBETA B-12

60-01-13.42-122 17 42.71

ANALYSIS OF CORES #1 AND #2

SLAVE POINT FORMATION

prepared for

SHELL CANADA LIMITED

File #90-GC-103

March 26, 1990

GEOTECHnical resources ltd.

4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3 (403) 230-4128
TELEX 03-821172 ENVOY 100: TELEX GEO FAX: (403) 230-4370

SHELL CANADA LIMITED

SHELL CELIBETA B-12

60-01-13.42-122 17 42.71

File #90-GC-103

CORE INTERVALS	RECOVERY/CUT	FORMATION	# OF BOXES
1) 1551.60-1555.40 m	3.80/3.80 m	Slave Point	3
2) 1555.40-1562.58 m	7.18/7.18 m	Slave Point	6

Coring Diameter: 111 mm

SAMPLE PREPARATION AND CLEANING

Sample Cutting Fluid: Water
 Solvent: Toluene
 Extraction Equipment: Vapour Phase
 Extraction Time: 14 days
 Drying Equipment: Convection Oven
 Drying Time: 24 hours
 Drying Temperature: 150°C

ANALYSIS

Grain Volume measured by: Boyle's Law Helium Porosimeter
 Bulk Volume measured by: Mercury/Caliper
 No fluid saturations requested.

Plugs are 38.1 mm diameter.

"x" P denotes preliminary sample.

SHELL CANADA LTD.

SHELL CELIBETA B-12
60-01-13.42-122 17 42.71

File #90-GC-103

GEOLOGIST: Janet Sawicki

Core #1: 1551.60-1555.40 m
Recovery: 3.80 m
Formation: Slave Point

Core #2: 1555.40-1562.58 m
Recovery: 7.18 m
Formation: Slave Point

<u>Depth</u>	<u>Lithology</u>	<u>Description</u>
Core #1		
1551.60-1554.07 m	Dolostone	- dark grey - hard - very fine to fine crystalline, slightly sucrosic - highly recrystallized - numerous pinpoint to small and occasional larger vugs, produced by leaching of biostromes and fossils - vugs are often concentrated into bands and patches - larger vugs may be isolated and are lined by well developed medium to very coarse crystalline drusy dolomite - local vugs completely filled by coarse crystalline dolomited - black abundant intercrystalline pyrobitumen - occasional pyrite patches - rare stylolites - scattered short microfractures, lined with pyrobitumen and locally connecting vugs - <u>poor to fair visible intercrystalline, fair vuggy porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>
1554.07-1554.40 m	Dolostone	- dark grey - hard - fine to medium crystalline - massive with rare scattered pinpoint vugs and small vugs lined with medium to coarse crystalline drusy dolomite - abundant intercrystalline pyrobitumen - <u>no to poor visible intercrystalline porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>

SHELL CELIBETA B-12
60-01-13.42-122 17 42.71

Page 2

<u>Depth</u>	<u>Lithology</u>	<u>Description</u>
1554.40-1555.40 m	Dolostone	- dark grey - hard - fine to medium crystalline - fossiliferous with highly re-crystallized ghosts of branching stromatoporoids and occasional bulbous stromatoporoids - small scattered vugs, often isolated, partially to nearly completely lined by drusy dolomite - scattered short vertical fractures, completely infilled by dolomite - vugs and re-crystallized fossils decrease in abundance towards base - abundant intercrystalline pyrobitumen - scattered stylolites - <u>no to poor visible intercrystalline, vuggy porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>
Core #2		
1555.40-1557.65 m	Dolostone	- dark grey - fine to medium crystalline, slight local sucrosic texture - fossiliferous floatstone to rudstone, often framework supported, consisting of branching stromatoporoids, small and large bulbous stromatoporoids and occasional tabular stromatoporoids - rare gastropods - size and abundance of fossils decreases towards base and in local beds - fossils are occasionally weakly to locally strongly leached, producing scattered pinpoint vugs and smaller vugs, occasional larger isolated vugs - larger vugs often partially lined by coarse crystalline drusy dolomite - abundant intercrystalline pyrobitumen - local short vertical fractures, partially open - <u>poor visible intercrystalline, poor to fair vuggy porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>

SHELL CELIBETA B-12
60-01-13.42-122 17 42.71

Page 3

<u>Depth</u>	<u>Lithology</u>	<u>Description</u>
1557.65-1559.13 m	Dolostone	- dark grey - hard - fine to coarse crystalline - highly re-crystallized - scattered branching stromatoporoid fragments - local bands of strongly leached horizontally aligned tabular stromatoporoids, producing vugs that have been subsequently completely to partially infilled by coarse crystalline dolomite and scattered pyrite framboids - local patches sparry calcite - abundant intercrystalline pyrobitumen - scattered vertical to subvertical open fractures, occasional shorter vertical fractures infilled by dolomite, or healed locally - <u>no to poor visible intercrystalline porosity, local fair visible vuggy porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>
1559.13-1561.26 m	Dolostone	- dark grey - hard - fine to coarse crystalline - highly re-crystallized - occasional re-crystallized ghosts of branching stromatoporoids (<u>Amphipora</u> and <u>Stachyodes</u>), rare gastropods, often concentrated in beds - rare leached and re-crystallized tabular stromatoporoids - rare isolated vugs (leached bulbous stromatoporoids), partially to completely filled by coarse crystalline drusy dolomite - local patches pyrite - scattered vertical fractures, open locally, closed otherwise or infilled by dolomite - rare stylolites - abundant intercrystalline pyrobitumen - <u>no to poor visible intercrystalline and vuggy porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>

SHELL CELIBETA B-12
60-01-13.42-122 17 42.71

Page 4

<u>Depth</u>	<u>Lithology</u>	<u>Description</u>
1561.26-1562.58 m	Dolostone	- dark grey - hard - fine to coarse crystalline - highly re-crystallized - fossiliferous with abundant ghosts of <u>Amphipora</u> and <u>Stachyodes</u> locally forming grainstone - scattered partially leached bulbous stromatoporoids and stromatoporoid fragments forming local patches of small vugs - vugs are lined by medium to coarse crystalline drusy dolomite - rare stylolites - scattered, open, subvertical to high angle fractures, often aligned parallel - abundant intercrystalline pyrobitumen - <u>no to poor visible intercrystalline, vuggy porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>

COMPANY: SHELL CANADA LIMITED

WELL NAME: SHELL CELIBETA B-12

LOCATION: 60-01-13.42-122 17 42.71



DATE: MAR 23, 1990

FILE: 90-GC-103

SPECTRAL GAMMA RAY

0 Potassium
1 % / CD

0 Uranium
2 ppm / CD

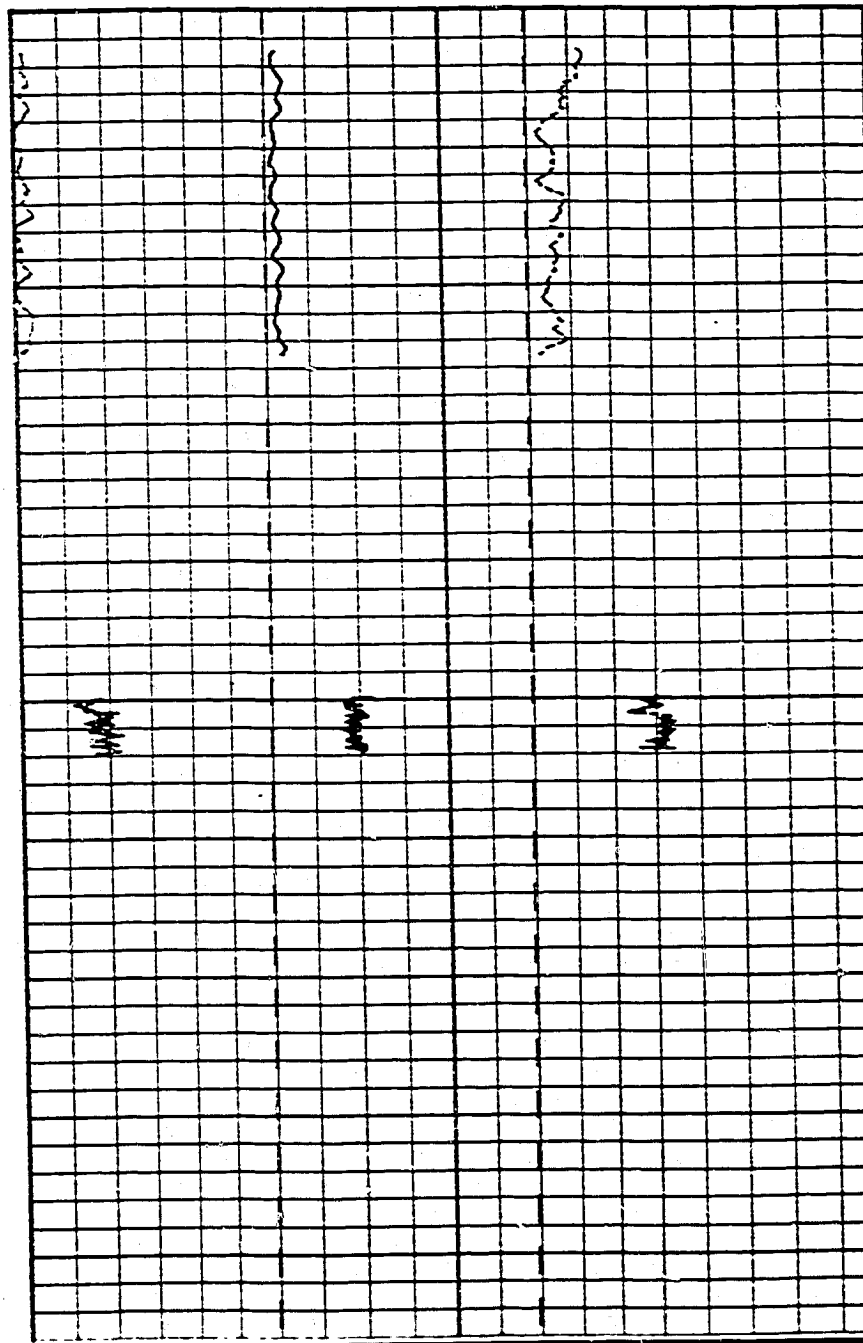
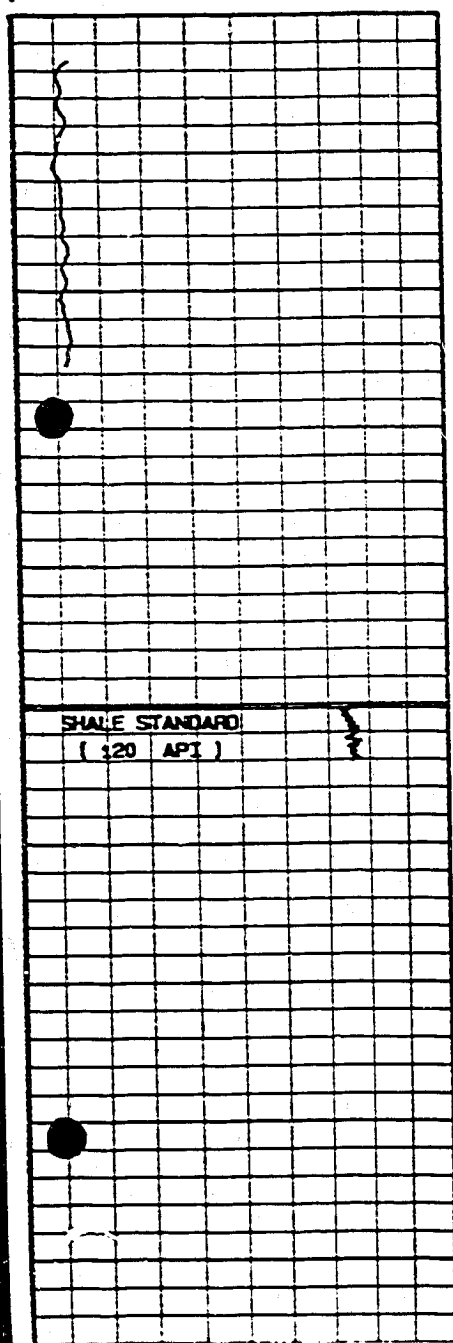
0 Thorium
3 ppm / CD

0 GR API 150

1550

1575

SHALE STANDARD
(120 API)



COMPANY SHELL CANADA LIMITED

COMPANY: SHELL CANADA LIMITED

WELL NAME: 60-01-SHELL CELIBETA B-12

LOCATION: 60-01-13.42-122 17 42.71



DATE: MAR 23 1990
DATE: MAR 23 1990
FILE: 90-GC-103
FILE: 90-GC-103

TECHLOG

HORIZONTAL PERMEABILITY

SLAVE POINT FORMATION

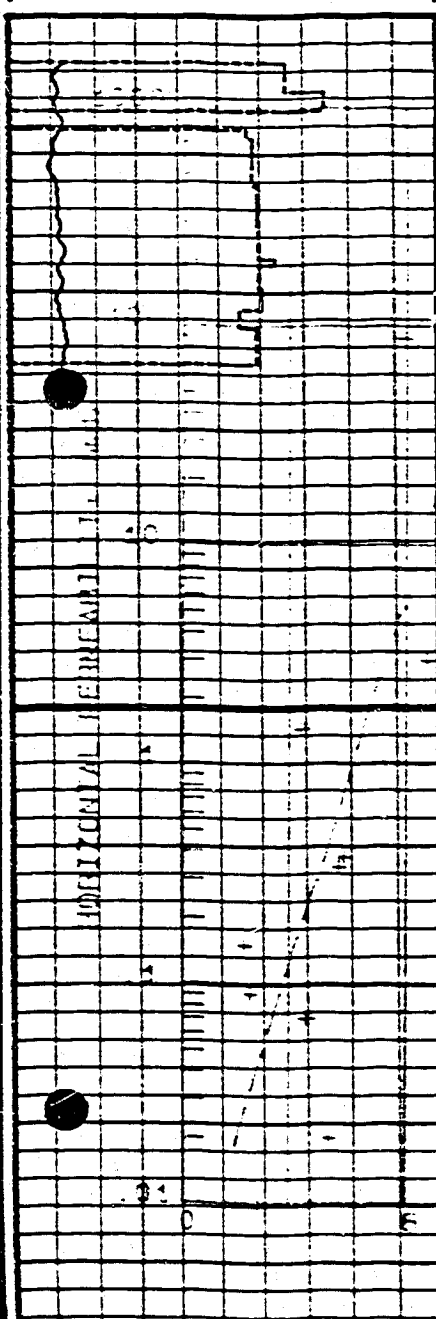
DEPTH: 1551.5 m to 1562.58 m

30 BOYLE'S LAW $\phi \times 0$

GR 150

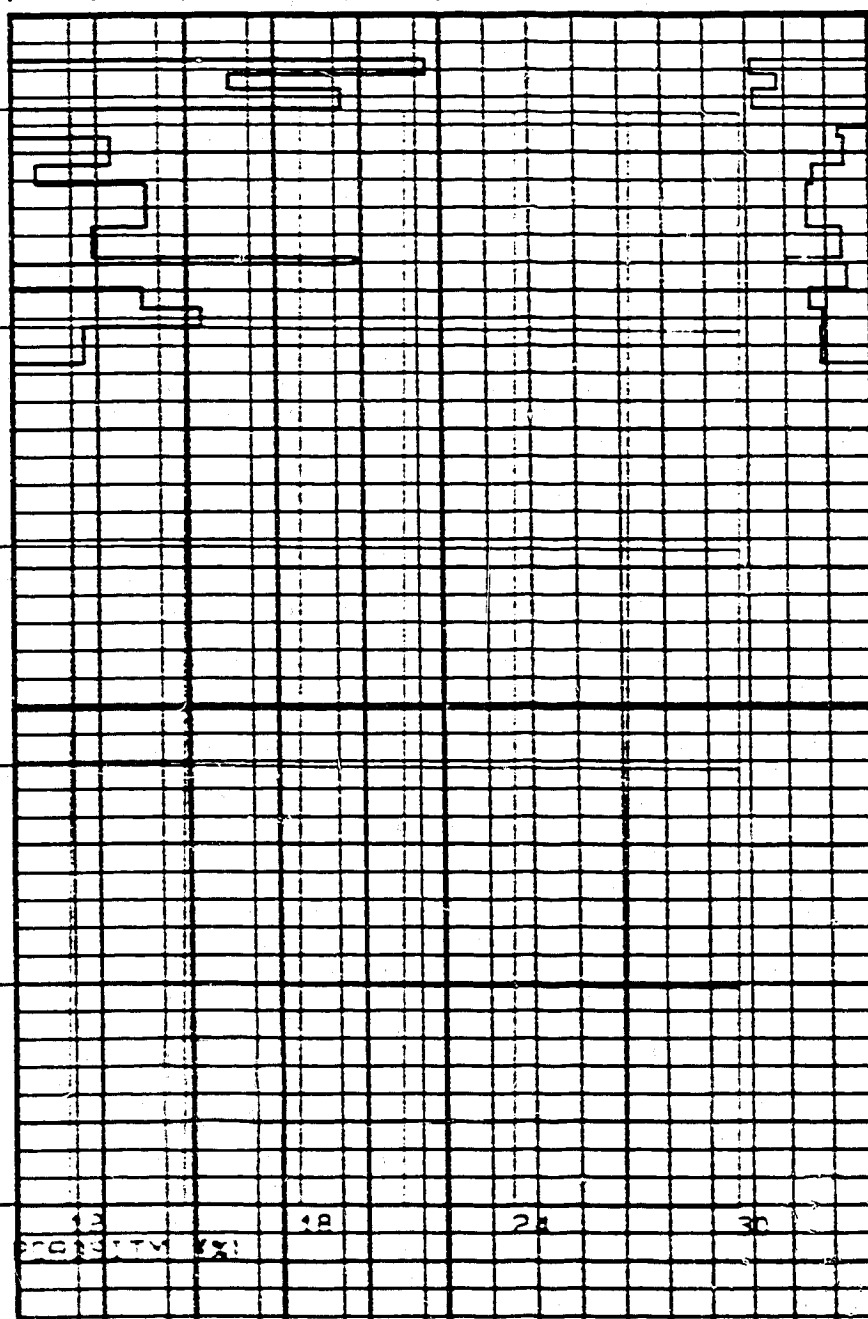
LOCATION: $L_{90} (Kh) = -2.5669 + .5534 * (Ph)$

2500 Grain Ben. 3000 EFFICIENCY 0.4 Kh = 1000



1550

1575



PERMEABILITY (%) 13 18 24 30

COMPANY: SHELL CANADA LIMITED

WELL NAME: SHELL CELIBETA B-12

LOCATION: 60-01-13.42-122 17 42.71

GEOTECH

DATE: MAR 23, 1990

FILE: 90-6C-103

POROSITY

VS

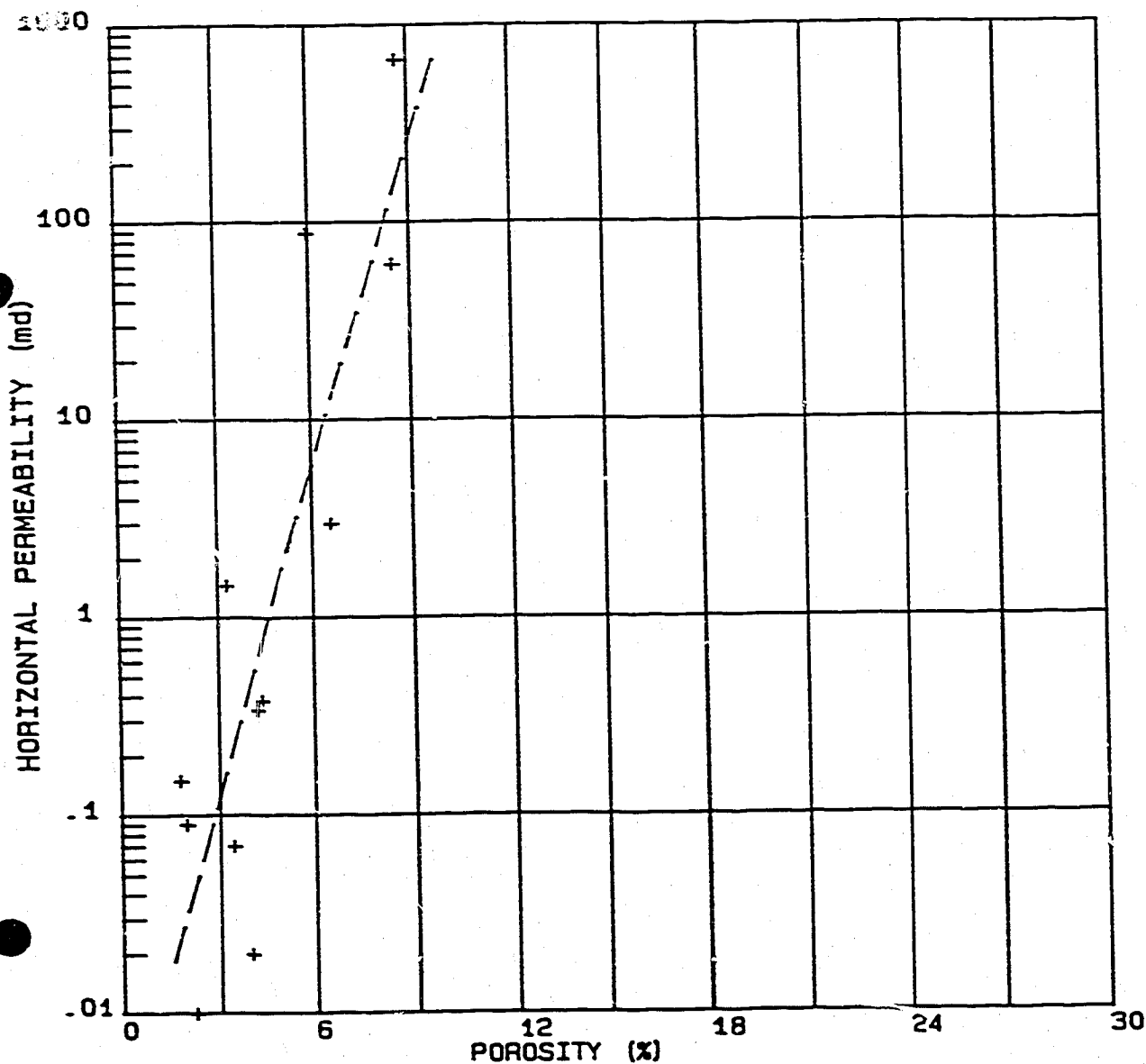
HORIZONTAL PERMEABILITY

SLAVE POINT FORMATION

DEPTH: 1551.6 m to 1562.58 m

EQUATION : $\text{Log}(Kh) = -2.5689 + .5534 * (\text{Ph1})$

CORRELATION COEFFICIENT : .7453



COMPANY: SHELL CANADA LIMITED

WELL NAME: SHELL CELIBETA B-12

LOCATION: 60-01-13.42-122 17 42.71

GEOTECH

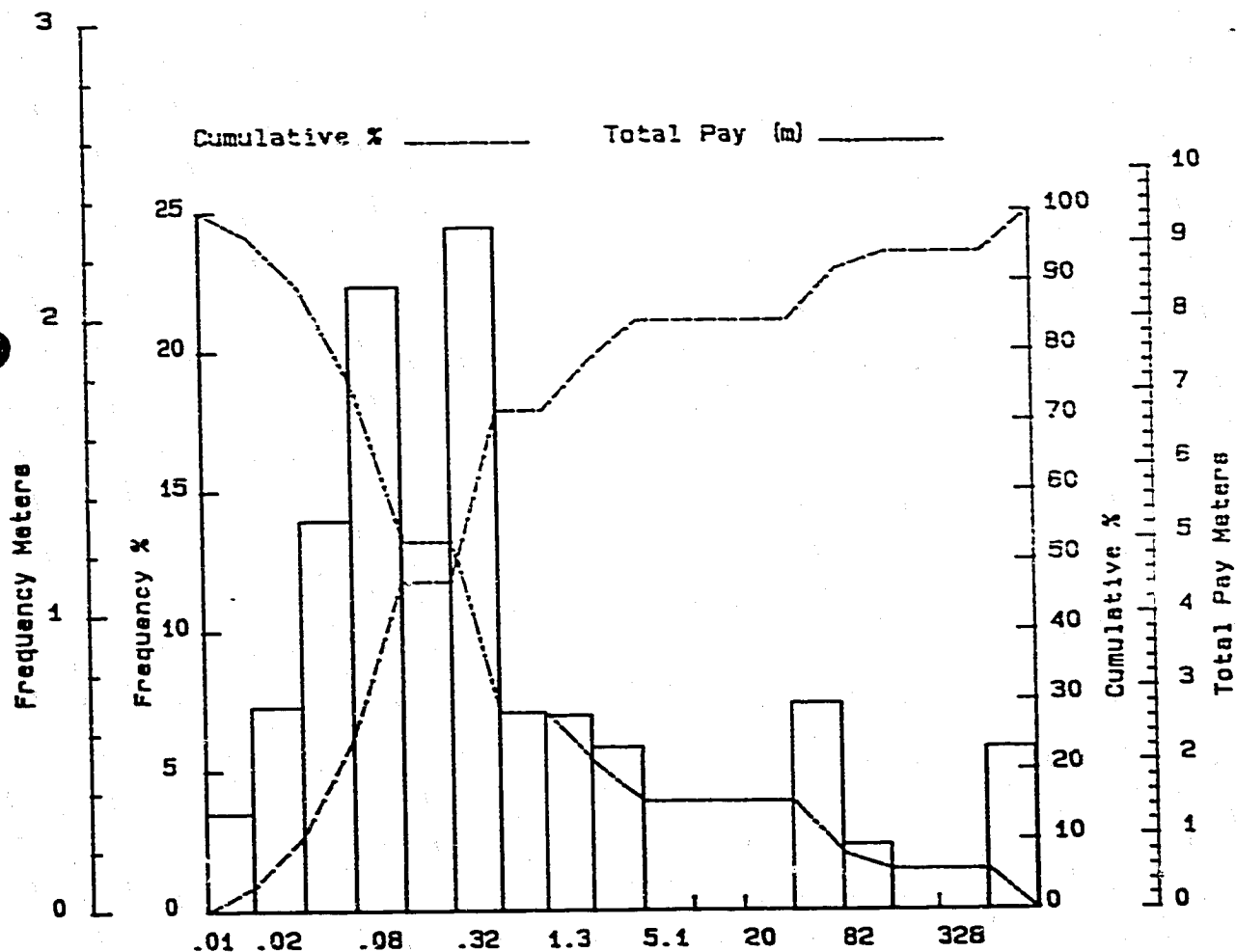
DATE: MAR 23, 1990

FILE: 90-6C-103

HORIZONTAL PERMEABILITY FREQUENCY DISTRIBUTION

SLAVE POINT FORMATION

DEPTH: 1551.6 m to 1562.58 m



Minimum : .01

Maximum : 667.59

Range : 667.58

Variance : 26363.31

Coeff of Variance : 248.98

Weighted Average : 65.21

Geom Mean : .92

Harm Mean : .06

Std Deviation : 162.37

Coeff of Skewness : 1.53

WELL NAME: SHELL CELIBETA B-12

LOCATION: 60-01-13.42-122 17 42.71

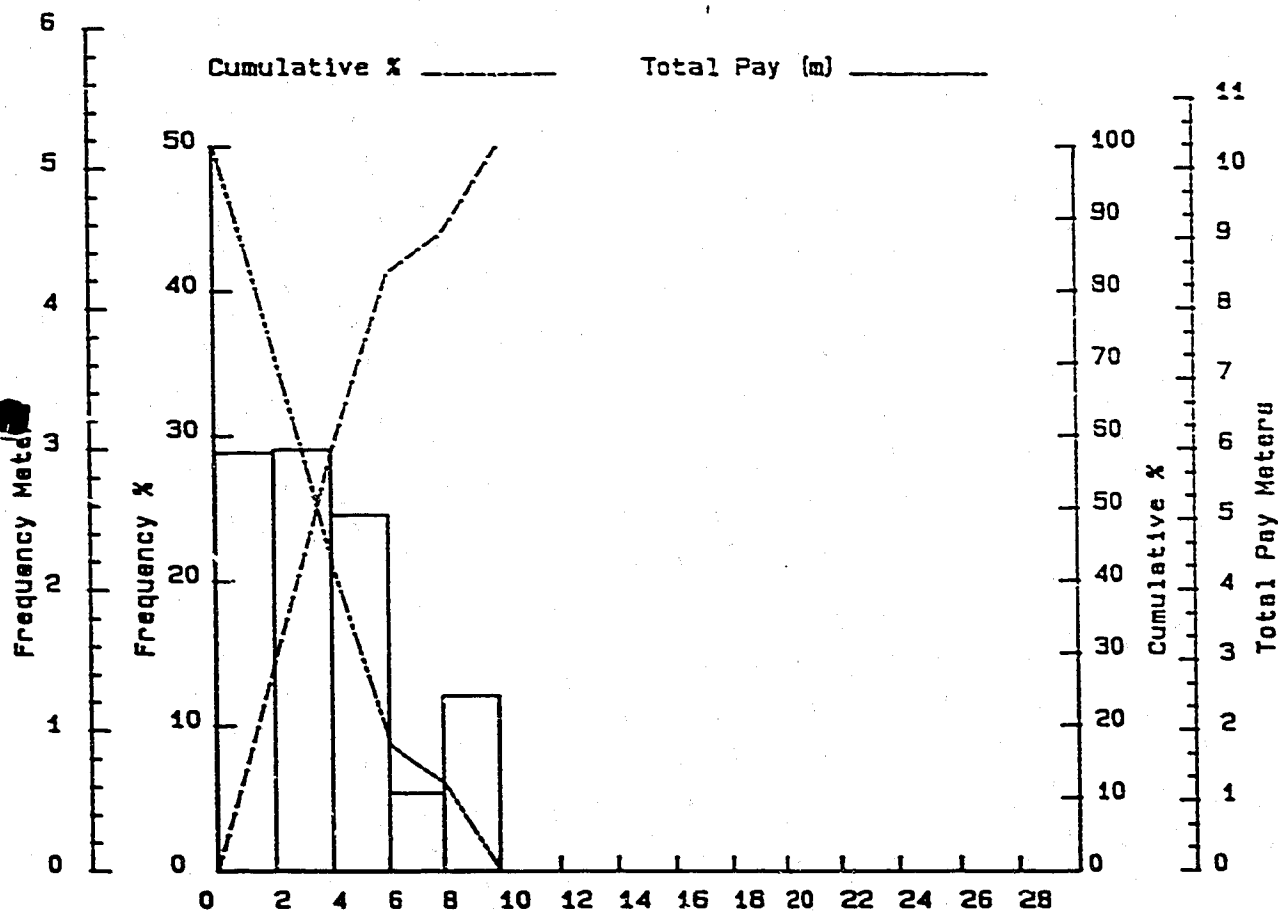
DATE: MAR 23, 1990

FILE: 90-6C-103

POROSITY FREQUENCY DISTRIBUTION

SLAVE POINT FORMATION

DEPTH: 1551.6 m to 1562.58 m



Minimum : 1.57	Weighted Average : 3.85
Maximum : 8.67	Geos Mean : 3.74
Range : 7.1	Harm Mean : 3.21
Variance : 7.4	Std Deviation : 2.72
Coeff of Variance : 70.57	Coeff of Skewness : .42

COMPANY: SHELL CANADA LIMITED
WELL NAME: SHELL CELIBETA B-12
LOCATION: 60-01-13.42-122 17 42.71

GEOTECH

DATE: MAR 23, 1990
FILE: 90-GC-103
PAGE: 1

CORE ANALYSIS REPORT

Sample Number	Depth (meters)	Thick (m)	Sample Depth (meters)	Sample Length (m)	Permeability			Porosity (%)	Grain Density (kg/mc)	Remarks
					Horz (mD)	Horz'90 (mD)	Vert (mD)			
SLAVE POINT FORMATION										
CORE # 1 1551.60 m - 1555.40 m										
RECOVERY/CUT : 3.80 m / 3.80 m										
1	1551.60-1552.10	0.50	1551.92	0.11						
2	1552.10-1552.50	0.40	1552.15	0.14				12.1	2830	FD:1P broken K n/a
3	1552.50-1552.75	0.25	1552.57	0.09	0.17	0.13	0.01	4.8	2798	FD:pyrbit
4	1552.75-1553.08	0.33	1552.93	0.09	8.43	3.15	4.12	8.1	2831	FD:2P styl,pyrbit
5	1553.08-1553.37	0.29	1553.12	0.10				10.0	2879	FD:3P broken K n/a,pyr
					4.23	2.27	0.52	11.4	2853	FD:
6	1553.37-1553.70	0.33	1553.51	0.12	1.02	0.98	0.27	4.3	2805	FD:pyrbit, styl
7	1553.70-1554.07	0.37	1553.88	0.12	1.91	0.33	0.33	5.8	2797	FD:pyrbit,vrtl frac
8	1554.07-1554.40	0.33	1554.07	0.09	0.02	0.02	<0.01	3.5	2785	FD:4P pyrbit
9	1554.40-1554.80	0.40	1554.62	0.10	0.17	0.10	0.04	2.1	2789	FD:5P pyrbit
10	1554.80-1555.10	0.30	1555.00	0.09	2.09	1.19	0.34	4.3	2799	FD:pyrbit, pyr
11	1555.10-1555.40	0.30	1555.27	0.09	0.22	0.03	0.02	1.6	2733	FD:pyrbit,vrtl styl
CORE # 2 1555.40 m - 1562.58 m										
RECOVERY/CUT : 7.18 m / 7.18 m										
12	1555.40-1555.78	0.38	1555.64	0.14	0.02	0.01	<0.01	4.6	2793	FD:6P pyrbit
13	1555.78-1555.98	0.20	1555.79	0.12	0.54	0.50	0.10	4.0	2775	FD:pyrbit

* Plug permeability - sample not suitable for full diameter measurement

COMPANY: SHELL CANADA LIMITED
 WELL NAME: SHELL CELIBETA B-12
 LOCATION: 60-01-13.42-122 17 42.71

GEOTECH

DATE: MAR 23, 1990
 FILE: 90-GC-103
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CORE ANALYSIS REPORT

Sample Number	Depth (meters)	Thick (m)	Sample Depth (meters)	Sample Length (m)	Permeability			Porosity (%)	Grain Density (kg/mc)	Remarks
					Horz (mD)	Horz'90 (mD)	Vert (mD)			
14	1555.98-1556.35	0.37	1556.03	0.11	0.47	0.37	0.37	6.3	2791	FD:pyrbit
15	1556.35-1556.68	0.33	1556.40	0.10	11.19	1.27	1.31	5.9	2793	FD:pyrbit,vugs
16	1556.68-1557.05	0.37	1556.74	0.12	0.61	0.36	1.75	5.3	2793	FD:7P pyrbit,vrtl frac
17	1557.05-1557.35	0.30	1557.18	0.10	1.94	0.70	1.54	7.6	2797	FD:vugs,vrtl frac,pyrbit
18	1557.35-1557.65	0.30	1557.37	0.10	0.01	0.01	0.07	4.6	2768	FD:vrtl frac,pybit
19	1557.65-1557.88	0.23	1557.81	--	0.22	*		5.1	2799	P:fractured zone,pyrbit
20	1557.88-1558.10	0.22	1557.93	0.09				6.2	2808	FD: broken K n/a
21	1558.10-1558.50	0.40	1558.14	0.12	0.19	0.07	1.24	2.4	2805	FD:8P fractured zone
22	1558.50-1558.76	0.26	1558.60	--	0.02	*		3.4	2822	P:
23	1558.76-1559.13	0.37	1558.92	0.11	532.94	24.70	2.47	6.7	2818	FD:9P vrtl frac,lrg vugs
24	1559.13-1559.70	0.57	1559.62	0.11				3.1	2799	FD:10P broken K n/a,pyrbit
25	1559.70-1560.25	0.55	1560.10	0.13	8.69	0.15	0.84	3.1	2774	FD:vrtl fracs,pyrbit
26	1560.25-1560.65	0.40	1560.30	0.16	1.20	0.76	3.15	5.6	2806	FD:11P vrtl fracs
27	1560.65-1561.26	0.61	1560.72	0.13	1.69	0.14	1.70	4.7	2778	FD:12P vrtl fracs,pyrbit
28	1561.26-1561.55	0.29	1561.43	0.08				6.4	2807	FD:broken K n/a
29	1561.55-1562.00	0.45	1561.64	0.13	0.09	0.07	<0.01	4.5	2796	FD:13P pyrbit
30	1562.00-1562.58	0.58	1562.44	0.09	8.65	5.51	3.01	5.2	2820	FD:vugs,vrtl frac

* Plug permeability - sample not suitable for full diameter measurement

COMPANY: SHELL CANADA LIMITED
 WELL NAME: SHELL CELIBETA B-12
 LOCATION: 60-01-13.42-122 17 42.71

GEOTECH

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PRELIMINARY CORE ANALYSIS REPORT

Sample Number	Interval (meters)	Thick (m)	Sample Depth (meters)	Permeability Horizontal (mD)	K x Thickness	Porosity (%)	Phi x Thickness	Saturation Oil (%)	H2O (%)	Grain Density (kg/mc)	Remarks
SLAVE POINT FORMATION											
CORE # 1 1551.60 m - 1555.40 m											
RECOVERY/CUT : 3.80 m / 3.80 m											
1	1551.60-52.15	0.55	1551.92	667.59	367.21	8.7	0.05			2830	FD:vugs
2	1552.15-52.70	0.55	1552.57	2.99	1.64	6.6	0.04			2830	FD:
3	1552.70-53.40	0.70	1552.93	61.26	42.89	8.5	0.06			2871	FD:vugs, pyr
	1553.40-54.07	0.67									bit, dol, loc vugs
4	1554.07-54.40	0.33	1554.07	0.01	0.00	2.2	0.01			2784	FD:
5	1554.40-55.40	1.00	1554.62	0.15	0.15	1.8	0.02			2791	FD:
CORE # 2 1555.40 m - 1562.58 m											
RECOVERY/CUT : 7.18 m / 7.18 m											
6	1555.40-56.09	0.69	1555.74	0.02	0.01	4.0	0.03			2791	FD:
7	1556.09-57.65	1.56	1556.74	0.38	0.59	4.4	0.07			2797	FD:
8	1557.65-58.76	1.11	1558.14	0.09	0.10	1.9	0.02			2798	FD:
9	1558.76-58.98	0.22	1558.92	88.54	19.48	6.0	0.01			2817	FD:vugs
10	1558.98-59.85	0.87	1559.62			1.6	0.01			2798	FD:broken K n/a
11	1559.85-60.60	0.75	1560.30	0.34	0.25	4.3	0.03			2801	FD:
12	1560.60-61.26	0.66	1560.72	1.46	0.96	3.3	0.02			2774	FD:vrtrl frac
13	1561.26-62.58	1.32	1561.64	0.07	0.09	3.4	0.05			2795	FD:

COMPANY: SHELL CANADA LIMITEDWELL NAME: SHELL CELIBETA B-12LOCATION: 60-01-3.42-122 17 42.71

GEOTECH

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CORE SUMMARY

CUTOFFS		AVERAGES		Porosity Meters	RESULTS by VOLUME	NET PAY	
Phi (%)	K (md)	Phi (%)	K (md)		Permeability Meters	Porosity Meters	Permeability Meters
SLAVE POINT FORMATION							
None	None	4.0	45.91	0.412	433.385	10.310	9.440
2.00	0.50	6.7	161.26	0.178	432.178	2.680	2.680
2.00	1.00	6.7	161.26	0.178	432.178	2.680	2.680
2.00	5.00	8.2	292.21	0.120	429.570	1.470	1.470
2.00	10.00	8.2	292.21	0.120	429.570	1.470	1.470
3.00	0.00	5.0	61.88	0.352	433.132	7.000	7.000
3.00	0.50	6.7	161.26	0.178	432.178	2.680	2.680
3.00	1.00	6.7	161.26	0.178	432.178	2.680	2.680
4.00	0.00	5.9	99.78	0.257	432.062	4.330	4.330
4.00	0.50	7.8	213.47	0.157	431.214	2.020	2.020
4.00	1.00	7.8	213.47	0.157	431.214	2.020	2.020
6.00	0.00	8.0	228.74	0.143	411.738	1.800	1.800
6.00	0.50	8.0	228.74	0.143	411.738	1.800	1.800
6.00	1.00	8.0	228.74	0.143	411.738	1.800	1.800
7.00	0.00	8.6	328.04	0.107	410.094	1.250	1.250
7.00	0.50	8.6	328.04	0.107	410.094	1.250	1.250
7.00	1.00	8.6	328.04	0.107	410.094	1.250	1.250
7.00	5.00	8.6	328.04	0.107	410.094	1.250	1.250
8.00	0.00	8.6	328.04	0.107	410.094	1.250	1.250
8.00	0.50	8.6	328.04	0.107	410.094	1.250	1.250
8.00	1.00	8.6	328.04	0.107	410.094	1.250	1.250
8.00	5.00	8.6	328.04	0.107	410.094	1.250	1.250

If cutoffs different from the above sets are required, please contact GEOTECH CORE SERVICES.

COMPANY: SHELL CANADA LIMITED
 WELL NAME: SHELL CELIBETA B-12
 LOCATION: 60-01-13.42-122 17 42.71

GEOTECH

DATE: MAR 23, 1990
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ENGINEERING SUMMARY

Sample No.	Thick (m)	Sumt (m)	Kh (md)	K x t (md.m)	Sum K x t (md.m)	Sample No.	Thick (m)	Sumt (m)	Phi (%)	Phi x t (m)	Sum Phi x t (m)
SLAVE POINT FORMATION											
1	0.55	0.55	667.59	367.207	367.207	1	0.55	0.55	8.67	0.048	0.048
9	0.22	0.77	88.54	19.476	386.683	3	0.70	1.25	8.49	0.059	0.107
3	0.70	1.47	61.26	42.886	429.570	2	0.55	1.80	6.60	0.036	0.143
2	0.55	2.02	2.99	1.644	431.214	9	0.22	2.02	5.97	0.013	0.157
2	0.66	2.68	1.46	0.964	432.178	7	1.56	3.58	4.41	0.069	0.225
7	1.56	4.24	0.38	0.593	432.771	11	0.75	4.33	4.25	0.032	0.257
1	0.75	4.99	0.34	0.255	433.026	6	0.69	5.02	3.99	0.028	0.285
5	1.00	5.99	0.15	0.150	433.176	13	1.32	6.34	3.43	0.045	0.330
8	1.11	7.10	0.09	0.100	433.275	12	0.66	7.00	3.29	0.022	0.352
8	1.32	8.42	0.07	0.092	433.368	4	0.33	7.33	2.17	0.007	0.359
	0.69	9.11	0.02	0.014	433.382	8	1.11	8.44	1.93	0.021	0.380
	0.33	9.44	0.01	0.003	433.385	5	1.00	9.44	1.76	0.018	0.398
	0.87	9.44	0.00	0.000	433.385*	10	0.67	10.31	1.57	0.014	0.412

*-Indicates no data for this sample

WIRELINE LOGGING SUMMARY



SHELL CANADA LIMITED

Wellsite Logging Summary

WELLNAME: Shell Celibeta B-12
LOCATION: 300-B12-06010-12215-0
LOGGING COMPANY: Schlumberger
TIME ORDERED OUT: 90-02-15 24:00
ARRIVED (On Lease): 90-02-15 08:00
FINISHED (Tearing Out): 90-02-15 14:00

DATE: 90-02-15 RUN #: 1
DEPTH (Driller): 1450.0 m KB
ENGINEER: BRENDAN REDING
TRUCK NO./DISTRICT: 8210/HIGH LEVEL
COMMENCED (Rigging Up): 90-02-15 08:30
TOTAL TIME (Logging): 0.75 TOTAL METERS: 140

LOGS RUN (With Respective Intervals):

1) PHAS IND-BHCS-GR-SP-CAL; BHCS-GR: 1450-0; PIL-SP-CAL: 1450-548

LOG QUALITY (Repeats, Baseline Shift, Zeroing, Etc.):

Logging Problems and Additional Comments

(BREAKDOWN/REPAIR, WAITING/LOST TIME, CREW ATTITUDE AND EFFICIENCY, ETC.):

TOOL	TIME STARTED IN	TIME ON BOTTOM	TIME OUT	DOWN TIME	TOTAL HOURS
BHCS-GR	12:30	:	13:30	0.25	1.00
PIL-SP-CAL	:	:	:		
	:	:	:		
	:	:	:		
	:	:	:		
	:	:	:		
	:	:	:		
	:	:	:		

COMMENTS:

A DECISION WAS MADE AT 16:00 hrs., 90-02-14 THAT TD FOR LOGGING WOULD BE 1450 m. SCHLUMBERGER WAS CALLED OUT FOR 24:00 hrs., 90-02-14, BUT THE EARLIEST A TRUCK COULD GET TO THE WELL SITE WAS 90-02-15, 08:00 hrs.

THE ZONE OF INTEREST (690-830 m.) WAS FIRST LOGGED AS A REPEAT SECTION. ON THE WAY DOWN FOR THE MAIN RUN, THE TOOL BRIDGED OFF AT 1098 m., 13:00 hrs. AFTER ATTEMPTING TO WORK THROUGH THE BRIDGE, THE TOOL PULLED FREE AT 75% OF MAXIMUM. THE TOOL WAS THEN PULLED OUT, WITHOUT LOGGING THE REST OF THE HOLE.

THE LOGGERS WERE RELEASED AT 00:30, 90-02-16.

A SAFETY MEETING WAS HELD PRIOR TO RIGGING UP THE SHEAVES.

PRE-JOB SAFETY MEETING HELD: Y

WELLSITE LOGGING ENGINEER:

BRENDAN REDING

PERFORMANCE RANKING:

ACCEPTABLE

WELLSITE:

KEN HOLMES

Wellsite Supervisor

OFFICE:

Office Supervisor

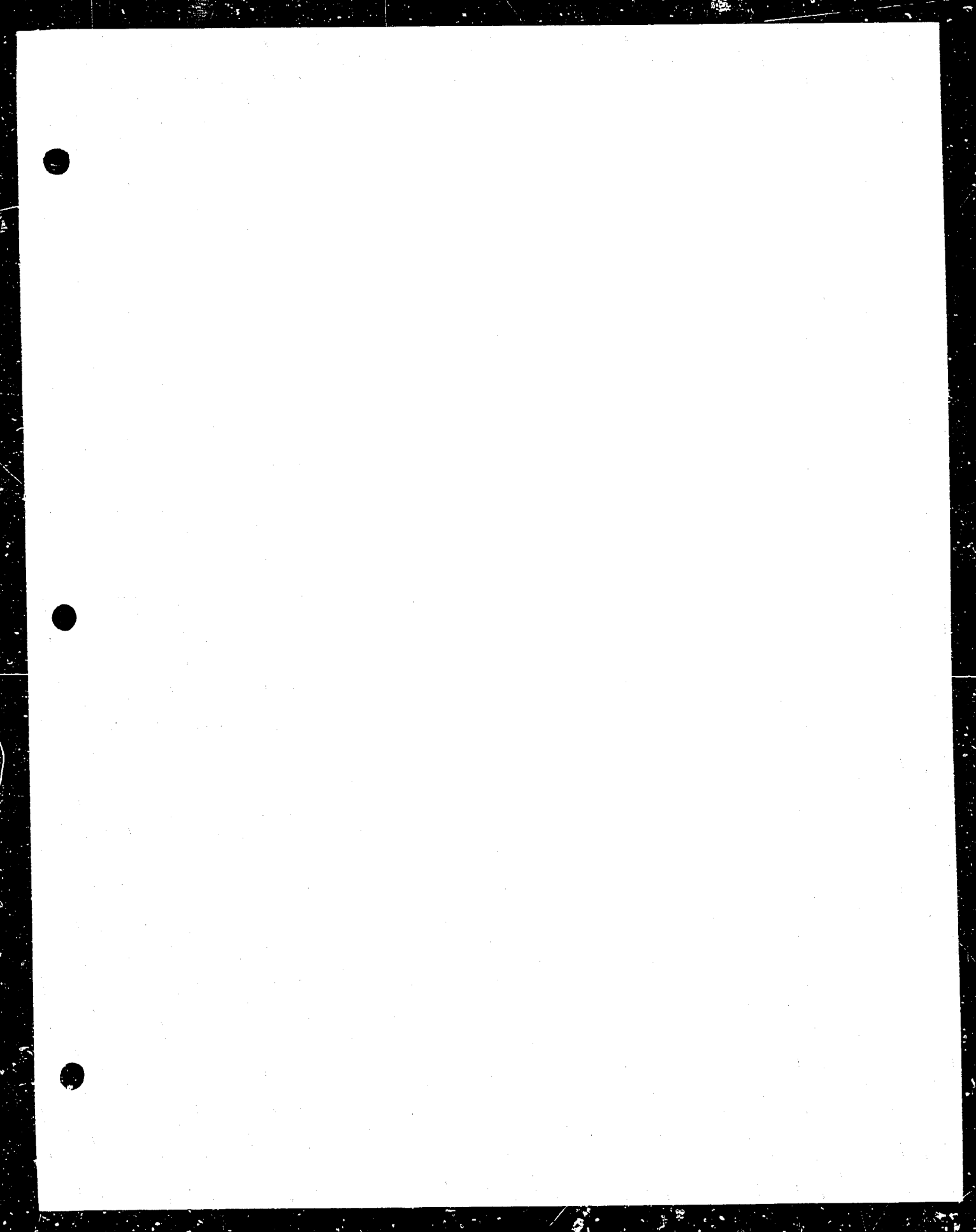
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10-1-1964



A.500



SHELL CANADA LIMITED

CALGARY RESEARCH CENTRE

P.O. BOX 2506, CALGARY, ALTA. T2P 3S6

Request No. 32615

OPERATOR NAME AND ADDRESS

Oil Analysis

LABORATORY NUMBER

00013 06-130

SHELL CANADA LIMITED, P.O. BOX 100, STN. "M", CALGARY, ALTA. T2P 2H5

U.W.I.	WELL OR SAMPLE NAME Shell Celibeta B-12		ELEVATION/m KB GL	
POOL OR ZONE	SAMPLER Nancy Harrison		POINT OF SAMPLE	
FIELD OR AREA	TEST TYPE	NUMBER	RECOVERY	
TEST INTERVAL/m		PERFORATIONS/m		REMARKS See Below
DATE SAMPLED	RECEIVED 900215	REPORTED 900220	ANALYST R. Hirsch	

Sample I.D.Density (kg/m³)
@ 15°CAPI Gravity
@ 60°F

Shell Celibeta B12 = 907.3 = 24.4
 B12: 60° 10'N 122° 15'W
 - Sample scraped off drill
 pipe while tripping out of hole.
 Oil started at 20th stand plus 1 single

Remarks: The sample was centrifuged at 13,000 RPM for 30 minutes to remove solids from the oil before this analysis was done.

RH:bdm
 Ref:AN90A501



CHEMICAL & GEOLOGICAL LABORATORIES LTD.



CONTAINER IDENTITY		LABORATORY NUMBER	
		E90-1616	
LICENCE NUMBER	OPERATOR NAME		
	SHELL CANADA LIMITED		
LOCATION	WELL NAME		
	SHELL CELIBETA 60-10-122-15		
FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	ELEVATIONS (meters) K.E. G.R.O.
	DEUONIAN		416 410.66
TEST TYPE			TEST RECOVERY
DST	NO. 1	0 - MUD	
MULTIPLE RECOVERY			
Y			
TEST INTERVAL (meters)		SAMPLING POINT	
731 - 766.81		DOWNHOLE SAMPLER	
PERFORATIONS (meters)		AIRL. & TYPE OF CUSHION	
		BED RESISTIVITY @ 25°C	
		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT SURFS	
		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
GAUGE PRESSURE kPa		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
TEMPERATURE °C		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST
90-02-16	90-02-21	90-03-05	D. RECHNER
OTHER INFORMATION			

SAMPLE #1: SAMPLED FROM DOWNHOLE SAMPLER.
A NORTHSTAR TESTERS DOWNHOLE SAMPLER #101 WAS RECEIVED AT
ATMOSPHERIC PRESSURE AND CONTAINED 2000 ml OF MUD.

RESISTIVITY: 3.11 OHM METRES @25C

SAMPLE #2: SAMPLED FROM DOWNHOLE SAMPLER.
A NORTHSTAR TESTERS DOWNHOLE SAMPLER #103 WAS RECEIVED AT
ATMOSPHERIC PRESSURE AND CONTAINED 2000 ml OF MUD. (WATER
ANALYSIS E90-1616-2).



WATER ANALYSIS

CONTAINER IDENTITY		LABORATORY NUMBER	
		F90-1616-2	
LICENSE NUMBER		OPERATOR NAME	
		SHELL CANADA LIMITED	
LOCATION		WELL NAME	
		SHELL CELIBETA 60-10-122-15	
FIELD OR AREA		POOL OR ZONE	
		DEVONIAN	
NAME OF SAMPLER		CORRECTION	
		NORTHSTAR	
TEST TYPE	NO.	TEST RECOVERY	
DST	1	0 - MUD	
MULTIPLE RECOVERY	☒		
TEST INTERVAL (meters)		SAMPLING POINT	
731 - 766.81		DOWNHOLE SAMPLER	
PERFORATIONS (meters)		MFL & TYPE OF CEMENT	
		MUD RESISTIVITY	
		@ 25°C	
		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT STEAM	
		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		GAUGE PRESSURE kPa	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		TEMPERATURE °C	
DATE SAMPLED (Y-M-D)		ANALYST	
90-02-16		D. RECHNER	
DATE RECEIVED (Y-M-D)		OTHER INFORMATION	
90-02-21			
DATE REPORTED (Y-M-D)			
90-03-05			

ION	Mg/l	Mass Fraction	Mg/l	ION	Mg/l	Mass Fraction	Mg/l
Na				Cl	578		16.30
K				Br			
Ca				I			
Mg				HCO ₃			
Ba				SO ₄			
Sr				CO ₃			
Fe	TRACE			OH			
				N ₃	NIL		

TOTAL SOLIDS Mg/l

EVAPORATED @ 100°C	EVAPORATED @ 100°C
2 730	
AT IGNITION	CALCULATED
2 140	

ORGANICS: PRESENT

RELATIVE DENSITY	REFRACTIVE INDEX
@ 25°C	@ 25°C
	1.3333

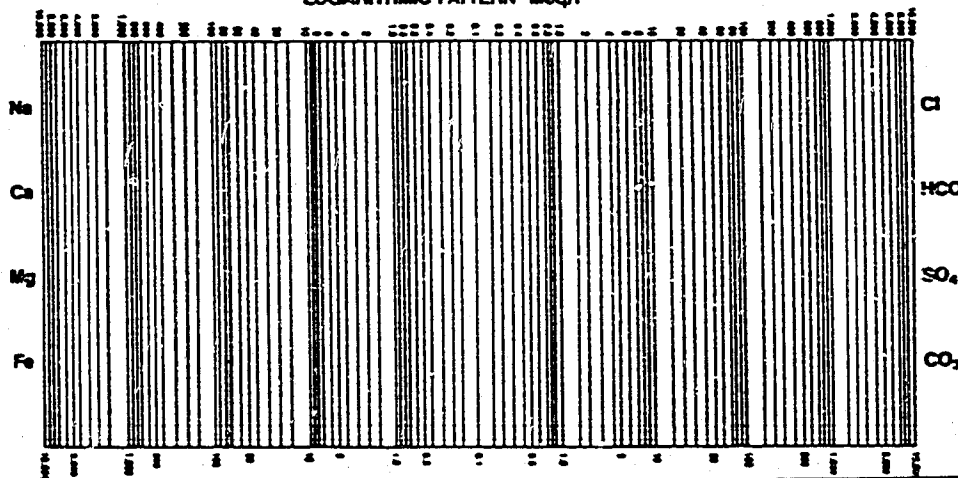
OBSERVED pH	RESISTIVITY (Ohm-cm)
8.8 @ 21°C	2.71 @ 25°C

REMARKS

A NORTHSTAR TESTERS
DOWNHOLE SAMPLER #103
WAS RECEIVED AT
ATMOSPHERIC PRESSURE
AND CONTAINED 2000 ml
OF MUD.

THE ANALYSIS IS
CHARACTERISTIC OF A
MUD FILTRATE WATER.

LOGARITHMIC PATTERN Meq/l





CHEMICAL & GEOLOGICAL LABORATORIES LTD.



CONTAINER IDENTITY		LABORATORY NUMBER	
		E90-1616	
LICENCE NUMBER	OPERATOR NAME		
	SHELL CANADA LIMITED		
LOCATION	WELL NAME		ELEVATIONS (metres)
	SHELL CELIBETA 60-10-122-15		K.B. GRD.
FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	COMPANY
	DEVONIAN		NORTHSTAR
TEST TYPE	NO.	TEST RECOVERY	
DST	1	O - MUD	
MULTIPLE RECOVERY	Y N		
	X		
TEST INTERVAL (metres)		SAMPLING POINT	
731 - 766.81		DOWNHOLE SAMPLER	
PERFORATIONS (metres)		AMT. & TYPE OF CUSHION	
		MUD RESISTIVITY	
		@ 25°C	
		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT SWAB	
		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
GAUGE PRESSURE kPa		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
TEMPERATURE °C		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST
90-02-16	90-02-21	90-03-05	D. RECHNER
OTHER INFORMATION			

SAMPLE #1: SAMPLED FROM DOWNHOLE SAMPLER.
A NORTHSTAR TESTERS DOWNHOLE SAMPLER #101 WAS RECEIVED AT
ATMOSPHERIC PRESSURE AND CONTAINED 2000 ml OF MUD.

RESISTIVITY: 3.11 OHM METRES @25C

SAMPLE #2: SAMPLED FROM DOWNHOLE SAMPLER.
A NORTHSTAR TESTERS DOWNHOLE SAMPLER #103 WAS RECEIVED AT
ATMOSPHERIC PRESSURE AND CONTAINED 2000 ml OF MUD. (WATER
ANALYSIS E90-1616-2).



CHEMICAL & GEOLOGICAL LABORATORIES LTD.



WATER ANALYSIS

CONTAINER IDENTITY		LABORATORY NUMBER	
		E90-1616-2	
LICENCE NUMBER		OPERATOR NAME	
		SHELL CANADA LIMITED	
LOCATION		WELL NAME	
		SHELL CELIBETA 60-10-122-15	
FIELD OR AREA		POOL OR ZONE	
		DEVONIAN	
TEST TYPE		TEST RECOVERY	
DST		0 - MUD	
MULTIPLE RECOVERY			
NO. 1			
Y N			
X			
TEST INTERVAL (metres)		SAMPLING POINT	
731 - 766.81		DOWNHOLE SAMPLER	
PERFORATIONS (metres)		AMT. & TYPE OF CUSHION	
		MUD RESISTIVITY @ 25°C	
		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT SWAB	
		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		GAUGE PRESSURE kPa	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		TEMPERATURE °C	
		DATE SAMPLED (Y-M-D) DATE RECEIVED (Y-M-D) DATE REPORTED (Y-M-D) ANALYST	
		90-02-16 90-02-21 90-03-05 D. RECHNER	
		OTHER INFORMATION	

ION	Mg/l	Mass Fraction	Meq/l	ION	Mg/l	Mass Fraction	Meq/l
Na				Cl	578		16.30
K				Br			
Ca				I			
Mg				HCO ₃			
Ba				SO ₄			
Sr				CO ₃			
Fe	TRACE			ON			
				H ₂ S	NIL		

TOTAL SOLIDS Mg/l

EVAPORATED @ 110°C	EVAPORATED @ 180°C
2.730	
AT IGNITION	CALCULATED
2.140	

ORGANICS: PRESENT

RELATIVE DENSITY	REFRACTIVE INDEX
@ 25°C	@ 25°C
	1.3333

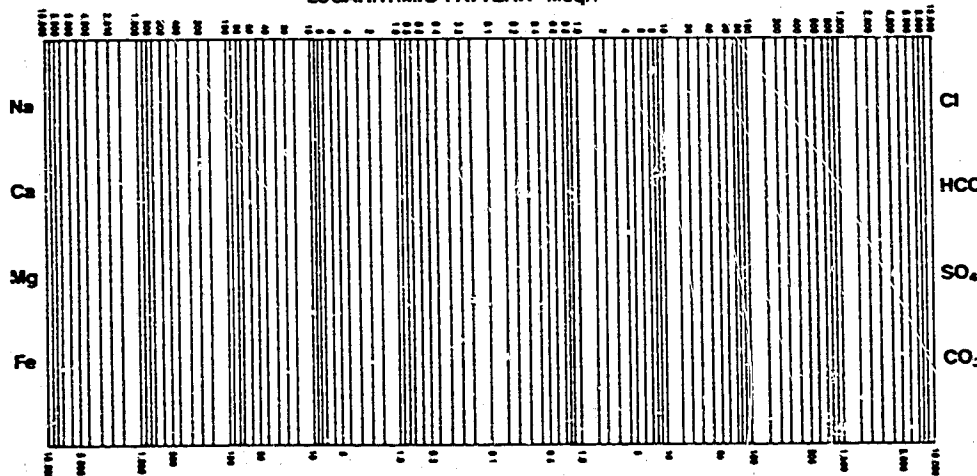
OBSERVED pH	RESISTIVITY (Ohm-cm)
8.8 @ 21°C	2.71 @ 25°C

REMARKS

A NORTHSTAR TESTERS
DOWNHOLE SAMPLER #103
WAS RECEIVED AT
ATMOSPHERIC PRESSURE
AND CONTAINED 2000 ml
OF MUD.

THE ANALYSIS IS
CHARACTERISTIC OF A
MUD FILTRATE WATER.

LOGARITHMIC PATTERN Meq/l



10

[illegible]



SHELL CANADA LIMITED
DRILL STEM TEST REPORT

PAGE 1 OF 3

WELL NAME Shell Celibeta B-12	LOCATION 300-B12-06010-12215-0	TEST NO. 1	DATE 90-02-15
FIELD OR AREA Celibeta, NWT	FORMATION Devonian Tetcho	INTERVAL 730.0 m KB TO 767.0 m KB	
TYPE OF TEST Inflate, closed Chmbr		TESTING COMPANY Schlumberger, Delta P	

WELL DATA

HOLE	K.B. 416.14	GL. 410.66	T.D. 1450	P.B.T.D. m	HOLE SIZE 219.1	DRILLED 225.0 mm	CALIPERED mm	HOLE COND. TIME	
CASING	SIZE 244.5	WT 53.57	SHOE DEPTH 548.0 m	PERFS INTERVAL	TO m	SNOTS/M	PHASING °C		
MUD	TYPE GelChem	DENSITY 1220	VIS 72	WL 9.6	FC 1.5	PH 9.6	GEL 200	TRACER N	MUD RES 4.2 OHM/M @ 15.0 °C

TEST DATA

OPERATION	
TIME STARTED IN HOLE	10: 0
TIME ON BOTTOM	11: 45
TIME PACKER SET	13: 15
TIME PRE FLOW STARTED	13: 22
TIME INITIAL SHUT-IN STARTED	13: 43
TIME FINAL FLOW STARTED	14: 43
TIME FINAL SHUT-IN STARTED	15: 43
TIME PACKER PULL LOOSE	17: 43
TIME OUT OF HOLE	21: 0
WAS TEST POSITIVE	Y

PRESSURE DATA

RECORDER NO.	DEPTH	
10960	752.26 m	
KEY PTS. ON CHRT	PRESSURE	TIME IN MINS.
IMHP	8866	
PPF	523	21
ISIP	132	60
IFP	132	60
FSIP	155	120
FFP	143	
FHP	8843	
BHT	DEPTH	
	°C	m
TIME ON BOTTOM	358	mins.

RECORDER AND MISC. DATA

RECORDER NO.	DEPTH	CAPACITY	CLOCK
13848	712.00	25617	24 IN
50077	713.52	99999	99 IN
6840	720.80	27513	24 IN
10960	732.06	23430	24 OUT
50086	732.06	99999	99 OUT
5026	768.97	20747	24 IN
CUSHION USED N		SALINITY	
BEFORE 32000		AFTER 32000	
CHOKE SURFACE 6.40		CHOKE BOTTOM 19.05	
MUD LEVEL IN ANNULUS Held steady		WT. ON PACKER 6000	
		WT PKR PLD LOOSE 39000	

FLOWS TO SURFACE

FLUID TYPE	TIME TO SURFACE	VOL/TEST TIME	RATE/24 HRS.	STATIC PRESS.	DIFF. PRESS.	ORIFICE	TEMP	%H2S
No fluid to								
Surface								

RECOVERY

FLUID TYPE	METERS	CUBIC METERS	TIME AFTER P.O.	SALINITY	DENSITY	SAMPLE CHAMBER NO.	VOL
No fluid						41	
Recovered						WAS SAMPLER DRAINED Y	
						CONTENTS IF DRAINED Empty	
						WERE GAS SAMPLES TAKEN N	

COMMENTS (Blow Description)

Sample Chamber: # 101 vol. 1, # 103 vol. 1
Prewflow: No response on closed chamber, open bubble line to ensure tool OK,
very weak air blow, closed tool & restart preflow to ensure closed chamber
integrity, 0.33Kpa incr. ISI: no pressure changes. V0: no increase, slight
decrease. FSI: no pressure change observed at surface.

WELLSITE REPRESENTATIVE: P Thomas; K Holmes



SHELL CANADA LIMITED
DRILL STEM TEST REPORT

PAGE 2 OF 3

WELL NAME	LOCATION	TEST NO.	INTERVAL
Shell Celibeta B-12	300-B12-06010-12215-0	1	730.0 m KB TO 767.0 m KB

TEST STRING DATA

TOOL SKETCH	ASSEMBLY DESCRIPTION	DEPTHS FROM KB. (m)	LENGTH (m)	OUTSIDE DIAMETERS (mm)
	Stickup from rig floor 7.09m			
	1single	-6.04	8.94	114.0
	Rig floor(delta flr-KB=0.35m)	0.35		
	Stabbing valve	2.20	0.60	163.0
	17.33stds pipe;5stds HW;3stds DC			
	totaling 683.15m	2.80		114.0
	Pump out sub	685.95	0.29	150.0
	1std DC with cross over	686.24	25.41	165.0
	Pump out sub	711.65	0.31	126.0
	AK1 recorder	711.96	1.52	127.0
	Electronic recorder	713.48	1.82	127.0
	Hydraulic tool	715.30	1.63	127.0
	3 sample chambers with cross over	716.93	3.83	126.0
	AK1 recorder	720.76	1.52	126.0
	Extension joint & jars	722.28	3.44	126.0
	Safety joint	725.72	0.68	126.0
	Pump & screen & deflate system	726.40	2.82	139.0
	Upper packer	729.22	1.78	171.0
	Port sub	731.00	0.76	128.0
	Recorder carrier(K2 & electronic)	731.76	1.97	134.0
	Spacer pipe;X0;1std pipe;X0	733.73	32.66	114.0
	Packer stub	766.39	0.42	126.0
	Bottom Packer	766.81	1.86	170.0
	AK1 recorder	768.67	1.52	118.0
	Belly Spring	770.19	1.56	120.0
	Bullnose	771.75	0.61	119.0
	Bottom of tool	772.36		

No gas to surface, No recovery in drill pipe or collars.
Sample chamber #41 opened at lease with no recovery. Chamber was empty.
Sample chambers #101 & #103 were sent to C&G Laboratories in Edmonton,
with note to contact Nancy Harrison for instructions.



SHELL CANADA LIMITED

REQUEST NO. 32104

CONTAINER IDENTITY

CALGARY RESEARCH CENTRE
WATER ANALYSISLABORATORY NUMBER
0015400 01 100
0012000 02 100

LICENCE NUMBER

OPERATOR NAME AND ADDRESS

SHELL CANADA RESOURCES LIMITED, P.O. BOX 100, CALGARY, ALBERTA T2P 2H5

U.W.I.

300/812 60-10 122-15/ 0

WELL OR SAMPLE NAME

CELIBETA B-12

KB

ELEVATION/m

GL

416.14 | 410.66

FIELD OR AREA

POOL OR ZONE

NAME OF SAMPLER

BAWDEN RIG 20

COMPANY

TEST TYPE

NO

RECOVERY

MULTIPLE

YES

NO

POINT OF SAMPLE

MUD @ 1606 m. -- PRIOR LOG # 2

AMT&TYPE OF CUSHION

MUD RESISTIVITY/ $\Omega \cdot m$
°C

TEST INTERVAL/m

PUMPING

FLOWING

TYPE OF PRODUCTION

GAS LIFT

SWAB

WATER

 m^3/d OIL m^3/d GAS $10^3 m^3/d$

PERFORATIONS/m

GAUGE PRESSURE/kPa

TEMPERATURE/°C

REMARKS

Separator Treater Reservoir Separator Treater Reservoir

F R O Z E N -- FILTRATE -- CLOUDY
DARK BROWN

DATE SAMPLED

90-03-07 0500

RECEIVED

90-03-13

REPORTED

90-03-27

ANALYST

MLT/ELS/NJR

ION [B]	$\rho_B/g \cdot m^{-3}$	ω_B	$c/mol \cdot m^{-3}$	ION [B]	$\rho_B/g \cdot m^{-3}$	ω_B	$c/mol \cdot m^{-3}$
Na + K	1050	0.2930	45.60	Cl	342	0.0954	9.65
K				Br			
Ca	25	0.0070	0.63	I			
Mg	20	0.0056	0.83	HCO ₃	1340	0.3739	22.00
Ba				SO ₄	807	0.2252	8.41
Sr				CO ₃	0	0.0000	0.00
Fe	MUCH			OH	0	0.0000	0.00
				H ₂ S	NONE		

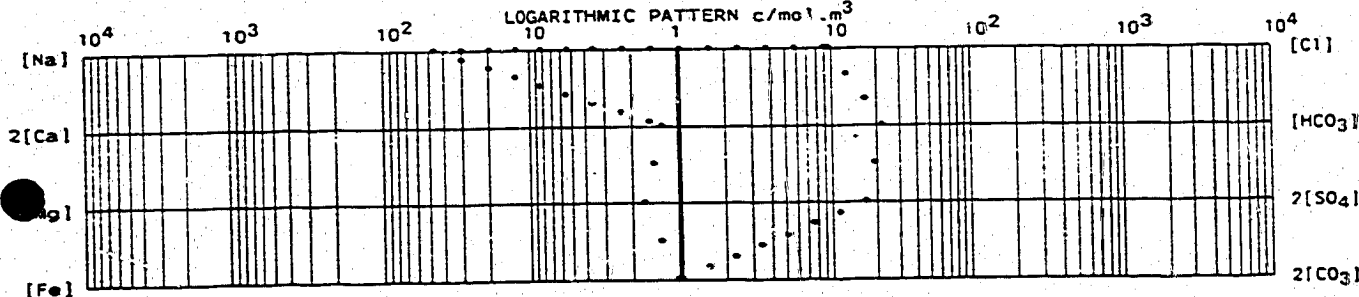
TOTAL DISSOLVED SOLIDS/ $g \cdot m^{-3}$

BY EVAPORATION @ 110°C BY EVAPORATION @ 180°C

AT IGNITION CALCULATED
3584

RELATIVE DENSITY REFRACTIVE INDEX

1.001 @ 15.0°C 1.333 @ 25°C

OBSERVED pH RESISTIVITY/ $\Omega \cdot m$
8.3 @ 21.2°C 2.790 @ 25°CCALCIUM = 25 g/m³ Ca
MAGNESIUM = 20 g/m³ MgLOGARITHMIC PATTERN $c/mol \cdot m^{-3}$ 

5

DRILL STEM TEST ASSEMBLY SKETCH & DESCRIPTION

WELL NAME:	TEST #:	INTERVAL:
Shell Celibeta B-12: 60°10'N, 122°15'W	One	731.00-766.81

SKETCH	ASSEMBLY DESCRIPTION (Depth measured to top of tool part)	DEPTH FROM KB (m)	LENGTH (m)	OD (mm)	ID (mm)
	##stickup from flr=6.74+0.35=7.09m##				
	1 single drill pipe	+ 6.74	6.94	114	97
	Rig floor (Delta Flr-KB =0.35m)	0.35			
	Stabbing valve	2.20	.60	163	72
	17 1/3 stands drill pipe	2.90	465.88	114	97
	5 Stands heavy weight drill pipe (includes 1 single drill pipe)	468.68	138.20	114	72
	3 Stands drill collars (includes 1 XO and 1 single heavy weight pipe)	606.88	79.07	163	72
	Pump out sub (mechanical)	685.95	.29	150	64
	1 Stand drill collars	686.24	25.10	165	72
stro	Cross over	711.34	.31	159	
	Pump out sub (pressure)	711.65	.31	126	57
	Upper recorder hanger	711.96	.30	127	
	Recorder bomb well (AK1 #13842)	712.26	1.22	125	60
	Upper recorder hanger	713.48	.30	127	
	Recorder bomb well (elec. rec #50077)	713.78	1.52	124	60
	Hydraulic tool	715.30	1.63	127	
	Sample chamber # 41	716.93	1.17	126	
	Sample chamber # 101	718.10	1.15	126	
	Sample chamber # 103	719.25	1.21	126	
9.4	Cross over sub	720.46	.30	127	
	Upper recorder hanger	720.76	.30	126	
	Recorder bomb well (AK1 #6340)	721.06	1.22	126	60
	Extension joint	722.28	1.73	125	
	Jars (open)	724.01	1.71	126	
	Safety joint	725.72	.68	126	49
	Pump	726.40	.60	139	
	Screen	727.00	1.32	127	
	Packer release system	728.32	.90	140	
	Upper packer	729.22	1.78	171	
	Port stub (perforations)	731.00	.76	129	
	Upper recorder hanger (K2 #10960)	731.76	.30	133	
	Lower recorder hanger (elec. #50086)	732.06	1.67	134	
	Cross over	733.73	.30	153	
	1 Stand drill pipe	734.03	26.89	114	72
	Cross over	760.92	.30	154	69
	Spacer pipe	761.22	5.17	129	61
	Packer stub	766.39	.42	126	
	Packer	766.81	1.86	170	
	Upper recorder hanger	768.67	.30	118	
	Recorder bomb well (AK1 #5026)	768.97	1.22	118	60
	Belly Spring	770.19	1.56	120	63
	Ball nose	771.75	.61	118	63
	Bottom of tool	772.36			

5

PIPE & CASING TALLY

WELL: Shell Calibeta S-12

S-12: 060°10'N, 122°15'W

Test #: One

Joint No.	Length	
	Joint	Cumulative
01	25.10	NDP
02	25.67	SDC
03	25.33	SDC
04	28.07	2SDC+XD+1HW
05		
06		
07		
08		
09		
10		

104.17 Total

Joint No.	Length	
	Joint	Cumulative
31	26.88	
32	26.90	
33	26.89	
34	26.89	
35	26.67	
36	26.88	
37	26.89	
38	17.91	2DP
39		
40		

206.15 Total

Joint No.	Length	
	Joint	Cumulative
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

Total

Joint No.	Length	
	Joint	Cumulative
51		
52		
53		
54		
55		
56		
57		
58		
59		
60		

Total

Joint No.	Length	
	Joint	Cumulative
11	27.54	3HW
12	27.44	3HW
13	27.67	3HW
14	27.85	3HW
15	27.70	2HW+1DP
16		
17		
18		
19		
20		

138.20 Total

Joint No.	Length	
	Joint	Cumulative
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

Total

Joint No.	Length	
	Joint	Cumulative
71		
72		
73		
74		
75		
76		
77		
78		
79		
80		

Total

TALLY SUMMARY:

Group No.	Length	
	Group	Cumulative
Forward: Nil		
10	104.17	
20	138.20	
30	266.69	
40	296.15	
50		
60		
70		
80		
90		
00		

717.19 Total

Joint No.	Length	
	Joint	Cumulative
21	26.88	
22	26.90	
23	26.91	
24	26.89	
25	26.80	
26	26.90	
27	26.89	
28	26.87	
29	26.89	
30	26.85	

268.59 Total

Joint No.	Length	
	Joint	Cumulative
51		
52		
53		
54		
55		
56		
57		
58		
59		
60		

Total

Joint No.	Length	
	Joint	Cumulative
81		
82		
83		
84		
85		
86		
87		
88		
89		
90		

Total

TALLY BY: Driller

CHECKED BY: Thomas

Joint 01 to 38

Page 01 of 01

DELTA-P TEST CORP.

WELL TESTING AND EVALUATION

#520 400 5th AVENUE S.W.
CALGARY, ALBERTA T2P 1N7

TEL. (403) 241-1111

TELETYPE (403) 241-1111

TELEX 720000 DELTA-P

1971

Fri, Feb 16, 1990

SHELL CELIBETA
8-12/60-10'N-122-15'W
TETCHO/731m-766.81m
DST # 1

irregular type of flow where the surface pressures fluctuated up and down but never observed a positive increase in surface pressures at any time during the MF period.

DOWN-HOLE PRESSURE RECORDERS:

FLUID RECORDER #17848, LOCATED ABOVE THE SI TOOL, WAS NOT USED BECAUSE THE CHART SHOWED NO FLUID INFLUX WHATSOEVER. THE CHARTS I RECEIVED WERE STRAIGHT AS THE CABLES AND THEREFORE CONFIRMED THAT NO FLUID INFLUX OCCURRED.

OUTSIDE PRESSURE RECORDER #10950, IN THE INTERVAL AT 700M, WAS DIGITIZED AND USED TO OBTAIN THE FOLLOWING PRESSURES:

IHF 8866, IPF 523, FPF 155, ISI 132,
FHP 8843, IFP 132, FFP 143, FSI 155, KPAG.

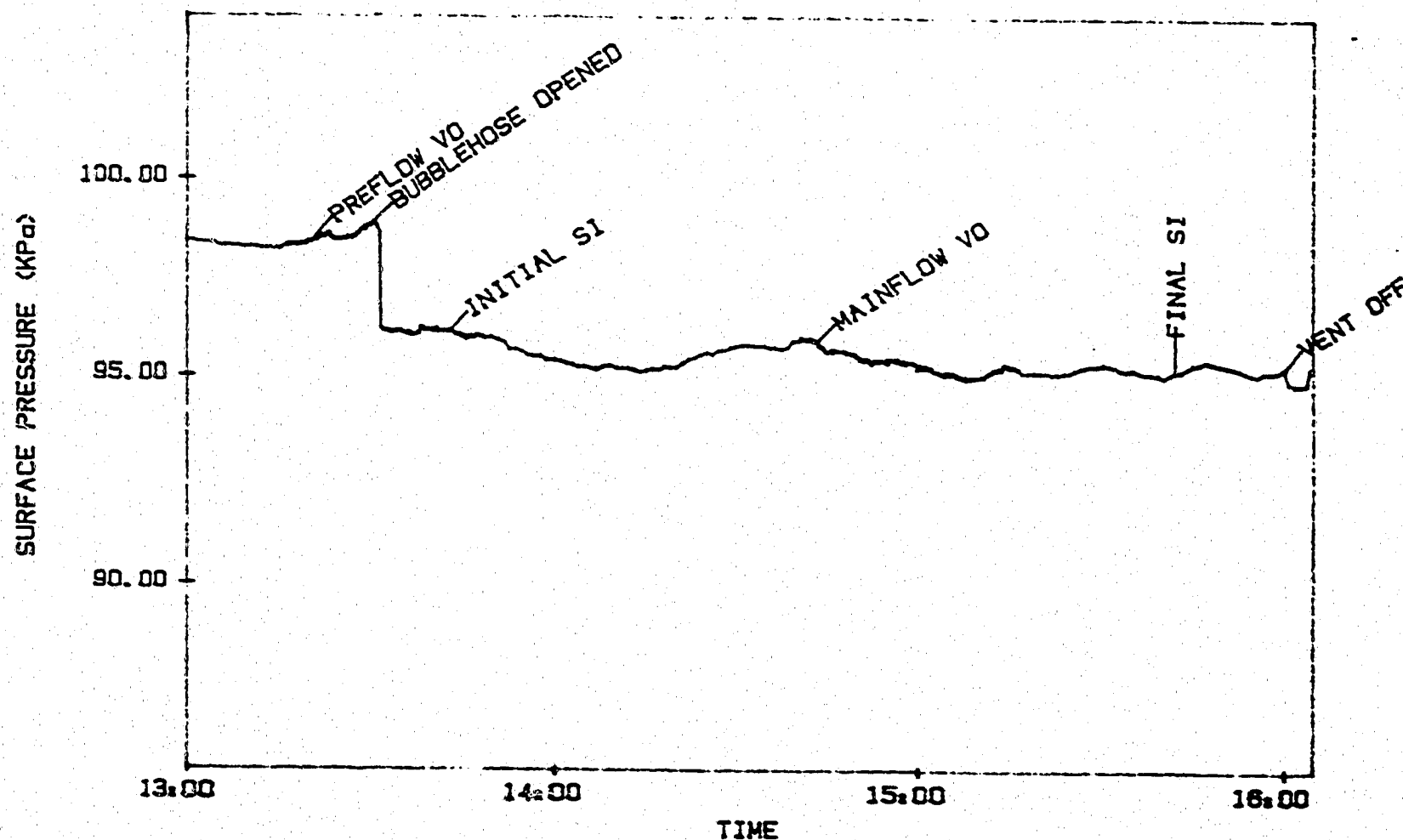
DELTA-P TEST CORP.

REFERENCE FILENAME : SC18

TEST DATE : Fri. Feb 16, 1990

WELL NAME : SHELL CELIBETA

WELL LOCATION : 8-12/60-10'N-122-15'W



Fri, Feb 16, 1990

SHELL CELIBETA

E-12/60-10°N-122-15'W

TETCHO/731m-766.81m

DST # 1

GAS FLOW RATES AND TIMES

TestTime	FlowTime	Pressure	Dp/Dt	Gas Rate
	Min.	KPa abs.	KPa/min	SCFD

START OF FLOW # 1

17:02:00	1.30	93.3		
17:03:00	1.30	93.3	-1.01	1.0
17:04:00	1.31	93.3	-1.03	1.0
17:05:00	1.33	93.3	-1.07	1.1
17:06:00	1.34	93.3	-1.07	1.1
17:07:00	1.35	93.3	-1.08	1.1
17:08:00	1.36	93.3	-1.08	1.1
17:09:00	1.36	93.3	-1.08	1.1
17:10:00	1.36	93.3	-1.08	1.1
17:11:00	1.36	93.3	-1.14	1.2
17:12:00	1.36	93.3	-1.13	1.2
17:13:00	1.36	93.3	-1.07	1.2
17:14:00	1.36	93.3	-1.07	1.2
17:15:00	1.36	93.3	-1.08	1.2
17:16:00	1.36	93.3	-1.07	1.2
17:17:00	1.36	93.3	-1.07	1.2
17:18:00	1.36	93.3	-1.13	1.2
17:19:00	1.36	93.3	-1.08	1.2
17:20:00	1.36	93.3	-1.07	1.2
17:21:00	1.36	93.3	-1.07	1.2
17:22:00	1.36	93.3	-1.07	1.2
17:23:00	1.36	93.3	-1.07	1.2
17:24:00	1.36	93.3	-1.07	1.2
17:25:00	1.36	93.3	-1.07	1.2
17:26:00	1.36	93.3	-1.07	1.2
17:27:00	1.36	93.3	-1.07	1.2
17:28:00	1.36	93.3	-1.07	1.2
17:29:00	1.36	93.3	-1.07	1.2
17:30:00	1.36	93.3	-1.07	1.2
17:31:00	1.36	93.3	-1.07	1.2
17:32:00	1.36	93.3	-1.07	1.2
17:33:00	1.36	93.3	-1.07	1.2
17:34:00	1.36	93.3	-1.07	1.2
17:35:00	1.36	93.3	-1.07	1.2
17:36:00	1.36	93.3	-1.07	1.2
17:37:00	1.36	93.3	-1.07	1.2
17:38:00	1.36	93.3	-1.07	1.2
17:39:00	1.36	93.3	-1.07	1.2
17:40:00	1.36	93.3	-1.07	1.2
17:41:00	1.36	93.3	-1.07	1.2
17:42:00	1.36	93.3	-1.07	1.2
17:43:00	1.36	93.3	-1.07	1.2

START OF FLOW # 1

17:44:00	1.36	93.3	-1.07	1.2
17:45:00	1.36	93.3	-1.07	1.2
17:46:00	1.36	93.3	-1.07	1.2
17:47:00	1.36	93.3	-1.07	1.2
17:48:00	1.36	93.3	-1.07	1.2
17:49:00	1.36	93.3	-1.07	1.2
17:50:00	1.36	93.3	-1.07	1.2
17:51:00	1.36	93.3	-1.07	1.2
17:52:00	1.36	93.3	-1.07	1.2
17:53:00	1.36	93.3	-1.07	1.2
17:54:00	1.36	93.3	-1.07	1.2
17:55:00	1.36	93.3	-1.07	1.2
17:56:00	1.36	93.3	-1.07	1.2
17:57:00	1.36	93.3	-1.07	1.2
17:58:00	1.36	93.3	-1.07	1.2
17:59:00	1.36	93.3	-1.07	1.2
18:00:00	1.36	93.3	-1.07	1.2
18:01:00	1.36	93.3	-1.07	1.2
18:02:00	1.36	93.3	-1.07	1.2
18:03:00	1.36	93.3	-1.07	1.2
18:04:00	1.36	93.3	-1.07	1.2
18:05:00	1.36	93.3	-1.07	1.2
18:06:00	1.36	93.3	-1.07	1.2
18:07:00	1.36	93.3	-1.07	1.2
18:08:00	1.36	93.3	-1.07	1.2
18:09:00	1.36	93.3	-1.07	1.2
18:10:00	1.36	93.3	-1.07	1.2
18:11:00	1.36	93.3	-1.07	1.2
18:12:00	1.36	93.3	-1.07	1.2
18:13:00	1.36	93.3	-1.07	1.2
18:14:00	1.36	93.3	-1.07	1.2
18:15:00	1.36	93.3	-1.07	1.2
18:16:00	1.36	93.3	-1.07	1.2
18:17:00	1.36	93.3	-1.07	1.2
18:18:00	1.36	93.3	-1.07	1.2
18:19:00	1.36	93.3	-1.07	1.2
18:20:00	1.36	93.3	-1.07	1.2
18:21:00	1.36	93.3	-1.07	1.2
18:22:00	1.36	93.3	-1.07	1.2
18:23:00	1.36	93.3	-1.07	1.2
18:24:00	1.36	93.3	-1.07	1.2
18:25:00	1.36	93.3	-1.07	1.2
18:26:00	1.36	93.3	-1.07	1.2
18:27:00	1.36	93.3	-1.07	1.2
18:28:00	1.36	93.3	-1.07	1.2
18:29:00	1.36	93.3	-1.07	1.2
18:30:00	1.36	93.3	-1.07	1.2
18:31:00	1.36	93.3	-1.07	1.2
18:32:00	1.36	93.3	-1.07	1.2
18:33:00	1.36	93.3	-1.07	1.2
18:34:00	1.36	93.3	-1.07	1.2
18:35:00	1.36	93.3	-1.07	1.2
18:36:00	1.36	93.3	-1.07	1.2
18:37:00	1.36	93.3	-1.07	1.2
18:38:00	1.36	93.3	-1.07	1.2
18:39:00	1.36	93.3	-1.07	1.2
18:40:00	1.36	93.3	-1.07	1.2
18:41:00	1.36	93.3	-1.07	1.2
18:42:00	1.36	93.3	-1.07	1.2
18:43:00	1.36	93.3	-1.07	1.2
18:44:00	1.36	93.3	-1.07	1.2
18:45:00	1.36	93.3	-1.07	1.2
18:46:00	1.36	93.3	-1.07	1.2
18:47:00	1.36	93.3	-1.07	1.2
18:48:00	1.36	93.3	-1.07	1.2
18:49:00	1.36	93.3	-1.07	1.2
18:50:00	1.36	93.3	-1.07	1.2
18:51:00	1.36	93.3	-1.07	1.2
18:52:00	1.36	93.3	-1.07	1.2
18:53:00	1.36	93.3	-1.07	1.2
18:54:00	1.36	93.3	-1.07	1.2
18:55:00	1.36	93.3	-1.07	1.2
18:56:00	1.36	93.3	-1.07	1.2
18:57:00	1.36	93.3	-1.07	1.2
18:58:00	1.36	93.3	-1.07	1.2
18:59:00	1.36	93.3	-1.07	1.2
19:00:00	1.36	93.3	-1.07	1.2

START OF FLOW # 1

Fri, Feb 16, 1990

SHELL CELIBETA

B-12/60-10°N-122-15°W

TETCHO/731m-766.81m

DST # 1

GAS FLOW RATES AND TIMES

TestTime	FlowTime Min.	Pressure kgf/cm ²	Gas/Dt cc/min	Gas Rate m ³ /hr
14:14:00	.00	95.00		
14:15:00	1.00	95.10	1.10	
14:16:00	2.00	95.10	1.10	
14:17:00	3.00	95.10	1.07	
14:18:00	4.00	95.10	1.07	
14:19:00	5.00	95.10	1.05	
14:20:00	6.00	95.10	1.05	
14:21:00	7.00	95.10	1.10	
14:22:00	8.00	95.10	1.00	
14:23:00	9.00	95.10	1.00	
14:24:00	10.00	95.10	1.00	
14:25:00	11.00	95.10	1.00	
14:26:00	12.00	95.10	1.00	
14:27:00	13.00	95.10	1.00	
14:28:00	14.00	95.10	1.00	
14:29:00	15.00	95.10	1.00	
14:30:00	16.00	95.10	1.00	
14:31:00	17.00	95.10	1.00	
14:32:00	18.00	95.10	1.00	
14:33:00	19.00	95.10	1.00	
14:34:00	20.00	95.10	1.00	
14:35:00	21.00	95.10	1.00	
14:36:00	22.00	95.10	1.00	
14:37:00	23.00	95.10	1.00	
14:38:00	24.00	95.10	1.00	
14:39:00	25.00	95.10	1.00	
14:40:00	26.00	95.10	1.00	
14:41:00	27.00	95.10	1.00	
14:42:00	28.00	95.10	1.00	
14:43:00	29.00	95.10	1.00	
14:44:00	30.00	95.10	1.00	
14:45:00	31.00	95.10	1.00	
14:46:00	32.00	95.10	1.00	
14:47:00	33.00	95.10	1.00	
14:48:00	34.00	95.10	1.00	
14:49:00	35.00	95.10	1.00	
14:50:00	36.00	95.10	1.00	
14:51:00	37.00	95.10	1.00	
14:52:00	38.00	95.10	1.00	
14:53:00	39.00	95.10	1.00	
14:54:00	40.00	95.10	1.00	
14:55:00	41.00	95.10	1.00	
14:56:00	42.00	95.10	1.00	
14:57:00	43.00	95.10	1.00	
14:58:00	44.00	95.10	1.00	
14:59:00	45.00	95.10	1.00	

Fri, Feb 16, 1990

SHELL CELIBETA

B-12/60-10'N-122-15'W

TETCHO/731m-766.81m

DST # 1

GAS FLOW RATES AND TIMES

TestTime	FlowTime Min.	Pressure KPa abs.	dp/dt KPa/min	Gas Rate m ³ /D
15:27:00	45.00	75.77	.05	1.0
15:28:00	46.00	75.77	.05	1.1
15:29:00	47.00	75.77	.05	1.1
15:30:00	48.00	75.77	.05	1.1
15:31:00	49.00	75.77	.05	1.1
15:32:00	50.00	75.77	.05	1.1
15:33:00	51.00	75.77	.05	1.1
15:34:00	52.00	75.77	.05	1.1
15:35:00	53.00	75.77	.05	1.1
15:36:00	54.00	75.77	.05	1.1
15:37:00	55.00	75.77	.05	1.1
15:38:00	56.00	75.77	.05	1.1
15:39:00	57.00	75.77	.05	1.1
15:40:00	58.00	75.77	.05	1.1
15:41:00	59.00	75.77	.05	1.1
15:42:00	60.00	75.77	.05	1.1
15:43:00	61.00	75.77	.05	1.1
15:44:00	62.00	75.77	.05	1.1

START OF SHUT IN # 1

15:44:00	63.00	75.77	.05	
15:45:00	64.00	75.77	.05	
15:46:00	65.00	75.77	.05	
15:47:00	66.00	75.77	.05	
15:48:00	67.00	75.77	.05	
15:49:00	68.00	75.77	.05	
15:50:00	69.00	75.77	.05	

END OF RECORDED DATA

21 DELTA P TEST CORPORATION

PRESSURE vs TIME

SHELL CELIBETA

8-12/80-10°N/122-15°W

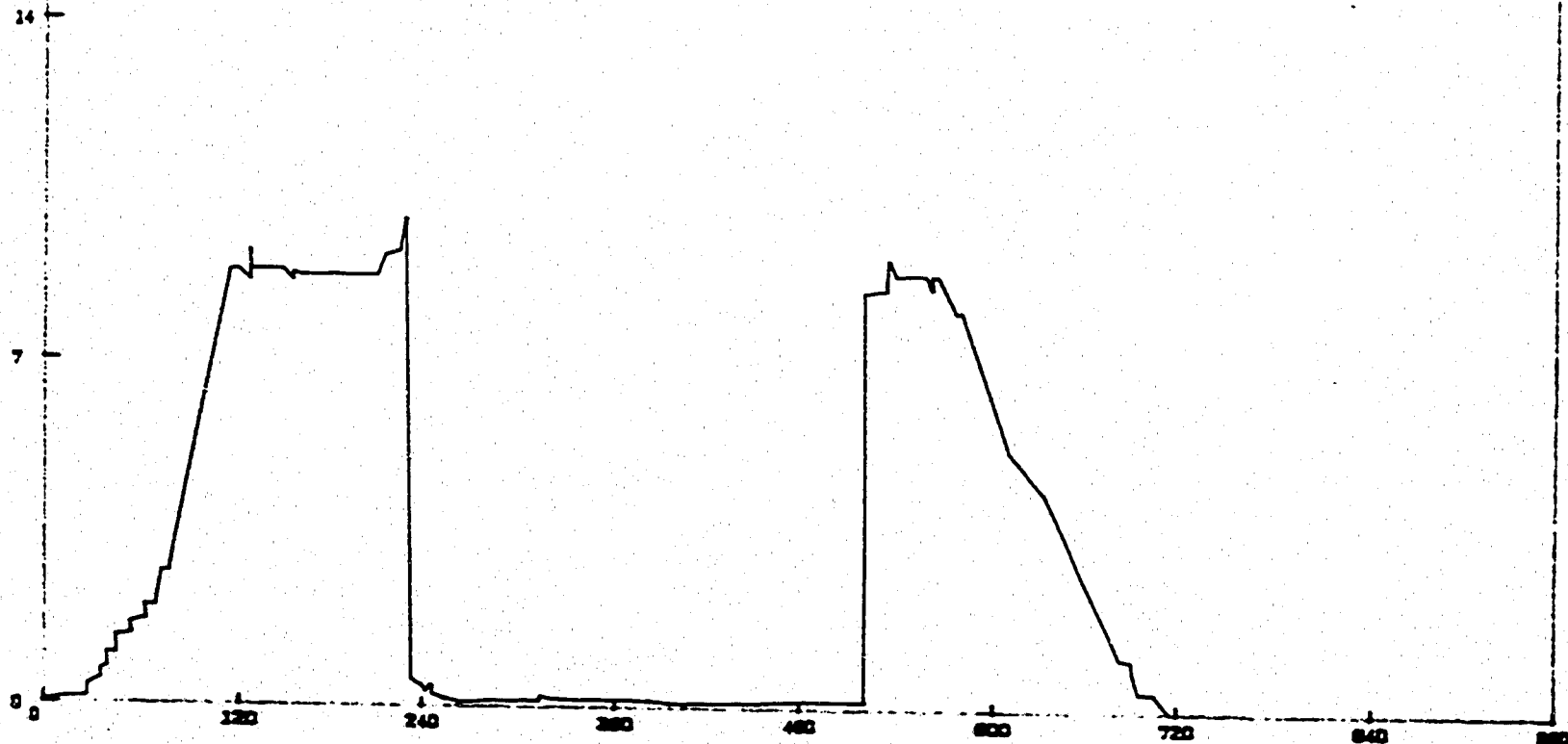
TETCHO / 731M - 766.81M

DST # 1

OUT-REC 910960 AT 733M

FEB 16, 1980

PRESSURE (kPa x 10⁻³)



RELATIVE TIME (minutes)

DELTA P TEST CORPORATION

SHELL CELIBETA

B-12/60-10'N/122-15'W

TETCHO / 731M - 766.81M

DST # 1 FEB 16, 1990

OUT-REC #10960 AT 733M

LINEAR DATA TABLE

Table No.: 1 INITIAL HYDROSTATIC

TIME (min)	PRESSURE (kPa)	TIME (min)	PRESSURE (kPa)
1.	0.0	34.	157.1
2.	11.4	35.	157.1
3.	23.3	36.	158.7
4.	35.2	37.	159.7
5.	46.5	38.	160.8
6.	48.8	39.	161.3
7.	49.3	40.	162.3
8.	49.8	41.	163.3
9.	49.9	42.	163.3
10.	50.4		
11.	50.4		
12.	50.5		
13.	50.5		
14.	50.5		
15.	50.5		
16.	50.5		
17.	50.5		
18.	50.5		
19.	50.5		
20.	50.5		
21.	126.8		
22.	126.8		
23.	126.8		
24.	126.8		
25.	126.8		

Table No.: 2 1st FLOW

TIME (min)	PRESSURE (kPa)
1.	0.0
2.	7.0
3.	9.7
4.	12.1
5.	13.9
6.	13.9
7.	18.2
8.	21.8

Table No.: 3 1st SHUT-IN

	TIME	PRESSURE
	(min)	(kPa)
1.	0.0	151.7
2.	1.7	35.3
3.	23.1	131.7
4.	27.3	131.7
5.	50.6	131.7
6.	58.7	131.7

Table No.: 4 2nd FLOW

	TIME	PRESSURE
	(min)	(kPa)
1.	0.0	131.7
2.	1.7	131.7
3.	1.7	131.7
4.	1.7	131.7
5.	1.7	131.7
6.	1.7	131.7
7.	55.1	143.2
8.	67.8	143.2

Table No.: 5 2nd SHUT-IN

	TIME	PRESSURE
	(min)	(kPa)
1.	0.0	143.2
2.	1.7	35.3
3.	23.1	131.7
4.	27.3	131.7
5.	50.6	131.7
6.	133.7	154.7
7.	140.4	154.7

Table No.: 6 FINAL HYDROSTATIC

	TIME	PRESSURE
	(min)	(kPa)
1.	0.0	154.7
2.	-1.8	3173.3
3.	11.0	3331.5
4.	13.7	3154.5
5.	15.2	3311.4
6.	25.1	8842.8
7.	30.7	3612.9
8.	35.7	3340.8
9.	40.7	3348.7
10.	45.7	3377.0
11.	47.7	3377.3
12.	51.0	3372.1
13.	57.0	3137.1
14.	57.1	3131.4
15.	105.7	3111.3
16.	120.7	1737.1
17.	135.7	1751.1
18.	150.1	155.3
19.	175.7	196.1
20.	183.7	190.1
21.	194.5	-0.1

Table No.: 6 FINAL HYDROSTATIC

	TIME	PRESSURE
	(min)	(kPa)
1.	0.0	154.7
2.	-1.0	8475.0
3.	11.0	8572.0
4.	13.7	8124.0
5.	18.2	8012.0
6.	25.1	8842.0
7.	30.7	8647.0
8.	36.3	8647.0
9.	40.2	8540.0
10.	43.2	8677.0
11.	45.3	8677.0
12.	51.3	8677.0
13.	57.6	8177.0
14.	57.4	8201.0
15.	100.0	10017.0
16.	100.1	10077.0
17.	100.2	10077.0
18.	100.4	786.0
19.	100.7	786.0
20.	100.7	786.0
21.	104.0	-2.4

Fri, Feb 16, 1990

SHELL CELIBETA
E-12/60-10'N-122-15'W
TETCHO/731m-766.81m
DST # 1

PRETEST CALCULATIONS

FILENAME	3019.DST
GAS GRAVITY	.65
FORMATION DEPTH	750.00 MFS
FORMATION PRESSURE	735.00 KPAa
FORMATION TEMPERATURE	25.75 DEG C
AVE CHAMBER TEMP	15.10 DEG C
INITIAL CH SURFACE PRESSURE	20.00 KPAa
INITIAL GAS WD HEAT PRESSURE	15.71 KPAa
INITIAL TOTAL CUSH. PRESSURE	35.71 KPAa
INITIAL CUSHION LENGTH	.00 m
LIQUID CUSHION GRADIENT	.01 KPA/m
DOWN HOLE CHOKED DIAMETER	12.75 mm
CHOKED COEFFICIENT	12.00 m ² D/KPA
DRILL COLLAR LENGTH	174.17 m
DRILL COLLAR I.D.	71.00 mm
DRILL COLLAR CAPACITY	.000959 m ³ /m
DRILL COLLAR VOLUME	.412 m ³
LOWER DRILL PIPE LENGTH	513.71 m
LOWER DRILL PIPE I.D.	57.10 mm
LOWER DRILL PIPE CAPACITY	.007420 m ³ /m
LOWER DRILL PIPE VOLUME	4.531 m ³
UPPER DRILL PIPE LENGTH	.00 m
UPPER DRILL PIPE I.D.	.00 mm
UPPER DRILL PIPE CAPACITY	.000000 m ³ /m
UPPER DRILL PIPE VOLUME	.000 m ³
TOTAL CHAMBER VOLUME	4.94 m ³
LIQUID CUSHION VOLUME	.00 m ³
NET CHAMBER VOLUME	4.94 m ³

	MAX. RATE	MAX. SURFACE DP/DT
GAS	187262.7 m ³ /D	2575.0 KPA/min
GAS SATURATED H2O	669.5 m ³ /D	24.0 KPA/min
PURE LIQUID INFUX	669.5 m ³ /D	9.6 KPA/min

	INITIAL CONVERSION FACTORS
GAS	22.7 m ³ D/KPA/min
GAS SATURATED H2O	22.7 m ³ D/KPA/min
PURE LIQUID INFUX	22.7 m ³ D/KPA/min



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/02
 LOCATION: 300-B12-6010-12215-0 DEPTH: 141 m DAILY COST: \$ 484218
 CONTRACTOR: BANDEN NO #: 20 PROGRESS: 141 m CUMULATIVE COST: \$ 484218
 DAYS FROM SPUD: 1 DAYS OVER/UNDER: AFE
 FORMATION: TOP @: m OPERATION:
 OPERATIONS P/C/E/C/M/T (Start 24 hrs) RIG TO CEMENT
 LAST CASING: mm @ m FORMATION TEST: mPa/m @ DEPTH: m

Summary

07:02 0800 DRLG.
 1100 MIX L.C.M RAISE VISCOSITY
 1115 SURVEY
 1130 RIG SERV.
 1300 DRLG.
 1315 SURVEY
 1500 DRLG.
 1530 SURVEY
 1715 WIPER TRIP TO THE BIT
 1730 BREAK CIRC. CLEAN TO BOTTOM
 1745 RIG SERV.
 1800 REPAIR # 2 PUMP

1915 DRLG.
 2115 CIRC. PRIOR FOR CSG.
 2145 SURVEY
 2300 TRIP OUT LAY DOWN STAB.
 0300 RIG & RUN 12 JTS. OF 339.7MM
 81 KG/M K55 LT & C LANDED @ 141M
 0430 RIG & CIRC. CSG.
 0700 CIRC. WAIT ON DOWELL TO REPAIR
 PRESSURIZER TO MIX CEMENT ON TWIN

Mud Properties

DENSITY 1150/	kg/m3	P.V.	mPa.s	SAND	K+	mg/l
VISCOSITY 60/	sec	Y.P.	Pa	SOLIDS	Cl-	mg/l
GELS /	Pa	WATER LOSS	cc	Oil	Ca++	mg/l
PH 10.0		FC THICKNESS	mm	MBT	kg/m3	SULPHIDES mg/l
PF/MF /		TEMP	C	POLYMER	kg/m3	SULPHITES mg/l

SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m3 OFF LEASE m3
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m3 LIQUIDS m3

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg)	(E/W)
1	33	0.0		
2	50	0.5		
3	74	0.5		
4	91	0.5		
5	115	1.0		
6	140	1.0		

Bit Data

BIT # 1A
 SIZE (mm) 444.5
 TYPE SDS RT
 MAKE SMITH
 SERIAL # XF2011
 WDC CODE 1-1-4-
 NOZZLES (mm) 15.9/15.9 / /
 15.9/ / /
 DEPTH IN (m) 0
 DEPTH OUT (m) 141
 METREAGE (m) 141
 ROTARY HOURS 8.00
 ROP (m/hr) 17.6
 WT ON BIT (kN) 3 000 / 10 000 000 / 000 000 / 000
 RPM 80/120 / /
 COND. (POOL) 3-3-WT-A3 - - - -
 (BGR) 3-1-BT-TD - - - -

Pumps

PUMP #	1	2
MANUFACTURER	G DENVER	EMSCO
TYPE	P28	DA500
LINER (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	104	60
OUTPUT (l/min)	1248	1260

REDUCED SPEED (rpm)

REDUCED PRESS. (kPa)

STAND PIPE PRESSURE 5500 kPa

TOTAL OUTPUT 2.51 m3/min ANN VEL-OP 16.2 m/min

ANN VEL-OC 20.9 m/min

Bottom Hole Assembly

OF CODE O.D. (mm) I.D. (mm) LENGTH (m)

TOTAL LENGTH (m)

Hydraulics

BIT PRESSURE LOSS kPa
 % PRESS LOSS @ BIT 0.0 %
 HYDRAULIC POWER AT BIT 0.00 kW

Pipe Data

DRILL PIPE				DRILL COLLARS		
JTS	GRADE	O.D. (mm)	WEIGHT (kg/m)	JTS	O.D.	I.D.
-	-	-	-	3	211.00 mm	75.00 mm
-	-	-	-	11	158.00 mm	65.00 mm

FILL: m
 DRAG: 1000 DaN
 TORQUE: DPa.m
 WEATHER: 7 m. DEPTH: 141 m

DC WEIGHT: 17 1000 DaN
 HOOK LOAD: 27 1000 DaN

AIR FLOW RATE: m3/min @ kPa
 FOAM INJECTION RATE: l/min

CONCENTRATION:
 NUMBER BOP DRILLS CONDUCTED: DRILLING TRIPPING
 REPORTED BY: DAN HEWITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA		AFE #: MCB62		DATE: 90/02/03	
LOCATION: 300-B12-6010-12215-0		DEPTH: 141 m		DAILY COST: \$ 60825	
CONTRACTOR: BANDEN		RIG #: 20		CUMULATIVE COST: \$ 545043	
FORMATION: BANFF		TOP @: m		OPERATOR: NIPPLE UP BOPS	
OPERATIONS FORECAST (Next 24 hrs)		NIPPLE UP, PRESSURE TEST		DAYS OVER/UNDERAGE	
LAST CASING: 339.7 mm @ 141 m		FORMATION TEST:		lPa/m @ DEPTH: m	

Summary		RUN 12 JTS. 339.7mm 81.10KG/M K55	
07:00 0930 RIG & CEMENT CSG. PLUG		ST&C CSG.	
DOWN @ 0915 90/02/02		CEMENT CSG. PREFLUSH 15M3 H2O AHEAD	
1730 WAIT ON CEMENT		PRESSURE TEST 24MPA. MIX 23 TORQUE	
0700 CUT CONDUCTOR, ROUGH CUT CSG.		0-1-0 CLASS G + 2% CACL2 1900 KG/M3	
LAY DOWN 508MM DEVERTOR SYSTEM &		DROP PLUG, DISPLACE 10.4M3, BUMP PLUG	
CUT CSG. WELD ON BOWL, PRESSURE TEST		& PRESSURE TEST CSG. TO 15MPA 15 MINS	
TO 14MPA. NIPPLE UP BOPS		PLUG DOWN @ 0915 90/02/02 RETURNS	
		3M3 GOOD CEMENT	

Mud Properties					
DENSITY	/	kg/m3	P.V.	mPa.s	SAND
VISCOSITY	/	sec	Y.P.	Pa	SOLIDS
GELS	/	Pa	WATER LOSS	cc	CL
PH			FC THICKNESS	mm	MBT
PF/MF	/	TEMP		C	POLYMER
SUMP VOLUMES AS OF SUNDAY P.M.:		ON LEASE		m3 OFF LEASE	
VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK:		SOLIDS		m3 LIQUIDS	

Surveys		BIT Data	
No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (deg)
			(N/S) (deg) (E/W)
		BIT # 1A	
		SIZE (mm) 444.5	
		TYPE SDS RT	
		MAKE SMITH	
		SERIAL # XF2011	
		WDC CODE 1-1-4-	
		NOZZLES (mm) 15.9/15.9	
		15.9/	
		DEPTH IN (m) 0	
		DEPTH OUT (m)	
		METREAGE (m) 0	
		ROTARY HOURS	
		ROP (m/hr)	
		WT ON BIT (kN) 3 000 / 10 000	
		RPM 80/120	
		CCNO. (COLL) 3-3-WT-A3	
		(BGRS) 3-1-BT-TD	

Pumps		Bottom Hole Assembly	
PUMP #	1	# OF	CODE
MANUFACTURER	2	O.D. (mm)	I.D. (mm)
TYPE		LENGTH (m)	
LINER (mm)			
STROKE (mm)			
STROKES/MIN			
OUTPUT (l/min)			
REDUCED SPEED (rpm)			
REDUCED PRESS. (kPa)			
STAND PIPE PRESSURE	kPa		
TOTAL OUTPUT	m3/min	ANN VEL-OP	
		ANN VEL-OC	
		m/min	
		L/min	
		TOTAL LENGTH (m)	

Hydraulics		Pipe Data	
BIT PRESSURE LOSS	kPa	DRILL PIPE	DRILL COLLARS
% PRESS LOSS @ BIT	%	#JTS	GRACE
HYDRAULIC POWER AT BIT	kW	O.D. (mm)	WEIGHT (kg/m)
		#JTS	O.D.
			I.D.

FILL:	m	DC WEIGHT:	100% DaN	AIR FLOW RATE:	m3/min @	kPa
DRAQ:	1000 DaN	HOOK LOAD:	1000 DaN	FOAM INJECTION RATE:	l/min	
TORQUE:	DP torque			CONCENTRATION:		
WEATHER:	CLEAR -26	NUMBER BOP DRILLS CONDUCTED: DRILLING		TRIPPING		
7 a.m. DEPTH:	141 m	REPORTED BY: D HEWITT				



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA		AFE #: WCB62		DATE: 90/02/04	
LOCATION: 300-B12-6010-12215-0		DEPTH: m		DAILY COST: \$ 22881	
CONTRACTOR: BANDEN		Fig #: 20		CUMULATIVE COST: \$ 567924	
FORMATION: BANFF		TOP @: m		OPERATION:	
OPERATIONS FORECAST (Next 24 hrs)		PRESSURE TEST, TRIP, DRILL OUT, DRILL			
LAST CASING: 339.7 mm @ 141 m		FORMATION TEST:		kPa/m @ DEPTH: m	

Summary 07:00 1830 NIPPLE UP 345.0MM BOP STACK, MANIFOLD LINES, LAY FLARE LINES 0700 PRESSURE TEST MANIFOLD, BLIND RAMS, UPPER & LOWER PIPE RAMS, HCR, & BOP VALVES 1400KPA 10 MINS EACH 21MPA 10 MINS. EACH. HYDRIL 1400 LOW, & 10500KPA HIGH. OK.		BANDEN CREW HRS. FROM FEB.1 TO FEB 3 MIDNIGHT 720HRS. LANDRY WELDER & HELPER ON FEB.2 + 3 30HRS. PEBEN TRUCKING 3 MEN ON FEB. 3 30 HRS.
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Mud Properties		DENSITY / kg/m3		P.V.		mPa.s		SAND		K+		mg/l	
VISCOSITY / sec		Y.P.		Pa		SOLIDS		Cl-				mg/l	
GELS / Pa		WATER LOSS		cc		OIL		Ca++				mg/l	
PH		FC THICKNESS		mm		MBT		kg/m3		SULPHIDES		mg/l	
PF/MF /		TEMP		C		POLYMER		kg/m3		SULPHITES		mg/l	
SUMP VOLUMES AS OF SUNDAY P.M.:				ON LEASE				OFF LEASE				m3	
VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK:				SOLIDS				m3				LIQUIDS	
												m3	

Surveys					Bit Data				
No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg)	(E/W)	BIT #	SIZE (mm)	TYPE	MAKE	SERIAL #
						444.5	SDS RT	SMITH	XF2011
									IADC CODE 1-1-4-
						15.9/15.9	/	/	/
						15.9/	/	/	/
						DEPTH IN (m)	0		
						DEPTH OUT (m)			
						METREAGE (m)	0		
						ROTARY HOURS			
						ROP (m/hr)			
						WT ON BIT (kg)	3 000 / 10 000	000 / 000	000 / 000
						RPM	80/120	/	/
						COND. (GOL)	3-3-WT-A3	- - -	- - -
						(GOLF) 3-1 -BT-ID	- - -	- - -	- - -

Pumps				Bottom Hole Assembly				
PUMP #	1	2		# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
MANUFACTURER								
TYPE								
LINE (mm)								
STROKE (mm)								
STROKES/MIN								
OUTPUT (l/min)								
REDUCED SPEED (rpm)								
REDUCED PRESS. (kPa)								
STAND PIPE PRESSURE		kPa						
TOTAL OUTPUT	m3/min	ANN VEL-OP	m/min					
		ANN VEL-OC	m/min					
				TOTAL LENGTH (m)				

Hydraulics				Pipe Data				DRILL COLLARS			
BIT PRESSURE LOSS	kPa			DRILL PIPE	GRADE	O.D.(mm)	WEIGHT(kg/m)	DRILL COLLARS	GRADE	O.D.	I.D.
% PRESS LOSS @ BIT	%									mm	mm
HYDRAULIC POWER AT BIT	KW									mm	mm
										mm	mm

FILL:	m	DC WEIGHT:	1000 DaN	AIR FLOW RATE:	m3/min @	kPa
DRAG:	1000 DaN	HOOK LOAD:	1000 DaN	FOAM INJECTION RATE:	l/min	
TORQUE:	DP turns			CONCENTRATION:		
WEATHER:		NUMBER BOP DRILLS CONDUCTED:	DRILLING	TRIPPING		
7 a.m. DEPTH:	m			REPORTED BY:	D HEWITT	



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/05
 LOCATION: 300-B12-6010-12215-0 DEPTH: 252 m DAILY COST: \$ 15855
 CONTRACTOR: BAWDEN RIG #: 20 PROGRESS: 111 m CUMULATIVE COST: \$ 583779
 DAYS FROM SPUD: 4 DAYS OVER/UNDER/SAFE
 FORMATION: BANFF TOP @: m OPERATION: SURVEY
 OPERATIONS FORECAST (Next 24 hrs) DRILL, SURVEY
 LAST CASING: 339.7 mm @ 141 m FORMATION TEST: 20.0 kPa/m @ DEPTH: 141 m

Summary

07:00 1200 PRESSURE TEST UPPER & LOWER
 KELLY COCK, KILL LINES, 1400KPA,
 21MPA 10 MINS EACH OK. ALSO PRESSURE
 TEST STAND PIPE
 1530 MAKE UP BHA, TRIP IN
 1600 RIG SERV. MOTOR SHUT OFFS
 CROWN STOPPER
 2045 DRILL OUT FLOAT @ 129M, CEMENT
 SHOE @ 141M
 2115 DRILL 10M
 2215 CIRC. PRIOR RUN FORMATION LEAK
 OFF, ACCUMALATER CHECK. 20.4 KPA/M

2245 CIRC. DISPLACE TO FRESH WATER
 2300 DRILL
 2330 LAY DOWN 3 HW, RUN STD. OF DC
 0015 DRILL
 0100 CIRC. BUILD VOLUME
 0600 DRILL
 0700 CIRC. MIX MUD
 ADC PRESSURE TESTER 27HR
 BAWDEN CREWS 264HRS.
 COMPANY SUPERVISION 48HRS.

Mud Properties

DENSITY 1070/	kg/m ³	P.V.	mPa.s	SAND	K+	mg/l
VISCOSITY 38/	sec	Y.P.	Pa	SOLIDS:	Ca	mg/l
GELS	Pa	WATER LOSS	cc	CL	Ca++	mg/l
PH 9.5		FC THICKNESS	mm	MBT	kg/m ³ SULPHIDES	mg/l
PP/MF		TEMP	C	POLYMER	kg/m ³ SULPHATES	mg/l

SUMP VOLUMES AS OF SUNDAY P.M.:

ON LEASE

VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK:

SOLIDS	m ³	OFF LEASE	m ³	LIQUIDS	m ³
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Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg)	(E/W)
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BIT Data

BIT #	1A	2	
SIZE (mm)	444.5	311.2	
TYPE	SDS RT	SDGH	
MAKE	SMITH	SMITH	
SERIAL #	XF2011	KH0660	
WCC CODE	1-1-4-	1-3-5-	
NOZZLES (mm)	15.9/15.9	12.7/12.7	/
	15.9/	12.7/	/
DEPTH IN (m)	0	141	
DEPTH OUT (m)			
METREAGE (m)	0	111	
ROTARY HOURS		6.50	
ROP (m/hr)		17.1	
WT ON BIT (kN)	3 000 / 10 000	4 000 / 14 000	000 / 000
RPM	80 / 120	40 /	/
COND. (KOL)	3-3-WT-A3	- - -	- - -
(SGOR)	3-1 -BT-TD	- - -	- - -

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	PZ8	500
LINE (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	100	44
OUTPUT (l/min)	1200	924
REDUCED SPEED (rpm)		
REDUCED PRESS. (kPa)		
STAND PIPE PRESSURE	kPa	
TOTAL OUTPUT	2.12 m ³ /min	ANN VEL-OP 27.9 m/min ANN VEL-OC 51.6 m/min

Bottom Hole Assembly

# OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	BIT	311.2		0.35
1	NBSU	230.0	70.0	1.39
1	SS	228.0	75.0	3.95
1	SU	230.0	70.0	2.00
2	DU	211.0	75.0	17.75
1	SU	230.0	78.0	2.00
1	DU	211.0	75.0	8.05
1	JH	228.0	70.0	630.00
1	XO	191.0	74.0	0.78
1	XO	165.0	65.0	0.49
1	DM	158.0	72.0	9.31
11	DU	158.0	70.0	94.00
1	XO	158.0	70.0	0.80

TOTAL LENGTH (m) 770.87

Hydraulics

BIT PRESSURE LOSS	1482.5 kPa
% PRESS LOSS @ BIT	%
HYDRAULIC POWER AT BIT	52.38 kW

Pipe Data

DRILL PIPE				DRILL COLLARS		
AJTS	GRADE	O.D. (mm)	WEIGHT (kg/m)	AJTS	O.D.	I.D.
-	-	-	-	3	211.00 mm	75.00 mm
-	-	-	-	12	158.00 mm	65.00 mm

FILL: m	DC WEIGHT: 17 1000 DaN	AIR FLOW RATE: m ³ /min @	kPa
DRAW: 1000 DaN	HOOK LOAD: 30 1000 DaN	FOAM INJECTION RATE: l/min	
TORQUE: DP turns		CONCENTRATION:	
WEATHER: CLEAR -24	NUMBER BOP DRILLS CONDUCTED: DRILLING	TRAPPING	
7 u.m. DEPTH: 252 m	REPORTED BY: D HEWITT		



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/06
 LOCATION: 300-B12-6010-12215-0 DEPTH: 432 m DAILY COST: \$ 20910
 CONTRACTOR: BANDEN RIG #: 20 PROGRESS: 180 m CUMULATIVE COST: \$ 604689
 DAYS FROM SPUD: 5 DAYS OVERUNDERLAP: 1
 FORMATION: BANFF TOP @: m OPERATION: TRIP
 OPERATIONS FORECAST (Next 24 hrs) TRIP, DRILL, PREPARE TO RUN CSG.
 LAST CASING: 339.7 mm @ 141 m FORMATION TEST: 20.0 MPa/m @ DEPTH: 141 m

Summary
 07:00 0715 SIG SERV. HYDRIL 1830 REPAIR SHAKER MOTOR
 0730 SURVEY MISS RUN 2000 DRILL
 0800 DRILL 2015 RIG SERV. CHECK TOP RAMS
 0830 CIRC. & SURVEY 2045 REPAIR MUD PUMP # 2
 0930 DRILG. 2400 DRILL
 1000 CIRC. & SURVEY 0015 RIG SERV. BOTTOM PIPE RAMS
 1200 DRILG. 0030 SURVEY
 1215 RIG SERV. UPPER PIPE RAMS 0330 DRILG.
 1600 DRILG. 0700 BLOW KELLY TRIP OUT
 1630 CIRC. SURVEY BANDEN CREWS 264 HRS.
 1700 DRILG. SUPERVISION 72HRS.
 1730 SURVEY O K

Mud Properties
 DENSITY 1070/ kg/m3 P.V. 25 mPa.s SAND 0.0025 K+ mg/l
 VISCOSITY 38/ sec Y.P. 13 Pa SOLIDS 0.0830 Cl- 200 mg/l
 GELS 3/ 15 Pa WATER LOSS cc Oil Ca++ 0 mg/l
 PH 10.0 FC THICKNESS mm MBT kg/m3 SULPHIDES mg/l
 PF/MF / TEMP C POLYMER kg/m3 SULPHITES mg/l
 SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m3 OFF LEASE m3
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m3 LIQUIDS m3

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg)	(E/W)
7	220	0.3	S 20.00 E	
8	290	0.3	N 50.00 W	
9	342	0.3	N 89.00 E	

Bit Data

BIT #	1A	2
SIZE (mm)	444.5	311.2
TYPE	SDS RT	SDGH
MAKE	SMITH	SMITH
SERIAL #	XF2011	KH0660
WADC CODE	1-1-4-	1-3-5-
NOZZLES (mm)	15.9/15.9	12.7/12.7
	15.9/	12.7/
DEPTH IN (m)	0	141
DEPTH OUT (m)		
METREAGE (m)	0	111
ROTARY HOURS		6.50
ROP (m/hr)		17.1
WT ON BIT (kN)	3 000 / 10 000	4 000 / 14 000
RPM	80/120	40/
COND.	(POOL) 3-3-WT-A3	- - -
	REGOR 3-1 -BT-TD	- - -

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	P23	500
LINER (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN		
OUTPUT (l/min)	0	0
REDUCED SPEED (rpm)		
REDUCED PRESS. (kPa)		
STAND PIPE PRESSURE	kPa	
TOTAL OUTPUT	0.00 m3/min	ANN VEL-OP 0.0 m/min
		ANN VEL-OC 0.0 m/min

Bottom Hole Assembly

# OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	BIT	311.2		0.35
1	NBSU	230.0	70.0	1.39
1	SS	228.0	75.0	3.95
1	SU	230.0	70.0	2.00
2	DU	211.0	75.0	17.75
1	SU	230.0	78.0	2.00
1	DU	211.0	75.0	8.05
1	JH	228.0	70.0	6.30
1	XO	191.0	74.0	0.78
1	XO	165.0	65.0	0.49
1	DM	158.0	72.0	9.31
11	DU	158.0	70.0	94.00
1	XO	158.0	70.0	0.80
15	HW	114.0	95.0	138.55
TOTAL LENGTH (m)				285.72

Hydraulics

BIT PRESSURE LOSS	0.0 kPa
% PRESS LOSS @ BIT	%
HYDRAULIC POWER AT BIT	0.00 kW

Pipe Data

DRILL PIPE	DRILL COLLARS					
AJTS	GRADE	O.D. (mm)	WEIGHT (kg/m)	AJTS	O.D.	LD
-	-	-	-	3	211.00 mm	75.00 mm
-	-	-	-	12	158.00 mm	65.00 mm

FILL: m DC WEIGHT: 17 1000 DaN AIR FLOW RATE: m3/min @ kPa
 DRAG: 1000 DaN HOOK LOAD: 36 1000 DaN FOAM INJECTION RATE: l/min
 TORQUE: DP turns CONCENTRATION:
 WEATHER: CLEAR -23 NUMBER BOP DRILLS CONDUCTED: DRILLING TRIP/LG
 7 m. DEPTH: 432 m REPORTED BY: D HEWITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/07
 LOCATION: 300-B12-6010-12215-0 DEPTH: 538 m DAILY COST \$ 28748
 CONTRACTOR: BANDEN RG #: 20 PROGRESS: 106 m CUMULATIVE COST \$ 633437
 DAYS FROM SPUD: 6 DAYS OVER/UNDERLAP: 1
 FORMATION: kotcho TOP @: 478 m OPERATION: DRILL
 OPERATIONS FORECAST (Next 24 hrs) drill, circ. trip run csg. voc
 LAST CASING: 339.7 mm @ 141 m FORMATION TEST: 20.0 MPa @ DEPTH: 141 m

Summary

07:00 0830 TRIP IN
 0900 BREAK CIRC. CLEAN TO BOTTOM
 1000 DRIG.
 1015 RIG SERV. UPPER RAMS
 1130 DRILL
 1200 CIRC. & SURVEY
 1630 DRIG.
 1700 CIRC. & SURVEY
 1715 RIG SERVICE, HYDRIL
 1945 TRIP OUT STRAP NO CORR.
 2130 TRIP IN
 2300 REAM BRIDGE @ 441 - 444 AND

CLEAN TO BTM. 2M OF FILL
 0500 DRILL AHEAD
 0515 RIG SERVICE, BOTTOM PIPE RAMS
 0700 DRILL

BANDEN CREW 264HRS
 SUPERVISION 2HRS.

Mud Properties

DENSITY	1150/	kg/m3	P.V.	27	mPa.s	SAND	0.0990	K+	mg/l
VISCOSITY	80/	sec	Y.P.	12	Pa	SOLIDS	0.0040	C-	250 mg/l
GELS	4/ 20	Pa	WATER LOSS	cc		CL		Ca++	0 mg/l
PH	10.0		FC THICKNESS	mm		MBT	kg/m3	SULPHIDES	mg/l
PF/MF	/		TEMP	C		POLYMER	kg/m3	SULPHITES	mg/l

SUMP VOLUMES AS OF SUNOY P.M.: ON LEASE m3 OFF LEASE m3 LIQUIDS m3
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m3 LIQUIDS m3

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg)	(E/W) (deg)
10	400	0.3	N 30.00 W	
11	450	0.0	N 1.00 W	

Bit Data

BIT #	4	2	3
SIZE (mm)	311.2	311.2	311.2
TYPE	DS84F	SDGH	J3
MAKE	SEC.	SMITH	WESTERN
SERIAL #	388919	KH0660	TW614
WDC CODE	1-3-6-	1-3-5-	1-3-6-
NOZZLES (mm)	15.9/15.9	12.7/12.7	14.3/15.9
DEPTH IN (m)	15.9/	12.7/	15.9/
DEPTH OUT (m)	487	141	432
METREAGE (m)	432	487	487
ROTARY HOURS	51	291	55
ROP (m/hr)	7.75	22.00	6.75
WT ON BIT (kN)	6.6	13.2	8.1
RPM	10 000 / 15 000	4 000 / 14 000	10 000 / 20 000
CONC. (FOOL)	90/	40/100	90/
ISGOR	3-3-WT-A3	6-6-WT-A3	8-6-BT-PR

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	P28	500
LINE (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	85	48
OUTPUT (l/min)	1020	1008
REDUCED SPEED (rpm)		
REDUCED PRESS. (kPa)		
STAND PIPE PRESSURE	8500 kPa	
TOTAL OUTPUT	2.03 m3/min	ANN VEL-OP 26.7 m/min
		ANN VEL-OC 49.4 m/min

Bottom Hole Assembly

# OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	BIT	311.2		0.35
1	NBSU	230.0	70.0	1.39
1	SS	228.0	75.0	3.95
1	SU	230.0	70.0	1.20
2	DU	211.0	75.0	17.75
1	SU	230.0	78.0	1.20
1	DU	211.0	75.0	8.05
1	JH	228.0	70.0	6.30
1	XO	191.0	74.0	0.78
1	XO	165.0	65.0	0.49
1	DM	158.0	72.0	9.31
11	DU	158.0	70.0	94.00
1	XO	158.0	70.0	0.80
15	HW	114.0	95.0	138.55
TOTAL LENGTH (m)				284.12

Hydraulics

BIT PRESSURE LOSS	2055.6 kPa
% PRESS LOSS @ BIT	24.2 %
HYDRAULIC POWER AT BIT	69.55 kW

Pipe Data

DRILL PIPE				DRILL COLLARS	
AUTS	GRADE	O.D. (mm)	WEIGHT (kg/m)	AUTS	O.D.
3	211.00	mm	75.00	mm	mm
12	158.00	mm	65.00	mm	mm

FILL:	m	DC WEIGHT:	17 1000 DaN	AIR FLOW RATE:	m3/min	kPa
DRAKE:	1000 DaN	HOOK LOAD:	38 1000 DaN	FOAM INJECTION RATE:	l/min	
TORQUE:	DP turns			CONCENTRATION:		
WEATHER:	CLEAR -20	NUMBER BOP DRILLS CONDUCTED:	DRILLING	TRIPPING		
7	4.4 m DEPTH: 538 m	REPORTED BY:	D HEWITT			

WELLNAME: SHELL CELIBETA LOCATION: 300-B12-6010-12215-0 CONTRACTOR: BAWDEN		AFE #: WCB62 DEPTH: 548 m PROGRESS: 10 m DAYS FROM SPUD: 7		DATE: 90/02/08 DAILY COST: 93892 CUMULATIVE COST: 727330 DAYS OVER/UNDER AFE: 1																																																																											
FORMATION: *kotcho OPERATIONS FORECAST (Next 24 hrs): NIPPLE UP & PRESSURE TEST BOPS LAST CASING: 339.7 mm @ 141 m		TOP @: 478 m OPERATION: TEAR OUT BOPS FORMATION TEST: 20.0 bPa/m @ DEPTH: 141 m																																																																													
Summary 07:00 0800 DRILL 0830 CIRC BINS UP 1000 DUMMY TRIP TO CASING 1030 SURVEY @ 500M 1045 RIG SER-CHECK CROWN SAVER 1230 CIRC & CONDITION HOLE 1630 TRIP FOR CASING-LAY DOWN 9"DC 1700 PULL WEAR RING 1715 RIG SER-CHECK BLIND RAMS 0115 RIG UP & RUN 244.5mm CASING 0415 CIRC & CONDITION HOLE & MUD 0545 RIG UP & CEMENT W/DOWEL 0700 SET SLIPS-TEAR OUT BOPS RAN 42JTS 244.5mm 53.6KG/M K-55 ST&C NEW CASING TO A DEPTH OF 548M. CEMENTED W/ 25.5T CLASS G + 1% CACL2 BUMPED PLUG W/ 20000KPA FOR 10 MIN-OK HOLE STANDING FULL-SET 10000DAN IN SLIP & SEAL																																																																															
Mud Properties <table style="width: 100%; border-collapse: collapse;"> <tr> <td>DENSITY</td><td>1160/</td><td>kg/m3</td><td>P.V.</td><td>30</td><td>mPa.s</td><td>SAND</td><td>0.0025</td><td>K+</td><td>mg/l</td></tr> <tr> <td>VISCOSITY</td><td>560/</td><td>sec</td><td>T.P.</td><td>5</td><td>Pa</td><td>SOLIDS</td><td>0.1020</td><td>G-</td><td>300 mg/l</td></tr> <tr> <td>GELS</td><td>2/</td><td>10 Pa</td><td>WATER LOSS</td><td>cc</td><td>OR</td><td></td><td></td><td>Ca++</td><td>0 mg/l</td></tr> <tr> <td>PH</td><td>9.5</td><td></td><td>FC THICKNESS</td><td>mm</td><td>MST</td><td>57.0</td><td>kg/m3</td><td>SULPHIDES</td><td>mg/l</td></tr> <tr> <td>PF/MF</td><td>/</td><td></td><td>TEMP</td><td>C</td><td>POLYMER</td><td></td><td>kg/m3</td><td>SULPHITES</td><td>mg/l</td></tr> </table> SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m3 OFF LEASE m3 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m3 LIQUIDS m3						DENSITY	1160/	kg/m3	P.V.	30	mPa.s	SAND	0.0025	K+	mg/l	VISCOSITY	560/	sec	T.P.	5	Pa	SOLIDS	0.1020	G-	300 mg/l	GELS	2/	10 Pa	WATER LOSS	cc	OR			Ca++	0 mg/l	PH	9.5		FC THICKNESS	mm	MST	57.0	kg/m3	SULPHIDES	mg/l	PF/MF	/		TEMP	C	POLYMER		kg/m3	SULPHITES	mg/l																								
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4	311.2	DS84F	SEC.	388919	1-3-6-	15.9/15.9	487	548	61	8.75	7.0	10 000 / 15 000	90/	1-1-WO-A3	E-1 -CD-CP																																																																
2	311.2	SDG8	SMITH	KM0660	1-3-5-	12.7/12.7	141	432	291	22.00	13.2	4 000 / 14 000	40/100	3-3-WT-A3	2-1 -WT-PR																																																																
3	311.2	J3	WESTERN	TW614	1-3-6-	14.3/15.9	432	487	55	6.75	8.1	10 000 / 20 000	90/	6-6-WT-A3	8-6 -BT-PR																																																																
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SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/09
 LOCATION: 300-B12-6010-12215-0 MTH: 548 m DAILY COST: 26357
 CONTRACTOR: BANDEN RIG #: 20 PROGRESS: 0 m CUMULATIVE COST: 753687
 FORMATION: kotcho TOP #: 478 m OPERATION: NIPPLE UP
 OPERATIONS FORECAST (Next 24 hrs) NIPPLE UP-PRESSURE TEST BOPS
 LAST CASING: 339.7 mm @ 141 m FORMATION TEST: 20.0 MPa/m @ DEPTH: 141 m

Summary
 07:00 1600 TEAR OUT BOPS
 1800 CUT OFF 244.5mm CASING
 2300 INSTALL DRILLING SPOOL-ENERGIZE
 X BUSHING-TEST TO 10000KPA FOR
 10 MIN-OK
 0700 NIPPLE UP BOPS

Mud Properties

DENSITY	/	kg/m ³	P.V.	mm	SAND	K+	mg/l
VISCOSITY	/	mc	T.P.	mm	SOLIDS	C-	mg/l
CELS	/	Pa	WATER LOSS	mm	OIL	C++	0 mg/l
PH			PC THICKNESS	mm	MBT	kg/m ³	SULPHIDES mg/l
PF/MF	/		TEMP	C	POLYMER	kg/m ³	SULPHITES mg/l

SUMP VOLUMES AS OF SUNDAY P.M.:

ON LEASE

OFF LEASE

VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys

No.	DEPTH	DRIFT	AZIMUTH	
	(m)	(deg)	(N/S)	(E/W)

BR Data

BIT #	4	2	3
SIZE (mm)	311.2	311.2	311.2
TYPE	DS84F	SDGH	J3
MAKE	SEC.	SMITH	WESTERN
SERIAL #	388919	KM0660	TW614
IADC CODE	1-3-6-	1-3-5-	1-3-6-
NOZZLES (mm)	15.9/15.9	12.7/12.7	14.3/15.9
	15.9/	12.7/	15.9/
DEPTH IN (m)	487	141	332
DEPTH OUT (m)	548	432	487
METREAGE (m)	61	291	55
ROTARY HOURS	8.75	22.00	6.75
ROP (m/hr)	7.0	13.2	8.1
WT ON BIT (kg)	10 000 / 15 000	4 000 / 14 000	10 000 / 20 000
RPM	90/	40/100	90/
COND.	(MOUL) 1-1-WO-A3	3-3-WT-A3	6-6-WT-A3
(BGRN)	2-1 -CD-CP	2-1 -WT-PR	8-6 -BT-PR

Pumps

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	P28	500
LINER (mm)	165	140
STROKE (mm)	203	406

STROKES/MIN

OUTPUT (l/min)

0

0

REDUCED SPEED (rpm)

REDUCED PRESS. (MPa)

STAND PIPE PRESSURE MPa

TOTAL OUTPUT 0.00 m³/min

ANN VEL-DP 0.0 m/min

ANN VEL-DC 0.0 m/min

Bottom Hole Assembly

OF CODE O.D.(mm) I.D.(mm) LENGTH (m)

TOTAL LENGTH (m) 0.00

Hydraulics

BIT PRESSURE LOSS	MPa
% PRESS LOSS @ BIT	%
HYDRAULIC POWER AT BIT	0.00 KW

Pipe Data

DRILL PIPE

#JTS	GRADE	O.D.(mm)	WEIGHT(kg/m)
-	-	-	-
-	-	-	-

DRILL COLLARS

#JTS	O.D.	I.D.
3	211.00 mm	75.00 mm
12	158.00 mm	65.00 mm

FILL: m
 DRAG: 1000 DaN
 TORQUE: DP mm
 WEATHER: 7 mm
 DEPTH: 548 m

DC WEIGHT: 1000 DaN
 HOOK LOAD: 1000 DaN

AIR FLOW RATE: m³/min @ MPa
 FOAM INJECTION RATE: l/min

CONCENTRATION:
 NUMBER BOP DRILLS CONDUCTED: DRILLING TRIPPING
 REPORTED BY: D KIATT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/10
 LOCATION: 300-B12-6010-12215-0 DEPTH: 548 = DAILY COST: 36065
 CONTRACTOR: BANDEN REC #: 20 PROGRESS: 0 = CUMULATIVE COST: 789752
 FORMATION: katcho TOP #: 478 = DAYS FROM SPDR: 9 DAYS OVER/UNDER AFE
 OPERATIONS FORECAST (Next 24 hrs) PRESSURE TEST CASING-DRILL OUT OPERATION: PRESS TEST CASING
 LAST CASING: 339.7 m @ 141 m FORMATION TEST: 20.0 mPa/m @ DEPTH: 141 m

Summary

07:00 1800 NIPPLE UP BOPS & AIR DRILL
 EQUIPMENT
 2000 JACK & LEVEL RIG
 2200 PRESSURE TEST BOPS
 2400 RIG UP AIR DRILLERS
 0015 RIG SER
 0400 PICK UP SR3, SU & JH
 0700 RUN IN

PRESSURE TEST UPPER & LOWER PIPE RAMS
 BLIND RAMS TO 1400KPA-21000KPA.
 TEST KILL & CHOKE LINES TO 21000KPA.
 TAST ANNULAR TO 1400-10500 KPA.
 ALL TESTS FOR 10 MIN-ALL OK

Mud Properties

PROPERTY	UNIT	VALUE	PROPERTY	UNIT	VALUE
DENSITY	kg/m ³	P.Y.	mPa.s	SAND	kg/l
VISCOSITY	sec	Y.P.	Po	SOLIDS	g/l
GELS	Po	WATER LOSS	cc	OE	0 g/l
PH		FC THICKNESS	mm	MST	kg/m ³
PF/MF		TEMP	C	POLYMER	kg/m ³

SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m³ OFF LEASE m³
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg)	(E/W) (deg)
-----	-----------	-------------	---------------------	-------------

Bore Data

BIT #	4	5	3
SIZE (mm)	311.2	219.0	311.2
TYPE	DS84F	JD8	J3
MAKE	SEC.	WESTERN	WESTERN
SERIAL #	388919	23085	TW614
IADC CODE	1-3-6-	- - -	1-3-6-
NOZZLES (mm)	15.9/15.9	19.1/19.1	14.3/15.9
	15.9/	19.1/	15.9/
DEPTH IN (m)	487	548	432
DEPTH OUT (m)	548		487
METREAGE (m)	61	0	55
ROTARY HOURS	8.75		6.75
ROP (m/hr)	7.0		8.1
WT ON BIT (kg)	10 000 / 15 000	000 / 000	10 000 / 20 000
RPM	90/	/	90/
COND.	POOL 1-1-WO-A3	- - -	6-6-WT-A3
	(BCOR) E-1 -CD-CP	- - -	8-6 -BT-PR

Pumps

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	P28	500
SIZE (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN		
OUTPUT (l/min)	0	0
REDUCED SPEED (rpm)		
REDUCED PRESS. (kPa)		
STAND PIPE PRESSURE	lPa	
TOTAL OUTPUT	0.00 m ³ /min	ANN VEL-DP 0.0 m/min
		ANN VEL-DC 0.0 m/min

Bottom Hole Assembly

# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
1	SR3	160.0	59.0	2.10
1	DM	158.0	72.0	9.34
1	SU	160.0	54.0	1.31
3	DO	165.0	68.0	25.10
1	JH	160.0	54.0	4.23
8	DO	160.0	68.0	68.90
1	XO	156.0	62.0	0.80
15	HWP	165.0		138.55

TOTAL LENGTH (m) 250.33

Hydraulics

BIT PRESSURE LOSS	0.0 kPa
% PRESS LOSS @ BIT	%
HYDRAULIC POWER AT BIT	0.00 kW

Pipe Data

DRILL PIPE				DRILL COLLARS		
#JTS	GRADE	O.D.(mm)	WEIGHT(lb/m)	#JTS	O.D.	I.D.
30	E-	158.0	24.70	3	211.00 mm	75.00 mm
	-			12	158.00 mm	65.00 mm

FILL:	m	DC WEIGHT:	1000 DaN	AIR FLOW RATE:	m ³ /min @	lPa
DRAG:	1000 DaN	HOOK LOAD:	1000 DaN	FOAM INJECTION RATE:	l/min	
TORQUE:	DP mm			CONCENTRATION:		
WEATHER:	-32	NUMBER BOP DRILLS CONDUCTED:	DRILLING	TRIPPING		
7 m. DEPTH:	548 m	REPORTED BY:	D KLATT			

CD 04/87

DDR

page 1 of 1



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA
 LOCATION: 300-B12-6010-12215-0
 CONTRACTOR: BANDEN
 AFE #: WCB62
 DEPTH: 558 m
 PROGRESS: 10 m
 DAYS FROM SPID: 10
 DATE: 90/02/11
 DAILY COST: 25243
 CUMULATIVE COST: 814995
 DAYS OVER/UNDER AFE
 FORMATION: kotcho TOP #: 478 m OPERATION: TRIP
 OPERATIONS FORECAST (Next 24 hrs) RUN IN WITH AIR HAMMER
 LAST CASING: 244.5 m @ 548 m FORMATION TEST: 17.5 mPa/m @ DEPTH: 548 m

Summary

07:00 0900 PRESSURE TEST CASING
 TO 18200KPA FOR 10 MIN-OK
 1115 WAIT ON ORDERS
 1430 TRIP OUT-CHECK WEAR RING-RUN IN
 1800 RIG REPAIR-WAIT ON FIRE EXTINGQU
 AND SCOTT AIR BOTTLES
 2100 DRILL OUT FLOAT COLLAR & CEMENT
 2130 CLOSE-OPEN-CLOSE ANNULAR & TOP
 PIPE RAMS 8600KPA PRESS REMAIN
 2300 DRILL OUT FLOAT SHOE & CEMENT
 2400 DRILL
 0030 LEAK OFF TEST

0245 BLOW HOLE DRY-AIR DRILL SAFETY
 MEETING
 0330 DRILL W/AIR
 0700 TRIP FOR AIR HAMMER, FIRE FLOATS,
 RUN IN
 PRESSURE TEST STAND PIPE TO
 21000KPA FOR 10MIN-OK

Mud Properties

DENSITY	kg/m ³	P.V.	mPa.s	SAND	K+	mg/l
VISCOSITY	sec	Y.P.	P ₀	SOLIDS	Q-	mg/l
CELS	P ₀ <th>WATER LOSS</th> <th>cc</th> <th>CL</th> <th>C₀+</th> <th>0 mg/l</th>	WATER LOSS	cc	CL	C ₀ +	0 mg/l
PH		FC THICKNESS	mm	BIT	kg/m ³ SULPHIDES	mg/l
PF/MF		TEMP	C	POLYMER	kg/m ³ SULPHITES	mg/l

SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK SOLIDS m³ LIQUIDS m³

Surveys

No.	DEPTH (m)	DRIFT (m)	AZIMUTH (N/S) (E/W)	BIT #	SIZE (mm)	TYPE	MAKE	SERIAL #	WDC CODE	NOZZLES (mm)	DEPTH IN (m)	DEPTH OUT (m)	METREAGE (m)	ROTARY HOURS	ROP (m/hr)	WT ON BIT (kg)	RPM	COND.
				4	311.2	DS24F	SEC.	182919	1-3-6-	15.9/15.9	487	548	61	8.75	7.0	10 000 / 15 000	90/	1-1-WC-A3
				5	219.0	JD8	WESTERN	23085	- - -	19.1/19.1	548	558	10	1.75	5.7	5 000 / 6 000	45/ 50	- - -
				6	219.0	MDC	MISSION	C2538	- - -	/	558		0			000 / 000	/	- - -

CONC. (BGR) E-1 -CD-CP

Pumps

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	P28	500
LINER (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN		
OUTPUT l/min	0	0
REDUCED SPEED (rpm)		
REDUCED PRESS. (kPa)		
STAND PIPE PRESSURE	mPa	
TOTAL OUTPUT	0.00 m ³ /min	ANN VEL-DP 0.0 m ³ /min ANN VEL-DC 0.0 m ³ /min

Bottom Hole Assembly

# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
1	MH			
1	SR3	160.0	59.0	2.10
1	DM	158.0	72.0	9.34
1	SU	160.0	54.0	1.31
1	AF			
3	DU	165.0	68.0	25.10
1	JH	160.0	54.0	4.23
7	DU	160.0	68.0	68.90
1	AF			
1	DU	165.0	68.0	
1	XO	156.0	62.0	0.80
15	HWP	165.0		138.55

TOTAL LENGTH (m) 250.33

Hydraulics

BIT PRESSURE LOSS	mPa
% PRESS LOSS @ BIT	%
HYDRAULIC POWER AT BIT	0.00 kW

Pipe Data

JOBS	GRADE	O.D.(mm)	WEIGHT(lb/m)	DRILL COLLARS	JOBS	O.D.	I.D.
30	E-	158.0	24.70	3	211.00 mm		75.00 mm
				12	158.00 mm		65.00 mm

FILL: 0 m DC WEIGHT: 13 1889 DuH AIR FLOW RATE: 35.0 m³/min @ 1000 mPa
 DRAG: 1800 DuH HOOK LOAD: 38 1889 DuH FOAM INJECTION RATE: 1/min
 TORQUE: DP mm CONCENTRATION:
 WEATHER: NUMBER BOP DRILLS CONDUCTED: DRILLING 1 TRIPPING
 7 m. DEPTH: 558 m REPORTED BY: D KLATT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA
 LOCATION: 300-B12-6010-12215-0
 CONTRACTOR: BARDEN
 APC #: WCB62
 DEPTH: 848 m
 PROCESS: 290 m
 DATE FROM SPD: 11
 DATE: 90/02/12
 DAILY COST: \$ 27945
 CUMULATIVE COST: \$ 842940
 OPERATIONS FORECAST (Run 30 hrs) AIR DRILL
 FORMATION: TETCHO TOP @: =
 LAST CASING: 244.5 m @ 548 m
 FORMATION TEST: 17.5 m³/m @ DEPTH: 548 m

Summary

07:00 0715 RIG SER
 0800 AIR DRILL SAFETY MEETING & BLOW
 OUT DRILL
 1330 DRILL
 1345 RIG SER
 1400 SURVEY @ 650 MISS RUN
 1415 DRILL
 1430 SURVEY @ 659
 1700 DRILL
 2100 TRIP FOR AIR HAMMER-CHANGE OUT-
 RUN IN
 2115 RIG SER

0115 DRILL
 0130 RIG SER
 0200 SURVEY @ 770
 0700 DRILL

Mud Properties

	kg/m³	P.Y.	mPa.s	SAND	K+	mg/l
DENSITY	/					
VISCOSITY	/	Y.P.	P _a	SOLIDS	Cl-	mg/l
GELS	/	P _a	cc	OR	Ca++	0 mg/l
PH		WATER LOSS	mm	MBT	kg/m³	SULPHIDES
PF/LF	/	FC THICKNESS	C	POLYMER	kg/m³	SULPHATES
		TEMP				

SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m³ OFF LEASE m³ LIQUIDS m³

VOLUMES OF WASTES HANDED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (deg)	DRIFT (E/W)
659	1.3	N	2.00	E
770	1.8	N	16.00	W

Bit Data

BIT #	7	5	6
SIZE (mm)	219.0	219.0	219.0
TYPE	MDC	JD8	MDC
NAME	MISSION	WESTERN	MISSION
SERIAL #	C2520	23085	C2538
MDC CODE	---	---	---
NOZZLES (mm)	/	19.1/19.1	/
	/	19.1/	/
DEPTH IN (m)	721	548	558
DEPTH OUT (m)		558	721
METREAGE (m)	127	10	163
ROTARY HOURS	9.00	1.75	8.25
ROP (m/hr)	14.1	5.7	19.8
WT ON BIT (kg)	1 000 / 2 000	5 000 / 6 000	1 000 / 2 000
RPM	28/	45/ 50	/
COND. (POOL)	---	---	---
COND. (BCOR)	---	---	---

Pumps

PUMP #	1	2
MANUFACTURER	G. DENTYER	EMSCO
TYPE	P28	500
LINE (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN		
OUTPUT (l/min)	0	0
REDUCED SPEED (rpm)		
REDUCED PRESS. (MPa)		
STAND PIPE PRESSURE	MPa	
TOTAL OUTPUT	0.00 m³/min	ANN VEL-OP 0.0 m³/min
		ANN VEL-DC 0.0 m³/min

Bottom Hole Assembly

# OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	MH	160.0	59.0	1.10
1	SR3	160.0	59.0	2.10
1	DM	158.0	72.0	9.34
1	SU	160.0	54.0	1.31
1	AP	164.0	52.0	0.80
3	DU	165.0	68.0	25.10
1	JH	160.0	54.0	4.23
7	DU	160.0	68.0	60.11
1	AP	164.0	52.0	0.80
1	DU	165.0	68.0	8.79
1	XO	156.0	62.0	0.80
15	HWP	165.0		138.55

TOTAL LENGTH (m) 253.03

Hydraulics

BIT PRESSURE LOSS	MPa
% PRESS LOSS @ BIT	%
HYDRAULIC POWER AT BIT	0.00 KW

Pipe Data

DRILL PIPE				DRILL COLLARS		
JOINTS	GRADE	O.D. (mm)	WEIGHT (kg/m)	JOINTS	O.D.	I.D.
65	E-	158.0	24.70	12	165.00	65.00

FILL: 0 m
 DRAG: 1000 DaN
 TORQUE: -35
 WEATHER: -35
 7 m DEPTH: 848 m

DC WEIGHT: 24 1000 DaN
 HOOK LOAD: 44 1000 DaN

AIR FLOW RATE: 44.0 m³/min @ 1400 lpm
 POISSON RATIO: 1/1000
 CONCENTRATION:

NUMBER BOP DRILLS CONDUCTED: DRILLING 1 TRIPPING
 REPORTED BY: D KLATT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA APE #: WCB62 DATE: 90/02/13
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1290 m DAILY COST: 2934\$
 CONTRACTOR: BAXENDEN INC #: 20 PROGRESS: 442 m CUMULATIVE COST: 87228\$
 FORMATION: TETCHO TOP #: DATE FROM SPEED: 12 DAYS OVER/UNDER APE
 OPERATIONS FORECAST (Next 24 hrs) AIR DRILL OPERATION: DRILL
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 MPa/m @ DEPTH: 548 m

Summary
 07:00 0915 DRILL
 0930 SURVEY
 1645 DRILL
 1700 SURVEY
 1715 RIG SER
 1815 CLEAN SHALE FROM END OF BOUY LIN
 2400 DRILL
 0015 RIG SER
 0100 DRILL
 0130 SURVEY
 0700 DRILL

Med Properties
 DENSITY / kg/m³ P.Y. mPa.s SAND K+ mg/l
 VISCOSITY / sec T.P. Pa SOLIDS C- mg/l
 GELS / Pa WATER LOSS cc OIL C+++ 0 mg/l
 PH mm MBT kg/m³ SULPHIDES mg/l
 PF/MF / TEMP C POLYMER kg/m³ SULPHITES mg/l
 SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m³ OFF LEASE m³
 VOLUMES OF WASTES Hauled TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys	DEPTH (m)	DRIFT (deg)	AZIMUTH (deg) (E/W)	BIT #	SIZE (mm)	TYPE	MAKE	SERIAL #	IADC CODE	NOZZLES (mm)	DEPTH IN (m)	DEPTH OUT (m)	METREAGE (m)	ROTARY HOURS	ROP (m/hr)	WT ON BIT (kg)	RPM	COND. (POOL)	(BCOR)
874	1.5	N	13.00 W	7	219.0	MDC	JDS				721	548	558	569	10	18.8	1 000 / 2 000	28/	
1026	1.8	N	12.00 E	5	219.0	JDS	WESTERN	23085		19.1/19.1	548	558	10	1.75	5.7	5 000 / 6 000	45/ 50		
1175	1.8	N	10.00 E	6	219.0	MDC	MISSION	C2538		/	558	721	163	8.25	19.8	1 000 / 2 000	/		

Pumps	1	2	Bottom Hole Assembly	# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
PUMP #	1	2		1	MH	160.0	59.0	1.10
MANUFACTURER	G-DENVER	EMSCO		1	SR3	160.0	59.0	2.10
TYPE	PZ8	500		1	DM	158.0	72.0	9.34
LINER (mm)	165	140		1	SU	160.0	54.0	1.31
STROKE (mm)	203	405		1	AP	164.0	52.0	0.80
STROKES/MIN				3	DU	165.0	68.0	25.10
OUTPUT (l/min)	0	0		1	JH	160.0	54.0	4.23
REDUCED SPEED (rpm)				7	DU	160.0	68.0	60.11
REDUCED PRESS. (MPa)				1	AP	164.0	52.0	0.80
STAND PIPE PRESSURE MPa				1	DU	165.0	68.0	8.79
TOTAL OUTPUT 0.00 m ³ /min				1	XO	156.0	62.0	6.80
ANN VEL-OP 0.0 m/min				15	HWP	165.0		138.55
ANN VEL-DC 0.0 m/min								
								TOTAL LENGTH (m) 253.03

Hydraulics	Pipe Data	DRILL PIPE	DRILL COLLARS
BIT PRESSURE LOSS MPa	#JTS GRADE O.D.(mm) WEIGHT(m)	#JTS O.D. I.D.	
% PRESS LOSS @ BIT %	114 E- 158.0 24.70	12 165.00 65.00	
HYDRAULIC POWER AT BIT 0.00 kW			

FILL: 0 m DC WEIGHT: 24 1000 Dm AIR FLOW RATE: 44.0 m³/min @ 1400 lps
 DRAG: 1000 Dm HOOK LOAD: 56 1000 Dm FOAM INJECTION RATE: 1/min
 TORQUE: 0P 1000 Dm CONCENTRATION:
 WEATHER: -35 CLEAR NUMBER BOP DRILLS CONDUCTED: DRILLING TRIPPING
 7 m DEPTH: 1290 m REPORTED BY: D KLATT

WELLNAME: SHELL CELIBETA	AGE #: WC862	DATE: 90/02/14
LOCATION: 300-B12-6010-12215-0	DEPTH: 1340 m	DAILY COST \$ 29953
CONTRACTOR: BANDEN	PROGRESS: 50 m	CUMULATIVE COST \$ 902241
INC #: 20	DAYS FROM SPUD: 13	DAYS OVER/UNDER AGE
FORMATION: TETCHO	TOP #: #	OPERATION: DRILL
OPERATIONS FORECAST (Next 24 hrs)	DRILL/ROTARY	
LAST CASING: 244.5 mm @ 548 m	FORMATION TEST: 17.5 MPa/m @ DEPTH 548 m	

Summary

07:00 073G DRILL / AIR
0800 WORK WET HOLE
1430 TRIP OUT-LAY DOWN AIR HAMMER,
FIRE FLOATS-RUN IN-CHECK BOPS
1445 RIG SER-SET BRAKES
1515 TEAR OUT AIR DRILLERS
2030 FILL HOLE W/MUD
2400 REAM 14 SINGLES TO BTM
0700 DRILL

Mud Properties

DENSITY	1190/1190	kg/m ³	P.V.	27	mg/L	SAND		K+	mg/l	
VISCOSITY	55/	sec	Y.P.	7	Pa	SOLIDS	0.0850	Cl-	200 mg/l	
GELS	3/	8 Pa	WATER LOSS	13.0	cc	OIL		Ca++	0 mg/l	
PH	10.0		FC THICKNESS	2.0	mm	MBT	57.0	kg/m ³	SULPHIDES	mg/l
PF/MF	0.3/	0.6	TEMP	36	C	POLYMER		kg/m ³	SULPHITES	mg/l

SUMP VOLUMES AS OF SUNDAY P.M. :	ON LEASE	m3	OFF LEASE	m3
VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK :	SOLIDS	m3	LIQUIDS	m3

Surveys

No.	DEPTH	DRAFT	AZIMUTH		
	(m)	(deg)	(N/S)	(deg)	(E/W)

Bit Data

BIT #	7	8	6
SIZE (mm)	219.0	216.0	219.0
TYPE	MDC	S84F	MDC
MAKE	MISSION	SEC	MISSION
SERIAL #	C2520	468535	C2538
IADC CODE	- - -	- - -	- - -
NOZZLES (mm)	/	9.5/ 9.5	/
	/	9.5/	/
DEPTH IN (m)	721	1300	558
DEPTH OUT (m)	1300		721
METREAGE (m)	579	40	163
ROTARY HOURS	31.00	7.00	8.25
ROP (m/hr)	18.7	5.7	19.8
WT ONE BIT (lb)	1 000 / 2 000	12 000 / 15 000	1 000 / 2 000
RPM	28/	60/ 65	/
COND. (MOUL)	- - -	- - -	- - -
(MCON)	- - -	- - -	- - -

Pratugas

PUMP #	1	2
MANUFACTURER	G-DENVER	EMSCO
TYPE	P28	500
LINE (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	100	
OUTPUT (l/min)	1200	
REDUCED SPEED (rpm)	50	
REDUCED PRESS. (kPa)	3900	

Bottom Hole Assembly

#	OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (in)
1		SR3	160.0	59.0	2.10
1		DM	158.0	72.0	9.34
1		SU	160.0	54.0	1.31
3		DU	165.0	68.0	25.10
1		JH	160.0	54.0	4.23
7		DU	160.0	68.0	60.11
1		DU	165.0	68.0	8.79
1		XO	156.0	62.0	0.80
15		HWP	165.0		138.55

STAND PIPE PRESSURE 11500 kPa
TOTAL OUTPUT 1.20 m3/min ANN VEL-DC 21.3 m/min
ANN VEL-OC 15.8 m/min

TOTAL LENGTH (m) 250.33

Hydraulics

BIT PRESSURE LOSS	5832.3 MPa
% PRESS LOSS @ BIT	50.7 %
HYDRAULIC POWER AT BIT	116.65 KW

Pipe Data

DRILL PIPE			
SJTS	GRADE	O.D.(mm)	WEIGHT(kg/m)
114	E-	158.0	24.70
	-		

DRILL COLLARS

DATE	QTY	UNIT PRICE	TOTAL
12	165.00		65.00

FILL: 0 m
DRAG: 1200 Dalt
TORQUE: 0.5 DP turns
WEATHER: -20 SNOWING
7 a.m. DEPTH 1340 m

DC WEIGHT: 19 2000 D-10
HOOK LOAD: 50 2000 D-10

AIR FLOW RATE: m3/min @
FOAM INJECTION RATE: 1/min
CONCENTRATION:

NUMBER BOP DRILLS CONDUCTED: DRILLING 1 TRIPPING 1
REPORTED BY: D KLATT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/15
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1450 m DAILY COST: \$ 24964
 CONTRACTOR: BAWDEN REC #: 20 PROGRESS: 110 m CUMULATIVE COST: \$ 927205
 FORMATION: TETCHO TOP #: 0 OPERATION: CIRC.
 OPERATIONS FORECAST (Next 24 hrs) CIRC. PRIOR TO LOG, TRIP OUT & LOG
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 kPa/m @ DEPTH: 548 m

Summary

07:00 0845 DRILL
 0900 RIG SERV. & UPPER RAMS
 1500 DRILL
 1515 RIG SERV. & UPPER RAMS
 2345 DRILL
 2400 RIG SERV. & HYDRIL
 0215 DRILL
 0315 CIRC. HOLE CLEAN
 0345 SURVEY
 0545 WIPER TRIP 10 STDS. 4M FILL
 0700 CIRC. HOLE SLOUGHING SHALE

AIR DRILLERS & TRUCKERS 36 HRS.
 BAWDEN CREWS HOURS 264HRS.
 SUPERVISION HRS.96

NEED 2 P.O. BOOKS
 NEED 2 MTR BOOKS
 SEND ON TOMORROWS PLANE

Mud Properties

DENSITY	1210/1210 kg/m ³	P.V.	37 mPa.s	SAND	K+	mg/l
VISCOSITY	79/ sec	V.P.	14 Pa	SOLIDS	0.0950	200 mg/l
GELS	4/ 18 Pa	WATER LOSS	11.0 cc	OL	Ca++	0 mg/l
PH	10.0	FC THICKNESS	2.0 mm	MST	64.0 kg/m ³	SULPHIDES mg/l
PF/MF	0.4/ 0.8	TEMP	40 C	POLYMER	4.5 kg/m ³	SULPHATES mg/l

SUMP VOLUMES AS OF SUNDAY P.M.:

ON LEASE

OFF LEASE

VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg)	(E/W)
18	1437	1.3	N 13.00	E

Bit Data

BIT #	7	8	6
SIZE (mm)	219.C	216.0	219.0
TYPE	MDC	S84P	MDC
MAKE	MISSION	SEC	MISSION
SERIAL #	C2520	468535	C2538
IADC CODE	- - -	- - -	- - -
NOZZLES (mm)	/	9.5/ 9.5	/
DEPTH IN (m)	721	1300	558
DEPTH OUT (m)	1300		721
METREAGE (m)	579	150	163
ROTARY HOURS	31.00	25.00	8.25
ROP (m/hr)	18.7	6.0	19.3
WT ON BIT (kN)	1 000 / 2 000	15 000 / 17 000	1 000 / 2 000
RPM	28/	60/ 65	/
COND. (POOL)	- - -	- - -	- - -
(BCOR)	- - -	- - -	- - -

Pumps

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	P28	500
LINER (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	100	
OUTPUT (l/min)	1200	0
REDUCED SPEED (rpm)	50	
REDUCED PRESS. (kPa)	3900	

STAND PIPE PRESSURE 11500 kPa

TOTAL OUTPUT 1.20 m³/min ANN VEL-OP 45.4 m/min
ANN VEL-OC 32.7 m/min

Bottom Hole Assembly

# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
1	SR3	160.0	59.0	2.10
1	DM	158.0	72.0	9.34
1	SU	160.0	54.0	1.31
3	DU	165.0	68.0	25.10
1	JH	160.0	54.0	4.23
7	DU	160.0	68.0	60.11
1	DU	165.0	68.0	8.79
1	XO	156.0	62.0	0.80
15	BWP	165.0		138.55

TOTAL LENGTH (m) 250.33

Hydraulics

BIT PRESSURE LOSS 5930.4 kPa
 % PRESS LOSS @ BIT 51.6 %
 HYDRAULIC POWER AT BIT 118.61 kW

Pipe Data

DRILL PIPE	DRILL COLLARS
#JTS GRADE O.D.(mm) WEIGHT(kg/m)	#JTS O.D. I.D.
133 E- 114.0 24.70	12 158.00 65.00

FILL: 0 m
 DRAG: 1000 DaN
 TORQUE: 0.5 DP mm
 WEATHER: CLEAR -25
 7 a.m. DEPTH: 1450 m

DC WEIGHT: 19 1000 DaN
 HOOK LOAD: 50 1000 DaN

AIR FLOW RATE: m³/min @ kPa
 FOAM INJECTION RATE: l/min
 CONCENTRATION:

NUMBER BOP DRILLS CONDUCTED: DRILLING 1 TRIPPING 0
 REPORTED BY: D HEWITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/16
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1450 m DAILY COST: 12414
 CONTRACTOR: BAYDEN REC #: 20 PROGRESS: 0 m CUMULATIVE COST: 939619
 FORMATION: TETCHO TOP #: 15 DATES FROM SPED: 15 DAYS OVER/UNDER AFE
 OPERATIONS FORECAST (Next 24 hrs) MAKE UP TEST: TOOLS.DST#1 MAKE UP DST TOOLS
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 kPa/m @ DEPTH: 548 m

Summary

07:00 0830 CIRC. PRIOR TO TRIP 2115 CIRC. SLOUGHING SHALE
 1130 TRIP OUT TO LOG 2330 REAM FROM 1106 TO 1161
 1400 RIG & LOG WITH SCHLUMBERGER 2400 CIRC. HOLE SLOUGHING
 RUN SONIC, GAMMA RAY, PHYSER, SP, CALLIP. 0015 RIG SERV.
 690M TO 830M HOLE BRIDGED @ 1098M 0030 TRIP UP TO 1080
 1530 RIG OUT ROTATING HEAD, INSTALL 0145 CIRC. HOLE FOR DST
 FLOW NIPPLE 0400 TRIP OUT
 1630 TRIP IN HOLE 0700 PICK UP TEST TOOL & MAKE UP
 1700 SLIP & CUT LINE INTERVAL 731 TO 766.78M
 1715 RIG SERVICE BAYDEN CREWS 254 HRS
 1900 TRIP IN SUPERVISION 96 HRS.
 2030 REAM FROM 1083 TO 1106M EXTRA TRUCKING TIME 18HRS.

Mud Properties

DENSITY 1220/1220 kg/m³ P.V. 38 mPa.s SAND K+ mg/l
 VISCOSITY 72/ sec T.P. 10 Pa SOLIDS 0.0950 G- 200 mg/l
 GELS 4/ 10 Pa WATER LOSS 9.6 cc CL C++ 0 mg/l
 PH 10.0 FC THICKNESS 2.0 mm MBT 64.0 kg/m³ SULPHIDES mg/l
 PF/MF 0.2/ 0.4 TEMP 40 C POLYMER 4.5 kg/m³ SULPHITES mg/l
 SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m³ OFF LEASE m³
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg)	(E/W)	BIT #	SIZE (mm)	TYPE	MAKE	SERIAL #	WDC CODE	NOZZLES (mm)	DEPTH IN (m)	DEPTH OUT (m)	INSTRUMENT (m)	ROTARY HOURS	SOP (m/hr)	WT ON BIT (kg)	RPM	COND. (pool)	(BGR)
					7	219.0	MDC	MISSION	C2527		/	721	1300	579	31.00	18.7	1 000 / 2 000	28/		
					8	216.0	S84P	SEC	468535		9.5/ 9.5	1300		150	25.00	6.0	15 000 / 17 000	60/ 65		
					6	219.0	MDC	MISSION	C2538		/	558	721	163	8.25	19.8	1 000 / 2 000	/		

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	P28	500
LINER (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	100	
OUTPUT (l/min)	1200	0
REDUCED SPEED (rpm)	50	
REDUCED PRESS. (kPa)	3900	

STAND PPV PRESSURE 8500 kPa
 TOTAL OUTPUT 1.20 m³/min ANN VEL-DP 45.4 m/min
 ANN VEL-DC 32.7 m/min

Bottom Hole Assembly

# OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	SR3	160.0	59.0	2.10
1	DM	158.0	72.0	9.34
1	SU	160.0	54.0	1.31
3	DU	165.0	68.0	25.10
1	JH	160.0	54.0	4.23
7	DU	160.0	68.0	60.11
1	DU	165.0	68.0	8.79
1	XO	156.0	62.0	0.80
15	HWP	165.0		138.55

TOTAL LENGTH (m) 250.33

Hydraulics

BIT PRESSURE LOSS 5979.4 kPa
 % PRESS LOSS @ BIT 70.3 %
 HYDRAULIC POWER AT BIT 119.59 kW

Pipe Data

DRILL PIPE	DRILL COLLARS					
#JTS	GRADE	O.D. (mm)	WEIGHT (kg/m)	#JTS	O.D.	I.D.
133	E-	114.0	24.70	12	158.00	65.00

FILL: 0 m
 DRAG: 1000 DaN
 TORQUE: 0.5 DP mm
 WEATHER: CLEAR -33
 7 a.m. DEPTH: 1450 m

DC WEIGHT: 19 1000 DaN
 HOOK LOAD: 50 1000 DaN

AIR FLOW RATE: m³/min @
 FOAM INJECTION RATE: l/min
 CONCENTRATION

NUMBER SOP DRILLS CONDUCTED: DRILLING TRIPPING 0
 REPORTED BY: D HEWITT

SHELL CANADA LIMITED

Daily Drilling Report

Daily Drilling Report

WCB62 DATE: 90/02/17
 DEPTH: 1450 m DAILY COST: 57775
 CUMULATIVE COST: 997394
 DAYS OVER/UNDER AFE
 OPERATION: REAMING
 DRILL AHEAD
 FORMATION TEST: 17.5 m³/m @ DEPTH: 548 m

BANDENS CREW HRS 264
 SHELL SUPERVISION 84HRS.

RE: SHELL CELIBETA
 E: 300-B12-6010-12215-0
 JOB: BANDEN

WCB62
 DEPTH: 1480 m
 PROGRESS: 30 m
 DAYS FROM SPUD: 17

DATE: 90/02/18
 DAILY COST: 12474
 CUMULATIVE COST: 1009868
 DAYS OVER/UNDER AFE

TOP 8: TRIP DRILL AHEAD TO CORE PT.
 FORECAST (Next 24 hrs):
 SFC: 244.5 mm @ 548 m

FORMATION TEST: 17.5 m³/m @ DEPTH: 548 m

0715 RIG SERV. & HYDRIL
 REAM TO BOTTOM 1245M TO 1450M
 RIG SERV. & TOP PIPE RAMS
 CIRC. HOLE CLEAN TO GET SAMPLES
 DRILL
 HOLD BOP DRILL, CHECK MANIFOLD
 S, THAW OUT & WINTERIZE
 DRILL
 CIRC. SAMPLE
 PUMP OUT 7 SINGLES & TRIP
 RIG SERV. & BLIND RAMS

BROUGHT DENSITY UP TO 1250KG/M³
 SLOWED SLOUGHING DOWN SOME

BANDEN CREWS & PUSH 264HRS.
 SHELL SUPERVISION 96HRS.

REPORTS
 DENSITY 1250/ kg/m³ P.V. 42 mPa.s SAND 200 mg/l
 SOLIDITY 78/ % Y.P. 14 Pa SOLIDS 0.0950 C- 200 mg/l
 LS 5/ 12 Pa WATER LOSS 9.6 cc OIL C- 0 mg/l
 10.5 FC THICKNESS 1.5 mm MBT 64.0 kg/m³ SULPHIDES mg/l
 0.2/ 0.4 TEMP 40 C POLYMER 4.5 kg/m³ SULPHITES mg/l
 SHUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m³ OFF LEASE m³
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

BIT DATA
 DEPTH (m) DRIFT (deg) AZIMUTH (N/S) (deg) (E/W) (deg) (E/W)
 BIT # 10 8 9
 SIZE (mm) 216.0 216.0 216.0
 TYPE HPL3G S84F S84FRR
 MAKE REED SEC. SEC.
 SERIAL # BT4690 468535 468535
 IADC CODE 2-1-7- 5-1-7-
 NOZZLES (mm) 9.5/10.3 9.5/ 9.5 9.5/10.3
 10.3/ 10.3/
 DEPTH IN (m) 1480 1300 1450
 DEPTH OUT (m) 0 150 30
 METREAGE (m) 0 25.00 7.00
 ROTARY HOURS 6.0 4.3
 ROT ON BIT (deg) 15 000 / 17 000 15 000 / 16 000
 RPM 60/ 65 62/
 COND. (POOL) 1-1-NO-A3 2-2-RG-H3
 (BCOR) 3-1-NO-DST 4-2-NO-TQ

Bottom Hole Assembly
 # OF CODE O.D.(mm) I.D.(mm) LENGTH (m)
 1 SR3 160.0 59.0 2.10
 1 DM 158.0 72.0 9.34
 1 SU 160.0 54.0 1.31
 3 DU 165.0 68.0 25.10
 1 JH 160.0 54.0 4.23
 1 DU 160.0 68.0 94.00
 1 DU 165.0 68.0 8.79
 1 XO 156.0 62.0 0.80
 5 BWP 165.0 138.55

Bottom Hole Assembly
 # OF CODE O.D.(mm) I.D.(mm) LENGTH (m)
 1 SR3 160.0 59.0 2.10
 1 DM 158.0 72.0 9.34
 1 SU 160.0 54.0 1.31
 3 DU 165.0 68.0 25.10
 1 JH 160.0 54.0 4.23
 1 DU 160.0 68.0 94.00
 1 DU 165.0 68.0 8.79
 1 XO 156.0 62.0 0.80
 15 BWP 165.0 138.55

TAND PIPE PRESSURE 9000 kPa
 TOTAL OUTPUT 1.20 m³/min ANN VEL-DP 45.4 m/min
 ANN VEL-DC 32.7 m/min

TOTAL LENGTH (m) 284.22

Drill Collars
 BIT PRESSURE LOSS 2725.6 kPa
 % PRESS LOSS @ BIT 30.3 %
 HYDRAULIC POWER AT BIT 54.51 kW
 DRILL PIPE
 #ITS GRADE O.D.(mm) WEIGHT(m) 158.00 65.00
 133 E- 114.0 24.70

FILL: 0 m DC WEIGHT: 19 1000 DaN AIR FLOW RATE m³/min @ 1 Pa
 DRAG: 1000 DaN HOOK LOAD: 50 1000 DaN FOAM INJECTION RATE l/min
 TORQUE: 0.5 DP turns CONCENTRATION: NUMBER BOP DRILLS CONDUCTED: DRILLING 1 TRIPPING 0
 WEATHER: SNOW - 5 REPORTED BY: D HEWITT

CD 01/17

DOR

Page 1 of 1

DOR

Page 1 of 2



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA APE #: WCB62 DATE: 90/02/19
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1496 m DAILY COST: \$ 25393
 CONTRACTOR: BANDEN REC #: 20 PROGRESS: 16 m CUMULATIVE COST: 1035261
 FORMATION: TETCHO TOP #: OPERATOR: DRILL
 OPERATIONS FORECAST (Next 24 hrs): DRILL, CIRC. TRIP
 LAST CASING: 244.5 mm & 548 mm FORMATION TEST: 17.5 m³/m & DEPTH: 548 m

Summary

07:00 1030 TRIP IN
 1045 RIG SERV. & HYDRILL
 0215 REAM SLOUGHING HOLE FROM
 1260M TO 1480M TOUGH REAMING
 0245 DRILL
 0300 RIG SERV. & TOP RAMS
 0700 DRILLING

Mud Properties

DENSITY	1300/	kg/m³	P.V.	43	mPa.s	SAND	0.0025	K+	mg/l	
VISCOSITY	90/	sec	Y.P.	19	Pa	SOLIDS	0.1170	Cl-	250 mg/l	
GELS	5/	16 Pa	WATER LOSS	8.6	cc	OR		Ca++	0 mg/l	
PH	10.5		FC THICKNESS	2.0	mm	MST	73.0	kg/m³	SULPHIDES	mg/l
PF/MF	4.0/	8.0	TEMP	42	C	POLYMER		kg/m³	SULPHITES	mg/l

SUMP VOLUMES AS OF SUNDAY P.M.:

ON LEASE

OFF LEASE

Surveys

No.	DEPTH	DRIFT	AZIMUTH
	(m)	(deg)	(M/T) (deg) (E/W)

Bit Data

BIT #	10	8	9
SIZE (mm)	216.0	216.0	216.0
TYPE	HP13G	S84F	S84FRR
MAKE	REED	SEC	SEC.
SERIAL #	BT4690	468535	468535
MOCK CODE	2-1-7-	- - -	5-1-7-
NOZZLES (mm)	9.5/10.3	9.5/ 9.5	9.5/10.3
	10.3/	9.5/	10.3/
DEPTH IN (m)	1480	1300	1450
DEPTH OUT (m)	0		1480
METREAGE (m)	16	150	30
ROTARY HOURS	4.50	25.00	7.00
ROP (m/hr)	3.6	6.0	4.3
WT ON BIT (kg)	12 000 / 15 000	15 000 / 17 000	15 000 / 16 000
RPM	/ 62	60/ 65	62/
COND.	[pool] - - -	1-1-NO-A3	2-2-RG-H3
(BCOR)	- - -	3-1 -NO-DST	4-2 -NO-TQ

Pumps

PUMP #	1	2
MANUFACTURER	G-DENVER	EMSCO
TYPE	PZ8	500
LINEAR (mm)	165	140
STROKE (mm)	203	406

STROKES/MIN	100	
OUTPUT (l/min)	1200	0

REDUCED SPEED (mm)	50
REDUCED PRESS. (MPa)	4000

STAND PIPE PRESSURE 9800 kPa

TOTAL OUTPUT	1.20 m³/min	ANN VEL-DP	45.4 m/min
		ANN VEL-DC	32.7 m/min

Bottom Hole Assembly

# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
1	SR3	160.0	59.0	2.10
1	DM	158.0	72.0	9.34
1	SU	160.0	54.0	1.31
1	DU	165.0	68.0	8.85
1	SS	160.0	54.0	4.64
2	DU	160.0	68.0	17.12
1	JH	165.0	68.0	4.23
11	DU	156.0	62.0	94.00
1	XO	156.0	62.0	0.80
15	HW	114.0	75.0	138.55

TOTAL LENGTH (m) 280.94

Hydraulics

BIT PRESSURE LOSS	2834.7 kPa
% PRESS LOSS @ BIT	28.9 %
HYDRAULIC POWER AT BIT	56.69 kW

Pipe Data

DRILL PIPE			
#JTS	GRADE	O.D.(mm)	WEIGHT(m³/m)
133	E-	114.0	24.70
-	-	-	-

DRILL COLLARS

#JTS	O.D.	I.D.
15	158.00 mm	65.00 mm

FILL:	0 m	DC WEIGHT:	19 1000 DaN
DRAG:	1000 DaN	HOOK LOAD:	52 1000 DaN
TORQUE:	0.5 DP 1000		
WEATHER:	-15 OVER CAST		
7	mm DEPTH 1496 m		

AIR FLOW RATE:	m³/min @	MPa
FOAM INJECTION RATE:	l/min	
CONCENTRATION:		
NUMBER BOP DRILLS CONDUCTED:	DRILLING 1 TRIPPING 0	
REPORTED BY:	D HEWITT	



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELISTEA AFE #: WCB62 DATE: 90/02/20
 LOCATION: 300-812-6810-12215-0 DEPTH: 1528 m DAILY COST: \$ 26012
 CONTRACTOR: BANDEN RIG #: 20 PROGRESS: 32 m CUMULATIVE COST: \$ 1061273
 FORMATION: MUSKIE TOP @: 1520 m OPERATION: REAM TO BOTTOM
 OPERATIONS FORECAST (Next 24 hrs) REAM TO BOTTOM FROM 1456H
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 mPa @ DEPTH: 548 m

Summary

07:00 0715 DRILL
 0815 CIRC. SAMPLE
 0830 HELD BOP DRILL & SAFETY MEETING
 1200 WIPER TRIP 22 STANDS
 1215 RIG SERVICE & HYDRIL
 1315 TRIP IN SLOW
 1600 REAM FROM 1450 TO 1503
 1745 DRILL
 1800 RIG SERVICE & UPPER RAMS
 2300 DRILL
 2400 CIRC. UP SAMPLE
 0330 PUMP OUT 9 SINGLES & TRIP OUT

0345 RIG SERV. & BLIND RAMS
 0545 TRIP IN SLOW
 0700 REAM FROM 1456H

BANDEN CREW 264 HRS.
 SHELL SUPERVISION 96 HRS.

NEED 2 X 12 HR TOUR BOOKS. 2MTR BOOKS
 2 P O BOOKS IMMEDIATELY

Mud Properties

DENSITY	1300/	kg/m ³	P.V.	50	mPa.s	SAND	0.0025	K+	mg/l
VISCOSITY	80/	sec	Y.P.	16	Pa	SOLIDS	0.1230	Cl-	250 mg/l
GELS	5/	13 Pa	WATER LOSS	8.4	cc	OL		Ca++	0 mg/l
PH	10.5		FC THICKNESS	2.0	mm	MT	64.0	kg/m ³	SULPHIDES
PF/MF	0.3/	0.6	TEMP	43	C	POLYMER		kg/m ³	SULPHITES

SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m³ OFF LEASE m³
 VOLUMES OF WASTES HAULED TO OFF LEASE SHED DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (deg)	BIT #	SIZE (mm)	TYPE	MAKE	SERIAL #	WADC CODE	NOZZLES (mm)	DEPTH IN (m)	DEPTH OUT (m)	METREAGE (m)	ROTARY HOURS	ROP (m/hr)	WT ON BIT (kN)	RPM	COND.
				10	11	9												
				216.0	216.0													
				HP13G	P3													
				REED	SMITH													
				BT4690	XJ4131													
				2-1-7-	5-3-7-													
				9.5/10.3	10.3/10.3													
				10.3/	11.1/													
				1480	1528													
				48	0													
				11.50	7.00													
				4.2	4.3													
				12 000 / 15 000	15 000 / 16 000													
				62/ 72	60/													
				7-7-WT-A3	2-2-RG-H3													
				2-2 -NO-PR	4-2 -NO-TO													

Pumps

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	PZ8	500
LINE (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	100	
OUTPUT (l/min)	1200	0
REDUCED SPEED (rpm)	50	
REDUCED PRESS. (kPa)	4000	

Bottom Hole Assembly

# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
1	SR3	160.0	59.0	2.10
1	DM	158.0	72.0	9.34
1	SU	160.0	54.0	1.31
1	DU	165.0	68.0	8.85
1	SS	160.0	54.0	4.64
2	DU	160.0	68.0	17.12
1	JH	165.0	68.0	4.23
11	DU	156.0	62.0	94.00
1	XO	156.0	62.0	0.80
15	BW	114.0	75.0	138.55

STAND PIPE PRESSURE 9800 mPa

TOTAL OUTPUT 1.20 m³/min ANN VEL-DP 45.4 m/min
 ANN VEL-DC 32.7 m/min

TOTAL LENGTH (m) 280.94

Hydraulics

BIT PRESSURE LOSS 4152.2 mPa
 % PRESS LOSS @ BIT 42.4 %
 HYDRAULIC POWER AT BIT 83.04 kW

Pipe Data

JOINTS	GRADE	O.D.(mm)	WEIGHT(kg/m)
142	E-	114.0	24.70

DRILL COLLARS

JOINTS	O.D.	I.D.
15	158.00	65.00

FILL: 0 m
 DRAG: 1800 DaN
 TORQUE: 0.5 DP mm
 WEATHER: 7
 7 a.m. DEPTH: 1528 m

DC WEIGHT: 19 1800 DaN
 HOOK LOAD: 52 1800 DaN

AIR FLOW RATE: m³/min @ kPa
 FOAM INJECTION RATE: l/min
 CONCENTRATION:

NUMBER BOP DRILLS CONDUCTED: DRILLING 1 TRIPPING 0
 REPORTED BY: D HEWITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/21
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1551 m DAILY COST: \$ 20224
 CONTRACTOR: BAWDEN NS #: 20 PROGRESS: 23 m CUMULATIVE COST: \$ 1081497
 FORMATION: SLAVE POINT TOP @: 1540 m OPERATION: CLEAN TO BOTTOM
 OPERATIONS FORECAST (Next 24 hrs) CLEAN TO BOTTOM & CUT CORE # 1 TRIP
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 kPa/m @ DEPTH: 548 m

Summary

07:00 0915 REAM TO BOTTOM FROM 1456 TO 1528
 1315 DRILL
 1430 CIRC. SAMPLE
 1545 DRILL
 1645 CIRC. SAMPLE
 1700 RIG SERV. & HYDRIL
 1715 DRILL
 1830 CIRC. SAMPLE
 1900 WIRELINE SURVEY, MISS RUN
 2115 PUMP OUT 10 SINGLES WIPER TRIP
 10 STANDS

2200 BREAK CIRC. CLEAN 1522 TO 1551
 2300 CIRC. HOLE PRIOR TO CORE
 2330 SURVEY
 0315 PUMP OUT 7 SINGLES, PUMP PILL & TRIP OUT HOLE GOOD
 0400 PICK UP CORE BBLS. & SERV.
 0415 RIG SERV. & BLIND RAMS
 0630 TRIP IN SLOW TO 1428
 0700 BREAK CIRC. CLEANING TO BOTTOM
 BAWDEN CREWS & SHELL SUPER. 360 HRS.
 TRANSFER 21226 LITRES OF DIESEL FUEL FROM SHELLS FUEL TO BAWDEN RIG #20

Mud Properties

DENSITY	1310/	kg/m ³	P.V.	52	mPa.s	SAND	0.0060	K+	mg/l
VISCOSITY	90/	sec	Y.P.	14	P _a	SOLIDS	0.1240	G-	250 mg/l
GELS	4/ 12	P _a	WATER LOSS	8.6	cc	OR		Ca++	0 mg/l
PH	10.5		FC THICKNESS	2.0	mm	MBT	71.0	kg/m ³	SULPHIDES
PF/MF	0.3/ 0.7	TEMP.		43	C	POLYMER		kg/m ³	SILPHITES

SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m³ OFF LEASE m³
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZMUTH (N/S) (deg)	(E/W) (deg)
19	1550	1.1	N 44.00 E	

Bit Data

BIT #	10	11	1C
SIZE (mm)	216.0	216.0	215.0
TYPE	HP13G	F3	CUCBG
MAKE	REED	SMITH	SPERRY
SERIAL #	BT4690	XJ4131	
IADC CODE	2-1-7-	5-3-7-	
NOZZLES (mm)	9.5/10.3	10.3/10.3	/
	10.3/	11.1/	/
DEPTH IN (m)	1480	1528	1551
DEPTH OUT (m)	1528	1551	0
METREAGE (m)	48	23	
ROTARY HOURS	11.50	6.00	
ROP (m/hr)	4.2	3.8	
WT ON BIT (kN)	12 000 / 15 000	10 000 / 16 000	800 / 800
RPM	62/ 72	62/	/
COND.	(POOL) 7-7-WT-A3	1-1-NO-A3	
(BCOR)	2-2 -NO-PR	1-1 -NO-CP	

Pumps

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	PZ8	500
LINEAR (mm)	165	140
STROKE (mm)	203	406

STROKES/MIN 100
 OUTPUT (l/min) 1200 0

REDUCED SPEED (rpm) 50
 REDUCED PRESS. (kPa) 4000

STAND PIPE PRESSURE 9500 kPa
 TOTAL OUTPUT 1.20 m³/min ANN VEL-DP 45.4 m/min
 ANN VEL-DC 32.7 m/min

Bottom Hole Assembly

# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
1	SR3	160.0	59.0	2.10
1	DM	158.0	72.0	9.34
1	SU	160.0	54.0	1.31
1	DO	165.0	68.0	8.85
1	SS	160.0	54.0	4.64
2	DU	160.0	68.0	17.12
1	JH	165.0	68.0	4.23
11	DU	156.0	62.0	94.00
1	XO	156.0	62.0	0.80
15	HW	114.0	75.0	138.55

TOTAL LENGTH (m) 280.94

Hydraulics

BIT PRESSURE LOSS kPa
 % PRESS LOSS @ BIT 0.0 %
 HYDRAULIC POWER AT BIT 0.00 kW

Pipe Data

DRILL PIPE

#JTS	GRADE	O.D.(mm)	WEIGHT(kg/m)
142	E-	114.0	24.70

DRILL COLLARS

#JTS	O.D.	I.D.
15	158.00	65.00

FILL: 0 m
 DRAG: 100% DaM
 TORQUE: 0.5 DP turn
 WEATHER: -18 SNOWING
 7 a.m. DEPTH: 1551 m

DC WEIGHT: 19 1800 DaM
 HOOK LOAD: 52 1800 DaM

AIR FLOW RATE: m³/min @
 FOAM INJECTION RATE: l/min
 CONCENTRATION:

NUMBER BOP DRILLS CONDUCTED: DRILLING 1 TRIPPING 0
 REPORTED BY: D HEWITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/22
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1562 m DAILY COST: 19486
 CONTRACTOR: BAWDEN RIG #: 20 PROGRESS: 11 m CUMULATIVE COST: 1100983
 DAYS FROM SPUD: 21 DAYS OVER/UNDER AFE: 0
 FORMATION: SLAVE POINT TOP @: 1540 m OPERATION: JAR ON CORE BBL
 OPERATIONS FORECAST (next 24 hrs) WORK STUCK CORE BBL-
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 MPa/m @ DEPTH: 548 m

Summary

07:00 0800 FINISH REAMING TO BOTTOM
 1045 CUT CORE #1 1551.6 TO 1555.4
 1300 PUMP OUT 9 SINGLES CORE JAMMED
 1530 TRIP OUT TO RECOVER CORE
 1630 RECOVER & SERV. CORE BBL
 1645 RIG SERV. & BLIND RAMS
 1745 TRIP IN
 1830 SLIP & CUT LINE
 2100 TRIP IN
 2300 CLEAN TO BOTTOM FROM 1483 TO
 1555
 0600 CUT CORE # 2 FROM 1555 TO 1562

WORK STUCK CORE BBL UP 12M

RECOVER 3.8M OF CORE FULL RECOVERY
 BAWDEN CREWS & PUSH 264 HRS.
 TRUCKERS 20 HRS.
 SHELL SUPERVISION 96 HRS.

Mud Properties

DEENSITY 1295/ kg/m³ P.Y. 49 mPa.s SAND 0.0040 K+ mg/l
 VISCOSITY 83/ sec Y.P. 17 Pa SOLIDS 0.1190 G- 250 mg/l
 GELS 4/ 11 Pa WATER LOSS 8.4 cc OE Co++ 0 mg/l
 PH 10.5 FC THICKNESS 2.0 mm MBT 71.0 kg/m³ SULPHIDES mg/l
 PF/MF 0.3/ 0.7 TEMP 43 C POLYMER kg/m³ SULPHITES mg/l
 SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m³ OFF LEASE m³
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys

No.	DEPTH (m)	DIFT (deg)	AZIMUTH (N/S) (deg)	(E/W)	BIT #	SIZE (mm)	TYPE	MAKE	SERIAL #	IADC CODE	NOZZLES (mm)	DEPTH IN (m)	DEPTH OUT (m)	METREAGE (m)	ROTARY HOURS	ROP (m/hr)	WT ON BIT (kN)	RPM	COND.	(POOL)	(BCOR)
					13	215.0	CRCB	SPERRY				1555			7	1.0	3 000 / 6 000	62/ 72			
					11	216.0	F3	SMITH	XJ4131	5-3-7-	10.3/10.3	1528	1551	23	3.8	10 000 / 16 000	62/		1-1-NO-A3		
					12	215.0	CUCBG	SPERRY			0.4/	1551	1555	4	1.5	3 000 / 6 000	72/		1-1-NO-CP		

Pumps

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	P28	500
LINE (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	80	
OUTPUT (l/min)	960	0
REDUCED SPEED (rpm)	50	
REDUCED PRESS. (MPa)	4000	
STAND PIPE PRESSURE	7400 MPa	
TOTAL OUTPUT	0.96 m ³ /min	ANN VEL-OP 36.3 m/min ANN VEL-DC 26.2 m/min

Bottom Hole Assembly

# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
1	SR3	160.0	59.0	2.10
1	DM	158.0	72.0	9.34
1	SU	160.0	54.0	1.31
1	DU	165.0	68.0	8.85
1	SS	160.0	54.0	4.64
2	DU	160.0	58.0	17.12
1	JH	165.0	68.0	4.23
11	DU	156.0	62.0	34.00
1	XO	156.0	62.0	0.80
15	HW	114.0	75.0	138.55

TOTAL LENGTH (m) 280.94

Hydraulics

BIT PRESSURE LOSS MPa
 % PRESS LOSS @ BIT 0.0 %
 HYDRAULIC POWER AT BIT 0.00 KW

Pipe Data

DRILL PIPE	DRILL COLLARS
#JTS GRADE O.D.(mm) WEIGHT(kg/m)	#JTS O.D. ID.
143 E- 114.0 24.70	15 158.00 65.00

FILL: 0 m
 DRAG: 1000 DaN
 TORQUE: 0.5 DP torque
 WEATHER: OVERCAST -10
 7 a.m. DEPTH: 1562 m

DC WEIGHT: 19 1000 DaN
 HOOK LOAD: 52 1000 DaN

AIR FLOW RATE m³/min @ MPa
 FOAM INJECTION RATE l/min
 CONCENTRATION:

NUMBER BOP DRILLS CONDUCTED: DRILLING 1 TRIPPING 0
 REPORTED BY: D HEWITT

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SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/23
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1580 m DAILY COST: 29597
 CONTRACTOR: BARDEN INC #: 20 PROGRESS: 18.0 CUMULATIVE COST: 1130580
 FORMATION: SLAVE POINT TOP #: 1540 m DAYS FROM SPIN: 22 DAYS OVER/UNDER AFE: 0
 OPERATIONS FORECAST (From 28 Jan) CIRC. SAMPLE OPERATION: CIRC. UP SAMPLE
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 MPa @ DEPTH: 548 m

Summary

07:00 1100 WORK STUCK PIPE JAR UP
 TO 1530M TO & FREE SPOT
 1230 CIRC. HOLE TO TRIP
 1330 PUMP OUT 9 SINGLES
 1615 CHECK HYDRIL, TRIP OUT
 1900 RECOVER 7M OF CORE, SERVICE CORE
 BBL & LAY DOWN
 1930 MAKE UP BHA, PICK UP NEW JARS
 1945 RIG SERVICE & BLIND RAMS
 2230 TRIP IN
 0100 REAM FROM 1494 TO 1562
 0145 DRILL

0200 RIG SERV. & TOP PIPE RAM
 0600 DRILL AHEAD
 0700 CIRC. UP SAMPLE

ADDED 100% OF DEAD CRUDE OIL TO MUD
 SYSTEM = 6%

BARDEN CREWS 264 HRS.
 SHELL SUPERVISION 96 HRS.

CORE INTERVAL #2 1555 TO 1562M 7M

Mud Properties

DENSITY	1295/	kg/m ³	P.V.	76	mpa.s	SAND	0.0030	K+	mg/l
VISCOSITY	110/	sec	Y.P.	2813	Pa	SOLIDS	0.0060	C-	250 mg/l
GEL	7/	19 Pa	WATER LOSS	6.2	cc	CL	0.0600	C++	0 mg/l
PH	10.5		FC THICKNESS	2.0	mm	MST	71.0	kg/m ³	SULPHIDES
PPH/MF	0.4/	0.8	TEMP	43	C	POLYMER	kg/m ³		SULPHATES

SUMP VOLUMES AS OF SUNDAY P.M. : ON LEASE m³ OFF LEASE m³

VOLUMES OF WASTES HAULED TO OFF LEASE SITES DURING WEEK : SOLIDS m³ LIQUIDS m³

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg)	(E/W) (deg)	BIT #	SIZE (mm)	TYPE	MAKE	SERIAL #	WDC CODE	NOZZLES (mm)	DEPTH IN (m)	DEPTH OUT (m)	METREAGE (m)	ROTARY HOURS	ROP (m/hr)	WT ON BIT (kg)	RPM	COND. (POOL)	(TCCOR)
					13	215.0	CRCB	SPERRY	DAS348	--	0.4/	1555		7	7.00	1.0	3 mm / 6 mm	62/ 72	--	--
					14	216.0	F3	SMITH	X74131	5-3-7-	10.3/11.1	1562		18	4.75	3.8	15 mm / 16 mm	65/	--	--
					12	215.0	CUCBG	SPERRY		--	0.4/	1551		4	2.75	1.5	3 mm / 6 mm	72/	--	--

Pumps

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	P28	500
LINER (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	90	
OUTPUT (l/min)	1080	0
REDUCED SPEED (mm)	50	
REDUCED PRESS. (kPa)	4000	

STAND PIPE PRESSURE 11400 kPa

TOTAL OUTPUT 1.08 m³/min ANM VEL-OP 40.8 m/min
 ANM VEL-OC 29.5 m/min

Bottom Hole Assembly

# OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	SR3	160.0	59.0	2.10
1	DM	158.0	72.0	9.34
1	SU	160.0	54.0	1.31
1	DO	165.0	68.0	8.85
1	SS	160.0	54.0	4.64
3	DO	160.0	68.0	25.64
1	JH	165.0	68.0	4.23
10	DO	156.0	62.0	85.47
1	XO	156.0	62.0	0.80
15	BW	114.0	75.0	138.55

TOTAL LENGTH (m) 280.93

Hydraulics

BIT PRESSURE LOSS 3032.8 kPa
 % PRESS LOSS @ BIT 26.6 %
 HYDRAULIC POWER AT BIT 54.59 kW

Pipe Data

DRILL PIPE				DRILL COLLARS		
SIZE	GRADE	O.D. (mm)	WEIGHT (kg/m)	SIZE	O.D.	I.D.
144	E-	114.0	24.70	15	158.00	65.00

FILL: 0 m
 DRAG: 1000 DaN
 TORQUE: 0.5 Dp mm
 WEATHER: -24 CLEAR
 7 a.m. DEPTH: 1580 m

DC WEIGHT: 19 1000 DaN
 HOOK LOAD: 52 1000 DaN

AIR FLOW RATE: m³/min @ kPa
 FOAM INJECTION RATE: l/min
 CONCENTRATION:

NUMBER BOP DRILLS CONDUCTED: DRILLING 1 TRIPPING 0
 REPORTED BY: D HENLIT

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SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/24
 LOCATION: 300-B12-6010-11215-0 DEPTH: 1591 m DAILY COST: 27292
 CONTRACTOR: BANDEN RIG #: 20 PROGRESS: 11 m CUMULATIVE COST: 1157872
 DAYS FROM SPUD: 23 DAYS OVER/UNDER AFE: 0
 FORMATION: SLAVE POINT TOP @: 1540 m OPERATION: PUMP LCM DOWN HOLE
 OPERATIONS FORECAST (Next 24 hrs) MIX & PUMP LCM POSSIBLE CEMENT PLUG
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 kPa/m @ DEPTH: 548 m

Summary
 07:00 0715 CIRC. SAMPLE
 0930 DRILL
 1015 CIRC. SAMPLE
 1115 W.O.O. TO DRILL AHEAD
 1130 RIG SERV. & HYDRIL
 1145 DRILL
 1345 LOST CIRC. JAR ON STUCK PIPE
 BIT & STAB TORQUE IN JARED LOOSE
 WORKED OUT 10 SINGLES
 1815 MIX LCM, PUMPED 3 DIFFERENT
 SLOGS TOTAL OF 30.5M3
 1015 TRIP OUT OF HOLE LAY DOWN BEA

1030 RIG SERV. & BLIND RAMS
 2315 SLIP & CUT LINE
 0230 WAIT ON WELDER
 0630 TRIP IN & PICK UP 26 SINGLES
 TRIP INTO 1588M, PIPE SETTING @ 1582M
 0700 MIX UP 13M3 OF LCM & PUMP DOWN
 PUMPING @ 3400 KPA
 MIXING 40SANDUST, 10KMKRSEAL, 5NUTPLUG
 5WALNUT, 5CELLOFLAKE, 25GEL
 LOST 40M3 OF 1300 KG/M3 OF DRILLING
 MUD TO FORMATION WHEN HOLE WENT ON VA

Mud Properties
 DENSITY 1295/ kg/m3 P.V. 76 mPa.s SAND 0.0030 K+ mg/l
 VISCOSITY 110/ sec Y.P. 2817 Pa SOLIDS 0.0060 C- 250 mg/l
 CELS 7/ 19 Pa WATER LOSS 6.2 cc OIL 0.0600 Ca++ 0 mg/l
 PF 10.5 cc 71.0 mg/m3 SULPHIDES mg/l
 PF/MF 0.4/ 0.8 TEMP 43 C POLYMER kg/m3 SULPHATES mg/l

SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m3 OFF LEASE m3
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m3 LIQUIDS m3

Surveys

NO.	DEPTH (m)	DRIFT (deg)	AZMUTH (N/S) (deg)	(E/W) (deg)
BIT #	13	14	15	
SIZE (mm)	215.0	216.0	215.0	
TYPE	CRCB	F3	JD4	
MAKE	SPERRY	SMITH	J&L	
SERIAL #	DAB348	XJ4131	755LL	
ADC CODE	- - -	5-3-7-	2-1-7-	
NOZZLES (mm)	0.4/	10.3/11.1	0.0/	
	/	11.1/	/	
DEPTH IN (m)	1555	1562	1591	
DEPTH OUT (m)			0	
METREAGE (m)	7	29	0	
ROTARY HOURS	7.00	7.25		
ROP (m/hr)	1.0	4.0		
WT ON BIT (kg)	3 000 / 6 000	15 000 / 16 000	000 / 000	
RPM	62/ 72	65/ 70	/	
COND. (HOOL)	- - -	2-2-NO-A3	- - -	
(BCOR)	- - -	3-3 -NO-CM	- - -	

Pumps

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	PZ8	500
LINER (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN		
OUTPUT (l/min)	0	0
REDUCED SPEED (rpm)	50	
REDUCED PRESS. (kPa)	4000	
STAND PIPE PRESSURE (kPa)		
TOTAL OUTPUT	0.00 m3/min	ANN VEL-DP 0.0 m/min ANN VEL-DC 0.0 m/min

Bottom Hole Assembly

# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
1	E0	160.0	59.0	0.96
1	XO	158.0	59.0	0.80
15	HW	114.0	75.0	138.55
161	DP	114.0	95.0	1441.91

TOTAL LENGTH (m) 1582.22

Hydraulics

BIT PRESSURE LOSS	0.0 kPa	DRILL PIPE	DRILL COLLARS
% PRESS LOSS @ BIT	%	ADTS GRADE O.D.(mm) WEIGHT(kg/m)	ADTS O.D. I.D.
HYDRAULIC POWER AT BIT	0.00 kW	144 E- 114.0 24.70	15 158.00 65.00

FILL: 0 m DC WEIGHT: 19 1000 Dm AIR FLOW RATE: m3/min @ kPa
 DRAG: 3000 Dm HOOK LOAD: 52 1000 Dm PUMP INJECTION RATE: l/min
 TORQUE: 0.5 DP mm CONCENTRATION: TRIPPING 0
 WEATHER: OVERCAST -12 NUMBER BOP DRILLS CONDUCTED: DRILLING
 7 m DEPTH 1591 m REPORTED BY: D HENWITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/25
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1591 m DAILY COST: 15433
 CONTRACTOR: RANDEN RIG #: 20 PROGRESS: 0 m CUMULATIVE COST: 1173305
 DAYS FROM SPUD: 24 DAYS OVER/UNDER AFE: 0
 FORMATION: SLAVE POINT TOP @: 1540 m OPERATION: RIG TO CEMENT
 OPERATIONS FORECAST (Next 24 hrs) RIG TO PUMP CEMENT PLUG, WOC, DRILL CEMENT
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 kPa/m @ DEPTH: 548 m

Summary

07:00 1045 MIX LCM & PUMP DOWN HOLE
 TOTAL OF 26M3
 1130 RIG & MIX 5 TONN OILWELL G PLUS
 .5% D65 & .2% D13 DISPLACE 9.5 M3
 H2O DOWN @ 1140 HRS. 90/02/24
 1230 TRIP OUT SLOW 15 STDS.
 1330 WOC
 1430 TRIP OUT DRILL PIPE
 2130 BLACK LIGHT & ULTRASONIC HWDP
 15 DRILL COLLARS
 2145 RIG SERV. & BLIND RAMS
 2345 TRIP IN SLOW TO 1555M CEMENT TOP INSPECTION

0245 BREAK CIRC. CIRC. COND. MUD
 0300 RIG SERV. & HYDRIL
 0530 DRILL OUT CEMENT FROM 1555M TO
 1591, TREATING CONTAMINATED MUD, LOST
 CIRC. @ 1591
 0700 CALL DOWELL, RIG DOWELL TO PUMP
 PLUG # 2

BANDEN CREWS 264 MAN HRS.
 SHELL SUPERVISION 96 HRS.
 LAYED DOWN 2 BAD DRILL COLLARS FROM

Mud Properties

DENSITY	1100/	kg/m3	P.V.	26	mPa.s	SAND	K+	mg/l
VISCOSITY	70/	sec	Y.P.	15	Pb	SOLIDS	0.0450	250 mg/l
GELS	2/	11 Pb	WATER LOSS	13.0	cc	CL	Co++	0 mg/l
PH	10.0		FC THICKNESS	1.5	mm	MBT	50.0 kg/m3	SULPHIDES mg/l
PP/MF	0.3/	0.8	TEMP	34	C	POLYMER	kg/m3	SULPHITES mg/l

SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m3 OFF LEASE m3
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m3 LIQUIDS m3

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg)	DEPTH (m)	DRIFT (deg)	AZIMUTH (E/W)
13	215.0			14	216.0	
14	216.0			15	215.0	
15	215.0			16	216.0	
16	216.0			17	215.0	
17	215.0			18	216.0	
18	216.0			19	215.0	
19	215.0			20	216.0	
20	216.0			21	215.0	
21	215.0			22	216.0	
22	216.0			23	215.0	
23	215.0			24	216.0	
24	216.0			25	215.0	
25	215.0			26	216.0	
26	216.0			27	215.0	
27	215.0			28	216.0	
28	216.0			29	215.0	
29	215.0			30	216.0	
30	216.0			31	215.0	
31	215.0			32	216.0	
32	216.0			33	215.0	
33	215.0			34	216.0	
34	216.0			35	215.0	
35	215.0			36	216.0	
36	216.0			37	215.0	
37	215.0			38	216.0	
38	216.0			39	215.0	
39	215.0			40	216.0	
40	216.0			41	215.0	
41	215.0			42	216.0	
42	216.0			43	215.0	
43	215.0			44	216.0	
44	216.0			45	215.0	
45	215.0			46	216.0	
46	216.0			47	215.0	
47	215.0			48	216.0	
48	216.0			49	215.0	
49	215.0			50	216.0	
50	216.0			51	215.0	
51	215.0			52	216.0	
52	216.0			53	215.0	
53	215.0			54	216.0	
54	216.0			55	215.0	
55	215.0			56	216.0	
56	216.0			57	215.0	
57	215.0			58	216.0	
58	216.0			59	215.0	
59	215.0			60	216.0	
60	216.0			61	215.0	
61	215.0			62	216.0	
62	216.0			63	215.0	
63	215.0			64	216.0	
64	216.0			65	215.0	
65	215.0			66	216.0	
66	216.0			67	215.0	
67	215.0			68	216.0	
68	216.0			69	215.0	
69	215.0			70	216.0	
70	216.0			71	215.0	
71	215.0			72	216.0	
72	216.0			73	215.0	
73	215.0			74	216.0	
74	216.0			75	215.0	
75	215.0			76	216.0	
76	216.0			77	215.0	
77	215.0			78	216.0	
78	216.0			79	215.0	
79	215.0			80	216.0	
80	216.0			81	215.0	
81	215.0			82	216.0	
82	216.0			83	215.0	
83	215.0			84	216.0	
84	216.0			85	215.0	
85	215.0			86	216.0	
86	216.0			87	215.0	
87	215.0			88	216.0	
88	216.0			89	215.0	
89	215.0			90	216.0	
90	216.0			91	215.0	
91	215.0			92	216.0	
92	216.0			93	215.0	
93	215.0			94	216.0	
94	216.0			95	215.0	
95	215.0			96	216.0	
96	216.0			97	215.0	
97	215.0			98	216.0	
98	216.0			99	215.0	
99	215.0			100	216.0	

Pumps

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	P28	500
LINE (mm)	165	140
STROKE (mm)	203	406

STROKES/MIN
 OUTPUT (l/min) 0 0

REDUCED SPEED (rpm) 50
 REDUCED PRESS. (kPa) 4000

Bottom Hole Assembly

# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
1	EO	160.0	59.0	0.96
1	XO	158.0	59.0	0.80
15	HW	114.0	75.0	138.55
161	DP	114.0	95.0	1441.91

STAND PIPE PRESSURE

TOTAL OUTPUT 0.00 m3/min ANN VEL-DP 0.0 m/min
 ANN VEL-DC 0.0 m/min

TOTAL LENGTH (m) 1582.22

Hydraulics

BIT PRESSURE LOSS 0.0 kPa
 % PRESS LOSS @ BIT %
 HYDRAULIC POWER AT BIT 0.00 kW

Pipe Data

DRILL PIPE	DRILL COLLARS
#JTS GRADE O.D.(mm) WEIGHT(kg/m)	#JTS O.D. I.D.
144 E- 114.0 24.70	15 158.00 65.00

FILL: 0 m DC WEIGHT: 19 1800 DuH AIR FLOW RATE: 0.0 m3/min @ l/min
 DRAG: 1800 DuH HOOK LOAD: 52 1800 DuH FOAM INJECTION RATE: 1/min
 TORQUE: 0.5 DP turns CONCENTRATION: TAPPING 0
 7 m DEPTH: 1591 m NUMBER DOP DRILLS CONDUCTED: DRILLING REPORTED BY: D HEWITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/26
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1591 m DAILY COST: 11788
 CONTRACTOR: BAWDEN RIG #: 20 PROGRESS: 0 m CUMULATIVE COST: 1185093
 FORMATION: SLAVE POINT TOP @: 1540 m DAYS FROM SPUD: 25 DAYS OVER/UNDER AFE: 0
 OPERATIONS FORECAST (Next 24 hrs) TRIP OUT WET OPERATION: TRIP OUT WET
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 kPa/m @ DEPTH: 548 m

Summary

07:00 0800 RIG UP DOWELL, MIX 5 TONN
 0-1-0 G PLUS .5% D65 & .2% D13 PLUG
 DOWN @ 0800 90/02/25 3HRS.13MINS
 0930 PULL 7 STANDS SLOW, TRIP INTO CSG
 1830 WAIT ON CEMENT, MOVE MUD AROUND
 & CLEAN SOLIDS OUT OF MUD TANKS
 MIX UP 50M3 NEW MUD
 1845 RIG SERV. & CHECK HYDRIL, UPPER
 & LOWER PIPE RAMS. ALSO MOTOR SHUT OFF
 2015 TRIP IN, CEMENT @ 1546
 2330 BREAK CIRC. DRILL OUT CEMENT TO
 1591M LOST CIRC. PIPE ON VACCUM
 0130 TRIP OUT
 0145 RIG SERV. & BLIND RAMS
 0315 MAKE UP PACKER & PERF TOOLS
 0600 TRIP IN REAL SLOW
 0615 ATTEMPT TO CIRC. STRING PLUGED
 0700 TRIP OUT WET, HOLE STANDING FULL
 BAWDEN CREWS 264 HRS.
 SHELL SUPERVISION 96 HRS.

Mud Properties

DENSITY 1100/	kg/m3	P.V.	26	mPa.s	SAND	K+	mg/l
VISCOSITY 70/	sec	Y.P.	15	Pa	SOLIDS 0.0450	Cl-	250 mg/l
GELS 2/ 11 Pa		WATER LOSS 13.0	cc	OK		Ca++	0 mg/l
PH 10.0		FC THICKNESS 1.5	mm	MBT 50.0	kg/m3	SULPHIDES	mg/l
PF/MF 0.3/ 0.8		TEMP 34	C	POLYMER	kg/m3	SULPHITES	mg/l

SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m3 OFF LEASE m3
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m3 LIQUIDS m3

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg)	(E/W)
BIT #	13	14	15	
SIZE (mm)	215.0	216.0	215.0	
TYPE	CRCB	F3	JD4	
MAKE	SPERRY	SMITH	J&L	
SERIAL #	DA8348	XJ4131	7551L	
IADC CODE	- - -	5-3-7-	2-1-7-	
NOZZLES (mm)	0.4/	10.3/11.1	0.0/	
	/	11.1/	/	
DEPTH IN (m)	1555	1562	1591	
DEPTH OUT (m)			0	
METREAGE (m)	7	29	0	
ROTARY HOURS	7.00	7.25		
ROP (m/hr)	1.0	4.0		
WT ON BIT (kN)	3 000 / 6 000	15 000 / 16 000	000 / 000	
RPM	62/ 72	65/ 70	/	
COND. (HOLL)	- - -	2-2-NO-A3	- - -	
(SGOR)	- - -	3-3 -NO-CM	- - -	

Pumps

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	P28	500
LINER (mm)	165	140
STROKE (mm)	203	406

STROKES/MIN
 OUTPUT (l/min) 0 0

REDUCED SPEED (rpm) 50
 REDUCED PRESS. (kPa) 4000

STAND PIPE PRESSURE kPa
 TOTAL OUTPUT C.00 m3/min ANN VEL-DP 0.0 m/min
 ANN VEL-DC 0.0 m/min

Bottom Hole Assembly

# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
1	E0	160.0	59.0	0.96
1	XO	158.0	59.0	0.80
15	HW	114.0	75.0	138.55
161	DP	114.0	95.0	1441.91

TOTAL LENGTH (m) 1582.22

Hydraulics

BIT PRESSURE LOSS 0.0 kPa
 % PRESS LOSS @ BIT %
 DRAGLIFT POWER AT BIT 0.00 kW

Pipe Data

DRILL PIPE				DRILL COLLARS		
#JTS	GRADE	O.D.(mm)	WEIGHT(kg/m)	#JTS	O.D.	I.D.
144	E-	114.0	24.70	15	158.00	65.00

FILL: 0 m DC WEIGHT: 19 1000 Dwt AIR FLOW RATE: 0.0 m3/min @ kPa
 DRAG: 1000 Dwt HOOK LOAD: 52 1000 Dwt PCAM INJECTION RATE: l/min
 TORQUE: 0.5 DP turns CONCENTRATION:
 WEATHER: -14 OVERCAST NUMBER ROP DRILLS CONDUCTED: DRILLING TRIPPING 0
 7 a.m. DEPTH: 1591 m REPORTED BY: D HEWITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/27
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1592 m DAILY COST: 1 59135
 CONTRACTOR: BANDEN RIG #: 20 PROGRESS: 1 m CUMULATIVE COST: 1244228
 DAYS FROM SPUD: 26 DAYS OVER/UNDER AFE: 0
 FORMATION: SLAVE POINT TOP #: 1540 m OPERATION: PUMP LCM DOWN HOLE
 OPERATIONS FORECAST (Next 24 hrs): PUMP LCM PLUG, RUN 7 TONN CEMENT PLUG, 4TRIP
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 MPa/m @ DEPTH: 548 m

Summary

07:00 1100 TRIP OUT WET, TOOL PLUGGED
 OFF WITH SHALE, SALT H2O FLOW
 1200 WASH UP RIG FLOOR & CELLAR FROM
 WET TRIP
 1215 RIG SERV. & BLIND RAMS
 1315 TRIP INTO 545M
 1345 BREAK CIRC. & CIRC.
 1545 TRIP IN SLOW TO 1575M
 1645 BREAK CIRC. CIRC. UP BOTTOMS
 1700 TAG FILL @ DRILL 1M OF NEW HOLE
 LOST CIRC.
 1715 PUMP LOST CIRC. PILL & MIX UP

0045 MIX LCM SLUG OF 11M3 & PUMP DOWN
 HOLE NO PRESSURE OR RETURNS
 0300 TRIP OUT
 0315 RIG SERV. & BLIND RAMS
 0400 MIX LCM
 0045 MAKE UP PACKER & SLOTTED TOOL
 0700 TRIP IN SLOW

BANDEN CREWS 264 HRS.
 SHELL SUPERVISION 96HRS.

Mud Properties

DENSITY 1100/	kg/m3	P.V.	26	mPa.s	SAND	K+	mg/l
VISCOSITY 70/	sec	Y.P.	15	Pa	SOLIDS 0.0450	C-	250 mg/l
GELS 2/	11 Pa	WATER LOSS	13.0	cc	OL	C++	0 mg/l
PH 10.0		FC THICKNESS	1.5	mm	MBT 50.0	kg/m3	SULPHIDES mg/l
PF/MF 0.3/	0.8	TEMP	34	C	POLYMER	kg/m3	SULPHATES mg/l

SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m3 OFF LEASE m3
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m3 LIQUIDS m3

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg) (E/W)	BIT #	SIZE (mm)	TYPE	MAKE	SERIAL #	IADC CODE	NOZZLES (mm)	DEPTH IN (m)	DEPTH OUT (m)	METREAGE (m)	ROTARY HOURS	ROP (m/hr)	WT ON BIT (kN)	RPM	COND. (tool)	COND. (BORT)
				13	215.0	CRCB	SPERRY	DA8348	- - -	0.4/	1555		7	7.00	1.0	3 000 / 6 000	62/ 72	- - -	- - -
				14	216.0	F3	SMITH	XJ4131	5-3-7-	10.3/11.1	1562	0	29	7.25	4.0	15 000 / 16 000	65/ 70	2-2-NO-A3	3-3-NO-CH
				15	215.0	JD4	J&L	755LL	2-1-7-	0.0/	1591	0	0			000 / 000	/	- - -	- - -

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	PZ8	500
LINE (mm)	165	140
STROKE (mm)	203	406

STROKES/MIN
 OUTPUT (l/min) 0 0

REDUCED SPEED (rpm) 50
 REDUCED PRESS. (kPa) 4000

STAND PIPE PRESSURE kPa
 TOTAL OUTPUT 0.00 m3/min ANN VEL-DP 0.0 m/min
 ANN VEL-DC 0.0 m/min

Bottom Hole Assembly

# OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	EO	160.0	59.0	0.96
1	XO	158.0	59.0	0.80
15	HW	114.0	75.0	138.55
161	DP	114.0	95.0	1441.91

TOTAL LENGTH (m) 1582.22

Hydraulics

BIT PRESSURE LOSS 0.0 kPa
 % PRESS LOSS @ BIT %
 HYDRAULIC POWER AT BIT 0.00 kW

Pipe Data

DRILL PIPE				DRILL COLLARS	
SITS	GRADE	O.D. (mm)	WEIGHT (kg/m)	SITS	O.D. (mm)
144	E-	114.0	24.70	15	158.00
					65.00

FILL: 0 m DC WEIGHT: 19 1000 Dm AIR FLOW RATE: 0.0 m3/min @ MPa
 DRAG: 1000 Dm HOOK LOAD: 52 1000 Dm FOAM INJECTION RATE: l/min
 TORQUE: 0.5 DP mm CONCENTRATION:
 WEATHER: NUMBER OF DRILLS CONDUCTED: DRILLING TRIPPING 0
 7 m DEPTH: 1592 m REPORTED BY: D HEWITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/02/28
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1592 m DAILY COST: \$ 45822
 CONTRACTOR: BANDEN INC #: 20 PROGRESS: 0 m CUMULATIVE COST: 1290050
 DATES FROM SPUR: 27 DATES OVER/UNDER AFE: 0
 FORMATION: SLAVE POINT TOP @: 1540 m OPERATION: MIXING LCM PLUG
 OPERATIONS FORECAST (Next 24 hrs): MIX LCM IN PREMIX WCK. MIX GEL IN MAIN SYSTEM
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 mPa/m @ DEPTH: 548 m

Summary

07:00: 1100 SPOT LCM PILL #10 OF 8M3
 1145 RIG UP DOWELL MIX & SPOT CEMENT
 PLUG #3 PACKER SITE @ 1562, PREFLUSH
 8M3 BULLHEADED, 7 TONN OF NEAT G PLUS
 .54 D65 PLUS .24 D13 DISPLACE WITH
 10M3 WATER
 1330 TRIP OUT OF HOLE
 1400 BREAK DOWN PACKER, LAY DOWN
 0700 WOC. RUN MUD SYSTEM OVER SHAKER
 SCREEN OUT WALNUT SHELLS. CLEAN OUT
 MUD TANKS & PUMP SUCTIONS, & PUMPS. MIX
 & BUILD VOLUME. MIX UP 45M3 OF PREMIX

LCM PLUG

BANDEN CREWS 276 HRS.
 SHELL SUPERVISION 120 HRS.

Mud Properties

PROPERTY	UNIT	VALUE	PROPERTY	UNIT	VALUE
DENSITY	kg/m3	P.V.	mPa.s	SAND	K+
VISCOSITY	mm	T.P.	Pa	SOLIDS	G-
GELS	Pa	WATER LOSS	cc	OIL	C++
PH		FC THICKNESS	mm	MBT	kg/m3
PPH/MF		TEMP	C	POLYMER	kg/m3
					SULPHIDES
					SULPHATES

SUMP VOLUMES AS OF SUNDAY P.M.:

ON LEASE

OFF LEASE

VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK:

SOLIDS

LIQUIDS

Surveys

NO.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg)	(E/W)
-----	-----------	-------------	---------------------	-------

Bore Data

BIT #	13	14	15
SIZE (mm)	215.0	216.0	215.0
TYPE	CRCB	F3	JD4
MAKE	SPERRY	SMITH	J&L
SERIAL #	DA8348	XJ4131	755LL
IADC CODE	- - -	5-3-7-	2-1-7-
NOZZLES (mm)	0.4/	10.3/11.1	0.0/
	/	11.1/	/
DEPTH IN (m)	1555	1562	1591
DEPTH OUT (m)			0
METREAGE (m)	7	29	0
ROTARY HOURS	7.00	7.25	
ROP (m/hr)	1.0	4.0	
WT ON BIT (kN)	3 000 / 6 000	15 000 / 16 000	800 / 000
RPM	62/ 72	65/ 70	/
COND. (POOL)	- - -	2-2-NO-A3	- - -
(DCOR)	- - -	3-3 -NO-CM	- - -

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	P28	500
LINE (mm)	165	140
STROKE (mm)	203	406

STROKES/MIN

OUTPUT (l/min)

0

0

REDUCED SPEED (rpm)

50

REDUCED PRESS. (MPa)

4000

STAND PIPE PRESSURE

MPa

TOTAL OUTPUT 0.00 m3/min

ANN VEL-DP 0.0 m/min

ANN VEL-DC 0.0 m/min

Bottom Hole Assembly

# OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	EO	160.0	59.0	0.96
1	XO	158.0	59.0	0.30
15	HW	114.0	75.0	138.55
161	DP	114.0	95.0	1441.91

TOTAL LENGTH (m) 1582.22

Hydraulics

BIT PRESSURE LOSS	0.0 MPa
% PRESS LOSS @ BIT	%
HYDRAULIC POWER AT BIT	0.00 KW

Pipe Data

DELL PIPE	DELL COLLARS
SITS GRADE	O.D.
144 E-	114.0 24.70
	15 158.00 65.00

FILL: 0 m
 DRAG: 1800 Dull
 TORQUE: 0.5 DP tons
 WEATHER: CLEAR +5C
 7 a.m. DEPTH: 1592 m

DC WEIGHT: 19 1800 Dull
 HOOK LOAD: 52 1800 Dull

AIR FLOW RATE: 0.0 m3/min @ MPa
 FOAM INJECTION RATE: l/min

CONCENTRATION:
 NUMBER BOP DRILLS CONDUCTED: DRILLING TRIPPING 0
 REPORTED BY: D HENWITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/03/01
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1592 m DAILY COST: 35995
 CONTRACTOR: BAWDEN WEL #: 20 PROGRESS: 0 m CUMULATIVE COST: 1326045
 FORMATION: SLAVE POINT TOP #: 1540 m OPERATION: MIX MUD
 OPERATIONS FORECAST (Shut in) MIXING MUD, TRIP IN
 LAST CASING: 244.5 mm @ 548 m RUN-IN TEST: 17.5 wpm @ DEPTH: 548 m

Summary

07:00: -1330 BUILD VOL. IN ACTIVE SYSTEM, MIX 50m3 LCM FILL.
 1630 RUN IN TO 1520m, TAG CEMENT
 1645 RIG SER, CK HYDRIL
 1945 CLEAN OUT CEMENT STRINGERS, COND MUD, DRILL 10m GOOD CEMENT TO BTM, LOST RETURNS.
 2030 PULL 12 STDS, RUN IN TO 1580m.
 2430 FILL PIPE W/11m3 LCM FILL (NO RETURNS). STAGE 1m3 EVERY 10 MIN UNTIL 20m3 LCM FILL LOST TO FOR-
 KATION, PIPE FULL OF FRESH MUD,

NO RETURNS DURING STAGING.
 0245 ROSET, PUMP PIPE DISP. INTO ANN.
 0300 BREAK OFF BIT & BIT SUB, RIG SER CK BLIND RAMS.
 0330 RUN IN OPEN-ENDED TO 400m, HOLE FULL.
 0700 CIRC & CON MUD @400m, BUILD VOL.

Mud Properties

DENSITY 1060/ kg/m3 P.V. 23 mPa.s SAND 0.0380 K+ 1200 mg/l
 VISCOSITY 58 sec T.P. 4 Pa SOLIDS 0.0380 G- 1200 mg/l
 CELS 3/ 13 Pa WATER LOSS 13.0 cc OE 0 mg/l
 PH 10.5 FC THICKNESS 2.5 mm MFT 49.9 kg/m3 SULPHIDES 0 mg/l
 PP/MP 0.3/ 0.8 TEMP C POLYMER 0 mg/l SULPHATES 0 mg/l

SUMP VOLUMES AS OF SUNDAY P.M. : ON LEASE :

VOLUMES OF WASTES HAILED TO OFF LEASE SUMP DURING WEEK : SOLIDS m3 LIQUIDS m3

Surveys

No. DEPTH DRIFT AZIMUTH
 (m) (deg) (N/S) (deg) (E/W)

Bit Data

BIT #	13	14	15
SIZE (mm)	215.0	216.0	215.0
TYPE	CRCB	F3	JD4
MAKE	SPERRY	SMITH	J&L
SERIAL #	DAB348	X74131	755LL
WDC CODE	- - -	5-3-7-	2-1-7-
NOZZLES (mm)	0.4/	10.3/11.1	0.0/
	/	11.1/	/
DEPTH IN (m)	1555	1562	1591
DEPTH OUT (m)			0
METREAGE (m)	7	29	1
ROTARY HOURS	7.00	7.25	0.25
ROP (m/hr)	1.0	4.0	4.0
WT AIR BIT (kg)	3 000 / 6 000	15 000 / 16 000	5 000 / 000
RPM	62/ 2	65/ 70	50/
COND. (POOL)	- - -	2-2-NO-A3	- - -
(BGR)	- - -	3-3 -NO-CM	- - -

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	P28	500
LINE (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN		50
OUTPUT (l/min)	0	1050

REDUCED SPEED (rpm) 50
 REDUCED PRESS. (MPa) 4000

STAND PIPE PRESSURE :

TOTAL OUTPUT 1.05 m3/min AIR VEL-OP 39.7 m/min
 AIR VEL-DC 28.6 m/min

Bottom Hole Assembly

# OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	E0	160.0	59.0	0.96
1	X0	158.0	59.0	0.80
15	HW	114.0	75.0	138.55
161	DP	114.0	95.0	1441.91

TOTAL LENGTH (m) 1582.22

Hydraulics

BIT PRESSURE LOSS 2346.5 MPa
 % PRESS LOSS @ BIT %
 HYDRAULIC POWER AT BIT 41.06 kW

Pipe Data

PIPE	GRADE	O.D. (mm)	WEIGHT (kg/m)	DRILL COLLAR	ID
144	E-	114.0	24.7%	15 158.00	65.00

FILL 0 m

DC WEIGHT: 19 1000 Dm

AIR FLOW RATE 0.0 m3/min @

DRAG 1000 Dm

HOOK LOAD: 52 1000 Dm

FOAM INJECTION RATE: 1/min

TORQUE 0.5 OP turn

CONCENTRATION:

WEATHER: CLEAR -12

NUMBER BOP DRW// CONDUCTED: DRILLING TRIPPING 0

7 a.m. DEPTH 1592 m

REPORTED BY: D. HEWITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA APE #: WCB62 DATE: 90/02/02
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1592 m DAILY COST: 18201
 CONTRACTOR: BANDEN REF #: 20 PROGRESS: 0 m CUMULATIVE COST: 1344246
 DAYS FROM SPUD: 29 DAYS OVER/CHECK APE: 0
 FORMATION: SLAVE POINT TOP #: 1540 m OPERATION: TRIPPING
 OPERATIONS FORECAST (Next 24 hrs) DRILL AHEAD W/LCK IN MUD
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 mPa @ DEPTH: 548 m

Summary

07:00 -1030 CIRC & CONDITION MUD
 1245 RUN IN SLOWLY
 1300 RIG SER, CK. HYDRIL
 1400 BREAK CIRC, CLEAN TO BOTTOM,
 LOST RETURNS. POUR COARSE LCM
 & MUD DOWN D.P., PLUGGED PIPE.
 1630 HOIST 18 STDS(WET), LAY DOWN
 PLUGGED SINGLE, RUN BACK TO BTH
 ATTEMPT TO CIRCULATE-NO RETURNS.
 POUR 24 1.3 SPEC GRAV FRAC BALLS
 DOWN PIPE-PIPE PLUGGED. PICK UP
 KELLY & ESTABLISH CIRCULATION-
 FRAC BALLS NOT TO BOTTOM YET.
 0200 CIRCULATE W/LCM MUD-FRAC BALLS
 DID NOT COME TO SURFACE. MIX AND
 CONDITION MUD.
 0415 HOIST-HOLE TOOK PROPER FILL.
 0430 RIG SER, CK BLIND RAMS-7sec.
 0700 MAKE UP BIT & DRILLING BHA, RUN
 IN.
 BANDEN CREW HRS.276HRS.
 SHELL SUPERVISION 96 HRS.

Mud Properties

DENSITY: 1070/ kg/m³ P.V. 18 mPa.s SAND K+ mg/l
 VISCOSITY: 60 sec Y.P. 7 Pa SOLIDS 0.0450 G- 1100 mg/l
 GELS 2/ 5 Pa WATER LOSS 13.4 cc OR G++ 0 mg/l
 PH 9.5 FC THICKNESS 2.5 mm MST 42.8 kg/m³ SULPHIDES mg/l
 FF/MF 0.2/ 0.5 TEMP C POLYMER kg/m³ SULPHATES mg/l

SUMP VOLUMES AS OF SUNDAY P.M.:

ON LEASE m³ OFF LEASE m³VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys

Run	DEPTH (m)	DRIFT (deg)	AZIMUTH (M/S) (deg)	E/W	BIT #	SIZE (mm)	TYPE	MAKE	SERIAL #	WDC CODE	NOZZLES (mm)	DEPTH IN (m)	DEPTH OUT (m)	METREAGE (m)	ROTARY HOURS	ROP (m/hr)	WT ON BIT (kg)	RPM	COND. (POOL)	COND. (BGR)
					16RR	215.0	JD4B	J&L	755LL	2-1-7-	/	1592		0	0.00		3 000 / 000	/	-	-
					14	216.0	F3	SMITH	XJ4131	5-3-7-	10.3/11.1	1562		29	7.25	4.0	15 000 / 16 000	65/ 70	2-2-NO-A3	3-3 -NO-CH
					15	215.0	JD4	J&L	755LL	2-1-7-	0.0/	1591	0	1	0.25	4.0	5 000 / 000	50/	-	-

Pumps

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	P28	500
LINE (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN		
OUTPUT l/min	0	0
REDUCED SPEED (rpm)	50	
REDUCED PRESS. (MPa)	4000	

STAND PIPE PRESSURE: MPa

TOTAL OUTPUT 0.00 m³/min AIR VEC-UP 0.0 m/min

AIR VEC-DC 0.0 m/min

Bottom Hole Assembly

# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
1	EL.0	158.0	72.0	0.96
1	DU	165.0	72.0	8.66
1	SS	166.0	72.0	4.04
2	DU	165.0	72.0	17.32
1	JH	165.0	70.0	4.94
9	DU	165.0	72.0	77.39
1	XO	158.0	59.0	6.80
15	HW	114.0	75.0	138.55
	DP	114.0	95.0	

TOTAL LENGTH (m) 252.66

Hydraulics

BIT PRESSURE LOSS 0.0 MPa
 % PRESS LOSS @ BIT %
 HYDRAULIC POWER AT BIT 0.00 kW

Pipe Data

PIPE GRADE	O.D.(mm)	WGT(lb/ft)	DRILL COLLARS	O.D.(mm)	WGT(lb/ft)
141 E	114.0	24.70	15	158.00	65.00

FILL: 0 m
 DRAG: 2000 Da
 TORQUE: 0.5 DP turns
 WEATHER: -8C, CLEAR
 7 a.m. DEPTH: 1592 m

DC WEIGHT: 19 2000 Da
 HOOK LOAD: 52 2000 Da

AIR FLOW RATE: 0.0 m³/min @ MPa
 FOAM INJECTION RATE: l/min
 CONCENTRATION:

NUMBER BOP DRILLS CONDUCTED: DRILLING TRIPPING: 0
 REPORTED BY: D HEWITT

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SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/03/03
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1624 m DAILY COST: 25643
 CONTRACTOR: BANDEN REC #: 20 PROGRESS: 32 m CUMULATIVE COST: 1369889
 DAYS FROM SPUR: 30 DAYS OVER/UNDER AFE: 0
 FORMATION: SLAVE POINT TOP #: 1540 m OPERATION: DRILLING
 OPERATIONS FORECAST (Next 24 hrs): HEAL LOSS CIRC, DRILL AHEAD
 LAST CASING: 244.5 mm x 548 m FORMATION TEST: 17.5 mPa/m x DEPTH: 548 m

Summary

07:00 -0730 BREAK CIRC, CIRC BTMS UP
 0900 RUN IN TO 1569m.
 1015 CIRC & COND MUD
 1030 CLEAN TO BOTTOM
 1200 DRILLING-FULL RETURNS.
 1215 RIG SER, CHECK CROWNSAVER,
 CHECK SWACO CHOKE.
 1845 DRILLING
 1900 RIG SER, CK HYDRIL 10sec
 2115 DRILLING TO 1624m.
 2430 TRIP OUT, CHANGE BITS, PICK UP
 DM & 2 DU's, RUN IN BHA
 0115 SLIP & CUT DRILLING LINE
 0130 RIG SER
 0515 RUN IN SLOWLY, TAG BRIDGE @1501m
 0600 FLUID LEVEL DROPPED IN ANNULUS.
 PICK UP KELLY, PUMP 6m3 INTO
 PIPE & 2m3 INTO ANNULUS-NEITHER
 SIDE FULL.
 0700 MIX LCM, BUILD VOLUME
 BANDEN CREWS 156 HRS.
 SHELL SUPERVISION 72 HRS.

Fluid Properties

DENSITY 1070/1070 kg/m3 P.V. 35 mPa.s SAND K+ mg/l
 VISCOSITY / 60 sec T.P. 15 Pa SOLIDS 0.0450 G- 1200 mg/l
 CELS 5/ 18 Pa WATER LOSS 12.6 cc OIL C++ 0 mg/l
 PH 9.8 FC THICKNESS 2.5 mm MBT 49.9 kg/m3 SULPHIDES mg/l
 PF/MF 0.3/ 0.7 TEMP 39 C POLYMER kg/m3 SULPHATES mg/l

SUMP VOLUMES AS OF SUNDAY P.M.:

ON LEASE

OFF LEASE

SOLIDS

LIQUIDS

Surveys

Na. DEPTH DRIFT AZIMUTH
 (m) (deg) (N/S) (deg) (E/W)
 19 1550 1.1 N 44.00 E

B.R. Data

BIT # 16RR 17 15
 SIZE (mm) 215.9 215.9 215.9
 TYPE JD4B J33 JD4
 MAKE J&L WESTERN J&L
 SERIAL # 755LL 24271 755LL
 WADC CODE 2-1-7- 5-3-7- 2-1-7-
 NOZZLES (mm) / / 0.0/
 DEPTH IN (m) 1592 1624 1591
 DEPTH OUT (m) 0
 METREAGE (m) 32 0 1
 ROTARY HOURS 10.25 0.25
 ROP (m/hr) 3.1 4.0
 WT ON BIT (kg) 12 000 /15 000 15 000 /16 000 5 000 / 000
 RPM 60/ 65/ 70 50/
 COND. (POOL) 7-6-WT-A3 - - -
 (RCOR) E-1 - -HR - - -

Pumps

PUMP # 1 2
 MANUFACTURER G.DENVER EMSCO
 TYPE P28 500
 LINER (mm) 165 140
 STROKE (mm) 203 406
 STROKES/MIN
 OUTPUT (l/min) 0 0

REDUCED SPEED (rpm): 50

REDUCED PRESS. (kPa): 4000

STAND PIPE PRESSURE: kPa

TOTAL OUTPUT 0.00 m3/min ANN VEE-UP 0.0 m/min

ANN VEE-DN 0.0 m/min

Bottom Hole Assembly

OF CODE O.D.(mm) I.D.(mm) LENGTH (m)
 1 BIT 215.0 72.0 0.25
 1 EL.0 158.0 72.0 0.96
 1 DM 166.0 72.0 9.34
 1 SS 166.0 72.0 4.04
 2 DU 165.0 72.0 17.59
 1 JH 165.0 70.0 4.94
 12 DU 165.0 72.0 103.37
 1 XO 158.0 59.0 0.80
 15 HW 114.0 75.0 138.55

TOTAL LENGTH (m) 279.84

Hydraulics

BIT PRESSURE LOSS kPa
 % PRESS LOSS @ BIT %
 REQUIRED POWER AT BIT 0.00 kW

Pipe Data

DRILL 1
 SIZE GRADE (mm) WEIGHT (kg/m)
 141 E- 114.0 24.70
 15 158.00 65.00

DRILL COLLARS

SIZE GRADE (mm) WEIGHT (kg/m)
 15 158.00 65.00

PICK-UP 0 m
 DRAG 2000 Dm
 TORQUE 0.5 OP turns
 WEATHER -10 CLEAR
 7 m. DEPTH 1624 m

DC WEIGHT: 19 200 Dm
 HOOK LOAD: 52 200 Dm

AIR FLOW RATE: 0.0 m3/min @ kPa

FOAM INJECTION RATE: 1/min

CONCENTRATION:

NUMBER BOP DRILLS CONDUCTED: DRILLING TRIPPING: 1

REPORTED BY: D HENIITT

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SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA APE #: WCB42 DATE: 90/03/04
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1659 m DAILY COST: 19535
 CONTRACTOR: BAXTER INC #: 20 PROGRESS: 35 m CUMULATIVE COST: 1329424
 DAYS FROM WFO: 31 DAYS OVER/UNDER APE: 0
 FORMATION: SLAVE POINT TOP #: 1540 m OPERATION: LOST CIRCULATION
 OPERATIONS FORECAST (Next 24 hrs): CLEAN & HEAL UP HOLE
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 m³/m @ DEPTH: 548 m

Summary

07:00 -1300 CLEAN TO BTM, 1501-1624m
 1345 CIRCULATE & CONDITION MUD
 1400 RIG SER, CK TOP PIPE RAMS-7sec
 2000 DRILLED TO 1659m, ANNULUS PACKED
 OFF, LOST CIRCULATION. TITE HOLE
 2330 BACK REAM & WORK OUT SINGLES
 TO 1504m.
 0145 ESTABLISH CIRCULATION. REAM &
 CLEAN 1504-1600m, ANNULUS PACKED
 OFF & LOST RETURNS AGAIN.
 0330 BACK REAM & WORK OUT 17 SINGLES
 TO 1500m.

0445 ESTABLISH CIRCULATION. REAM &
 CLEAN 1500-1560m, PUMP 8m3 LCM
 FILL AROUND TO TRY TO STOP
 PARTIAL LOSSES.
 0515 REAM & CLEAN 1560-1580m, LOST
 CIRCULATION.
 0700 SPCT 6m3 LCM FILL ON BOTTOM.
 MIX & CONDITION MUD

Mud Properties

DENSITY 1070/1070 kg/m³ P.Y. 46 mPa.s SAND K+ mg/l
 VISCOSITY 70/100 sec Y.P. 14 Pa SOLIDS 0.0450 C- 700 mg/l
 CELS 6/ 14 Pa WATER LOSS 8.0 cc OIL C+++ 0 mg/l
 PH 10.3 FC THICKNESS 1.5 mm MBT 49.9 kg/m³ SULPHIDES mg/l
 PF/MF 0.3/ 0.7 TEMP 39 C POLYMER kg/m³ SULPHITES mg/l

SUMP VOLUMES AS OF SUNDAY P.M.:

ON LEASE

OFF LEASE

VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys

No. DEPTH DRIFT AZIMUTH
 (m) (deg) (N/S) (deg) (E/W)

Bit Data

BIT #	16RR	17	15
SIZE (mm)	215.9	215.9	215.9
TYPE	JD4B	J33	JD4
MAKE	J&L	WESTERN	J&L
SERIAL #	755LL	24271	755LL
WADC CODE	2-1-7-	5-3-7-	2-1-7-
NOZZLES (mm)	/	/	0.0/
DEPTH IN (m)	1592	1624	1591
DEPTH OUT (m)	1624		0
METREAGE (m)	32	35	1
ROTARY HOURS	10.25	6.00	0.25
ROP (m/hr)	3.1	5.8	4.0
WT ON BIT (kg)	12 000 / 15 000	15 000 / 16 000	5 000 / 000
RPM	60/	65/ 70	50/
COND.	POOL 7-6-WT-A3	- - -	- - -
	(BGR) E-1 - -HR	- - -	- - -

Pumps

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	P28	500
LENGTH (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	100	
OUTPUT (l/min)	1200	0

REDUCED SPEED (rpm) 50
 REDUCED PRESS. (MPa) 4000

STAND PIPE PRESSURE: 4000 kPa

TOTAL OUTPUT 1.20 m³/min ANN VEL-OP 45.4 m/min
 ANN VEL-DC 32.7 m/min

Bottom Hole Assembly

#	OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	BIT	215.0	72.0	0.25	
1	E1.0	158.0	72.0	0.96	
1	DM	166.0	72.0	9.34	
1	SS	166.0	72.0	4.04	
2	DU	165.0	72.0	17.59	
1	JH	165.0	70.0	4.94	
12	DU	165.0	72.0	103.37	
1	XO	158.0	59.0	0.80	
15	HW	114.0	75.0	138.55	

TOTAL LENGTH (m) 279.84

Hydraulics

BIT PRESSURE LOSS MPa
 % PRESS LOSS @ BIT 0.0 %
 HYDRAULIC POWER AT BIT 0.00 kW

Pipe Data

DRILL PIPE
 # OF GRADES O.D. (mm) WEIGHT (kg/m)
 144 E- 114.0 24.70

DRILL COLLARS

OF O.D. (mm) I.D. (mm)
 15 158.00 65.00

FILE 0 m
 DRAG 2000 Dm
 TORQUE 0.5 DP tons
 WEATHER -4C, CLEAR
 7 km DEPTH 1659 m

DC WEIGHT 19 1000 Dm
 HOOK LOAD 52 1000 Dm

AIR FLOW RATE 0.0 m³/min @ MPa
 FOAM INJECTION RATE l/min

CONCENTRATION
 NUMBER BOP DRILLS CONDUCTED: DRILLING TRIPPING
 REPORTED BY D HENITT

WELFARE: SHELL CELIBETA
LOCATION: 300-B12-6010-12215-0
CONTRACTOR: RANDEN

AFE #: WCB62 DATE: 90/03/05
 DEPTH: 1659 = DAILY COST : 19535
 PROGRESS: 0 = CUMULATIVE COST : 1408959
 DAYS FROM SPUD: 32 DAYS OVER/UNDER AFE 0

FORMATION: SLAVE POINT TOP @: 1540 = OPER
OPERATIONS FORECAST (Dist 24 hrs) WAIT ON CEMENT, MIX MUD
LAST CASING: 244.5 = @ 548 = INFORMATION TEXT

FORMATION TEST: 17.5 MPa/m @ DEPTH: 548

Summary

07:00 -0915 BUILD VOLUME, MIX LCM PILL
0945 MAKE 5 STD. WIPER TRIP
1015 SPOT 7.6m3 LCM PILL ON BOTTOM
1230 HOIST, LAY DOWN MOREL COLLAR
1245 RIG SER, CK BLIND RAMS-7sec
1430 RUN IN OPEN ENDED TO 1589m
1730 DROP COARSE LCM & PREMIX DOWN
DRILL PIPE, PIPE PLUGGED OFF.
2215 HOIST, CLEAN OUT PLUGGED JOINTS
2230 RIG SER, CK CROWNSAVER
0230 MAKE UP PACKER, RUN IN, ANNULUS
CAME FULL. SET PACKER @1560m.

0330 RIG UP DOWELL & PUMP CEMENT PLUG
#4 AS FOLLOWS: 5m3 WATER AHEAD,
5 TONNES CLASS G NEAT, 7 TONNES
CLASS G W/.2% D-13 & .5% D65,
10m3 WATER BEHIND. *Pressured up
to 8.1Mpa when drill pipe filled
w/water ahead, then broke down
and went on vacuum throughout
rest of cement job.

0700 HOIST, LAY DOWN PACKER

0700 HOIST, LAY DOWN PACKER

Mud Properties

DENSITY	1070/1070	kg/m3	P.V.	46	mPa.s	SAND		K+	mg/l
VISCOSITY	70/100	sec	Y.P.	14	Pa	SOLIDS	0.0450	Cl-	700
GELS	6/ 14	Pa	WATER LOSS	8.0	cc	Oil		Ca++	0
PH	10.3		FC THICKNESS	1.5	mm	MST	49.9	mg/m3	SULPHIDES
PF/MF	0.3/ 0.7		TEMP	39	C	POLYMER	kg/m3	g/g	SHUTTER

SUMP VOLUMES AS OF SUNDAY P.M. : ON LEASE
VOLUMES OF WASTES HAILED TO OFF LEASE SUMP ON

Surveys

No.	DEPTH	DRIFT	AZIMUTH	
	(m)	(deg)	(N/S)	(deg) (E/W)

BAR Data

BIT #	16RR	17	15
SIZE (mm)	215.9	215.9	215.9
TYPE	JD4B	J33	JD4
MAKE	J&L	WESTERN	J&L
SERIAL #	755LL	24271	755LL
IADC CODE	2-1-7-	5-3-7-	2-1-7-
NOZZLES (mm)	/	/	0.0/
	/	/	/
DEPTH IN (m)	1592	1624	1591
DEPTH OUT (m)	1624		0
METREAGE (m)	32	35	1
ROTARY HOURS	10.25	6.00	0.25
ROP (m/hr)	3.1	5.8	4.0
WT ON BIT (MM)	12 000 / 15 000	15 000 / 16 000	5 000 / 000
RPM	60/	65/ 70	50/
CONDL.	(PODL) 7-6-WT-A3	- - -	- - -
	(DCOR) E-1 - -HR	- - -	- - -

Primer

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	P28	500
LINE# (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN		
OUTPUT (l/min)	0	

REDUCED SPEED (rpm) 50
REDUCED PRESS. (psi) 4000

STAND PIPE PRESSURE		MPa	
TOTAL OUTPUT	0.00 m3/min	ANK VEL-OP	0.0 m/min
		ANK VEL-DC	0.0 m/min

Bottom Hole Assembly

# OF	CODE	Q.D.(mm)	I.D.(mm)	LENGTH (m)
1	BIT	215.0	72.0	0.25
1	EL.0	158.0	72.0	0.96
1	DM	166.0	72.0	9.34
1	SS	166.0	72.0	4.04
2	DU	165.0	72.0	17.59
1	JH	165.0	70.0	4.94
12	DU	165.0	72.0	103.37
1	XO	158.0	59.0	0.80
15	HW	114.0	75.0	138.55

TOTAL LENGTH (m) 279.84

Hydraulics

ENT PRESSURE LOSS	MPa
% PRESS LOSS @ ENT	%
HYDRAULIC POWER AT ENT	0.00 kW

Place Data

DRILL PIPE			DRILL COLLARS		
JTS	CODE	Q.D. (mm)	WEIGHT (kg)	JTS	Q.D. (mm)
144	K-	114.0	24.70	15	158.00
					65.00

FLIC 0 m
 DRAG 1800 Dwt
 TORQUE 0.5 DP tons
 WEATHER -4C, CLEAR
 7 m DEPTH 1659 m

DC WEIGHT: 19 1999 D-W
HOOK LOAD: 52 1999 D-W

AIR FLOW RATE: 0.0 m³/min @ 1Pa
FOAM INJECTION RATE: 1/min

CONCENTRATION:

HUNTER BOB DILLS CONDUCTED: DILLING TIPPING

REPORTED BY: D HENITT



WELLNAME: SHELL CELIBETA API #: WCB62 DATE: 90/03/06
LOCATION: 300-E-1-6010-12215-0 SEPTH: 1659 = DAILY COST: 33805
CONTRACTOR: BANDEN HSE #: 20 PROGRM: 0 = CUMULATIVE COST: 1442764
 DATE FROM OPER: 33 DATE OVER/UNDER API: 0
FORMATION: SLAVE POINT TOP @: 1540 = OPERATIONS: L.C. TRIP OUT
OPERATIONS FORECAST (Start 28 Inj) TRIP OUT
LAST CASING: 244.5 = @ 548 = FORMATION TEST: 17.5 MPa = @ SEPTH: 548 =

07:00 -1200 W.O.C. MIX & COND MUD.
1400 DUMP 72 SAX COARSE LCM & LCM
PILL DOWN HOLE.
1700 RUN IN OPEN ENDED, CLEAN BRIDGE
@ 949m, RUN IN, CLEAN SPOTTY
BRIDGES TO 1589m, NO RETURNS
WHILE RUNNING IN & REAMING.
1900 HOIST
2030 DUMP ANOTHER 70 SAX COARSE LCM &
LCM PILL DOWN HOLE-HOLE NOT FULL
2430 BUILD VOLUME, MIX LCM.
0300 RUN IN, HOLE CAME FULL AFTER 12
STANDS RUN IN. BREAK CIRC @
1200 & 1400m-FULL RETURNS
0415 CLEAN SPOTTY BRIDGES FROM 1509
TO 1545m, LOST RETURNS @1545m.
0500 RUN IN WITH NO RETURNS TO 1600m,
NO BRIDGES OR FILL 1545-1600m.
0700 HOIST

DENSITY	1055/1055	kg/m ³	P.Y.	44	mPa.s	SAND		K+		mg/l
VISCOSITY	90/100	sec	Y.P.	10	P _a	SOLIDS	0.0350	Cl-		450 mg/l
GELS	4/ 11	P _a	WATER LOSS	10.2	cc	OZ		Ca++		0 mg/l
PH	9.8		FC THICKNESS	1.5	mm	BET	49.9	kg/m ³		SULPHIDES mg/l
PF/NF	0.2/ 0.5		TEMP	39	C	POLYMER		kg/m ³		SULPHITES mg/l
SLUMP VOLUMES AS OF SUNDAY P.M. :			ON LEASE		m ³	OFF LEASE		m ³		
VOLUMES OF WASTES HAULED TO OFF LEASE SLUMP DURING WEEK :			SOLIDS		m ³	LIQUIDS		m ³		

NO.	DEPTH	DRAFT	AZIMUTH		
	(m)	(fms)	(N/S)	(deg)	(E/W)
BIT #			16RR	17	15
SIZE (mm)			215.9	215.9	215.9
TYPE			JD48	J33	JD4
MAKE			J&L	WESTERN	J&L
SERIAL #			755LL	24271	755LL
INOC CODE			2-1-7-	5-3-7-	2-1-7-
NOZZLES (mm)			/	/	0.0/
			/	/	/
DEPTH IN (m)			1592	1626	1591
DEPTH OUT (m)			1624		0
WETWEAGE (m)			32	35	1
ROTARY HOUR			10.25	6.00	0.25
ROP (m/hr)			3.1	5.8	4.0
WT ON BIT (K)			12 000 / 15 000	15 000 / 16 000	5 000 /
RPM			6G/	65/ 70	50/
CONO.			POOL 7-6-WT-A3	- - -	- - -
			POOL E-1 - -HR	- - -	- - -

PUMP #	1	2
MANUFACTURER	G.DENVER	HMSCO
TYPE	PZ8	500
LINER [mm]	165	140
STROKE [mm]	203	406
STROKES/MIN		
OUTPUT g/min	0	0
REDUCED SPEED [rpm]	50	
REDUCED PRESS. [kPa]	4000	
STAND PIPE PRESSURE		kPa
TOTAL OUTPUT	0.00 m ³ /min	ANN VEL-OP 0.0 m/min ANN VEL-OC 0.0 m/min

PIPE		PIPE		PIPE	
PIPE PRESSURE LOSS	MPa	PIPE GRADE	G.D.(mm)	WEIGHT(kg/m)	PIPE COLLARS
% PRESS LOSS @ INT	%	SIZE			SIZE
HYDRAULIC POWER AT INT	0.00 KW	144 E-	114.0	24.70	15 158.00
					65.00

FILL: 0 in DC WEIGHT: 19 3000 Dwt AIR FLOW RATE: 0.0 cu/min @ 100 PSI
 DRAG: 3000 Dwt HOOK LOAD: 52 3000 Dwt FOAM INJECTION RATE: 1/4 min
 TORQUE: 0.5 DP turns CONCENTRATION: 2
 WEATHER: 0, CLEAR MEMBER BOP DRILLS CONDUCTED: DRILLING TRIPPING
 7 a.m. DEPTH 1659 m REPORTED BY: D HENRITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA APE #: WCB62 DATE: 90/03/07
 LOCATION: 300-B12-6010-12215-0 DEPTH: m DAILY COST: 45415
 CONTRACTOR: BANDEN INC #: 20 PROGRESS: -1659 m CUMULATIVE COST: 1488179
 DAYS FROM SPOD: 34 DAYS OVER/UNDER APE: 0
 FORMATION: SLAVE POINT TOP #: 1540 m OPERATION: TRIP OUT TO LOG
 OPERATIONS FORECAST (Next 24 hrs) TRIP OUT TO LOG
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 MPa/m @ DEPTH: 548 m

Summary

07:00:0930 MIX LCM MUD
 1130 RUN IN OPEN END TO 1575M
 1230 CLEAN TO 1600M
 1430 TRIP OUT
 1445 RIG SERV. & BLIND RAMS
 1500 RUN IN BIT # 18 JG4 OPEN
 1545 SLIP & CUT LINE
 1715 RUN IN TO 1560M
 1900 REAM FILL FROM 1560M TO 1613M
 2100 CIRC. HOLE CLEAN
 2130 HOIST TO 1573 TIGHT
 0115 BACK REAM 1570M TO 1564M
 0130 PULL 3 STDs.
 0145 BREAK CIRC. # 1483
 0200 RUN INTO 1547M
 0230 CLEAN TO 1576M NO FILL
 0500 CONTINUE TO CLEAN TO 1613M WHILE
 DISPLACING HOLE TO FRESH MUD
 0545 MADE 5 STD. WIPER TRIP TO 1466M
 0700 TRIP OUT TO LOG
 BANDEN CREW HRS. FOR MONTH OF FEB.
 3677 TOTAL
 SERV. CONTRACTORS 2016 HRS. FOR FEB.
 1990

Mud Properties

DENSITY: 1055/1055 kg/m³ P.V. 44 mPa.s SAND K+ mg/l
 VISCOSITY: 90/100 sec T.P. 10 Pa SOLIDS 0.0350 G- 450 mg/l
 CELS 4/ 11 Pa WATER LOSS 10.2 cc OIL G++ 0 mg/l
 PH 9.8 FC THICKNESS 1.5 mm MBT 49.9 kg/m³ SULPHIDES mg/l
 PF/MF 0.2/ 0.5 TEMP 39 C POLYMER kg/m³ SULPHITES mg/l
 SUMP VOLUMES AS OF SUNDAY P.M.: OR LEASE m³ OFF LEASE m³
 VOLUMES OF WASTES HANDLED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys

Run	DEPTH (m)	DRIFT (deg)	AZIMUTH (deg)	BIT #	SIZE (mm)	TYPE	MAKE	SERIAL #	IADC CODE	NOZZLES (mm)	DEPTH IN (m)	DEPTH OUT (m)	METREAGE (m)	ROTARY HOURS	ROP (m/hr)	WT ON BIT (kg)	RPM	CONV.
1	1624			16RR	215.9	JD4B	J&L	755LL	2-1-7-	/	1592	1624	32	10.25	3.1	12 000 / 15 000	60/	7-6-WT-A3
2	1624			17	215.9	J33	WESTERN	24271	5-3-7-	/	1624		35	6.00	5.8	15 000 / 16 000	65/ 70	- - -
3				18	215.9	JG4	HW	23416	2-1-7-	0.0/		0	0				0/	- - -

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	PZ8	500
LINE (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN		
OUTPUT (l/min)	0	0

REDUCED SPEED (rpm) 50
 REDUCED PRESS. (MPa) 4000

STAND PIPE PRESSURE: MPa
 TOTAL OUTPUT: 0.00 m³/min ANN VEL-DP 0.0 m/min
 ANN VEL-DC 0.0 m/min

Bottom Hole Assembly

# OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	BIT	215.0	72.0	0.25
1	E1.0	158.0	72.0	0.96
1	DM	166.0	72.0	9.34
1	SS	166.0	72.0	4.04
2	DU	165.0	72.0	17.59
1	JH	165.0	70.0	4.94
12	DU	165.0	72.0	103.37
1	XO	158.0	59.0	0.80
15	HW	114.0	75.0	138.55

TOTAL LENGTH (m) 279.84

Hydraulics

BIT PRESSURE LOSS: MPa
 % PRESS LOSS @ BIT: %
 HYDRAULIC POWER AT BIT: 0.00 kW

Pipe Data

PIPE TYPE	JOINTS	GRADE	O.D. (mm)	WEIGHT (kg/m)	PIPE COLLARS	JOINTS	O.D. (mm)	I.D. (mm)
144 E-	-	114.0	24.70		15	158.00		65.00

FILL: 0 m DC WEIGHT: 19 1000 Dm AIR FLOW RATE: 0.0 m³/min @ MPa
 DRAG: 1500 Dm HOOK LOAD: 52 1000 Dm FOAM INJECTION RATE: l/min
 TORQUE: 0.5 DP mm CONCENTRATION:
 WEATHER: CLEAR -5 NUMBER BOP DRILLS CONDUCTED: DRILLING TRIPPING
 7 m DEPTH REPORTED BY: D HENITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/03/08
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1659 m DAILY COST: 64118
 CONTRACTOR: BAWDEN RIG #: 20 PROGRESS: 0 m CUMULATIVE COST: 1552297
 DAYS FROM SPUD: 35 DAYS OVER/UNDER AFE: 0
 FORMATION: SLAVE POINT TOP @: 1540 m OPERATION: RUNNING IN HOLE
 OPERATIONS FORECAST (Next 24 hrs) RUN IN, CIRC HOLE CLEAN, COND MUD FOR CASING
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 MPa/m @ DEPTH: 548 m

Summary

07:00 -0830 HOIST
 0600 HOLD SAFETY MEETING, RIG TO AND
 LOG W/SCHLUMBERGER, RIG OUT SAME
 0700 MAKE UP BHA, RUN IN.

Made 5 logging runs as follows:

1) DIL-SP-GR 1603-548
 2) BHCS-GR-CAL. 1597-SUR BAWDEN CREW HRS.144
 3) PHASOR-GR-SP 1592-1500, 900-700 CONTRACTOR SUPERVISION 120 HRS.
 4) CNL-LDT-GR 1589-548
 5) Vertical Seismic Profile 1580-548

Mud Properties

DENSITY	1055/1055 kg/m ³	P.V.	44 mPa.s	SAND	K+	mg/l
VISCOSITY	90/100 sec	Y.P.	10 Pa	SOLIDS	0.0350	450 mg/l
GELS	4/ 11 Pa	WATER LOSS	10.2 cc	OE	C++	0 mg/l
PH	9.8	FC THICKNESS	1.5 mm	MBT	49.9 kg/m ³	SULPHIDES mg/l
PP/HF	0.2/ 0.5	TEMP	39 C	POLYMER	kg/m ³	SULPHITES mg/l

SUMP VOLUMES AS OF SUNDAY P.M.:

ON LEASE	m ³	OFF LEASE	m ³
VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK:	SOLIDS	m ³	LIQUIDS
	m ³		m ³

Surveys

N	DEPTH	DRIFT	AZIMUTH
(m)	(deg)	(N/S)	(deg) (E/W)

Bit Data

BIT #	19RR	17	18
SIZE (mm)	215.9	215.9	215.9
TYPE	JG4	J33	JG4
MAKE	HW	WESTERN	HW
SERIAL #	23416	24271	23416
IADC CODE	2-1-7-	5-3-7-	2-1-7-
NOZZLES (mm)	/	/	0.0/
DEPTH IN (m)	1659	1624	
DEPTH OUT (m)			0
METREAGE (m)	0	35	0
ROTARY HOURS		5.00	
ROP (m/hr)		5.8	
WT ON BIT (kl)	000 / 000	15 000 / 16 000	000 / 000
RPM	/	65/ 70	0/
COND. (POOL)	- - -	- - -	- - -
(BCOR)	- - -	- - -	- - -

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	P28	500
LINE (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN		
OUTPUT (l/min)	0	0

REDUCED SPEED (rpm) 50
 REDUCED PRESS. (MPa) 4000

STAND PIPE PRESSURE

MPa
 TOTAL OUTPUT 0.00 m³/min ANN VEL-OP 0.0 m/min
 ANN VEL-OC 0.0 m/min

Bottom Hole Assembly

# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
1	BIT	215.0	72.0	0.25
1	E1.0	158.0	72.0	0.96
4	DU	166.0	72.0	35.54
1	JH	165.0	70.0	4.94
2	DU	165.0	72.0	17.59
1	XO	158.0	59.0	0.80
15	HW	114.0	75.0	138.55

TOTAL LENGTH (m) 198.63

Hydraulics

BIT PRESSURE LOSS MPa
 % PRESS LOSS @ BIT %
 HYDRAULIC POWER AT BIT 0.00 KW

Pipe Data

DRILL PIPE	DRILL COLLARS
#JTS GRADE O.D.(mm) WEIGHT(kg/m)	#JTS O.D.(mm) I.D.(mm)
144 E- 114.0 24.70	15 158.00 65.00

FILL 0 m
 DRAG 1000 Daft
 TORQUE 0.5 DP turns
 WEATHER: -18, CLEAR
 7 a.m. DEPTH: 1659 m

DC WEIGHT: 9 1000 Daft
 HOOK LOAD: 42 1000 Daft

AIR FLOW RATE 0.0 m³/min @ MPa
 FOAM INJECTION RATE l/min

CONCENTRATION
 NUMBER BOP DRILLS CONDUCTED: DRILLING TRIPPING
 REPORTED BY: D HEWITT

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SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/03/09
 LOCATION: 300-B12-6010-12215-0 DEPTH: = DAILY COST: 30593
 CONTRACTOR: BANDEN INC #: 20 PROGRESS: -1659 = CUMULATIVE COST: 1582890
 DAYS FROM SPUD: 36 DAYS OVER/UNDER AFE: 0
 FORMATION: SLAVE POINT TOP @: 1540 m OPERATION: REAMING @1517M
 OPERATIONS FORECAST (Next 24 hrs) REAMING SLOUGHING HOLE & COND FOR CASING
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 kPa/m @ DEPTH: 548 m

Summary

07:00 0800 TRIP IN
 0830 CIRC. @ 548M
 0930 TRIP INTO 1000M
 1000 BREAK CIRC. @ 1000M
 1130 TRIP IN SLOW
 1200 BREAK CIRC. @ CIRC. @1506M
 1215 RIG SERV. & HYDRIL
 1330 CIRC & COND. MUD
 1345 PULL 3 STDS
 1500 CIRC. & COND. MUD BEFORE REAMING
 1515 RUN IN TO 1506M
 2000 REAMING SLOUGHING HOLE FROM
 1506M TO 1513M
 2030 LAY DOWN 9 SINGLES, RIHW 3 STDS.
 0100 REAM FROM 1513 TO 1521
 0115 RIG SERV.
 0400 TRIP OUT TO CHECK BIT
 0615 TRIP IN BIT @ 19 TO REAM
 0700 BREAK CIRC. & REAM FROM 1512M
 BANDEN CREW HRS. 144
 SHELL SUPERVISION 84 HRS.

Mud Properties

DENSITY: 1055/1060 kg/m³ P.V. 52 mPa.s SAND 0.0030 K+ mg/l
 VISCOSITY 90/120 sec Y.P. 22 Pa SOLIDS 0.0380 G- 400 mg/l
 GELS 5/ 8 Pa WATER LOSS 9.0 cc OIL Ca++ 40 mg/l
 PH 10.0 FC THICKNESS 2.0 mm MBT 54.2 kg/m³ SULPHIDES mg/l
 PF/MF 0.2/ 0.8 TEMP 39 C POLYMER kg/m³ SULPHITES mg/l
 SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m³ OFF LEASE m³
 VOLUMES OF WASTES HAILED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg) (E/W)	BIT #	SIZE (mm)	TYPE	MAKE	SERIAL #	IADC CODE	NOZZLES (mm)	DEPTH IN (m)	DEPTH OUT (m)	METREAGE (m)	ROTARY HOURS	ROP (m/hr)	WT ON BIT (kg)	RPM	COND. (HOO)	(SGOR)
				19	215.9	JG4	HW	26616	2-1-7-	0.0/ 0.0	1612		5	0.75	6.7	4 000 / 8 000	/ 60	- - -	- - -
				17	215.9	J33	WESTERN	24271	5-3-7-	/	1624	0	35	6.00	5.8	15 000 / 16 000	65/ 70	- - -	- - -
				18	215.9	JG4	HW	23416	2-1-7-	0.0/		0	0			000 / 000	0/	- - -	- - -

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	PZ8	500
LINER (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	100	
OUTPUT (l/min)	1200	0
REDUCED SPEED (rpm)	50	
REDUCED PRESS. (kPa)	4000	
STAND PIPE PRESSURE	3500 kPa	
TOTAL OUTPUT	1.20 m ³ /min	ANN VEL-OP 45.4 m/min ANN VEL-OC 32.7 m/min

Bottom Hole Assembly

# OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	BIT	215.0	72.0	0.25
1	E1.0	158.0	72.0	0.96
4	DU	166.0	72.0	34.75
1	JH	165.0	70.0	4.94
4	DU	165.0	72.0	34.37
1	XO	158.0	59.0	0.80
15	HW	114.0	75.0	138.55

TOTAL LENGTH (m) 214.62

Hydraulics

BIT PRESSURE LOSS kPa
 % PRESS LOSS @ BIT 0.0 %
 HYDRAULIC POWER AT BIT 0.00 kW

Pipe Data

DRILL PIPE	DRILL COLLARS
JUNTS GRADE O.D. (mm) WEIGHT (kg/m)	JUNTS O.D. I.D.
145 E- 114.0 24.70	15 158.00 65.00

FILL: 0 m DC WEIGHT: 9 1800 DaN AIR FLOW RATE: 0.0 m³/min @ kPa
 DRAG: 1000 DaN HOOK LOAD: 46 1800 DaN FOAM INJECTION RATE: l/min
 TORQUE: 0.5 DP turns CONCENTRATION:
 WEATHER: NUMBER BOP DRILLS CONDUCTED: DRILLING TRIPPING
 7 a.m. DEPTH: m REPORTED BY: D HENWITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/03/10
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1590 m DAILY COST: 11205
 CONTRACTOR: BAWDEN REC #: 20 PROGRESS: 0 m CUMULATIVE COST: 1594095
 DAYS FROM SPOD: 37 DAYS OVER/UNDER AFE: 0
 FORMATION: SLAVE POINT TOP @: 1540 m C-DATE: REAMING TO BOTTOM
 OPERATIONS FORECAST (Next 24 hrs) REAM TO BOTTOM COND. HOLE FOR PACKER
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 mPa/m @ DEPTH: 548 m

Summary

07:00 1300 REAM FROM 1512M TO 1590M
 1530 CIRC TO CLEAN HOLE
 1545 WIPER TRIP PULL 1 STD
 2000 JAR OUT 6 SINGLES TO 1500M
 2030 CIRC. @1500M
 2130 LOSSING CIRC. SPOT 10M3 PILL
 2200 TRIP UP TO 1445M
 2400 CIRC. HOLE WITH 2 PUMPS 2M3/MIN.
 0015 RIG SERV. & UPPER RAMS
 0030 TRIP IN TO 1499M
 0430 CIRC. HOLE WITH 2 PUMPS
 0700 REAMING BACK TO BOTTOM FROM

1499M TO 1571M
 HOLE CLEANED REALLY GOOD WITH BOTH PUMPS

BAWDEN CREW HRS.132
 CONTRACT SUPERVISION 72HRS.

Mud Properties

DENSITY	/1060 kg/m3	P.V.	70 mPa.s	SAND	0.0030	K+	mg/l
VISCOSITY	/208 sec	T.P.	35 Pa	SOLIDS	0.0380	Cl-	400 mg/l
GELS	8/ 14 Pa	WATER LOSS	8.4 cc	OL		Ca++	40 mg/l
PH	10.0	FC THICKNESS	1.5 mm	MST	60.0 kg/m3	SULPHIDES	mg/l
PF/MF	0.2/ 0.8	TEMP	39 C	POLYMER	kg/m3	SULPHATES	mg/l

SUMP VOLUMES AS OF SUNDAY P.M.:

VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m3 LIQUIDS m3

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZMUTH (M/S) (deg)	(E/W)
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Rig Data

BIT #	19	17	18
SIZE (mm)	215.9	215.9	215.9
TYPE	JG4	J33	JG4
MAKE	HW	WESTERN	HW
SERIAL #	26616	24271	23416
WDC CODE	2-1-7-	5-3-7-	2-1-7-
NOZZLES (mm)	0.0/ 0.0	/	0.0/
	0.0/	/	/
DEPTH IN (m)		1624	
DEPTH OUT (m)			0
METREAGE (m)	0	35	0
ROTARY HOURS		6.00	
ROP (m/hr)		5.8	
WT ON BIT (kN)	4 000 / 8 000	15 000 / 16 000	000 / 000
RPM	/ 60	65/ 70	0/
COND.	(POOL)	(DCOR)	

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	P28	500
LINE (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	90	45
OUTPUT (l/min)	1080	945

REDUCED SPEED (rpm) 50
 REDUCED PRESS. (kPa) 4000

STAND PIPE PRESSURE 9000 kPa

TOTAL OUTPUT 2.03 m3/min ANN VEL-OP 76.8 m/min
 ANN VEL-DC 55.4 m/min

Bottom Hole Assembly

# OF	CODE	O.D.(mm)	I.D.(mm)	LENGTH (m)
1	BIT	215.0	72.0	0.25
1	E1.0	158.0	72.0	0.96
4	DU	166.0	72.0	34.75
1	JH	165.0	70.0	4.94
4	DU	165.0	72.0	34.37
1	XO	158.0	59.0	0.80
15	HW	114.0	75.0	138.55

TOTAL LENGTH (m) 214.62

Hydraulics

BIT PRESSURE LOSS mPa
 % PRESS LOSS @ BIT 0.0 %
 HYDRAULIC POWER AT BIT 0.00 kW

Pipe Data

DRILL PIPE				DRILL COLLARS		
#JTS	GRADE	O.D.(mm)	WEIGHT(kg/m)	#JTS	O.D.	I.D.
145	E-	114.0	24.70	15	158.00	65.00

FILL 0 m
 DRAG 1000 DaN
 TORQUE 0.5 DP bars
 WEATHER -15 OVERCAST
 7 a.m. DEPTH: 1590 m

DC WEIGHT: 9 1000 DaN
 HOOK LOAD: 46 1000 DaN

AIR FLOW RATE 0.0 m3/min @
 FOAM INJECTION RATE 1/min

CONCENTRATION:
 NUMBER BOP DRILLS CONDUCTED: DRILLING TRIPPING
 REPORTED BY: D HEWITT

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SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/03/11
LOCATION: 300-B12-6010-12215-0 DEPTH: = DAILY COST: 16205
CONTRACTOR: BANDEN INC #: 20 PROGRESS: -1590 = CUMULATIVE COST: 1610300
 DAYS FROM SPUD: 38 DAYS OVER/UNDER AFE: 0
FORMATION: SLAVE POINT TOP @: 1540 = OPERATION:
OPERATIONS FORECAST (Next 24 hrs) SET PACKER
LAST CASING: 244.5 mm @ 548 = FORMATION TEST: 17.5 WPI/m @ DEPTH: 548 =

Summary

07:00 1100 REAM FROM 1571 TO 1589M
1200 CIRC COND. HOLE 1589 M
1215 RIG SERVICE B.P.R.
1230 PULL 3 STDs 1 SINGLE 1500 M
1400 CIRC WITH BOTH PUMPS
1415 RUN BACK TO BOTTOM
1600 CIRC HOLE CLEAN @ 1589
2045 TRIP PUMPED OUT 6 SINGLES
2130 SLIP & CUT LINE 29 M
2145 RIG SERVICE U.P.R.
2230 TRIP IN OPEN
2400 BREAK CIRC CLEAN TO 1589

0030 CIRC HOLE CLEAN
0330 TRIP OUT
0400 MAKE UP BAKER PACKER
0630 TRIP IN
0700 SET PACKER

Mud Properties

DENSITY	/1060	kg/m ³	P.Y.	70	mPa.s	SAND	0.0030	K+		mg/l	
VISCOSITY	/208	sec	Y.P.	35	Pa	SOLIDS	0.0380	Cl-		400	
GELS	8/	14	Pa	WATER LOSS	8.4	cc	OR	Ca++		40	
PH	10.0			FC THICKNESS	1.5	mm	MST	60.0	kg/m ³	SULPHIDES	mg/l
PF/MF	0.2/	0.8		TEMP	39	C	POLYMER		kg/m ³	SULPHITES	mg/l
SUMP VOLUMES AS OF SUNDAY P.M.:						ON LEASE	m ³	OFF LEASE	m ³		
VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK:						SOLIDS	m ³	LIQUIDS	m ³		

Surveys

No.	DEPTH	DRIFT	AZIMUTH
	(m)	(deg)	(N/S) (deg) (E/W)

Big Data

BIT #	19	17	18
SIZE (mm)	215.9	215.9	215.9
TYPE	JG4	J33	JG4
MAKE	HW	WESTERN	HW
SERIAL #	26616	24271	23416
WADC CODE	2-1-7-	5-3-7-	2-1-7-
NOZZLES (mm)	0.0/ 0.0	/	0.0/
	0.0/	/	/
DEPTH IN (m)		1624	
DEPTH OUT (m)			0
METREAGE (m)	0	35	0
ROTARY HOURS		6.00	
ROT (m/hr)		5.8	
WT ON BIT (wt)	4 100 / 8 000	15 000 / 16 100	000 / 000
RPM	/ 60	65/ 70	0/
CONCL.	- - -	- - -	- - -
	(RECORD)	- - -	- - -

Paraphrase

PUMP #	1	2
MANUFACTURER	G.DENVER	EMSCO
TYPE	P28	500
LINE# (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	72	40
OUTPUT (l/min)	864	840

REDUCED SPEED (rpm) 50
REDUCED PRESS (psi) 4000

STAND PIPE PRESSURE MPa
TOTAL OUTPUT 1.70 m3/min ASME VEL-DP 64.3 m/min
ASME VEL-DC 46.4 m/min

Bottom Hole Assembly

# OF	CASE	O.D.(mm)	I.D.(mm)	LENGTH (in)
1	BIT	215.0	72.0	0.25
1	EL-0	158.0	72.0	0.96
4	DU	166.0	72.0	34.75
1	JH	165.0	70.0	4.94
4	DU	165.0	72.0	34.17
1	XO	158.0	59.0	0.30
15	HW	114.0	75.0	138.55

TOTAL LENGTH (m) 214.62

Hydraulics

HYD PRESSURE LOSS	MPa
% PRESS LOSS @ HYD	%
HYDRAULIC POWER AT HYD	0.00 KW

Pipe Data

DRILL PIPE
SIZE GRADE O.D. (in) WEIGHT (lb/ft)
145 E- 114.0 24.70
-

DRILL COLLARS

13 158.00 69.00

0 m
 1000 Dm
 0.5 DP mm
 7 a.m. DEPTH

DC WEIGHT:	9	1000 DALL
HOOK LOAD:	46	2000 DALL

AIR FLOW RATE: 0.0 m³/min @ 100
FOAM INJECTION RATE: 1/min
CONCENTRATION:

NUMBER BOB DRILLS CONDUCTED: DRILLING TRIPPING
REPORTED BY: D. HEWITT

REPORTED BY: D. HEWITT



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/03/12
 LOCATION: 300-B12-6010-12215-0 DEPTH: = DAILY COST: 34790
 CONTRACTOR: BAWDEN SEC #: 20 PROCEED: = CHEMICAL COST: 1645090
 DATES FROM SPEED: 39 DAYS OVER/UNDER AFE: 0
 FORMATION: SLAVE POINT TOP @: 1540 m OPERATION: DRILL CEMENT
 OPERATIONS FORECAST (Next 24 hrs) DRIG. OUT CEMENT FROM 1498M
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 m @ DEPTH: 548 m

Summary

07:00 0730 SET BAKER INFLATE PACKER
 DISCONNECT, UNABLE TO FILL HOLE
 LATCH ONTO PACKER 3M LOWER @ 1592M
 HAD SET IT @ 1589M SLID DOWN
 1200 TRIP OUT
 1215 RIG SERV. @ BLIND RAMS
 1330 LAY DOWN RUPTURED PACKER
 1600 MAKE UP CONVENTIONAL PACKER AND
 TRIP INTO 1590M BOTTOM TAIL PIPE
 PACKER @ 1534M
 1615 CIRC. SET PACKER FORMATION
 PRESSURED UP TO 8000KPA NO FEED

1900 TRIP OUT LAY DOWN PACKER
 2100 TRIP IN OPEN END TO RUN CEMENT
 PLUG @ 1585M
 2330 BREAK CIRC. CIRC. COND. MUD
 2400 RIG & RUN CEMENT PLUG #5 @ 1585M
 0315 TRIP OUT
 0330 RIG SERV. & BLIND RAMS
 0530 RUN IN HOLE CLEAN FROM 1449M TO
 1498 HIT CEMENT
 0700 DRILL OUT CEMENT 1498 TO 1510
 PLUG #5 5M H2O AHEAD MIX 6 TONN 010
 PLUS .5% D65 DISPLACE 9M H2O

Mud Properties

DENSITY 1050/1060 kg/m³ P.V. 38 mPa SAND K+ mg/l
 VISCOSITY 69/ sec Y.P. 13 Pa SOLIDS 0.0310 G- 400 mg/l
 GELS 3/ 5 Pa WATER LOSS 9.4 cc CR G++ 40 mg/l
 PH 10.0 FC THICKNESS 1.5 mm MBT 56.0 kg/m³ SULPHATES mg/l
 PF/MF 0.3/ 0.9 TEMP 32 C POLYMER kg/m³ SULPHATES mg/l

SUMP VOLUMES AS OF SUNDAY P.M.:

ON LEASE

OFF LEASE

VOLUMES OF WASTES MAILED TO OFF LEASE DUMP DURING WEEK:

SOLIDS

LIQUIDS

Surveys

No. DEPTH DRIFT AZIMUTH
 (m) (4m) (N/S) (4m) (E/W)

Bit Data

BIT #	19	17	18
SIZE (mm)	215.9	215.9	215.9
TYPE	JG4	J33	JG4
MAKE	HW	WESTERN	HW
SERIAL #	26616	24271	23416
WDC CODE	2-1-7-	5-3-7-	2-1-7-
NOZZLES (mm)	0.0/ 0.0	/	0.0/
	0.0/	/	/
DEPTH IN (m)		1624	
DEPTH OUT (m)			0
METREAGE (m)	0	35	0
ROTARY HOURS		6.00	
ROP (m/hr)		5.8	
WT ON BIT (kg)	4 mm / 8 mm	15 mm / 16 mm	mm / mm
RPM	/ 50	65/ 70	0/
COND. (POOL)	- - -	- - -	- - -
(BICO)	- - -	- - -	- - -

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	P28	500
LINE (mm)	165	140
STROKE (mm)	203	406

STROKES/MIN 120
 OUTPUT (l/min) 1440 0

REDUCED SPEED (rpm) 50
 REDUCED PRESS. (MPa) 4000

STAND PIPE PRESSURE 3500 MPa

TOTAL OUTPUT 1.44 m³/min AIR VEL-DP 54.5 m/min
 AIR VEL-DC 39.3 m/min

Bottom Hole Assembly

# OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	FS	159.0	82.0	0.20
14	HW	114.0	76.0	129.31

TOTAL LENGTH (m) 129.51

Hydraulics

BIT PRESSURE LOSS MPa
 % PRESS LOSS @ BIT 0.0 %
 HYDRAULIC POWER @ BIT 0.00 kW

Pipe Data

DRILL PIPE
 SPTS GRADE 0.0 (mm) WEIGHT (kg/m)
 163 X- 114.0 24.70

WELL COLLARS

SPTS GRADE 0.0 (mm)
 163 X- 114.0 24.70

FILE 0 m
 DRAG 3000 Dm
 TORQUE 0.5 DP mm
 WEATHER -10
 7 a.m. DEPTH m

DC WEIGHT: 9 1000 Dm
 HOOK LOAD: 46 1000 Dm

AIR FLOW RATE 0.0 m³/min @ MPa
 PUMP INJECTION RATE l/min
 CONCENTRATION

NUMBER BOP DRILLS CONDUCTOR: DRILLING TRIPPING
 REPORTED BY: D HEWITT

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SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/03/13
 LOCATION: 300-B12-6010-12215-0 DEPTH: 1572 m DAILY COST: 1 33524
 CONTRACTOR: BANDEN INC #: 20 PROGRESS: 0 m CUMULATIVE COST: 1678614
 DAYS FROM SPUD: 40 DAYS OVER/UNDER AFE: 0
 FORMATION: SLAVE POINT TOP #: 1540 m OPERATION: CIRC. COND HOLE
 OPERATIONS FORECAST (Max 36 hrs) CIRC. 55TD. WIPER TRIP, CIRC. LAY DOWN DRILL PIPE
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 MPa/m @ DEPTH: 548 m

Summary

07:00 0900 CIRC. COND MUD CONTAMINATI
 1200 DRILL CEMENT FROM 1508M TO 1520M
 1215 RIG SERV. & TOP RAMS
 1530 DRILL CEMENT WITH 10000 daN, 5MIN
 PER METRE FROM 1520 TO 1572M
 1630 CIRC. BOTTOM UP
 1930 TRIP OUT STRAP PIPE
 1945 RIG SERV. & BLIND RAMS
 2215 TRIP IN TO 1497 M
 2400 REAM UNDER GAGE HOLE 1497 TO 1504
 0015 RIG SERV. & ANNULAS
 0515 REAM FROM 1504 TO 1572M

0700 CIRC. COND. HOLE
 LAST 31M OPEN HOLE DID NOT HAVE TO
 REAM. JUST WASH TO BOTTOM
 WHILE REAMING HOLE SLOUGHING SHALE
 RAISE VISCOSITY FROM 50 TO 120
 BANDEN CREW HRS. PER DAY 132
 CONTRACTOR HRS ON LEASE 72

Mud Properties

DENSITY 1050/1060 kg/m³ P.Y. 31 mPa.s SAND K+ mg/l
 VISCOSITY 120/ mc Y.P. 12 Pa SOLIDS 0.0310 G- 420 mg/l
 GELS 5/ 21 Pa WATER LOSS 11.0 cc OIL Ca++ 20 mg/l
 PH 11.5 FC THICKNESS 1.5 mm MBT 56.0 kg/m³ SULPHIDES mg/l
 PF/MF 0.8/ 2.0 TEMP 32 C POLYMER kg/m³ SULPHITES mg/l

SUMP VOLUMES AS OF SUNDAY P.M.:

ON LEASE m³ OFF LEASE m³
 VOLUMES OF WASTES HAULED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys

No.	DEPTH (m)	DRIFT (deg)	AZIMUTH (N/S) (deg)	DEPTH IN (m)	DEPTH OUT (m)	METREAGE (m)	ROTARY HOURS	ROP (m/hr)	WT ON BIT (kg)	RPM	COND.	ROD	SCORE
1	19			20RR	18								
2	215.9			215.9	215.9								
3	JG4			JG4	JG4								
4	HW			WESTERN	HW								
5	26616			26616	23416								
6	2-1-7-			5-3-7-	2-1-7-								
7	NOZZLES (mm)	0.0/ 0.0		/	0.0/								
8		0.0/		/	/								
9	0			0	0								
10	4 000 / 8 000			000 / 000	000 / 000								
11	/ 60			/	0/								
12	---			---	---								
13	---			---	---								

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	P28	500
UNER (mm)	165	140
STROKE (mm)	203	406
STROKES/MIN	120	
OUTPUT l/min	1440	0
REDUCED SPEED (rpm)	50	
REDUCED PRESS. (MPa)	4000	

STAND PIPE PRESSURE: 4000 kPa

TOTAL OUTPUT: 2.44 m³/min ANN VEL-OP 54.5 m/min

ANN VEL-DC 24.5 m/min

Bottom Hole Assembly

# OF	CODE	O.D. (mm)	I.D. (mm)	LENGTH (m)
1	BIT	216.0		0.25
1	E0.9	159.0	65.0	0.96
6	DU	158.0	65.0	52.46
1	JH	158.0	63.0	4.94
2	DU	158.0	65.0	17.13
1	XO	156.0	66.0	0.80
15	HW	114.0	75.0	138.55

TOTAL LENGTH (m) 215.09

Hydraulics

BIT PRESSURE LOSS	MPa
% PRESS LOSS @ BIT	0.0 %
HYDRAULIC POWER AT BIT	0.00 kW

Pipe Data

PIPE	GRADE	O.D. (mm)	WEIGHT (kg/m)	COLLARS	O.D.	I.D.
150	X-	114.0	24.70	8	158.00 mm	65.00 mm

FILL: 0 m

DRAG: 1800 DaN

TORQUE: 0.5 DP 1000

WEATHER: -10 CLEAR

7 m. DEPTH: 1572 m

DC WEIGHT: 9 3000 DaN

HOOK LOAD: 46 3000 DaN

AIR FLOW RATE: 0.0 m³/min @

FOAM INJECTION RATE: l/min

CONCENTRATION:

NUMBER BOP DEVICES CONDUCTED: DRILLING TRIPPING

REPORTED BY: D HEWITT

CD 28/97

DOR

page 1 of 1



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA
 LOCATION: 300-E12-6010-12215-0
 CONTRACTOR: BARDEN
 WFT: 20
 POSITION: SLAVE POINT
 OPERATIONS FORECAST DATE: 1572
 LAST CHASE: 244.5 m @ 548 m
 DATE: 90/03/14
 DAILY COST: 183937
 CUMULATIVE COST: 1862551
 RIG OVER/UNDER: 0
 WFT: 20
 POSITION: 1572
 RIG OVER/UNDER: 41
 POSITION: 17.5 m @ 548 m

Summary
 07:00: 0745 WIPER TRIP 3 STDs.
 0900 CIRC. COND HOLE. RIG UP LAYDOWN
 1200 LAY DOWN DRILL PIPE
 1215 RIG SERV. BOTTOM PIPE RAMS
 1500 FINISH LAYING DOWN DRILL PIPE
 1600 PULL WEAR BUSHING, RIG TO RUN
 CSG.
 2100 HOLD SAFETY MEETING, RUN CSG.
 RUN 114 JTS. 139.7mm KES 21.67KG/M
 ST&C LANDED @ 1572M FLOAT @1571M
 2400 CIRC.HOLE COND FOR CEMENT JOB
 0015 RIG SERVICE : CHECK ANGULAR
 0200 CIRC & CONDITION MUD
 0430 HOLD SAFETY MEETING, CEMENT CSG
 0700 SET CSG SLIPS, TEAR OUT BOP's
 CEMENT CASING WITH:
 0-1:0 20 TORQUE
 W/.752 D65,.13D59,.13D136,.13D13
 1-1:2 45 TORQUE
 W/ 18 D60
 PLOG DOWN 04:20 90/03/14
 PRESSURE TEST CASING TO 25 MPa FOR 15
 MINUTES

Mud Properties
 DENSITY: 1050/ kg/m³ P.V. 28 mPa
 VISCOSITY: 60/ sec TP. 10 Pa
 GELS: 5/ 20 Pa WATER LOSS: 11.0 cc
 PH 11.5 PC THICKNESS: 1.5 mm
 FFMF 0.8/ 2.0 TEMP 32 C
 SUMP VOLUMES AS OF SUNDAY P.M.: ON LEASE m³ OFF LEASE m³
 VOLUMES OF WASTES MAILED TO OFF LEASE SUMP DURING WEEK: SOLIDS m³ LIQUIDS m³

Surveys
 No. DEPTH (m) DRIFT (deg) AZIMUTH (deg) (E/W)
 Bit Data
 BIT # 20RR 18
 SIZE (mm) 215.9 215.9 215.9
 TYPE JG4 JG4 JG4
 MAKE HW WESTERN HW
 SERIAL # 26616 26616 23416
 WDC CODE 2-1-7- 5-3-7- 2-1-7-
 NOZZLE (mm) 0.0/ 0.0 / 0.0/
 DEPTH IN (m) 0.0/ / /
 DEPTH OUT (m) 0 0 0
 METREAGE (m) 0 0 0
 ROTARY HOURS
 BOP (m/h) 4 m / 8 m m / m m / m
 RPM / 60 / / 0/
 CORO. (ROCK) - - - - -
 (ROCK)

Pumps
 PUMP # 1 2
 MANUFACTURER G.DENVER ENSCO
 TYPE P2P 500
 CYLINDER (mm) 165 140
 STROKE (mm) 203 406
 STROKES/REV 100 50
 OUTPUT (l/min) 1200 1050
 REDUCED SPEED (rpm) 50
 REDUCED PRESS. (MPa) 4000
 STAND PIPE PRESSURE MPa
 TOTAL OUTPUT 2.25 m³/min ANN VE-UP 61.4 m/min
 ANN VE-DOWN 61.4 m/min
 Bottom Hole Assembly
 # OF CODE O.D. (mm) I.D. (mm) LENGTH (m)
 TOTAL LENGTH (m) 0.00

Hydraulics
 BIT PRESSURE LOSS MPa
 % PRESS LOSS @ BIT %
 HYDRAULIC POWER AT BIT 3.00 kW
 Pipe Data
 DRILL PIPE
 DATE / GRADE / O.D. (mm) / WEIGHT (kg/m)
 COLLAPSE
 DATE / GRADE / O.D. (mm) / I.D. (mm)

FILE 0 m DC WDRATE 1000 g/min AIR FLOW RATE 0.0 m³/min @ MPa
 DRAG 1000 lbs HOOK LOAD 1000 lbs FLOW INJECTION RATE l/min
 TORQUE 0P tons CONCENTRATION
 WEATHER: -2 CLOUDY NUMBER BOP CHECKS CONDUCTED: DURING TESTING
 7 m DEPTH REPORTED BY D HEWITT 41



SHELL CANADA LIMITED

Daily Drilling Report

WELLNAME: SHELL CELIBETA AFE #: WCB62 DATE: 90/03/15
 LOCATION: 300-BL2-6010-12215-0 DEPTH: = DAILY COST: \$ 9619
 CONTRACTOR: BAXTER INC #: 20 PROGRESS: 0 = CUMULATIVE COST: \$ 1872170
 FORMATION: SLAVE POINT TOP #: 1540 = DATES FROM SPUD: 42 DAYS OVER/UNDER AFE: 0
 OPERATIONS FORECAST (Next 24 hrs) RIG RELEASED OPERATION:
 LAST CASING: 244.5 mm @ 548 m FORMATION TEST: 17.5 MPa/m @ DEPTH: 548 m

Summary

07:00 2400 RIG OUT BOPS; SET SLIPS
 CUT CASING; LAY DOWN BOPS
 CLEAN MUD TANKS; INSTALL
 WELL HEAD
 0700 NIPPLE UP 6 IN BOPS
 RIG RELEASED AT 2400 HRS.
 90/03/14
 RIG TURNED OVER TO WELL
 COMPLETIONS.

Mud Properties

DENSITY	/	kg/m ³	P.V.	mPa.s	SAND	K+	mg/l
VISCOSITY	/	mc	T.P.	Pa	SOLIDS	Q-	mg/l
GELS	/	Pa	WATER LOSS	cc	CL	Ca++	mg/l
PH			PC THICKNESS	mm	MBT	kg/m ³ SULPHIDES	mg/l
PP/MP	/		TEMP	C	POLYMER	kg/m ³ SULPHITES	mg/l

SUMP VOLUMES AS OF SUNDAY P.M.:

ON LEASE

VOLUMES OF WASTES HANDED TO OFF LEASE SUMP DURING WEEK: SOLIDS

OFF LEASE

LIQUIDS

Surveys

No.	DEPTH	DRIFT	AZIMUTH	
	(m)	(deg)	(M/S)	(E/W)

Bk Data

BIT #			
SIZE (mm)			
TYPE			
MAKE			
SERIAL #			
BADC CODE	- - -	- - -	- - -
NOZZLES (mm)	/	/	/
DEPTH IN (m)			
DEPTH OUT (m)			0
METREAGE (m)	0	0	0
ROTARY HOURS			
BOP (m/hr)			
WT OIL BIT (kg)	000 / 000	000 / 000	000 / 000
RPM	/	/	0 /
COND. (POOL)	- - -	- - -	- - -
(B-COR)	- - -	- - -	- - -

Pumps

PUMP #	1	2
MANUFACTURER	G. DENVER	EMSCO
TYPE	P28	500
LINE (mm)	165	140
STROKE (mm)	203	406

STROKES/MIN

OUTPUT (l/min)

0

0

REDUCED SPEED (rpm) 50

REDUCED PRESS. (MPa) 4000

STAND PIPE PRESSURE: MPa

TOTAL OUTPUT 0.00 m³/min

ANN VIL-CP 0.0 m/min

ANN VIL-DC 0.0 m/min

Bottom Hole Assembly

OF CODE O.D.(mm) I.D.(mm) LENGTH (m)

TOTAL LENGTH (m) 0.00

Hydraulics

INT PRESSURE LOSS MPa
 % PRESS LOSS @ INT %
 HYDRAULIC POWER AT INT 0.00 kW

Pipe Data

DRILL PIPE
 SITS GRADE O.D.(mm) WEIGHT(kg/m)
 - - -
 - - -
 - - -

DRILL COLLARS

SITS O.D. I.D.
 - - -
 - - -
 - - -

FILL: 0 m

DRAG: 1000 Da

TORQUE: 0P mm

WEATHER:

7 a.m. DEPTH: 0

DC WEIGHT:

HOOK LOAD: 1000 Da

NUMBER BOP DRILLS CONDUCTED: DRILLING TRIPPING

AIR FLOW RATE: 0.0 m³/min @ MPa

PUMP SELECTION RATE: 1/min

CONCENTRATION:

REPORTED BY: D BENITT

DAILY DRILLING SUMMARY

DATE	DAY FROM SPUD	DEPTH	PROG	STATUS
90/01/23	0.	0	0	Rig out
90/01/24	0	0	0	Rig out
90/01/25	0	0	0	Finish rig out
90/01/26	0	0	0	Travel to new lease
90/01/27	0	0	0	Start rig up
90/01/28	0	0	0	Rig up
90/01/29	0	0	0	Rig up
90/01/30	0	0	0	Rig up
90/01/31	0	0	0	Rig up
90/02/01	0	86	86	Survey. Spud 90/02/01 0400 hrs.
90/02/02	1	141	55	Circulate Casing
90/02/03	2	141	0	Nipple up
90/02/04	3	141	0	Pressure Test
90/02/05	4	252	111	Survey
90/02/06	5	432	180	Tripping in with NB#3
90/02/07	6	538	106	Drilling
90/02/08	7	548	10	Nipple up & pressure test
90/02/09	8	548	0	Install air
90/02/10	9	548	0	Pressure test casing
90/02/11	10	558	10	Safety meeting prior to start of air drilling
90/02/12	11	848	290	Drilling
90/02/13	12	1290	442	Drilling
90/02/14	13	1340	50	Drilling, Mud up @ 1300m
90/02/15	14	1450	110	Circulate & condition Hole
90/02/16	15	1450	0	Run in hole with DST#1
90/02/17	16	1450	0	Reaming to bottom with NB#9RRB
90/02/18	17	1480	30	Reaming to bottom with NB#10
90/02/19	18	1496	16	Drilling
90/02/20	19	1528	32	Ream to bottom
90/02/21	20	1551	23	Run in hole with Core #1: 1551.6-1555.4
90/02/22	21	1562	11	Work stuck core barrel, Core #2 1555.4-1562.4
90/02/23	22	1580	18	Circulate up sample from drilling break
90/02/24	23	1591	11	Pump lost circulation material (59.5m ³)
90/02/25	24	1591	0	Rig to pump cement for loss circ @ 1591m
90/02/26	25	1591	0	Trip out wet
90/02/27	26	1592	1	Pump loss circulation material
90/02/28	27	1592	0	Mix loss circulation plug
90/03/01	28	1592	0	Mix mud to build volume
90/03/02	29	1592	0	Run in hole with NB#16RR
90/03/03	30	1624	32	Mix LCM & build volume
90/03/04	31	1659	35	Mix & condition mud

DATE	DAY FROM SPUD	DEPTH	PROG	STATUS
90/03/05	32	1659	0	Wait on cement, mix mud
90/03/06	33	1659	0	Mix LCM
90/03/07	34	1659	0	Pull out of hole to log
90/03/08	35	1659	0	Run in hole
90/03/09	36	1659	0	
90/03/09	37			
90/03/10	38			
90/03/11	39			



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	1-----50	SOE	7DSTPORD	LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
135	12jt, 339.9mm, 81.1Kg/m	ST&C, K55csg landed 141m							
	cmt w/ 23t 0:1:0G	+2%CaCl2, PlugDwn 90/02/2							
	0915hrs								
140		NB#2 SDGH							05SH DK GRY, FRM, PLTY
	90/02/04 291m 22.0hrs		3.0						85SS CLR, ORSH IP, MED-CRS, SR, MOD SRT, ARKC
	5/3/WT/A3		2.5						(MNR FSPR), UNCONS LSE QTZ GR, TR CL CMT, NO
	E/1/--/PR		2.5						APR POR, NS
			3.0						10CMT BUFF, SPKLD
145		MOB 7000	3.3						10SH AA
		RPM 60	2.5						80SH CLR, ORSH, MED-CRS, SR, MOD SRT, UNCONS
		PP 8000	2.0						LSE QTZ GR, TR CL CMT, ARKC(MNR FSPR), TR DK
		SPM 100#1;56#2	3.0						MIN, NO APR POR, NS
			3.0						10 CMT AA
150			1.0						10SH AA
			0.8						70SS AA
			0.5						10 IG/VOLC? VARICD, V CRS FRAG, ANG, DK MIN
			0.5						(MIC), GRN MIN, ORSH MIN(FSPR), CLR MIN(QTZ)
			0.5						, PROB TILL
155			0.5						10SH DK GRY, FRM, BLKY
			0.8						80SS CLR, ORSH IP, CRS, SR, MOD SRT, UNCONS LSE
			0.8						QTZ GR, TR CL CMT, ARKC(MNR FSPR), TR DK MIN,
			0.5						NO APR POR, NS
			0.8						10 IG/VOLC? AA
160			0.8						20SH AA
			0.8						70SS AA
			0.8						20 IG/VOLC? VARICD, V CRS FRAG, ANG, DK MIN
			0.8						(MIC), GRN MIN, ORSH MIN(FSPR), CLR MIN(QTZ),
			1.0						PROB TILL
165			1.0						NSAMP PROB 100%CL, WASHED AWAY BY CLEANING
			0.8						
			0.8						
			1.0						
			0.5						
170			1.0						NSAMP PROB 100%CL, WASHED AWAY BY CLEANING
			0.5						
			0.5						
			0.5						
175			1.0						30SH MED GRY, V HD, BLKY, SL CALRUS
			1.5						40LMST BUFF, LT-MED GRY, GRN GRY IP, MXLN, I/
			1.0						II, FOSS FRAG IP, TR XLM CALC IP, V ARG, NVP,
			0.5						NS, (FOSS MDST, BIOMI??)
			0.8						30SLTST GRN GRY, CALRUS, ARG, TI, NS, GRAD SH
180	90/02/05	MOB 7000	0.3						05SH MED GRY, V HD, SLKY, SL CALRUS
		RPM 90	0.1						45LMST AA
		PP 10500	0.1						50SLTST AA
		SPM 90#1;44#2	1.3						
			1.3						
185		DEN 1070	2.0						35SH GRY, GRN GRY, FRM, BLKY, V CALRUS, SLTY
		VIS 32	1.0						05SS CLR, ORSH IP, CRS, SR, WL SRT, UNCONS, LSE
		pH 9.5	2.5						QTZ GR, ARK(TR FSPR), NO APR POR, NS
			2.0						60IG/VOLC? VARICD, V CRS FRAG, ANG, DK MIN,
			3.0						GRN MIN, CLR MIN, ORSH MIN, PROB TILL?



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
			ROP	1-----50			
190			2.5				20SH GRN GRY,BLKY,V SLTY,V CALRUS GRAD
			4.0				LMST IP
			4.0				80IG/VOLC? VARICD,V CRS FRAG,ANG,DK MIN,
			0.8				
			1.5				
195			1.5				70SH GRN GRY,FRM,BLKY,V SLTY,V CALRUS GRAD
			1.3				LMST IP
			1.5				30IG/VOLC? AA
			2.0				
			3.0				
200			3.0				60SH GRN GRY,FRM,BLKY,SLTY,V CALRUS GRAD
			7.0				LMST IP
			5.0				40IG/VOLC? VARICD,V CRS FRAG,ANG,DK MIN
							(MIC),ORSH MIN(FSPR),YEL MIN,CLR MIN(QTZ)
			1.5				,PROB TILL
205			3.0				50SH AA
			3.5				50IG/VOLC? AA
			3.5				TR SS CLR,CRS,RND-SR,WL SRT,UNCONS LSE QTZ
			4.0				GR,NO APR POR,NS
			8.0				
210			6.0				75SH AA
			4.0				25IG/VOLC? AA
			6.0				
			2.0				
			1.8				
215			2.8				15SH GRN GRY,FRM,BLKY,V SLTY,V CALRUS
			3.0				85IG/VOLC? VARICD,V CRS FRAG,ANG,DK MIN,
			3.0				ORSH MIN,CLR MIN,YEL MIN,PROB TILL?
			3.0				
		DS 1/4 S20.0E	3.3				
220			3.5				50SH GRN GRY,FRM,BLKY,SLTY,V CALRUS,V TR
			3.3				BLK,TR DK GRY,TR PURP,SLTY,CALRUS
			3.8				50IG/VOLC? AA
			3.5				TR LMST BRN-LT BRN,MXLN,I(CPCT),NVP,NS
			1.5				
225			1.5				75SH GRN GRY,FRM,BLKY-SUB BLKY,V CALRUS,
			2.0				SLTY
			2.0				25IG/VOLC? AA
			2.3				TR SS CLR,CRS,RND,WL SRT,UNCONS LSE QTZ GR
			2.8				NO APR POR,NS
230			3.0				95SH AA
			3.5				05IG/VOLC? AA
			4.5				TR SS CLR,CRS,RND,WL SRT,UNCONS,LSE QTZ GR
			2.5				NO APR POR,NS
			2.5				
235			3.0				95SH GRN GRY,FRM,BLKY-SUB BLKY,SLTY,V
			3.0				CALRUS
			3.5				05IG/VOLC? VARICD,V CRS FRAG,ANG,DK MIN
			3.5				(MIC),ORSH MIN(FSPR),CLR MIN(QTZ),YEL MIN
			3.0				,PROB TILL?
240			3.3				100SH GRN GRY,LT GRN,FRM,BLKY-SUB BLKY,SL
			3.0				SLTY,V CALRUS
			2.5				
			2.3				



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	SIT/TECH DATA	ROP	CORE			LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				50	70	100			
245			2.3						100SH AA
			3.0						
			3.3						
			4.5						
			5.0						
250			7.0						100SH AA;W TR CLR RND UNCONS QTZ SD GR
			3.0						
			3.0						
			3.0						
			4.0						
255			1.5						100SH GRN GRY,LT GRN,FRM,BLKY-SUB BLKY,SL
			0.2						SLTY,V CALRUS
			0.2						
			0.2						
			0.2						
260			4.0						100SH AA
			5.0						
			4.0						
			3.0						
265			4.0						100SH AA
			4.0						
			4.5						
			4.5						
			6.0						
270			6.0						100SH GRN GRY,LT GRN,FRM,BLKY-SUB BLKY,SL
			5.0						SLTY,V CALRUS
			5.0						
			5.0						
			4.5						
275			5.0						100SH AA
			4.5						
			5.0						
			5.0						
			5.0						
280			4.0						100SH AA
			4.5						
			6.0						
			5.0						
			6.5						
285			7.0						100SH GRN GRY,LT GRN,FRM,BLKY-SUB BLKY,SL
			7.5						SLTY,V CALRUS
			8.0						TR LMST GRN GRY,LT GRN IP,MXLN-VF,I-I/II,
			1.0						(MOST,MICR),TI,NS
		DS 1/4 N50.0W	3.0						
290		MOB 15000	3.0						100SH AA
		RPM 88	3.0						
		PP 10000	2.5						
		SPM 80#1;44#2	3.0						
			2.5						
295		DEN 1130	3.3						100SH AA
		VIS 67	3.0						
		PH 8.9	3.5						
		ML NC	4.5						
		CL- 200	4.0						



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Petrophysical Engineering

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LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	CORE				LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
			ROP	1	50	75			
300		Ca++ TR	4.0						100SH GRN GRY, LT GRN, FRM, BLKY-SUB BLKY, SL
		Slphd ---	4.0						SLTY, V CALRUS
		K+ ---	4.0						TR LMST GRN GRY, LT GRN IP, MXLN-VF, I-I/II,
		MSlds 8.3	4.8						(MDST, MICR), TI, NS
		SD ---	4.8						
305			4.0						100SH AA, PLTY-SUB BLKY
			5.0						
			6.5						
			3.5						
			3.3						
310			3.0						100SH AA, PLTY-SUB BLKY
			3.0						
			3.0						
			3.3						
			4.0						
315			5.0						100SH GRN GRY, LT GRN, FRM, PLTY-SUB BLKY,
			5.5						CALRUS, TR XLN CALC
			3.5						
			3.5						
			3.3						
320			3.5						100SH AA
			5.0						
			5.0						
			6.5						
			4.5						
325			5.0						100SH AA
			3.3						TR LMST GRN GRY, MXLN-VF, I-I/III, (XLN), TI,
			3.5						NS
			4.5						
			4.5						
330			4.5						100SH GRN GRY, LT GRN, FRM, PLTY-SUB BLKY, SL
			5.0						CALRUS, TR DISSEM PYR
			6.5						
			7.0						
			5.0						
335			4.5						100SH AA
			3.5						TR LMST GRN GRY, TR TN GRY, MXLN-VF, I, (CPCT)
			4.0						TI, NS, LAM
			4.5						
			4.0						
340			5.0						100SH AA
	DS 1/4 N89.0E		5.5						TR LMST AA
			6.5						
			4.5						
			5.0						
345			4.8						100SH GRN GRY, LT GRN, FRM, PLTY-SUB BLKY, TR
			5.0						DISSEM PYR, CALRUS, TR XLN CALC
			5.0						
			4.8						
			5.0						
350			2.5						100SH AA
			2.5						SL TR LMST GRN GRY, MXLN-VF, I-I/III, (XLN),
			3.0						TI, NS, LAM
			2.5						
			3.0						



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE			LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				1-----50	75	100			
355			3.0				P		100SH AA
			3.0				P		
			3.5				P		
			3.5				P		
			7.5				P		
360			3.0				P		100SH GRN GRY,LT GRN,FRM,PLTY-SUB BLKY,TR
			6.0				P		DISSEM PYR,TR XLN CALC,
			3.0				P		
			5.5				P		
			4.0				P		
365			3.5				P		100SH AA
			4.5				P		
			5.0				P		
			6.0				P		
			5.0				P		
370			3.0				P		100SH AA
			3.5				P		SL TR LMST LT GRN,MXLN-VF,I-I/III(XLN),TI,
			4.0				P		NS,LAM
			3.5				P		
			4.5				P		
375			5.0				P		100SH GRN GRY,LT GRN,FRM,PLTY-SUB BLKY,SL
			5.0				P		CALRUS,TR DISSEM PYR,TR PYR NOD,TR XLN
			3.0				P		CALC
			3.5				P		SL TR LMST AA
			2.5				P		
380			2.5				P		100SH AA
			4.0				P		SL TR LMST AA
			4.0				P		
			4.0				P		
			3.0				P		
385			4.0				P		100SH AA
			3.5				P		SL TR LMST GRN GRY,MXLN-VF,I-I/III,(XLN),
			4.5				P		TI,NS,ARG,LAM
			3.5				P		
			2.0				P		
390			3.0				P		100SH GRN GRY,LT GRN,FRM,PLTY-SUB BLKY,SL
			3.3				P		CALRUS,TR DISSEM PYR,TR PYR NOD,TR XLN
			3.0				P		CALC
			4.0				P		
			3.3				P		
395			3.8				P		100SH AA
			4.5				P		TR LMST BUFF,GRN GRY,MXLN,II,TI,NS,LAM
	90/02/06	MOB 15000	3.0				P		
		RPM 88	3.0				P		
		DS 0.25 N30.0E	3.0				P		
400		PP 10000	3.5				P		100SH AA
		SPM 80#1;44#2	3.5				P		
			3.5				P		
		DEN 1140	4.0				P		
		VIS 62	4.0				P		
405		PH 10	4.5				P		100SH GRN GRY,LT GRN,DK GRN GRY(30%),FRM,
			3.5				P		PLTY-SUB BLKY,SL CALRUS,TR DISSEM PYR
			3.5				P		SL TR LMST BUFF,GRN GRY,MXLN,II,TI,NS,LAM
			3.0				P		
			3.0				P		



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				1-----50	/DISTPORO			
410			3.5					100SH AA
			4.0			P		
			5.0					
			4.5			100SH		
			4.5					
415			3.0					100SH DK GR, FRM, SUB BLKY, SL SLTY, TR
			3.0			P		DISSEM PYR, TR XLN CALC
			3.0			30		TRXCLST WH
			3.3			100SH		
			3.5					
420			3.5					100SH AA
			3.5			P		
			4.0					
			6.0			100SH		
			3.5					
425			3.5					100SH DK GR, TR DK BRN GR, TR V DK GR, FRM
			4.5			P		SUB BLKY, SL SLTY, TR DISSEM PYR, TR XLN CALC
			4.5					TR CLST WH
			4.0			100SH		
			5.0					
430			6.0					75SH AA
		NB#3 J3	5.5					25CLST CRM, SFT, V SDY, TR CHT GR, TR MIC?
		55m 6.75hrs	5.0					GRAD CLY CHT SS? IP,
		6/6/WT/A3	6.5					
		8/6/8T/PR	9.5					
435	DWA		11.5					25SH DK GR, FRM, SUB BLKY, SL SLTY, TR DISSEM
			6.0					PYR, W MNR LT GRN GR, FRM, PLTY-SUB BLKY, SL
			11.0					CALRUS, DISSEM PYR
			12.0					75LMST BUFF, BRN GR, VF, I-1/III, (PKST?), NVP
			6.0					NS, TR SLTY?
440			5.5					95SH LT GRN GR, LT GRN, FRM, GRANAR TEX, BLKY
			4.0			P		-SUB BLKY, TR SLTY, COM DISSEM PYR, V CALRUS
			4.0					GRAD LMST IP
			4.5					05LMST AA
445			6.0					100SH AA, W TR FOSS FRAG, W TR DK GRY-BLK SH
			5.5			P		
			5.5					
			6.0					
		DS 0.0 NOO.OE	9.0					100SH AA, W TR FOSS FRAG
450		MOB 15000	7.0					TR LMST CRM, MXLN-VF, I-1/III, NVP, NS
		RPM 90	5.0			P		
		PP 8500	4.5					
		SPM 85#1;48#2	6.0					
			6.5					
455		DEN 1150	7.5					100SH LT GRN GR, LT GRN, FRM, BLKY, GRANAR
		VIS 49	8.5					TEX IP, FOSS FRAG, DISSEM PYR, TR RND LSE QTZ
		pH 9.5	7.5					GR, V CALRUS GRAD LMST IP
		WL NC	8.5			P		
		CL- 250	5.0					
460		Ca++ ---	5.0					100SH LT GRN GR, LT GRN, FRM, PLTY-SUB BLKY,
		Slphd ---	6.0					DISSEM PYR, CALRUS GRAD LMST IP
		K+ ---	6.0					
		MSLds 9.6	6.5					
		SD ---	5.0					



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10°;122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				-----50	/DISTFORG			
465			6.0					100SH LT GRN GRY, LT GRN, FRM, PLTY-SUB BLKY, GRANAR TEX IP, DISSEM PYR, TR PYR NOD, CALRUS GRAD LMST IP
			5.0					
			5.0					
			7.7					
			4.5					
470			6.0					90SH AA
			5.0					10LMST LT GRN GRY, TR CRM GRY, TR BRN GRY, V CRS FOSS FRAG W VF GR MTRX, BIOCL BDST?, FOSS(CRIN, SHL), NVP, NS
			5.0					
			5.0					
475			6.5					95SH AA
			4.8					05LMST AA
			6.0					
			7.0					
			7.0					
480			7.5					100SH LT GRN GRY, LT GRN, PLTY-SUB BLKY, COM FOSS FRAG, GRANAR TEX IP, V CALRUS GRAD LMST MNR LMST GRN GRY, BRN GRY IP, MXLN-VF, I, TR FOSS FRAG, (BIOMI?), TI, NS
			8.0					
			8.5					
			18.0					
			15.0					
485			21.0					70SH AA
		NS#4 DS84F	5.0					30LMST GRN GRY, TR CRM, TR TN GRY, MXLN-VF, I W FOSS FRAG, (BIOMI?), TI, NS
		61m 6.75hrs	8.0					
		///	7.0					
		///	7.0					
490			8.0					40SH AA
		90/02/07 J08 15000/17000	7.5					60LMST AA
		RPM 90	7.5					
		PP 8500	7.5					
		SPM 95#1;48#2	7.0					
495			7.0					30SH LT GRN GRY, LT GRN, FRM, PLTY-SUB BLKY, DISSEM PYR, V CALRUS GRAD ARG LMST IP
		DEN 1150	6.5					70LMST GRN GRY, CRM, TR TN GRY IP, MXLN-VF, I-1/11 IP, W FOSS FRAG(CRIN, SHL), BIOMI?, TI, NS
		VIS 81	7.5					
		PH 10	6.5					
		DS 1/8 N01.0E	8.0					
500		ML NC	7.0					50SH AA
		CL- 250	7.0					50LMST AA
		Ca++ ---	6.5					
		Slphd ---	7.0					
		K+ ---	6.5					
505		2Slids 10.8	6.0					60SH AA
		20 ---	6.5					40LMST AA
			7.5					
			7.0					
			6.5					
510			6.5					NO SPL
			6.5					
			7.0					
			6.0					
			8.0					
515			8.5					60SH LT GRN GRY, LT GRN, FRM, SUB BLKY, GRANAR TEX IP, TR DISSEM PYR, V CALRUS GRAD LMST
			6.5					40LMST GRN GRY, CRM, TN GRY IP, MXLN-VF, I, W MNR FOSS FRAG(CRIN, SHL), BIOMI?, TI, NS
			8.0					
			7.5					
			6.5					



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				50	/DIST/PO			
520			7.5					50SH AA
			7.0					50LMST AA, W ABT FOSS FRAG
			6.0					
			8.3					
			8.0					
525			7.5					100SH LT GRN GRY, LT GRN, FRM, SUB BLKY,
			7.5					GRANAR TEX IP, TR DISSEM PYR, V CALRUS GRAD
			6.5					LMST IP
			7.0					
			6.0					
530			7.0					85SH AA
			6.0					15LMST LT GRN GRY, CRM IP, MXLN-VF, I, W COM
			8.0					FOSS FRAG(CRIN, SHL), BIOMI?, TI, NS
			8.0					
			7.5					
535			9.5					100SH LT GRN GRY, LT GRN, FRM, SUB BLKY,
			9.5					GRANAR TEX IP, TR DISSEM PYR, V CALRUS GRAD
			9.0					LMST IP
			8.5					
			4.5					
540		42jt, 244.5mm,	7.0					85SH AA
		53.6Kg/m, ST&C,	6.0					15LMST LT GRN GRY, CRM IP, MXLN-VF, I, W COM
		X55 csg landed	6.0					FOSS FRAG(CRIN, SHL), BIOMI?, TI, NS
		458m; cmt w/25.5	5.5					
		t 0:1:0g+1%	5.0					
545		CaCl2, Plug Down	5.0					80SH AA
		90/02/08 0545	8.5					20LMST AA
		NB#5 JD8	10.0					
	90/02/10	12m hrs	7.0					
		/ / /	12.0					
550		/ / /	13.0					70SH AA
		MOB 5000/7000	14.0					20LMST AA
		RPM 50	11.5					100MT WH, SPKLD
		PP 1750	11.0					
		SPM 100#1	11.5					
555	90/02/11		7.0					100SH LT GRN GRY, LT GRN, SL TR MED GRY IP,
			1.5					FRM, BLKY, GRANAR TEX IP, TR DISSEM PYR, V
			1.5					CALRUS GRAD ARG LMST IP
			1.5					
		NB#6 MDC	1.5					
560		161m	2.0					100SH AA
		MOB						
		RPM 20	3.5					
		AIR 2200 Kpa	2.0					
565		AIR 35 m3/m	2.0					100SH AA
			2.0					
			2.0					
			1.5					
			2.0					
570			1.5					100SH AA
			1.5					
			1.5					
			2.5					
			3.0					



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				-----50	/DSTPORG			
575			2.5					100SH AA, W TR FOSS FRAG(CRIN)
			2.5					
			2.0					
			1.5					
			2.5					
580			2.5					100SH AA
			2.5					
			2.5					
			2.3					
			2.3					
585			2.0					100SH LT GRN GRY, LT GRN, FRM, SUB BLKY-BLKY,
			2.5					TR GRANAR TEX IP, TR DISSEM PYR, CALRUS GRAD
			2.5					ARG LMST IP,
			2.5					
			3.0					
590			2.5					100SH AA
			2.5					
			2.5					
			2.0					
			2.0					
595			2.0					100SH AA, W TR FOSS FRAG(CRIN)
			2.0					SL TR LMST TN GRY, MXLN, I, MICR, TI, NS
			2.0					
			2.0					
			2.0					
600			2.0					100SH LT GRN GRY, LT GRN, FRM, SUB BLKY-BLKY,
			2.0					GRANAR TEX IP, TR DISSEM PYR, CALRUS GRAD
			2.0					ARG LMST IP
			2.0					
			2.0					
605			2.0					100SH AA
			2.0					
			2.0					
			2.0					
			2.0					
610			2.0					100SH AA
			2.0					
			2.0					
			2.0					
615			2.0					100SH LT GRN GRY, LT GRN, FRM, SUB BLKY-BLKY,
			2.0					TR DISSEM PYR, CALRUS
			2.0					
			2.0					
			2.0					
620			2.0					100SH AA
			2.3					
			1.8					
			2.0					
			2.0					
625			2.0					100SH AA
			1.8					
			2.0					
			2.0					
			2.0					



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				-----50	/DIST/PO			
630			2.0					100SH LT GRN GRY,LT GRN,FRM,SUB BLKY,V
			2.0					CALRUS,DISSEM PYR
			2.0					
			2.0					
			2.0					
635			2.0					100SH AA
			2.0					
			2.0					
			2.0					
			2.0					
640			2.0					100SH AA
			2.0					
			2.0					
			2.0					
			1.8					
645			1.8					100SH GRN GRY,LT-MED GRN,FRM,SUB BLKY-BLKY
			1.8					DISSEM PYR,V CALRUS
			2.0					
			2.0					
			2.0					
650			2.0					100SH AA,W TR FOSS FRAG(SHL)
			2.0					
			2.0					
			2.0					
			2.0					
655			1.8					100SH AA
			1.5					
			2.0					
			2.0					
			2.0					
660			2.0					100SH GRN GRY,LT-MED GRN,MED GRY,FRM,SUB
			1.8					BLKY-BLKY,DISSEM PYR,CALRUS
			2.0					
			2.0					
			2.0					
665			2.0					100SH GRN GRY,LT-MED GRN,OCC TR MED GRY,
			2.0					SUB BLKY,DISSEM PYR,SL CALRUS
			2.0					
			2.0					
			2.0					
670			1.8					100SH AA
			2.0					
			2.0					
			2.0					
			2.0					
675			2.0					100SH GRN GRY,LT-MED GRN,FRM,SUB BLKY,
			2.0					DISSEM PYR
			2.0					
			2.0					
			2.0					
680			1.8					100SH GRN GRY,LT-MED GRN,FRM,SUB BLKY,TR
			2.0					GRANAR TEX IP,DISSEM PYR,SL CALRUS
			2.0					
			2.0					
			2.0					



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				1-----50	/DST/POD			
685			1.8					100SH AA
			2.0					
			1.8					
			1.8					
			2.0					
690			1.8					100SH MED-DK GRY, GRN GRY, FRM, SUB BLKY-PLTY
			2.0					IP, DISSEM PYR, CALRUS
			1.8					
			2.0					
			2.0					
695			2.0					100SH MED-DK GRY, FRM-HD, SUB BLKY-PLTY IP,
			2.0					DISSEM PYR, CALRUS
			1.8					
			2.0					
			2.0					
700			1.8					100SH AA
			1.8					
			2.0					
			2.3					
			2.0					
705			2.0					90SH MED-DK GRY, FRM-HD, SUB BLKY-BLKY,
			1.8					DISSEM PYR, CALRUS
			2.0					10LMST BUFF, CRM IP, LT GRY IP, MXLN, I GRAD
			1.8					I/II IP, TI, NS
			2.0					
710			2.0					100SH MED-DK GRY, FRM-HD, BLKY-SUB BLKY,
			2.0					DISSEM PYR, CALRUS
			2.0					TR LMST AA
			2.0					
715			2.0					85SH V DK GRY, BLK, FRM-HD, SUB BLKY-PLTY, TR
			2.0					DISSEM PYR, CALRUS, COM XLN CALC, FOSS FRAG
			2.0					15LMST TN, TN GRY, MXLN-VF, I, TI, NS
			2.0					
			2.0					
720			1.8					20SH DK GRY, FRM-HD, SUB BLKY, CALRUS
								80LMST TN GRY, LT GRY, BRN GRY, BUFF IP, MXLN-
								VF, I, CPCT, TR PYR, SL DOLC, ARG IP, NVP, NS
			2.3					
725			2.0					20SH AA
			2.0					80LMST AA
			2.0					
			2.3					
			2.3					
730			3.0					10SH DK GRY, HD-FRM, BLKY, CALRUS, DISSEM PYR
			3.3					90LMST TN GRY, LT GRY, BRN GRY, BUFF IP, MXLN-
			3.5					VF, I, CPCT, MICR?, SL ARG, TR PYR, NVP, NS, TR SH
			3.3					PTG, TR FRAC FLD W MIN XL
			3.5					
735			3.3					10SH AA
			3.5					90LMST AA
			3.5					
			3.5					
			3.5					



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.G. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
			ROP	705750			
740			3.0				100LMST TN GRY,TN,BRN GRY,LT GRY,MXLN OCC
			3.0				VF,I,CPCT,DNS IP,MICR?,SL ARG,TR SH PTG,TR
			3.0				PYR,TR XLN QTZ,NVP,NS
			3.0				
			3.0				
745			3.0				10SH DK GRY,HD,BLKY,CALRUS,TR DISSEM PYR
			3.0				90LMST AA
			3.0				
			3.0				
			2.5				
750			4.5				10SH AA
			3.5				90LMST TN GRY,BRN GRY,TN,LT GRY IP,MXLN
			3.5				OCC VF,I,CPCT,DNS IP,MICR?,TR SH PTG,TR
			3.5				PYR,TR FOSS FRAG,TR XLN CALC,TR XLN QTZ,
			3.3				TI,NS
755							100LMST AA
							TR SH AA
			3.5				
			3.5				
			3.0				
760			3.5				10SH DK GRY,HD,BLKY,CALRUS,TR DISSEM PYR
			3.0				90LMST TN GRY,LT BRN GRY,TN IP,LT GRY IP,
			3.0				MXLN,I,CPCT,DNS IP,MOST?,TR FRAC FLD W MIN
			3.0				XL,TR SH PTG,TR FOSS FRAG,TR XLN CALC,NVP,
			3.0				SCAT YEL WH FLUOR,V PR YEL GRN CUT
765			3.3				10SH AA
			3.5				90LMST AA
			3.0				
			2.0				
			2.5				
770			2.3				40SH DK GRY,HD,BLKY,TR GRANAR TEX IP,V
			2.8				CALRUS,SL TR DISSEM PYR
			2.5				90LMST BUFF,LT GRY,CRM IP,MXLN-VF,I GRAD
			2.8				I/III IP,CPCT,WKST?,NVP,? FLUOR,? CUT
			2.0				
775			2.5				90SH DK GRY,HD,BLKY,TR GRANAR TEX,CALRUS
			2.0				10LMST BUFF,LT GRY,MXLN OCC VF,I GRAD I/
			3.0				III IP,MICR?,SL DOLC,SL ARG,NO FLUOR,NO
			3.0				CUT
			2.5				
780			2.5				70SH DK GRY,HD,BLKY-SUB BLKY,GRANAR TEX IP
			2.5				CALRUS,DISSEM PYR
			2.0				30LMST BUFF,LT GRY,MXLN-VF,I,XLN,CPCT,TR
			2.0				FOSS FRAG,SL DOLC,ARG IP,NVP,NS
			2.5				
785			2.3				30SH AA
			2.5				70LMST AA
			2.3				
			2.5				
			2.8				
790			2.5				85SH MED-DK GRY,GRN GRY,FRM,SUB BLKY,
			2.5				DISSEM PYR,CALRUS
			2.3				15LMST TN GRY,LT GRY,BUFF IP,MXLN-VF,I,
			2.3				CPCT,SL ARG,NVP,NS
			2.0				



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				1-----50	/DST/PORE			
795			2.3					10SH AA
			3.3					90LMST LT GRY,TN GRY,BUFF,MXLN-VF,I-1/III,
			3.5					WKST7,7FLJDR,NO CUT
			3.3					
			2.8					
800			2.3					90SH MED-DK GRY,FRM-HD,SUB BLKY-BLKY,
								GRANAR TEX IP,DISSEM PYR,CALRUS
			2.5					10LMST AA
			2.5					
			2.5					
805			2.5					90SH AA
			2.5					10LMST AA
			2.5					
			2.5					
810			2.5					100SH MED GRY,GRN GRY,LT FRN,FRM,SUB BLKY-
			2.5					BLKY,GRANAR TEX IP,DISSEM PYR,SL CALRUS
			2.8					
			2.5					
815			2.5					100SH GRN GRY,LT GRN,FRM,SUB BLKY,DISSEM
			3.0					PYR
			3.0					TR LMST TN GRY,MXLN,I,NVP,NS
			3.0					
820			4.5					
			2.5					100SH AA
			2.5					
			2.5					
			3.3					
			3.3					
825			3.0					100SH AA
			3.5					TR LMST TN GRY,MXLN-VF,I,NVP,NS
			3.0					
			3.5					
830			2.0					100SH GRN GRY,LT GRN,FRM,SUB BLKY,DISSEM
			2.0					PYR
			3.5					TR LMST BRN,BRN GRY,BUFF IP,MXLN-VF,I,NVP,
			3.3					NS
			3.0					
			3.5					
835			3.0					100SH LT-MED GRN,GRN GRY,FRM,SUB BLKY,PYR
			3.0					SL TR LMST TN GRY,MXLN,I,NVP,NS
			3.0					
			3.0					
840			3.3					100SH AA
			3.0					
			3.0					
			3.0					
			3.3					
845			3.0					100SH LT-MED GRN,GRN GRY IP,FRM,SUB BLKY-
			3.3					BLKY,GRANAR TEX IP,DISSEM PYR
			3.3					
			3.0					
			3.0					



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				50	75			
850			2.8					60SH AA
			2.5					30SLTST LT GRY,BUFF,SILOUS,CALRUS,ARG IP,
			3.0					TI,NS,GRAD SS IP
			3.0					10LMST TN GRY,MOLN-VF,I,NVP,NS
			2.8					
855			2.5					100SH AA
			1.5					TR SLTST AA
			3.0					TR LMST AA
860								
			1.5					30SH AA
			2.5					70SS BUFF,LT GRY,VF-SLT,SA,WL SRT,WL CON,
			2.5					SILETR CALC CMT,TI,NS,GRAD SLTST IP
			2.5					TR LMST AA
865			4.0					60SH MED-DK GRY,HD,BLKY-SUB BLKY,GRANAR
			3.0					TEX IP,CALRUS,TR DISSEM PYR,
			3.5					40LMST TN GRY,LT BRN GRY,TR LT BRN,MOLN-VF
			3.0					I,MICR,NVP,NS,SL DOLC
			2.5					
870			2.5					100SH MED-DK GRY,GRY BRN IP,BLKY,HD,GRANAR
			2.5					TEX IP,CALRUS,TR DISSEM PYR
			2.5					
			5.0					
			2.5					100SH AA
875			2.5					TR LMST BUFF,LT BRN GRY,MOLN,I,MICR,TI,NS
			2.5					SL ARG
			2.5					
			2.5					
			2.5					100SH AA
880			2.5					
			2.5					
			2.3					
			3.0					
			2.5					100SH LT-MED GRN,GRN GRY,FRM-HD,SUB BLKY-
885			2.8					PLTY,DISSEM PYR
			3.0					MNR SLTST LT GRN,ARG,TI,NS,GRAD SLTY SH IP
			3.0					
			3.3					
			3.5					100SH AA,TR CALRUS,TR SLTY IP
890			2.0					
			2.0					
			2.0					
			2.0					
			2.0					100SH DK GRY,HD-FRM,PLTY-SUB BLKY,TR
895			1.5					DISSEM PYR
			2.0					
			2.0					
			2.0					
			2.0					100SH LT-DK GRN,GRN GRY,HD-FRM,PLTY-SUB
900			1.8					BLKY,TR DISSEM PYR
			2.0					TR SLTST LT GRY,BUFF IP,SILOUS,SL CALRUS,
			1.8					ARG,TI,NS,LAM
			2.0					



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celizeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

CORE							GEOLOGICAL DESCRIPTION
DEPTH	TOPS	BIT/TECH DATA	ROP	-----50	7DST/POD	LITHOLOGY	
905			2.0				100SH AA
			2.0				
			2.0				
			2.0				
			2.0				
910			2.0				100SH MED-DK GRY, GRN, FRM-HD, SUB BLKY,
			2.0				DISSEM PYR, TR SLTY PTG
			2.0				
			2.0				
			2.0				
915			2.0				100SH GRN(30), DK GRY(70), FRM-HD, SUB BLKY,
			2.0				DISSEM PYR, SL CALRUS
			2.0				
			1.5				
			2.5				
920			2.0				100SH DK GRY, OCC GRN, FRM-HD, SUB BLKY,
			1.8				DISSEM PYR
			2.3				
			2.0				
			2.0				
925			2.0				100SH LT GRN GRY, LT GRN, FRM, SUB BLKY,
			2.0				DISSEM PYR
			2.0				TR LMST BRN, MDLN MTRX U MED CHT GR&FOSS
			2.0				FRAG, ARG IP, TI, NS
			2.0				
930			2.0				100SH DK GRY, OCC GRN, OCC GRN GRY, FRM, SUB
			2.0				BLKY, DISSEM PYR
			1.8				
			2.0				
			2.0				
935			2.0				100SH AA
			2.0				
			2.0				
			2.0				
			2.0				
940			2.0				100SH GRN GRY, GRN, OCC DK GRY, FRM, SUB BLKY-
			2.0				PLTY, DISSEM PYR, TR FOSS FRAG
			2.0				
			2.0				
			2.0				
945			2.0				100SH AA
			1.8				
			2.0				
			1.8				
			2.0				
950			1.8				100SH DK GRY, GRN IP, GRN GRY IP, FRM, DISSEM
			2.0				PYR
			2.0				
			2.0				
			2.0				
955			1.8				100SH GRN GRN GRY, TR DK GRY, FRM, DISSEM PYR
			1.8				SU BLKY- PLTY IP,
			2.0				TR LMST, LT GRY, MDLN CRPXLN, I, CPCT, TI, NS
			1.8				
			1.8				



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10°;122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				-----50	/DSTPORD			
960			1.8					100SH AA
			2.0					
			2.0					
			2.0					
			2.0					
965			1.8					100SH AA
			2.0					
			1.8					
			2.0					
			2.0					
970			1.8					100SH GRN GRY, GRN, FRM, SUB BLKY-PLTY, DISSEM
			2.0					PYR
			2.0					TR LMST TN GRY, MXLN, I, TI, NS
			2.0					TR SLTST BUFF, LT GRY, GRN GRY, SILOUS, SL
			2.0					CALRUS, SL ARG, TI, NS
975			1.8					100SH AA
			2.0					TR SLTST BUFF, LT GRY, CALRUS, SILOUS, ARG, TI,
			1.8					NS
			1.5					
			2.0					
980			2.0					100SH AA
			2.0					
			1.5					
			2.0					
985			1.5					100SH GRN GRY, GRN, FRM, SUB BLKY, DISSEM PYR
			1.8					
			1.5					
			2.0					
			1.5					
990			1.0					80SH DK GRY, GRN, GRN GRY, FRM, SUB BLKY, TR
			2.0					DISSEM PYR
			1.8					20SLTST LT GRN, GRN WH, CALRUS, SILOUS, ARG IP
			1.5					TI, NS
			2.0					
995			1.5					90SH AA
			2.0					10SLTST AA
			2.0					
			2.0					
			2.0					
1000			2.0					100SH GRN, GRN GRY, FRM, PLTY-SUB BLKY IP, TR
			2.0					DISSEM PYR
			1.8					
			2.0					
			2.0					
1005			1.8					60SH DK GRY, GRN GRY, GRN, FRM, SUB BLKY-PLTY,
			1.8					TR DISSEM PYR, TR SLTY STRK
			2.0					40SS GRN GRN GRY, LT GRY IP, BUFF IP, VF-SLT
			2.0					SA-SR, WL SRT, WL CONS, CALCSIL CHT, ARG IP,
			2.0					TI, NS, GRAD SLTST IP
			2.0					85SH GRN, GRN GRY, GRN, PLTY-SUB BLKY, TR
1010			2.0					DISSEM PYR,
			1.5					15SS AA
			2.0					
			2.0					



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				1-----50	/OSTPORD			
1015			1.8					100SH AA
			1.8					
			2.0					
			2.0					
1020			1.8					100SH AA
			2.0					TR SS GRN, GRN GRY, TR BUFF, VF-SLT, SA-SR, WL
			1.5					SRT, WL CONS, CALC&SIL CMT, ARG IP, TI, NS
			1.8					
			2.0					
1025			1.8					20SH DK GRY, GRN GRY, FRM-HD, SUB BLKY,
			1.8					80SS CRM, BUFF, GRN GRY IP, VF, SA-SR, WL SRT,
			2.0					WL CONS, SIL&MNR CALC CMT, TR ARG, TI, NS
			2.0					
			1.5					
1030			1.8					100SH GRN, GRN GRY, FRM, SUB BLKY, TR DISSEM
			2.0					PYR, TR SLTY
			2.0					TR SS AA
			2.0					
1035			2.0					100SH GRN, GRN GRY, FRM, SUB BLKY, TR DISSEM
			3.0					PYR:W TR O&DUST COTG GR
			2.0					
			1.5					
			2.0					
1040			2.0					100SH AA
			2.0					
			2.0					
			2.0					
			1.5					
1045			2.0					100SH AA
			2.0					
			1.8					
			2.0					
			1.8					
1050			1.8					100SH GRN, GRN GRY, FRM, SUB BLKY-PLTY, DISSEM
			2.0					PYR
			2.0					
			1.8					
			1.8					
1055			2.0					100SH AA, SL SLTY
			2.0					
			1.5					
			1.8					
			2.0					
1060			1.8					100SH AA, SL SLTY
			2.0					
			1.8					
			2.0					
			2.0					
1065			2.0					100SH GRN, GRN GRY, FRM, SUB BLKY-PLTY, DISSEM
			2.0					PYR, SL SLTY IP
			1.8					
			2.0					
			2.0					



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE			LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				1-----50	/DSTPORD				
1070			2.0						100SH AA
			2.0						
			2.0						
			2.0						
			1.8						
1075			2.0						100SH AA
			2.0						
1080			1.5						100SH GRN, GRN GRY, FRM, SUB BLKY, DISSEM PYR
			2.0						
			0.5						
			2.0						
			1.8						
1085			1.8						100SH AA
			2.0						
			2.0						
			2.0						
1090			2.0						100SH AA, PLTY IP
			2.0						
			2.0						
			2.0						
			2.0						
1095			2.0						100SH GRN, GRN GRY IP, FRM, PLTY-SUB BLKY, TR
			2.0						DISSEM PYR
			2.0						
			2.0						
			2.0						
1100			2.3						100SH AA
			2.0						
			1.8						
			2.0						
			2.0						
1105			2.0						100SH AA
			2.0						
			2.0						
			2.0						
			2.0						
1110			2.0						100SH GRN, GRN GRY IP, FRM, PLTY-SUB BLKY, TR
			2.0						DISSEM PYR
			2.0						
			2.0						
			2.0						
1115			2.0						100SH AA
			2.0						
			2.0						
			2.0						
			2.0						
1120			2.0						100SH AA
			2.0						
			2.0						
			2.0						
			2.5						



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10°;122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE			LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				1	2	3			
1125			2.0						100SH DK GRY, GRN, GRN GRY, FRM, SUB BLKY, OCC
			2.0						PLTY, TR DISSEM PYR
			2.0						
			2.0						
			2.0						
1130			2.3						100SH AA
			1.8						
			2.0						
			2.0						
			2.3						
1135			2.3						100SH AA
			2.0						
			2.0						
			2.0						
			2.0						
1140			2.0						100SH DK GRY, GRN, GRN GRY, FRM, SUB BLKY-PLTY
			2.0						DISSEM PYR:SL TR O&DUST COTG SPL GR
			2.0						
			2.0						
			2.0						
1145			2.0						100SH AA
			1.8						
			1.8						
			1.8						
			1.8						
1150			1.8						100SH AA
			2.0						
			2.0						
			2.0						
			2.0						
1155			1.8						100SH DK GRY, GRN GRY, GRN, FRM, SUB BLKY, TR
			1.8						DISSEM PYR, SL CALRUS
			1.8						
			1.8						
			1.8						
1160			2.0						100SH AA
			2.0						
			2.0						
			2.0						
			2.0						
1165			2.0						100SH DK GRY, GRN GRY, GRN, FRM, SUB BLKY, TR
			2.0						DISSEM PYR
			2.0						
			2.3						
			2.0						
1170			2.0						100SH DK GRY, GRN, GRN GRY, FRM, SUB BLKY, TR
			2.0						DISSEM PYR, SL TR CALRUS
			2.0						
			2.0						
			2.0						
1175			2.0						100SH AA:W ABT YEL GLD FLUOR, O&DUST COTG
			2.0						SPL GR
			2.0						
			1.8						
			2.0						



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Petrophysical Engineering

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DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

		CORE			LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
DEPTH	TOPS	BIT/TECH DATA	ROP	1-----50 /DST/PORE			
1180			2.3				100SH AA
			2.0				
			1.8				
			2.0				
			2.0				
1185			2.0				100SH DK GRY, GRN GRY, FRM-HD, SUB BLKY-PLTY
			2.0				TR DISSEM PYR, TR CALRUS
			1.8				
			2.3				
			2.3				
1190			2.0				100SH DK GRY, FRM-HD, SUB BLKY-PLTY IP, TR
			2.0				DISSEM PYR, SL TR CALRUS
			2.0				
			2.0				
			2.0				
1195			2.0				100SH AA
			2.0				
			2.0				
			2.0				
			2.0				
1200			2.0				100SH AA
			2.0				
			2.0				
			2.0				
			2.0				
1205			2.0				100SH DK GRY, FRM-HD, SUB BLKY-PLTY IP, TR
			2.0				DISSEM PYR, SL TR CALRUS
			2.0				
			2.0				
			2.0				
1210			2.0				100SH AA
			2.0				
			2.5				
			1.8				
			2.0				
1215			2.0				100SH AA
			2.0				
			2.0				
			2.0				
			2.0				
1220			1.8				100SH DK GRY, FRM-HD, SUB BLKY-PLTY IP, TR
			2.3				DISSEM PYR
			2.0				
			2.0				
			2.0				
1225			2.0				100SH AA
			2.0				
			2.3				
			2.0				
			2.0				
1230			2.0				100SH DK GRY, GRN GRY IP, FRM-HD, SUB BLKY-
			2.3				PLTY IP, DISSEM PYR
			2.0				
			2.3				
			2.0				



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		CORE							
DEPTH	TOPS	BIT/TECH DATA	ROP	1-----50	7DSTPORD	LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION	
1235			2.0					100SH AA	
			2.0						
			2.0						
			2.0						
			2.0						
1240			2.3					100SH AA	
			2.0						
			2.0						
			2.3						
			1.8						
1245			2.0					100SH DK GRY, GRN GRY IP, FRM, SUB BLKY,	
			2.0					DISSEM PYR	
			2.0						
			2.0						
1250			2.0					100SH DK GRY, GRN GRY IP, FRM, SUB BLKY, TR	
			2.0					DISSEM PYR	
			2.8						
			2.0						
			2.0						
1255			2.3					100SH AA	
			2.0						
			2.0						
			2.0						
			2.5						
1260			2.0					100SH AA	
			2.3						
			2.3						
			2.0						
			2.0						
1265			2.0					100SH GRN GRY, DK GRY, FRM, SUB BLKY, DISSEM	
			2.0					PYR	
			2.5						
			2.0						
			2.5						
1270			2.0					100SH AA	
			2.0						
			2.0						
			2.0						
			2.0						
1275			2.0					100SH AA, TR BENTC	
			2.3						
			2.0						
			2.5						
1280			2.0					100SH GRN GRY, DK GRY, FRM, SUB BLKY-PLTY, TR	
			2.0					DISSEM PYR	
			2.0						
			2.0						
			2.0						
1285			2.0					100SH AA:ABT YEL GLD FLUOR, O&DUST COTG SPL	
			2.0					GR	
			2.5						
			2.0						
			2.0						
			2.3						



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DEPTH	TOPS	BIT/TECH DATA	ROP	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				1-----50	70STPORD			
1290			2.0					100SH AA:ABT YEL GLD FLUOR, OEDUST COTG SPL
			2.0					GR IP
			2.5					
			2.5					
			2.5					
1295			2.5					AIR: 60SH AA
			2.0					40LMST TN,BUFF,LT BRN,MXLN,I,MICR,NVP
			2.0					SL DOLC,NS
			2.0					MUD:100SH DK GRY,GRN GRY,GRN,SFT-FRM,SUB
			2.5					BLKY-PLTY,TR DISSEM PYR
1300	90/02/14	150m 25.0hrs						100SH LT-DK GRN,GRN GRY,SFT-FRM,SUB BLKY-
		///	3.0					PLTY,SPLIN,TR DISSEM PYR
		///	8.0					
		Orig 215.9 hole	10.5					
			10.0					
1305		MOB 15000/18000	10.0					100SH AA
		RPM 50/70	10.0					
		PP 11500	10.0					
		SPM 100#1	11.0					
			11.0					
1310		DEN 1190	10.5					100SH AA
		VIS 55	11.5					TR SLTST WH,TN GRY,CALRUS,SILOUS,TI,NS
		PH 10	10.0					
		ML 13	10.0					
		CL- 200	10.0					
1315		Ca++ ---	10.0					100SH GRN,GRN GRY,EX GRY IP,SFT-FRM,SPLIN,
		Slphd ---	10.0					PLTY-SUB BLKY IP,TR DISSEM PYR
		K+ ---	9.5					
		%Slds 8.5	10.0					
		XO TR	10.0					
1320		DS 2.0 N03.0E	13.0					100SH GRN,GRN GRY IP,SFT-FRM,SPLIN,PLTY
			9.5					DISSEM PYR
			8.0					
			9.0					
			10.0					
1325			9.0					100SH AA
			10.0					
			9.0					
			9.5					
			9.0					
1330			11.0					100SH GRN,GRN GRY IP,SFT-FRM,SPLIN,PLTY
			10.0					OCC SUB BLKY,DISSEM PYR
			10.0					
			9.5					
			9.5					
1335			9.5					100SH AA
			10.0					
			9.5					
			8.5					
			7.5					
1340			10.5					100SH AA
			8.0					
			10.5					
			10.0					



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

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LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
			ROP	7DSTPORO			
1345			10.0				100SH GRN, GRN GRY IP, SFT-FRM, SPLIN IP, PLTY
			10.5				OCC SUB BLKY, DISSEM PYR
			8.0				
			10.0				
			10.0				
1350			10.0				100SH AA
			11.0				SL TR SLTST GRN, SL CALRUS, SILOUS, TI, NS
			11.0				
			12.0				
			11.0				
1355			8.0				100SH AA
			8.0				
			9.0				
			9.0				
			9.0				
1360			8.0				100SH GRN, TR GRN GRY IP, SFT-FRM, SPLIN IP,
			9.0				PLTY OCC SUB BLKY, DISSEM PYR
			9.0				
			8.0				
			9.0				
1365	90/02/15	MOB 17000	8.0				100SH AA
		RPM 65	9.0				
		PP 11800	9.0				
		SPM 100#1	10.0				
			9.0				
1370		DEN 1220	9.0				100SH AA
		VIS 69	8.0				
		PH 9.8	9.0				
		ML 11	9.0				
		CL- 200	8.0				
1375		Ca++ ---	10.0				100SH AA
		Slphd ---	10.0				SL TR SLTST WH, CALRUS, TR SILOUS, TI, NS
		K+ ---	10.0				
		SLds 10	10.0				
		SD TR	10.0				
1380			9.0				100SH GRN, TR GRN GRY IP, SFT-FRM, SPLIN IP,
			9.0				PLTY OCC SUB BLKY, DISSEM PYR
			8.0				
			10.0				
			10.0				
1385			11.0				100SH AA
			10.0				
			9.0				
			10.0				
			10.0				
1390			10.0				100SH AA
			10.0				
			9.0				
			9.0				
			9.0				
1395			10.0				100SH DK GRN, DK GRY, TR GRN GRY, SFT-FRM,
			10.0				PLTY, DISSEM PYR
			11.0				
			11.0				
			11.0				



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Petrophysical Engineering

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LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				1-----50	/DST/POD			
1400			10.0					100SH AA
			8.0					
			11.0					
			9.0					
			10.0					
1405			10.0					100SH DK GRN,DK GRY IP,GRN GRY IP,SFT-FRM,PLTY,DISSEM PYR
			10.0					SL TR SS WH,CLR,VF-SLT,SA,WL SRT,WL CCN,CALCSIL CNT,TI,NS
			9.0					
			11.0					
			9.0					
1410			10.0					100SH GRN,GRN GRY,TR GRY IP,SFT-FRM,PLTY
			10.5					TR SPLIN,TR DISSEM PYR
			9.5					
			10.0					
			9.5					
1415			9.5					100SH GRN,GRN GRY,TR DK GRY,SFT-FRM,PLTY
			8.5					SPLIN IP,TR DISSEM PYR
			8.5					
			9.0					
			8.5					
1420			8.0					100SH GRN,GRN GRY,SFT-FRM,PLTY,TR SPLIN,TR DISSEM PYR
			8.0					
			8.0					
			8.0					
			8.0					
1425			8.0					100SH AA
			8.5					
			8.5					
			7.0					
			8.0					
1430			8.0					100SH AA
			8.0					
			8.5					
			7.5					
			8.0					
1435			9.0					100SH GRN,GRN GRY IP,SFT-FRM,PLTY,TR SPLIN
		DS 1.25 N13.0E	8.0					DISSEM PYR
			9.0					
			9.0					
		Stop Drlg @1450	9.5					
1440		to run BHCS-	9.5					100SH AA
		Phasor Ind.-GR-	9.5					
		SP-CAL: BRIDGE	9.5					
		@ 1098m:DST#1	9.5					
		731.00-766.81	9.0					
1445			8.5					100SH AA
		Sloughing Shale	8.0					
		1098m-1450m	9.5					
			9.0					
		MS#92R8 S84F	10.0					
1450	90/02/17	30m 7.0hrs	8.0					100SH GRN GRY,MED-DK GRY,GRN IP,FRM,PLTY,TR SPLIN,TR DISSEM PYR
		2/2/NO/A	12.0					
		E/1/NO/TO	11.0					
			10.0					
		WCB 16000	10.0					



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

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C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE		LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
				50	75			
1455		RPM 62	10.0					100SH AA
		PP 9000	10.5					
		SPM 100#1	9.0					
			10.0					
		DEN 1210	10.0					
1460		VIS 79	8.0					100SH GRN GRY, GRN, FRM, PLTY-SUB BLKY, DISSEM
		PH 10	7.5					PYR
		ML 9	12.0					
		CL- 200	10.0					
		Ca++ ---	10.5					
1465		Slphd ---	11.0					100SH AA
		K+ ---	11.0					
		SSlds 9.5	11.0					
		ZO --	10.0					
			12.0					
1470			14.0					100SH AA
			12.0					
			14.0					
			12.0					
	90/02/18	MOB 16000	11.0					
1475		RPM 62	10.0					100SH GRN GRY, GRN, FRM, PLTY-SUB BLKY, DISSEM
		PP 9000	10.5					PYR
		SPM 100#1	11.0					
			13.5					
		NB#10 HP13GJ	8.5					
1480	90/02/19	48m 11.5hrs	14.0					100SH MED-DK GRY, FRM, PLTY-SUB BLKY IP, PYR
		7/7/NT/A3	11.0					
		2/2/NO/PR	16.0					
		Ream to bottom,	16.0					
		sloughing shale	17.5					
1485		MOB 15000	15.5					100SH AA
		RPM 62	15.5					
		PP 9800	16.0					
		SPM 100#1	16.0					
			15.0					
1490		DEN 1295	17.0					100SH AA
		VIS 92	12.0					
		PH 10.5	14.0					
		ML 8.6	12.0					
		CL- 250	13.0					
1495		Ca++ ---	14.0					100SH MED-DK GRY, FRM, PLTY-SUB BLKY IP, PYR
		Slphd ---	16.0					TR XLN CALC, TR QTZ GR,
		K+ ---	11.0					
		SSlds 11.7	12.5					
		ZO TR	11.0					
1500								100SH MED-DK GRY, GRN GRY, GRN, FRM, PLTY-SUB
								BLKY, DISSEM PYR
		MOB 15000	11.5					
		RPM 78	10.5					
1505		PP 9500	11.0					100SH AA
		SPM 100#1	13.0					SL TR SLTST WH, CALRUS, SL SILOUS, TI, NS
			12.0					
		DEN 1315	12.0					
		VIS 79	12.5					



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WELLSITE TECHNICAL LOG
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DEPTH	TOPS	BIT/TECH DATA	ROP	1	CORE	LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
1510		PH 10.5 ML 8.4 CL- 250 Ca++ --- Slphd ---	12.5 13.0 12.0 13.0 12.5					100SH MED-DK GRY, OCC GRN GRY, OCC GRN, FRM, PLTY, SPLIN IP, TR DISSEM PYR
1515		K+ --- XSLds 12.3 ZO TR	13.5 13.0 13.5 14.0 15.0 20.0					100SH AA
1520	DMSK		18.0 17.0 20.0 21.0 23.0					100SH DK-V DK GRY, BLK IP, FRM, PLTY-SUB BLKY, ABT DISSEM PYR SL TR SLTST WH, CALRUS, SL SILOUS, TI, NS
1525		Pump out 9 sgl Ream in @ 1456 NB#11 F3 90/02/2023m 6hrs	60.0 11.0 16.0 11.0 12.5 13.5 14.0 13.5					1525:100SH V DK GRY-BLK, GRN IP, FRM, BLKY-SUB BLKY, DISSEM PYR, SL TR CALRUS SL TR SLTST WH, CALRUS, SL SILOUS, TI, NS 1525-1530:100SH DK-V DK GRY, FRM-HD, SUB BLKY, DISSEM PYR, TR SILOUS 100SH DK-V DK GRY, FRM-HD, SUB BLKY, PYR, SL TR SLTST WH, CALRUS, SILOUS, TI, NS
1530		1/1/NO/A3 E/1/NO/CP MOB 16000 RPM 62 PP 9500 SPM 100#1	16.0 11.0 12.5 13.5 14.0 13.5					
1535		DEN 1310 VIS 94 PH 10.6 ML 8.6	13.5 13.5 15.0					70SH MED GRY, V DK GRY, BLK, GRN GRY IP, FRM, SUB BLKY, DISSEM PYR 30LXST WH, S&P, VF, I/III-III, SL TR DOL XL, COM ARG PTG, SPTY PR b POR, NS
1540	DS	CL- 250 Ca++ --- Slphd --- K+ --- XSLds 12.4 ZO TR	12.5 15.5 15.5 17.0 16.5 13.0 14.0 16.0 13.5					30SH AA 70LMST PRED S&P, F OCC MED, WH GR W DK ARG MTRX, ARG PTG, ARG, TI, NS; COM LMST DK BRN GRY MOXLN, DNS, I, TI, NS, ARG; TR LMST WH, BUFF, MOXLN-VF, I/III, MVP, NS 20SH MED GRY, GRN GRY, SUB BLKY-PLTY 80LMST PRED S&P, LT GRY, BUFF, VF-F, GRST, WH GR W DK ARG MTRX, I/III, ARG PTG, MVP, NS; COM LMST DK GRY BRN, MOXLN, I, MOST, ARG, TI, NS
1545		Pump out 7 sgl DS 1.25 N44.0E NB#12 CUCBG 90/02/213.8m 2.75hrs	16.0 13.5 10.0 16.0 28.0 29.0 36.0					30SH AA; 20LMST AA; 50 DOL WH, BUFF, F-MED, I/III-III, SPTY PR b POR, TR DD ASPH, NO FLUOR, NO CUT, SL TR QTZ XL, CORE#1 1551.6-1555.4 Slave Point Formation cut 3.8m rec. 3.7m 2.75 hrs.
1550		MOB 6000 RPM 72 NB#13 CRCB 7.0m 7.0hrs	16.0 29.0 36.0 109.0					
1555		90/02/22MOB 5000 RPM 80 PP 7400 SPM 100#1 DEN 1300	57.0 56.0 55.0 64.0 59.0 55.0					CORE#2 1555.4-1562.4 Slave Point Formation cut 7.0m rec. 7.0 7.00 hrs Note!!! top core#2 fits bottom core#1
1560		Pump 35m3 to F3 90/02/23 NB#14RR11 F3 29m 7.25hrs 2/2/NO/A3	25.0 12.0 13.5					1562.4-1565: 30SH GRN GRY, MED GRY, FRM, PLTY DISSEM PYR 70DOL DK GRY, S&P, WH, VF-F, I/III W CRS WH DOL & CLR QTZ XL (LINING VUG), SPTY PR d POR, TR DK GRY ARG MAT(ASPHC?), NO FLUOR, NO CUT



SHELL CANADA LIMITED

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DEPTH	TOPS	BIT/TECH DATA	ROP	1-----50	CORE /DST/PORE	LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
1565		S/3/NO/CM	15.0					20SH AA
			9.5					30DOL AA
		MOB 15000/16000	11.5					
		RPM 65/70	12.0					
		PP 11400	12.5					
1570		SPM 90#1	14.5					10SH MED GRY, FRM, PLTY, DISSEM PYR
			15.5					90DOL DK GRY, SEP IP, VF-F, I/III, W MNR CRS
		Added 10m3 oil	14.0					WH XLN DOL & CLR QTZ, (LINING/FLD VUG), TR DK
		at 1562m (5%)	14.5					GRY ARG MAT(ASPHC), NO FLUOR, NO CUT
		DEN 1295	13.5					
1575		VIS 110	10.5					10SH AA
		pH 10.5	24.0					60DOL AA
		ML 6.2	22.0					30LMST LT BRN, TN GRY IP, LT GRY, MXLN, I-I/II
		CL- 250	24.5					TI, NS, SL DOLC
		Ca++ ---	20.5					
1580		Slphd ---	11.0					30SH MED-DK GRY, GRN GRY IP, FRM, PLTY, PYR
		K+ ---	22.0					30DOL DK GRY, BRN GRY IP, VF-F, OCC MED, I/III
		SGds 6.0	16.0					W ABT CRS WH DOL & CLR QTZ XL & TR PYR (LINING
		SD 6.0						/FLD VUG), TR c&tr d POR, TR ASPHC, TR DK ARG
		Loss Circa 1591	16.0					MAT(ASPHC?) NS; 40LMST AA
1585		+220m3 to fm-	16.0					30SH AA
		run 3cart plugs	9.0					50DOL AA; W PR c&d POR
		NB#15 JD4	11.0					20LMST BUFF, TN BUFF, MXLN, I/II, SL DOLC, SL
		1m 0.25hrs	7.5					ARG, NVP, NS; W MNR LMST BRN GRY, MXLN, I, NVP,
		2/2/NO/A3	10.0					NS
1590		E/1/NO/CM	9.0					15LCM
		NB#16RR15 JD4	15.0					70SH DK GRY, FRM, PLTY-SUB BLKY IP, PYR
	90/03/02	32m 10.25hrs	17.0					15DOL (30X) WH, LT GRY, SMKY, F-MED, I/III, W
		7/6/NT/A3	28.0					(70X) ABT WH MED-V CRS DOL XL, MNR QTZ XL,
		E/1/NO/HR	25.0					FR d POR, TR BLK ARG MAT(ASPHC), NO FLUOR, NS
1595			20.0					60SH AA
		MOB 12000/15000	20.0					40DOL (30X) WH, SMKY, BLK IP, MOTT IP, F-MED,
		RPM 60						I/III, W (70X) ABT WH MED-V CRS DOL XL, MNR
		PP 5200						QTZ XL, PROB XL LINING VUG, FR-SPTY GD d POR
		SPM 100#1	16.0					TR BLK ARG MAT(ASPHC?), NO FLUOR, NO CUT
1600			31.0					70SH AA
		DEN 1065	30.0					30DOL AA
		VIS ?	26.0					
		pH 9.5	21.0					
			15.0					
1605			15.0					60SH DK GRY, FRM, PLTY, DISSEM PYR
			15.0					40DOL (30X) WH, SMKY, TR BLK IP, MOTT IP, F-MED
			15.0					I/III, W (70X) ABT WH & OCC SMKY MED-V CRS
			15.0					DOL XL, MNR CRS QTZ XL, FR-SPTY GD d POR
			18.0					TR BLK ARG MAT(ASPHC?), NO FLUOR, NO CUT
1610			17.0					60SH AA
			19.0					40DOL AA
			20.0					
			20.0					
			17.0					
1615			28.0					70SH AA
			25.0					30DOL AA
			23.0					
			28.0					
			22.0					



SHELL CANADA LIMITED

WELLSITE TECHNICAL LOG
Petrophysical Engineering

WELLNAME: Shell Celibeta B-12

DATE:

LOCATION: B-12:060 10';122 15'W

C.W.O. #: WCB62

DEPTH	TOPS	BIT/TECH DATA	ROP	CORE	705TPOR	LITHOLOGY	SHOW	GEOLOGICAL DESCRIPTION
1620			21.0					100LCH
			18.0					
			29.0					
		NB#17 J33	30.0					
		90/03/0335m 6.0hrs	10.0					
1625		/ / /	10.0					20SH MED-DK GR, FRM, PLTY-SUB BLKY, PYR
		/ / /	10.5					800CL (30%) WH, SHKY IP, BLK IP, MOTT IP, VF-F
			9.0					I/III, V (70%) ABT WH MED-V CRS I-I/III XLN
		MOB 12000/15000	7.0					DOLENNR QTZ XL (VUG LINING), FR-SPTY GD d
		RPM 60	8.0					POR, TR BLK ARG MAT(ASPHC?), NO FLUOR, NO CUT
1630		PP 4300	8.0					30SH AA
		SPM 90#1/52#2	8.0					700CL AA
			14.0					
		DEN	10.0					
		VIS	8.0					
1635			9.0					30SH AA
			7.0					700CL AA
			9.0					
			9.0					
			9.5					
1640			9.5					30SH MED-DK GR, FRM, PLTY-SUB BLKY, PYR
			8.0					700CL (30%) WH, SHKY IP, BLK IP, MOTT IP, F-
			9.0					MED, I/III, V (70%) WH MED-V CRS I/III XLN
			8.0					DOLENNR QTZ XL (VUG LINING), FR-SPTY GD d
			10.0					POR, TR BLK ARG MAT(ASPHC?), NO FLUOR, NO CUT
1645			11.0					40SH AA
			9.5					600CL AA
			9.5					
			9.5					
			11.0					
1650			9.0					
			12.0					
		loose circ a	8.0					
		1595m on trip	9.5					
		7m3	11.0					
1655			13.0					
			12.0					
			15.0					
		90/03/04	15.0					

9211-56-3-1

GEOLOGICAL REPORT FOR

SHELL CELIBETA B - 12

OTTAWA COPY



GEOLOGICAL REPORT FOR

SHELL CELIBETA B - 12

B-12: 60°10N, 122°15W



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Shell Celibeta B-12

B-12: 60°10'N, 122°15'W - page 1-A-1

1A. WELL DATA SUMMARY

WELL NAME: Shell Celibeta B-12

LOCATION: B-12: 60°10'N, 122°15'W

FIELD OR AREA: Celibeta, Northwest Territories, Mainland

COORDINATES: Latitude 60°, 01', 13.423", North
Longitude 122°, 17', 42.712", West

UNIQUE WELL IDENTIFIER: 300B126010122150

WELL AUTHORIZATION NUMBER: CWO #: WCB62

PERMITTEE, LICENSEE OR LESSEE: Shell Canada Limited

LICENSE TYPE: Northern Exploration LICENSE NO: N89A251

OPERATOR: Shell Canada Limited

SHELL'S WORKING INTEREST: 100%

DRILLING CONTRACTOR: Noble Bawden Drilling

CONTRACTOR RIG NO: 20

CONTRACTOR LICENSE NO:

SERVICE COMPANY:

SERVICE RIG NO:

SPUD DATE: 90/02/01 0400 hours

DRILLING RIG RELEASE DATE: 90/03/

DATE TOTAL DEPTH REACHED: 90/03/03 2000 hours

SERVICE RIG RELEASE DATE:

K.B. ELEVATION: 416.14 (5.48)

GROUND ELEVATION: 410.66

C.F. ELEVATION: 409.99

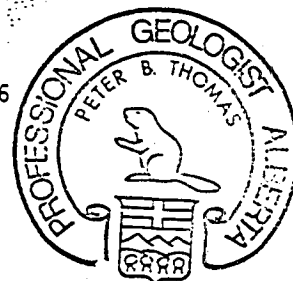
TOTAL DEPTH: 1659.0 m

PBTD:

WELL STATUS: Cased

WELLSITE DRILLING SUPERVISOR: Dan Hewitt, Darrell Klatt, Boyd Robinson

WELLSITE GEOLOGICAL REPRESENTATIVE: Peter Thomas, Ken Holmes



PERMIT TO PRACTICE	
Discovery Geological Wellsite Consulting Ltd.	
Signature	<i>Peter Thomas</i>
Date	<i>Peter Thomas</i>
PERMIT NUMBER: P 4516	
The Association of Professional Engineers, Geologists and Geophysicists of Alberta	

DISCOVERY Geological Wellsite Consulting Ltd.

1B.

ENGINEERING SUMMARYi) Casing and Tubing Record Summary

Hole Size (mm)	Csg. Size (mm)	Wt. (kg/m)	Grade	Make	Setting Depth K.B.	Cement Volume	Cement Type	Cement Additives	Date Run
444.5	339.7	81.1	K55:ST&C	Algoma	141 m	23t	0:1:0	"G"+2%CaCl ₂	90/02/02 0915
311.2	244.5	53.6	K55:ST&C	Algoma	548 m	25.5t	0:1:0	"G"+1%CaCl ₂	90/02/08 0545

Tbg. Length or Depth Landed	Tbg. Size	Wt.	Grade	Make	Subsurface Equipment Details
_____	_____	_____	_____	_____	_____

1B.

ENGINEERING SUMMARYii) Bit Record

<u>Bit Number</u>	<u>Make</u>	<u>Type</u>	<u>Size</u>	<u>Hours on Bottom</u>	<u>Depth In</u>	<u>Depth Out</u>	<u>Meterage Drilled</u>
01	Smith	SDS (RT)	444.5	8.00	0	141	141
02	Smith	SDGH	311.2	22.00	141	432	291
03	HughesWestern	J3	311.2	6.75	432	487	55
04	Security	DS84F	311.2	8.75	487	548	61
05	HughesWestern	JD8	219.1	1.75	548	558	10
06	Mission	MDC	219.1	8.25	558	721	163
07	Mission	MDC	219.1	31.00	721	1300	579
08	Security	S84F	215.9	25.00	1300	1450	150
09RR8	Security	S84F	215.9	7.00	1450	1480	30
10	Reed	MP13GJ	215.9	11.50	1480	1528	48
11	Smith	F3	215.9	6.00	1528	1551.6	23
12	Sperry Sun	CUCBG	215.0	2.75	1551.6	1555.4	3.8
13	Sperry Sun	CRCB	215.0	7.00	1555.4	1562.4	7
14RR11	Smith	F3	215.9	7.25	1562.4	1591	29
15	HughesWestern	JD4	215.9	.25	1591	1592	1
16RR15	HughesWestern	JD4	215.9	10.25	1592	1624	32
17	HughesWestern	J33	215.9	6.00	1624	1659	35
18	HughesWestern	JG4	215.9	0.00	1659	1659	0
19RR18	HughesWestern	JG4	215.9	0.00	1659	1659	0

1B. ENGINEERING SUMMARYiii) Deviation Surveys

<u>Depth</u>	<u>Measurement</u>
33	0.
50	1/2
74	1/2
91	1/2
119	1.
140	1.
220	1/4 N20.0E
290	1/4 N50.0W
342	1/4 N89.0E
400	1/4 N30.0W
450	0. N01.0W
500	1/8 N01.0W
659	1. 1/4 N02.0E
770	1. 3/4 N16.0W
874	1. 1/2 N13.0W
1026	1. 3/4 N12.0E
1175	1. 3/4 N10.0E
1321	2. N03.0E
1437	1. 1/4 N13.0E
1551	1. 1/4 N44.0E

1B. ENGINEERING SUMMARYiv) Drilling Fluids

Type	Interval	Wt.	Vis.	W.L.	pH	Cl	Ca	Slph	K	% Solids	% Oil	Value
GelChem	0-141	1120	37		9.5							Low
		1160	72		10.5							High
		1140	54	18.0	10.0	200	40			10.8		Avg
GelChem	141-548	1050	29		9.5	200	NIL			8.3		Low
		1150	81		10.0	250	TR			10.8		High
		1130	67		9.5	200	TR			9.6		Avg
Air	548-1300	1300	Kpa		35	m3/min						Low
		2000	Kpa		50	m3/min						High
		1700	Kpa		44	m3/min						Avg
GelChem	1300-1450	1170	37	11.0	9.8	200				8.0		Low
		1220	89	14.0	10.5	200				10.0		High
		1220	69	11.0	10.0	200				9.5		Avg
GelChem	1450-1562	1260	74	8.4	10.1	200				11.0	TR	Low
		1310	94	8.8	10.6	250				12.4	TR	High
		1305	76	8.6	10.5	250				12.0	TR	Avg
GelChem	1562-1591	1250	80	6.2	10.0	250				11.0		Low
		1300	135	8.8	10.5	300				11.9		High
		1295	110	6.2	10.5	300				11.0	6.0	Avg
GelChem	1591-1592	1050	52	11.0	9.5	250				3.8	Nil	Low
		LCM mud	1085	100+	11.2	1200				4.5	TR	High
			1060	58	13.0	10.5	1200			3.8		Avg
GelChem	1592-1624											
		LCM mud										
		1070	60+	12.6	9.8	1200				4.5		Avg
GelChem	1624-1659	1055	75	8.0	10.3	700				3.5		Low
		1065	100+	9.8	10.8	900				4.1		High
		1055	75	9.8	10.8	900				3.5		Avg

1B.

ENGINEERING SUMMARYv) Hole Problems (Severe deviation, sloughing, dog, legs, etc.)

1) Log bridged off at 1098 m; severe sloughing problems in Fort Simpson Shales 1098 - 1480 m; mud up to 1300 kg/m³ to control shale.

2) Sloughing shale problems. Need to pump out 7 - 10 singles on trip at 1528 m and 1551 m.

3) Temporarily stuck with core #2 at 1562.4 m, pumped 35m³ of mud into formation in attempt to pump off bottom. Jarred free.

4) Hole on vacuum at 1591 m, sucked 40m³ mud into formation. Pumped 59.5m³ lost circulation material. Set 100 m cement plug from 1591 m - 1491 m with 5 tonnes 0:1:0 "G" + 0.5% D65 + 0.2% D13. Cement top at 1546 m. Loss of circulation after plug drilled to 1591 m. Run in with packer assembly. Packer plugged off. Pull out of hole. 8 stds salt water. Mud level holding? Run in hole with bit and drill ahead 1 m to 1592 m. Encounter mild loss of circulation, attempt to seal with LCM (11m³) pill. Hole goes on vacuum again. Pump LCM plug #8 8m³. Run in hole with packer and set plug #3 7t 0:1:0 "G" + 0.5% D65 + 0.2% D13 at 1562m. Empty mud tanks, mix 47m³ LCM and 87m³ new mud. Run in hole encounter cement stringer at 1520 m, drill 10 m good cement to 1591. Encounter mild loss of circulation. Pump 20m³ LCM. Pour coarse LCM down pipe. Pipe plugged. Pull wet. Run in hole, pour 24 1.3 spec grav frac balls in pipe. Circulation. Pull out of hole, run in hole with bit.

5) Screen out LCM at 1624 m. Annulus packed off at 1659 m. Loss of circulation, tite hole. Back ream to 1504 m. Clean and ream 1500 - 1600. Pump LCM pill (14m³). Set packer at 1565 and pump 5t 0:1:0 "G" lead in and 7t 0:1:0 "G" + 0.5% D65 + 0.2% D13 main. Pull out of hole, mud will not hold, pour coarse LCM down hole, run in hole, bridge at 1555 m, ream to 1613 m. Circulate and condition. Pull out of hole to log.

vi) Lost Circulation

<u>Formation</u>	<u>Zone</u>	<u>Interval</u>	<u>Flow Rates</u>	<u>Amount Lost</u>
Slave Point		1591 - 1595		280+ m ³

vii) Well Control Problems (Well flow, blowouts - conditions before and after blow out).

1C. COMPLETION SUMMARY

i) Perforation Intervals

<u>Date</u>	<u>Interval Perforated</u>	<u>Number of Perforations</u>	<u>Bullet Type and Size Run</u>

ii) Cementation (plugback and squeeze operations)

<u>Date</u>	<u>Plug Number</u>	<u>Interval</u>	<u>Type</u>	<u>Cement Volume</u>

iii) Acidization

<u>Date</u>	<u>Acid Volume</u>	<u>Additives</u>	<u>Feed Rates</u>	<u>Pressure</u>	<u>Well Condition Before/After</u>

iv) Fracture Jobs

<u>Date</u>	<u>Volumes</u>	<u>Feed Rates</u>	<u>Pressure</u>	<u>Well Condition Before/After</u>

v) Wellhead Equipment and Diagram

2. GEOLOGICAL FORMATION TOPS

GL: 714.4 KB: 722.8

Formation Age	Formation Name	<u>Sample</u>		<u>Wireline Logs</u>		
		Depth	Subsea	Depth	Subsea	TDVSS
Pleistocene						
P	Undifferentiated					
Mississippian						
Mb	Banff	240.0	+192.14			
Devonian						
Dwa	Wabanum Group	434.0	-17.86			
Dke	Kotcho	477.0	-60.86			
Dte	Tetcho	706.0	-289.86	730.85	-307.71	
Dmsk	Muskwa	1520.0	-1103.86			
*	Ds	Slave Point	1539.0	-1122.86		
	Dwt	Watt Mountain				
**	Dpq	Presqu'ile				
**	Dh	Hume				
	Dbr	Bear Rock				
	D	Base Alpha Marker				
Precambrian						
PC	Undifferentiated					
Total Depth	TD	1659.0	-1242.86			

SAMPLE DESCRIPTIONS

SAMPLE INTERVAL
(metres)

DESCRIPTIONS

141 - 145	5% SHALE, dark grey, firm, platy. 85% SANDSTONE, clear, orange in part, medium to coarsely grained, subrounded, moderately sorted, arkose (minor feldspar), unconsolidated loose quartz grains, trace clay cement, no apparent porosity, no show. 10% CEMENT, buff, speckled.
145 - 150	10% SHALE, as above. 80% SHALE, clear, orange in part, medium to coarsely grained, subrounded, moderately sorted, unconsolidated loose quartz grains, trace clay cement, arkose with minor feldspar, trace dark mineral, no apparent porosity, no show. 10% CEMENT.
150 - 155	10% SHALE, dark grey, firm, blocky. 70% SANDSTONE, orange in part, coarse, subrounded, moderately sorted, unconsolidated loose quartz grains, trace clay cement, arkose with minor feldspar, trace dark mineral, no apparent porosity, no show. 20% IGNEOUS/VOLCANICS, varicolored, very coarsely grained, angular, fragmented, dark mineral, green mineral, organ mineral, trace quartz, probable tillite.
155 - 160	10% SHALE, dark grey, very hard, blocky. 80% SANDSTONE, as above. 10% IGNEOUS/VOLCANICS, as above.
160 - 165	20% SHALE, as above. 70% SANDSTONE, as above. 10% IGNEOUS/VOLCANICS, as above.
165 - 170	No sample. Probably 100% clastic. Washed away while being cleaned.
170 - 175	No sample. Probably 100% clastic. Washed away while being cleaned.

- 175 - 180 30% SHALE, medium grey, very hard, blocky, slightly calcareous.
 40% LIMESTONE, buff, light to medium grey, grey green in part, microcrystalline (I/II), fossil fragments in part, trace crystalline, calcareous in part, very argillaceous, grey SHALE in part, I/II (fossil Mudstone, fossil Micrite), no visible porosity, no show.
 30% SILTSTONE, grey, grey green, calcareous cement, very argillaceous, tight, no show, grading calcareous shale.
- 180 - 185 5% SHALE, as above.
 45% LIMESTONE, as above.
 50% SILTSTONE, as above.
- 185 - 190 35% SHALE, grey, green grey, blocky to firm, very calcareous, very silty, grading argillaceous limestone in part.
 5% SANDSTONE, clear, orange in part, coarsely grained, subrounded, well sorted, unconsolidated loose quartz grains, arkose (trace feldspar), no apparent porosity, no show.
 60% IGNEOUS/VOLCANICS, varicolored, very coarsely grained, angular, fragmented, dark minerals, green minerals, orange minerals, clear minerals (quartz), probably tillite questionable.
- 190 - 195 20% SHALE, grey green, blocky to firm, very silty, very calcareous grading argillaceous limestone in part.
 80% IGNEOUS/VOLCANICS, varicolored, very coarsely grained, angular, fragmented, dark minerals, green minerals, clear minerals (quartz), orange minerals (feldspar).
- 195 - 200 20% SHALE, grey green, green grey, blocky to firm, very silty, very very calcareous grading very argillaceous limestone in part.
 30% IGNEOUS/VOLCANICS, varicolored, as above.
- 200 - 205 60% SHALE, grey green, green grey, blocky to firm, silty, very calcareous, grading very argillaceous limestone in part ?.
 30% IGNEOUS/VOLCANICS, varicolored, very coarsely grained, angular, fragmented, dark minerals (pyroxene, mica ?), orange minerals (feldspar), clear minerals (quartz ?), trace green minerals.

- 205 - 210 50% SHALE, as above.
 50% IGNEOUS/VOLCANICS, as above.
 Trace SANDSTONE, clear, coarsely grained, rounded to
 subrounded, well sorted, unconsolidated loose quartz
 grains, no apparent porosity, no show.
- 210 - 215 75% SHALE, as above.
 25% IGNEOUS/VOLCANICS, as above.
- 215 - 220 15% SHALE, grey green (green grey), firm, blocky, very
 silty, very calcareous.
 85% IGNEOUS/VOLCANICS, fragmented, varicolored, very
 coarsely grained, angular, dark minerals (mica,
 pyroxene), orange minerals (feldspar), clear mineral
 (quartz), yellow minerals, trace green minerals.
- 220 - 225 50% SHALE, green grey (grey green), firm, blocky,
 silty, very calcareous with trace black, trace dark
 grey, trace purple, silty, calcareous.
 50% IGNEOUS/VOLCANICS, as above.
 Trace LIMESTONE, brown to light brown,
 microcrystalline, compact (), no visible porosity, no
 show.
- 225 - 230 75% SHALE, green grey, (grey green), firm, blocky to
 sub-blocky, very calcareous, silty.
 25% IGNEOUS/VOLCANICS, as above.
 Trace SANDSTONE, clear, coarsely grained, rounded, well
 sorted, unconsolidated loose quart grains, no apparent
 porosity, no show.
- 230 - 235 95% SHALE, as above.
 5% IGNEOUS/VOLCANICS, fragmented, varicolored, very
 coarsely grained, angular, dark minerals (pyroxene,
 mica ?), orangish minerals (feldspar), clear minerals
 (quartz), yellow minerals.
- 235 - 240 95% SHALE, as above.
 5% IGNEOUS/VOLCANICS, fragmented, as above.
- 240 - 245 100% SHALE, green grey, light green, firm, blocky to
 sub-blocky, slightly silty, very calcareous.
- 245 - 250 100% SHALE, as above.

250 - 255	100% SHALE, as above, with trace SANDSTONE, clear, coarsely grained, rounded, well sorted, unconsolidated quartz sand grains.
255 - 260	100% SHALE, green grey, light green in part, firm, blocky to sub-blocky, slightly silty, very calcareous.
260 - 265	100% SHALE, as above.
265 - 270	100% SHALE, as above.
270 - 275	100% SHALE, green grey, light green in part, firm, blocky to sub-blocky, slightly silty, very calcareous.
275 - 280	100% SHALE, as above.
280 - 285	100% SHALE, as above.
285 - 290	100% SHALE, green grey, light green in part, firm, blocky to sub-blocky, slightly silty, very calcareous, grading microcrystalline to very fine crystalline, I/II, limestone. Trace LIMESTONE, green grey, light green in part, microcrystalline to very fine crystalline, I - I/II (mudstone, micrite), tight, no show.
290 - 295	100% SHALE, as above.
295 - 300	100% SHALE, as above.
300 - 305	100% SHALE, green grey, light green in part, firm, blocky to sub-blocky, calcareous, grading argillaceous limestone in part. Trace LIMESTONE, green grey, light green in part, microcrystalline to very fine crystalline, I - I/II in part (mudstone, micrite), tight, no show.
305 - 310	100% SHALE, as above, platy to sub-blocky.
310 - 315	100% SHALE, green grey, light green in part, firm, platy to sub-blocky, calcareous.
315 - 320	100% SHALE, as above, with trace crystalline calcite.

- 320 - 325 100% SHALE, green grey, light green, firm, platy to sub-blocky, calcareous.
- 325 - 330 100% SHALE, green grey, light green, firm, platy to sub-blocky, slightly calcareous.
Trace LIMESTONE, green grey, microcrystalline to very fine crystalline, I - I/III (crystalline), tight, no show.
- 330 - 335 100% SHALE, as above with trace disseminated pyrite.
- 335 - 340 100% SHALE, green grey, light green, firm, platy to sub-blocky, calcareous, disseminated pyrite.
Trace LIMESTONE, green grey, trace tan grey, microcrystalline to very fine crystalline, I, (compact), tight, no show, laminated.
- 340 - 345 100% SHALE, as above.
Trace LIMESTONE, as above.
- 345 - 350 100% SHALE, as above with trace crystalline calcite.
- 350 - 355 100% SHALE, green grey, light green, firm, platy to sub-blocky, calcareous, trace disseminated pyrite, trace crystalline calcite.
Slight trace LIMESTONE, microcrystalline to very fine crystalline, I - I/III (crystalline), tight, no show, laminated.
- 355 - 360 100% SHALE, as above.
- 360 - 365 100% SHALE, as above.
- 365 - 370 100% SHALE, green grey, light green firm, platy to sub-blocky, slightly calcareous, trace disseminated pyrite, trace crystalline calcite.
- 370 - 375 100% SHALE, as above.
Slight trace LIMESTONE, light green grey, microcrystalline to very fine crystalline, I - I/III (crystalline), tight, no shows, laminated.
- 375 - 380 100% SHALE, as above.
Slight trace LIMESTONE, as above.

- 380 - 385 100% SHALE, as above with trace pyrite nodules.
Slight trace LIMESTONE, as above.
- 385 - 390 100% SHALE, green grey, light green, firm, platy to sub-blocky, slightly calcareous, trace disseminated pyrite, trace pyrite nodules, trace crystalline calcite.
Slight trace LIMESTONE, green grey, microcrystalline to very fine crystalline, I - I/III (crystalline), tight, argillaceous, no show, laminated.
- 390 - 395 100% SHALE, as above.
- 395 - 400 100% SHALE, as above.
Trace LIMESTONE, buff, green grey, microcrystalline, II (chalky), tight, no show, laminated.
- 400 - 405 100% SHALE, green grey, light green, firm, sub-blocky, slightly calcareous, trace disseminated pyrite.
- 405 - 410 100% SHALE, green grey, light green, dark green grey (30%), firm, platy to sub-blocky, slightly calcareous, trace disseminated pyrite.
Slight trace LIMESTONE, as above.
- 410 - 415 100% SHALE, green grey, light green, dark green grey (25%), dark grey (25%), firm, platy to sub-blocky, trace disseminated pyrite.
- 415 - 420 100% SHALE, dark grey, firm, sub-blocky, slightly silty, trace disseminated pyrite with trace green grey (20%) as above.
- 420 - 425 100% SHALE, as above.
- 425 - 430 100% SHALE, dark grey, occasionally dark brown grey, occasionally very dark grey, firm, sub-blocky, slightly silty, trace disseminated pyrite, trace crystalline calcite.
Trace CLAYSTONE, white.
- 430 - 435 75% SHALE, as above.
25% CLAYSTONE, cream, soft, very sandy, trace chert grains, trace mica ?, grading clay cement, sandstone in part ?

- 435 - 440 25% SHALE, dark grey, firm, sub-blocky, slightly silty, trace disseminated pyrite, with light grey, firm, platy to sub-blocky, slightly calcareous, disseminated pyrite.
75% LIMESTONE, buff, brown grey, very fine crystalline, I - I/III (compact - compact/sucrosic), packstone, no visible porosity, no show, trace silty ?
- 440 - 445 95% SHALE, light green grey, light green, firm, granular texture, sub-blocky to blocky, trace silty, common disseminated pyrite, very calcareous, grading argillaceous limestone in part.
5% LIMESTONE, as above.
- 445 - 450 100% SHALE, as above with trace fossil fragments with trace dark grey to black shale.
- 450 - 455 100% SHALE as above, with trace fossil fragments.
Trace LIMESTONE, cream, microcrystalline to very fine crystalline, I - I/III (compact - compact/sucrosic), no visible porosity, no show.
- 455 - 460 100% SHALE, light green grey, light green, firm, blocky, granular, fossil fragments, very calcareous, grading argillaceous limestone, disseminated pyrite, trace round loose quartz grains.
- 460 - 465 100% SHALE, light green grey, light green, platy to sub-blocky, disseminated pyrite, calcareous, grading argillaceous limestone in part.
- 465 - 470 100% SHALE, as above with trace granular texture in part, slight trace pyrite nodules.
- 470 - 475 90% SHALE, as above.
10% LIMESTONE, light green grey, trace cream grey, trace brown grey, bioclastic boundstone with common very coarsely grained fossil fragments in very fine grained matrix, fossils (predominantly crinoids, trace shells), no visible porosity, no show.
- 475 - 480 95% SHALE, as above.
5% LIMESTONE, as above.

- 480 - 485 100% SHALE, light green grey to light green, granular texture in part, platy to sub-blocky, disseminated pyrite, very calcareous, grading argillaceous limestone in part, common fossil fragments (crinoid, shells). Minor LIMESTONE, green grey to brown grey in part (biomicrite), microcrystalline to very fine crystalline, I, (crystalline to compact), trace fossil fragments, tight, no show.
- 485 - 490 70% SHALE, as above.
30% LIMESTONE, green grey, trace cream, trace tan grey, microcrystalline to very fine crystalline, I, (crystalline, compact) with fossil fragments (biomicrite), tight, no show.
- 490 - 495 40% SHALE, as above.
60% LIMESTONE, as above.
- 495 - 500 30% SHALE, light green grey, light green, platy to sub-blocky, disseminated pyrite, very calcareous, grading argillaceous limestone in part.
70% LIMESTONE, green grey, cream, trace tan grey in part, microcrystalline to very fine crystalline, I-I/II in part, (crystalline compact - compact/sucrosic) with fossil fragments (crinoid, shells), biomicrite, tight, no show.
- 500 - 505 50% SHALE, as above.
50% LIMESTONE, as above.
- 505 - 510 60% SHALE, as above.
40% LIMESTONE, as above.
- 510 - 515 No sample.
- 515 - 520 60% SHALE, light green grey, light green, firm, sub-blocky, granular texture in part, trace disseminated pyrite, very calcareous, grading argillaceous limestone.
40% LIMESTONE, green grey, cream, tan grey in part, microcrystalline to very fine crystalline, I (crystalline compact) with minor fossil fragments (shells, crinoid), biomicrite, tight, nos show.

- 520 - 525 50% SHALE, as above.
50% LIMESTONE, as above with abundant fossil fragments.
- 525 - 530 100% SHALE, light green grey, light green, firm, sub-blocky, granular texture in part, trace disseminated pyrite, very calcareous grading argillaceous limestone.
- 530 - 535 85% SHALE, as above.
15% LIMESTONE, light green grey, cream in part, microcrystalline to very fine crystalline, I (crystalline compact) with common fossil fragments (shale, crinoid), biomicrite, tight, no show.
- 535 - 540 100% SHALE, as above.
- 540 - 545 85% SHALE, light green grey, light green, firm, sub-blocky, granular texture in part, trace disseminated pyrite, very calcareous grading argillaceous limestone in part.
15% LIMESTONE, light green grey, cream in part, microcrystalline to very fine crystalline, I (compact crystalline) with common fossil fragments (shells, crinoid), biomicrite, tight, no show.
- 545 - 548 80% SHALE, as above.
20% LIMESTONE, cream, light green grey, bioclastic boundstone, medium to coarsely grained fossil fragments with very fine grained matrix, I - I/III, tight, no visible porosity, no show.
- 548 - 550 70% SHALE, light green grey, medium grey, light green, firm, sub-blocky, granular texture, trace pyrite nodules, trace disseminated pyrite, silty, very calcareous, grading limestone in part.
20% LIMESTONE, cream, light green grey in part, tan grey in part, very fine grained, I, compact with trace fossil fragments (micrite), tight, no show.
10% CEMENT, white, speckled.
- 550 - 555 70% SHALE, as above.
20% LIMESTONE, as above.
10% CEMENT, white, speckled.

555 - 560	100% SHALE, light green grey, light green, slight trace medium grey in part, firm, blocky, granular texture in part, trace disseminated pyrite, very calcareous, grading argillaceous limestone in part.
560 - 565	100% SHALE, as above.
565 - 570	200% SHALE, as above.
570 - 575	100% SHALE, light green grey, light green, firm, sub-blocky, trace granular texture in part, trace disseminated pyrite, calcareous grading limestone in part.
575 - 580	100% SHALE, as above, with trace fossil fragments (crinoid).
580 - 585	100% SHALE, as above.
585 - 590	100% SHALE, light green grey, light green, firm, sub-blocky to blocky, trace granular texture in part, trace disseminated pyrite, calcareous, grading argillaceous limestone in part.
590 - 595	100% SHALE, as above.
595 - 600	100% SHALE, as above, slight trace fossil fragments (crinoid) Slight trace LIMESTONE, tan grey, microcrystalline, I, micrite, tight, no show.
600 - 605	100% SHALE< light green grey, light green, firm, sub-blocky to blocky, granular texture in part, trace disseminated pyrite, calcareous grading argillaceous limestone in part.
605 - 610	100% SHALE, as above.
610 - 615	100% SHALE, as above.
615 - 620	100% SHALE, light green grey, light green, firm, sub-blocky to blocky, trace disseminated pyrite, calcareous.
620 - 625	100% SHALE, as above.

625 - 630	100% SHALE, as above.
630 - 635	100% SHALE, light green grey, light green, firm, sub-blocky, disseminated pyrite, very calcareous.
635 - 640	100% SHALE, as above.
640 - 645	100% SHALE, as above.
645 - 650	100% SHALE, green grey, light to medium green, firm, sub-blocky to blocky, disseminated pyrite, very calcareous.
650 - 655	100% SHALE, as above, trace fossil fragments (shells).
655 - 660	100% SHALE, as above.
660 - 665	100% SHALE, green grey, light to medium green, medium grey, firm, sub-blocky to blocky, disseminated pyrite, calcareous.
665 - 670	100% SHALE, green grey, light to medium green, occasional trace medium grey, firm, sub-blocky, disseminated pyrite, slightly calcareous.
670 - 675	100% SHALE, as above.
675 - 680	100% SHALE, green grey, light to medium green, firm, sub-blocky, disseminated pyrite.
680 - 685	100% SHALE, green grey, light to medium green, firm, sub-blocky, trace granular texture in part, disseminated pyrite, slightly calcareous.
685 - 690	100% SHALE, as above.
690 - 695	100% SHALE, medium to dark grey, green grey, firm, sub-blocky to platy in part, disseminated pyrite, calcareous.
695 - 700	100% SHALE, medium to dark grey, firm to hard, sub-blocky to platy in part, disseminated pyrite, calcareous.

- 700 - 705 100% SHALE, as above.
- 705 - 710 90% SHALE, as above, sub-blocky to blocky.
10% LIMESTONE, buff, cream in part, light grey in part, microcrystalline, compact (I grading I/II in part), tight, no show.
- 710 - 715 100% SHALE, medium to dark grey, firm to hard, blocky to sub-blocky, disseminated pyrite, calcareous.
Trace LIMESTONE, as above.
- 715 - 720 85% SHALE, very dark grey, black, firm to hard, sub-blocky to platy, trace disseminated pyrite, calcareous, common crystalline calcite, trace fossil fragments.
15% LIMESTONE, tan, tan grey, microcrystalline to very fine crystalline, compact, I, tight, no show.
- 720 - 725 20% SHALE, dark grey, firm to hard, sub-blocky, calcareous.
80% LIMESTONE, tan grey, light grey, brown grey, buff in part, microcrystalline to very fine crystalline, compact, I (micrite), trace pyrite, tight, no show, slightly dolomitic, argillaceous.
- 725 - 730 20% SHALE, as above.
80% LIMESTONE, as above.
- 730 - 735 10% SHALE, dark grey, hard to firm, blocky, calcareous, trace disseminated pyrite.
90% LIMESTONE, tan grey, light grey, brown grey, buff in part, microcrystalline to very fine crystalline, I, compact, micrite, slightly argillaceous, slight trace anhydritic, trace pyrite, no visible porosity, no show, trace shale partings, trace fractured infilled with crystalline minerals.
- 735 - 740 10% SHALE, as above.
90% LIMESTONE, tan grey, tan, brown grey, light grey, microcrystalline, occasionally very fine crystalline, I, compact, dense in part, micrite, slightly argillaceous, trace shale partings, slight trace pyrite, no visible porosity, slight trace crystalline quartz.

- 740 - 745 100% SHALE, as above.
- 745 - 750 10% SHALE, dark grey, hard, blocky, calcareous, trace disseminated pyrite.
90% LIMESTONE, as above.
- 750 - 755 10% SHALE, dark grey, hard, blocky, calcareous, trace disseminated pyrite.
90% LIMESTONE, tan grey, brown grey, tan, light grey in part, microcrystalline, occasionally very fine crystalline, I, compact, micrite, dense in part, trace shale partings, trace pyrite, trace fossil fragments, trace crystalline calcite, trace crystalline quartz, tight, no show.
- 755 - 760 100% LIMESTONE, as above.
Trace SHALE, as above.
- 760 - 765 10% SHALE, dark grey, hard, blocky, calcareous, slight trace disseminated pyrite.
90% LIMESTONE, tan grey, light brown grey, tan in part, light grey in part, microcrystalline, I, compact, dense in part, micrite, mudstone, trace fractured infilled by mineral crystals, trace shale partings, slight trace fossil fragments, trace crystalline calcite, no visible porosity, scattered yellow fluorescence, very poor yellow green cut.
- 765 - 770 10% SHALE, as above.
90% LIMESTONE, as above.
- 770 - 775 40% SHALE, dark grey, hard, blocky, trace granular texture in part, very calcareous, slight trace disseminated pyrite.
60% LIMESTONE, buff, light grey, cream in part, microcrystalline to very fine crystalline, I grading I/III in part, compact, micrite, wackstone, no visible porosity, questionable fluorescence, questionable cut.
- 775 - 780 90% SHALE, dark grey, hard, blocky, trace granular texture in part, calcareous.
10% LIMESTONE, buff, light grey, microcrystalline, occasionally very fine crystalline, I grading I/III in part, micrite, no visible porosity, no fluorescence, no cut, slightly dolomitic, slightly argillaceous.

- 780 - 785 70% SHALE, dark grey, hard, blocky to sub-blocky, granular texture in part, calcareous, disseminated pyrite.
30% LIMESTONE, buff, light grey, microcrystalline to very fine crystalline, I, crystalline, compact, trace fossil fragments, no visible porosity, no show, slightly dolomitic, argillaceous in part.
- 785 - 790 30% SHALE, as above.
70% LIMESTONE, as above.
- 790 - 795 85% SHALE, medium to dark grey, green grey, firm, sub-blocky, calcareous, disseminated pyrite.
15% LIMESTONE, tan grey, light grey, buff in part, microcrystalline to very fine crystalline, I, crystalline, compact, no visible porosity, no show, slightly argillaceous.
- 795 - 800 10% SHALE, as above.
90% LIMESTONE, light grey, tan grey, buff, microcrystalline to very fine crystalline, I - I/III, wackstone, pinkstone, no visible porosity, questionable fluorescence, no cut.
- 800 - 805 90% SHALE, medium to dark grey, firm to hard, sub-blocky to blocky, granular texture in part, disseminated pyrite, calcareous.
10% LIMESTONE, as above.
- 805 - 810 90% SHALE, as above.
10% LIMESTONE, as above.
- 810 - 815 100% SHALE, medium grey, green grey, light green, firm, sub-blocky to blocky, granular texture in part, disseminated pyrite, slightly calcareous.
- 815 - 820 100% SHALE, green grey, light green, firm, sub-blocky, disseminated pyrite.
Trace LIMESTONE, tan grey, microcrystalline, I, no visible porosity, no show.
- 820 - 825 100% SHALE, as above.
- 825 - 830 100% SHALE, as above.
Trace LIMESTONE, tan grey, microcrystalline to very fine crystalline, I, no visible porosity, no show.

- 830 - 835 100% SHALE, green grey, light green, firm, sub-blocky, disseminated pyrite.
Trace LIMESTONE, brown, brown grey, buff in part, microcrystalline to very fine crystalline, I, no visible porosity.
- 835 - 840 100% SHALE, light to medium green, green grey, firm, sub-blocky, disseminated pyrite.
Slight trace LIMESTONE, tan grey, microcrystalline, I, no visible porosity, no show.
- 845 - 850 100% SHALE, light to medium green, green grey in part, firm, sub-blocky to blocky, granular texture in part, disseminated pyrite.
- 840 - 855 60% SHALE, as above.
30% SILTSTONE, light grey, buff, siliceous, slightly calcareous, tight, no show, slightly argillaceous in part, grading sandstone in part.
10% LIMESTONE, tan grey, microcrystalline to very fine crystalline, I, no visible porosity, no show.
- 855 - 860 100% SHALE, light to medium grey, green grey, firm, sub-blocky to blocky, trace granular texture in part, disseminated pyrite.
Trace SILTSTONE, as above.
Trace LIMESTONE, as above.
- 860 - 865 30% SHALE, as above.
70% SANDSTONE, buff, light grey, very fine to siltstone, subangular, well sorted, well consolidated, siliceous cement, trace calcareous cement, tight, no show, grading siltstone in part.
Trace LIMESTONE, as above.
- 865 - 870 60% SHALE, medium to dark grey, hard, blocky to sub-blocky, granular texture in part, calcareous, trace disseminated pyrite, grading LIMESTONE in part.
40% LIMESTONE, tan grey, light brown grey, trace light brown, microcrystalline to very fine crystalline, I, micrite, no visible porosity, no show, slightly dolomitic.
- 870 - 875 100% SHALE, medium to dark grey, grey brown in part, blocky, hard, granular texture in part, calcareous, trace disseminated pyrite.
Trace LIMESTONE, as above.

- 875 - 880 100% SHALE, medium to dark grey, green grey in part, trace grey brown in part, hard, blocky, trace granular texture in part, calcareous, trace disseminated pyrite. Trace LIMESTONE, buff, light brown grey, microcrystalline, I, micrite, tight, no show, slightly argillaceous.
- 880 - 885 100% SHALE, as above with trace fossil fragments.
- 885 - 890 100% SHALE, light to medium green, green grey, firm to hard, sub-blocky to platy, disseminated pyrite. Minor SILTSTONE, light green, orange, tight, grading silty shale.
- 890 - 895 100% SHALE, as above, trace calcareous, trace silty in part.
- 895 - 900 100% SHALE, hard to firm, platy to sub-blocky, trace disseminated pyrite.
- 900 - 905 100% SHALE, light to dark green, green grey, hard to firm, platy to sub-blocky, trace disseminated pyrite. Trace SILTSTONE, light grey, buff in part, siliceous, slightly calcareous, argillaceous, tight, no show, laminated.
- 905 - 910 100% SHALE, as above.
- 910 - 915 100% SHALE, medium to dark grey, green, firm to hard, sub-blocky, disseminated pyrite, trace silty partings.
- 915 - 920 100% SHALE, green (30%), dark grey (70%), firm to hard, sub-blocky, disseminated pyrite, slightly calcareous.
- 920 - 925 100% SHALE, dark grey, occasionally green, firm to hard, sub-blocky, disseminated pyrite.
- 925 - 930 100% SHALE, light green grey, firm, sub-blocky, disseminated pyrite. Trace LIMESTONE, brown, microcrystalline matrix, with medium chert grains and fossil fragments, argillaceous, tight, no show.
- 930 - 935 100% SHALE, dark grey, occasionally green, occasionally green grey, firm, sub-blocky, disseminated pyrite.

935 - 940	100% SHALE, as above.
940 - 945	100% SHALE, green grey, green, occasionally dark grey, firm, sub-blocky to platy, disseminated pyrite, trace fossil fragments.
945 - 950	100% SHALE, as above.
950 - 955	100% SHALE, dark grey, green in part, green grey in part, firm, disseminated pyrite.
955 - 960	100% SHALE, green, green grey, trace dark grey, firm, disseminated pyrite, sub-blocky to platy in part. Trace LIMESTONE, light grey, microcrystalline to cryptocrystalline, compact (I), tight, no show.
960 - 965	100% SHALE, as above.
965 - 970	100% SHALE, as above.
970 - 975	100% SHALE, green grey, green, firm, sub-blocky to platy, disseminated pyrite. Trace LIMESTONE, tan grey, microcrystalline, I, tight, no show.
975 - 980	100% SHALE, as above. Trace SILTSTONE, buff, light grey, calcareous, siliceous, argillaceous, tight, no show.
980 - 985	100% SHALE, as above.
985 - 990	100% SHALE, green grey, green, firm, sub-blocky, trace disseminated pyrite.
990 - 995	80% SHALE, dark grey, green, green grey, firm, sub-blocky, trace disseminated pyrite. 20% SILTSTONE, light green, green, white, calcareous, siliceous, argillaceous in part, tight, no show.
995 - 1000	90% SHALE, as above. 10% SILTSTONE, as above.
1000 - 1005	100% SHALE, green, green grey, firm, platy to sub-blocky in part, trace disseminated pyrite.

- 1005 - 1010 60% SHALE, dark green, green grey, green, firm, sub-blocky to platy, trace disseminated pyrite, trace silty streaks.
40% SANDSTONE, green, green grey, light grey in part, buff in part, very fine grained, occasionally silt, subangular to subrounded, well sorted, well consolidated, calcareous and siliceous cement, argillaceous in part, tight, no show, grading siltstone in part.
- 1010 - 1015 85% SHALE, green, green grey, firm, platy to sub-blocky, trace disseminated pyrite.
15% SANDSTONE, as above.
- 1015 - 1020 100% SHALE, as above.
- 1020 - 1025 100% SHALE, as above.
Trace SANDSTONE, green, green grey, slight trace buff, very fine grained grading silt, subangular to subrounded, well sorted, well consolidated, calcareous and siliceous cement, argillaceous in part, tight, no show.
- 1025 - 1030 20% SHALE, dark grey, green grey, firm to hard, sub-blocky.
80% SANDSTONE, cream, buff, green grey in part, very fine grained, subangular to subrounded, well sorted, well consolidated, siliceous and minor calcareous cement, trace argillaceous, tight, no show.
- 1030 - 1035 100% SHALE, green, green grey, firm, sub-blocky, trace disseminated pyrite, trace silty, petroleum smell from sample, ABUNDANT YELLOW GOLD FLUORESCENCE, OIL AND DUST COATED SAMPLE.
Trace SANDSTONE, as above.
- 1035 - 1040 100% SHALE, green, green grey, firm, sub-blocky, trace disseminated pyrite with trace oil and dust covered sample.
- 1040 - 1045 100% SHALE, as above.
- 1045 - 1050 100% SHALE, as above.
- 1050 - 1055 100% SHALE, green, green grey, firm, sub-blocky to platy, disseminated pyrite.

1055 - 1060	100% SHALE, as above, with slightly silty.
1060 - 1065	100% SHALE, as above, with slightly silty.
1065 - 1070	100% SHALE, green, green grey, firm, sub-blocky to platy, disseminated pyrite, slightly silty in part.
1070 - 1075	100% SHALE, as above.
1075 - 1080	100% SHALE, as above.
1080 - 1085	100% SHALE, green, green grey, firm, sub-blocky, trace disseminated pyrite.
1085 - 1090	100% SHALE, as above..
1090 - 1095	100% SHALE, as above, platy in part.
1095 - 1100	100% SHALE, green, green grey in part, firm, platy to sub-blocky, trace disseminated pyrite.
1100 - 1105	100% SHALE, as above.
1105 - 1110	100% SHALE, as above.
1110 - 1115	100% SHALE, green, green grey in part, firm, platy to sub-blocky, trace disseminated pyrite.
1115 - 1120	100% SHALE, as above.
1120 - 1125	100% SHALE, as above.
1125 - 1130	100% SHALE, dark grey, green grey, green, firm, sub-blocky, occasionally platy, trace disseminated pyrite.
1130 - 1135	100% SHALE, as above.
1135 - 1140	100% SHALE, as above.
1140 - 1145	100% SHALE, dark grey, green, green grey, firm, sub-blocky to platy, trace disseminated pyrite, slight trace oil and dust covered sample (tan, light brown).
1145 - 1150	100% SHALE, as above, slightly calcareous.

1150 - 1155	100% SHALE, as above, slightly calcareous.
1155 - 1160	100% SHALE, dark grey, green, green grey, firm, sub-blocky, trace disseminated pyrite, slightly calcareous.
1160 - 1165	100% SHALE, as above.
1165 - 1170	100% SHALE, dark grey, green, green grey, firm, sub-blocky, trace disseminated pyrite.
1170 - 1175	100% SHALE, dark grey, green, green grey, firm, sub-blocky, trace disseminated pyrite, slight trace calcareous.
1175 - 1180	100% SHALE, as above, with abundant yellow gold fluorescence caused by oil and dust coating sample.
1180 - 1185	100% SHALE, as above.
1185 - 1190	100% SHALE, dark grey, green grey, firm to hard, sub-blocky to platy in part, trace disseminated pyrite, slight trace calcareous.
1190 - 1195	100% SHALE, dark grey, firm to hard, sub-blocky to platy in part, trace disseminated pyrite, slight trace calcareous.
1195 - 1200	100% SHALE, as above.
1200 - 1205	100% SHALE, as above.
1205 - 1210	100% SHALE, dark grey, firm to hard, sub-blocky to platy in part, trace disseminated pyrite, slight trace calcareous.
1210 - 1215	100% SHALE, as above.
1215 - 1220	100% SHALE, as above.
1220 - 1225	100% SHALE, dark grey, firm to hard, sub-blocky to platy, trace disseminated pyrite.
1225 - 1230	100% SHALE, as above.

- 1230 - 1235 100% SHALE, dark grey, green grey in part, firm to hard, sub-blocky to platy in part, trace disseminated pyrite.
- 1235 - 1240 100% SHALE, as above.
- 1240 - 1245 100% SHALE, as above.
- 1245 - 1250 100% SHALE, dark grey, green grey, firm, sub-blocky, trace disseminated pyrite.
- 1250 - 1255 100% SHALE, dark grey, green grey in part, firm, sub-blocky, trace disseminated pyrite.
- 1255 - 1260 100% SHALE, as above.
- 1260 - 1265 100% SHALE, as above.
- 1265 - 1270 100% SHALE, green grey, dark grey, firm, sub-blocky, trace disseminated pyrite.
- 1270 - 1275 100% SHALE, as above.
- 1275 - 1280 100% SHALE, as above, trace bentonite.
- 1280 - 1285 100% SHALE, green grey, dark grey, firm, sub-blocky to platy, disseminated pyrite.
- 1285 - 1290 100% SHALE, as above, abundant yellow gold fluorescence due to oil and dust coating sample.
- 1290 - 1295 100% SHALE, as above, abundant yellow gold fluorescence due to oil and dust coating sample.

Air drilling sample from dust suppressor.

60% SHALE, as above.

40% LIMESTONE, tan, buff, light brown, microcrystalline, I, dense, compact (micrite), no visible porosity, no show, slightly dolomitic.

Mud up at 1300.

1300

100% SHALE, dark grey, green grey, green, soft to firm, sub-blocky to platy, trace disseminated pyrite.

- | | |
|-------------|---|
| 1300 - 1305 | 100% SHALE, light to dark green, green grey, soft to firm, sub-blocky to platy, splintery, trace disseminated pyrite. |
| 1305 - 1310 | 100% SHALE, light to dark green, green grey, splintery, sub-blocky to platy, soft to firm, trace disseminated pyrite. |
| 1310 - 1315 | 100% SHALE, as above.
Trace SILTSTONE, white, tan grey, calcareous, siliceous, tight, no show. |
| 1315 - 1320 | 100% SHALE, green, green grey, dark grey in part, soft to firm, splintery, platy, occasionally sub-blocky, trace disseminated pyrite. |
| 1320 - 1325 | 100% SHALE, green grey in part, soft to firm, splintery, platy, trace disseminated pyrite. |
| 1325 - 1330 | 100% SHALE, as above. |
| 1330 - 1335 | 100% SHALE, green, green grey in part, soft to firm, splintery, platy, occasionally sub-blocky, disseminated pyrite. |
| 1335 - 1340 | 100% SHALE, as above. |
| 1340 - 1345 | 100% SHALE, as above. |
| 1345 - 1350 | 100% SHALE, green, green grey in part, soft to firm, splintery in part, platy, occasionally sub-blocky, disseminated pyrite. |
| 1350 - 1355 | 100% SHALE, as above.
Slight trace SILTSTONE, green, slightly calcareous, siliceous, tight, no shows. |
| 1355 - 1360 | 100% SHALE, as above. |
| 1360 - 1365 | 100% SHALE, as above. |
| 1365 - 1370 | 100% SHALE, green, trace green grey in part, soft to firm, splintery in part, platy to occasionally sub-blocky, disseminated pyrite. |

1370 - 1375	100% SHALE, as above.
1375 - 1380	100% SHALE, as above. Trace SILTSTONE, white, calcareous, trace siliceous, tight, no show.
1380 - 1385	100% SHALE, green, trace green grey in part, soft to firm, splintery in part, platy to occasionally sub-blocky, disseminated pyrite.
1385 - 1390	100% SHALE, as above.
1390 - 1395	100% SHALE, as above.
1395 - 1400	100% SHALE, dark grey, dark green, trace green grey, soft to firm, platy, disseminated pyrite.
1400 - 1405	100% SHALE, as above.
1405 - 1410	100% SHALE, dark green, dark grey in part, green grey in part, soft to firm, platy, disseminated pyrite. Trace SANDSTONE, white, clear, very fine to silt, subangular, well sorted, well consolidated, calcareous and siliceous cement, tight, no show.
1410 - 1415	100% SHALE, green, green grey, trace grey in part, soft to firm, platy, trace splintery, trace disseminated pyrite.
1415 - 1420	100% SHALE, green, green grey, trace dark grey, soft to firm, platy, splintery in part, trace disseminated pyrite.
1420 - 1425	100% SHALE, green, green grey, soft to firm, platy, trace splintery, trace disseminated pyrite.
1425 - 1430	100% SHALE, as above.
1430 - 1435	100% SHALE, as above.
1435 - 1440	100% SHALE, green, green grey in part, soft to firm, platy to splinter, disseminated pyrite.
1440 - 1445	100% SHALE, as above.

1445 - 1450	100% SHALE, as above.
1450 - 1455	100% SHALE, green grey, medium to dark grey, green in part, firm, platy, trace splintery in part, disseminated pyrite.
1455 - 1460	100% SHALE, medium to dark grey, green grey in part, trace green in part, firm, platy, trace splintery, disseminated pyrite.
1460 - 1465	100% SHALE, green grey, green, trace medium to dark grey, soft to firm, platy, trace splintery, disseminated pyrite.
1465 - 1470	100% SHALE, green grey, green, firm, platy to sub-blocky, disseminated pyrite.
1470 - 1475	100% SHALE, as above, trace crystalline calcite. Trace SILTSTONE, white, calcareous, trace siliceous, tight, no show.
1475 - 1480	100% SHALE, as above, with trace coarse, rounded, quartz grains.
1480 - 1485	100% SHALE, medium to dark grey, firm, platy to sub-blocky, disseminated pyrite.
1485 - 1490	100% SHALE, as above.
1490 - 1495	100% SHALE, as above, trace crystalline calcite.
1495 - 1500	100% SHALE, medium to dark grey, firm, platy to sub-blocky, disseminated pyrite, trace crystalline calcite, trace quartz grains ?
1500 - 1505	100% SHALE, medium to dark grey, green grey, green, firm, platy to sub-blocky, disseminated pyrite.
1505 - 1510	100% SHALE, as above. Slight trace SILTSTONE, white, calcareous, slightly siliceous, tight, no show.
1510 - 1515	100% SHALE, medium to dark grey, occasionally grey, trace green grey, firm, platy, splintery in part, trace disseminated pyrite.

- 1515 - 1520 100% SHALE, as above.
- 1520 - 1525 100% SHALE, dark to very dark grey, black in part, firm, platy to sub-blocky, slightly silty, abundant disseminated pyrite.
Slight trace SILTSTONE, white, calcareous, slightly siliceous, tight, no show.
- 1528 grab sample 100% SHALE, very dark grey to black, green in part, firm, blocky to sub-blocky, disseminated pyrite, slight trace calcareous in part.
Slight trace SILTSTONE, white, calcareous, siliceous, tight, no show.
- 1525 - 1530 100% SHALE, dark to very dark grey, firm to hard, sub-blocky, disseminated pyrite, trace siliceous.
- 1530 - 1535 100% SHALE, as above, trace crystalline calcite, trace calcareous in part, sub-blocky to blocky.
Slight trace SILTSTONE, white, calcareous and siliceous, tight, no show.
- 1535 - 1540 70% SHALE, medium grey, very dark grey, black, green grey in part, firm, sub-blocky, disseminated pyrite.
30% LIMESTONE, white, salt and pepper, very fine grained, crystalline, sucrosic, III - I/III, slight trace dolomite crystals, common argillaceous partings, spotted poor porosity (crystalline) "b", no show.
- 1540 - 1545 30% SHALE, as above.
70% LIMESTONE: 1) 30% dark brown, abundant brown grey, microcrystalline, dense (I), tight, no show argillaceous.
2) 60% salt and pepper, fine, occasionally medium grained, white grains/pellets with microcrystalline dark grey to black matrix, very argillaceous, argillaceous partings, tight, no show.
3) 10% white, buff, very fine to microcrystalline, I/III, no visible porosity, no show.

- 1545 - 1550 20% SHALE, medium grey, green grey, sub-blocky to platy.
 80% LIMESTONE: 1) 30% dark grey, dark grey brown, microcrystalline (I), mudstone, micrite, argillaceous, tight, no show.
 2) 70% salt and pepper, mottled in part, light grey, buff, very fine to fine grained, granular texture, greenstone, I/III, white green/dark grey argillaceous matrix, argillaceous partings, no visible porosity, no show.
- 1550 - 1551.6 30% SHALE, medium to dark grey, green grey, sub-blocky to platy, firm to hard.
 20% LIMESTONE, as above.
 50% DOLOMITE, white, buff, fine to medium crystalline, I/III - III, spotted poor porosity (crystalline) "b", trace dead asphalt, no fluorescence, no cut, slight trace quartz crystals.
- Core #1, 1551.6 0 1555.4 m, cut 3.8 m, rec. 3.7 m.
 Core #2, 1555.4 - 1562.4 m, cut 7.0 m, rec. 7.0 m.
- 1562.4 - 1565 30% SHALE, green grey, medium grey, firm, platy, disseminated pyrite.
 70% DOLOMITE, dark grey, salt and pepper, white, very fine to fine crystalline, I/III - I with coarse dolomite and quartz crystals (vugs), spotty poor "d" porosity (vuggy), no fluorescence, no cut.
- 1565 - 1570 20% SHALE, as above.
 80% DOLOMITE, as above.
- 1570 - 1575 10% SHALE.
 90% DOLOMITE, dark grey, very fine to fine grained, minor coarse white dolomite and quartz crystals (vug, limy) I/III, spotted poor "d" and "c" porosity, no fluorescence, no cut.
- 1575 - 1580 10% SHALE.
 60% DOLOMITE, as above.
 30% LIMESTONE, light brown, tan, light grey, microcrystalline, I - I/II, tight, no show, slightly dolomitic.

Bottom up 1580.3

20% SHALE, green, green grey.

30% DOLOMITIC, as above.

50% LIMESTONE, as above.

1580 - 1585

30% SHALE, medium to dark grey, green grey in part, firm, platy, disseminated pyrite.

30% DOLOMITE, dark grey to white, brown grey in part, very fine to fine grained, occasionally medium grained, I/III matrix with coarse white and clean dolomite and quartz grains, slight trace "c" and trace "d" porosity (vuggy), (trace crystalline ?), no fluorescence, no cut, trace asphaltic, dolomite replacing feature.

40% LIMESTONE, brown, brown grey, microcrystalline (I), dense, compact, (mudstone, micrite), no visual porosity, no show, slightly argillaceous, trace dolomite, occasionally buff, light grey microcrystalline, I/II.

1585 - 1590

30% SHALE, medium to dark grey, firm.

50% DOLOMITE, dark grey, light brown in part, fine to medium crystalline, I/III, trace dark argillaceous matrix coating crystals (asphalt), with abundant white dolomite crystals, trace quartz crystals, trace pyrite, poor "c" and poor "d" porosity (fair vuggy porosity), trace dark asphalt, no fluorescence, no cut.

20% LIMESTONE, buff, tan buff, microcrystalline, I/II, chalky, occasionally compact, slightly dolomitic, slightly argillaceous, minor light brown, brown grey, microcrystalline, compact, I, no visible porosity, no show.

1590 - 1595
trough sample

15% LCM.

70% SHALE, dark grey, firm, platy to sub-blocky in part, trace disseminated pyrite.

15% DOLOMITE, white, smoky, light grey, fine to medium grained, I/III, with abundant white to smoky medium to coarse dolomite crystals and minor quartz crystals, fair "d" porosity (vuggy), trace argillaceous matrix (asphaltic ?), no fluorescence, no cut.

Trace LIMESTONE, light brown, microcrystalline, I, no visible porosity, no show.

1595 - 1600 trough sample	60% SHALE, as above. 40% DOLOMITE, white, smoky, black in part, mottled in part, fine to medium grained, I/III, with very abundant white medium to very coarse dolomite crystals, minor quartz crystals, fair to spotty good "d" (vuggy) porosity, trace argillaceous matrix (asphaltic ?), no fluorescence, no cut.
1600 - 1605 trough sample	70% SHALE, as above. 30% DOLOMITE, as above.
1605 - 1610 trough sample	60% SHALE, dark grey, firm, platy, disseminated pyrite. 40% DOLOMITE, white, smoky, trace black in part, mottled in part, fine to medium grained, I/III, with very abundant white and smokey medium to very coarse dolomite crystals, minor coarse quartz crystals, fair to spotty good "d" (vuggy) porosity, trace black argillaceous matrix (asphaltic ?), no fluorescence, no cut.
1610 - 1615 trough sample	60% SHALE, as above. 40% DOLOMITE, as above.
1615 - 1620	70% SHALE, as above. 30% DOLOMITE, as above.
1620 - 1625	100% LCM.
1625 - 1630	20% SHALE, medium to dark grey, firm, platy to sub-blocky, trace disseminated pyrite. 80% DOLOMITE, 30% white, smoky in part, black in part, mottled in part, very fine to fine grained, I/III with very abundant (70%) white, medium to very coarse, I - I/III, dolomite crystals, minor quartz crystals, lining vugs, fair to spotty good "d" (vuggy) porosity, trace black argillaceous matrix (asphaltic ?), no fluorescence, no cut.
1630 - 1635	30% SHALE, as above. 70% DOLOMITE, as above.

- 1635 - 1640 30% SHALE, medium to dark grey, firm, platy to sub-blocky, trace disseminated pyrite.
70% DOLOMITE, minor (30%) white, smoky, black in part, mottled in part, fine to medium grained, I/III, with very abundant (70%) white occasionally smoky, medium to very coarse, I - I/III, dolomite crystals, and minor quartz crystals, lining vugs, fine to spotty good "d" (vuggy) porosity, trace black argillaceous matrix (asphaltic ?), no fluorescence, no cut.
- 1640 - 1645 20% SHALE, as above.
70% DOLOMITE, as above.
- 1645 - 1650 40% SHALE, as above.
60% DOLOMITE, as above.

3. CORE SUMMARY

<u>Core No.</u>	<u>Interval</u>	<u>Formation</u>	<u>Recovery</u>	<u>Comments</u>
One	1551.60 - 1555.40	Slave Point	3.70 m	Jammed off
Two	1555.40 - 1562.40	Slave Point	7.00 m	Stuck on connection

LOCATION: E-12:50410°W 22510°N FIELD AREA: Gullery, C.R.S. 4: 40, 2

DATE: 10/07/77 TIME: 1500

EXHIBIT: Water House

3542: 410.45

[illegible]

33 34 35

343

THE UNIVERSITY OF CHICAGO

— 1991 —

100-37363-102

SECRET

NO. OF PAGES: 2

INTEREST	ROCK DESCRIPTION	SHOWS	FLUOR.	CUT	% HC ODR	INTERCOLOR	FLUORIM.	#SYN	COMMENTS & FRAC/DIP STRUCTURES
1551.6	Core #1 1551.6m - 1555.4m Slave Pt. cut 3.5m rec. 3.7m 2.75hrs.								
1551.6	DOL DK GRN, GSF, F-MED XL, 1-1/111, XL CALC. S. IR ARG MAT COIG XL IP(ASPH?) DOL REPL. IR FOSS REPL. IR STYL IR & POR PR & POR (UUG) IR FRAC POR DOL FLD W XLN DOLATZATR PYR OPEN IR & DOL W XLN MINOR DOLATZATR PYR IR & DOL W POR NO FLDOR, NO CUT								FRACITURES: 1551.75-1551.87 (UUG) 1552.67-1552.85 (UUG) 1553.22-1553.48 (UUG) Occasional traces closed & open fractures: Minor open horizontal fractures (possible large 100 ft)
1554.6	DOL DK GRN, GSF, F-MED XL, 1-1/111, XL CALC. S. IR ARG MAT COIG XL DOL REPL. IR FOSS REPL. IR STYL IR & POR PR & POR (UUG) IR FRAC POR DOL FLD W XLN DOLATZATR PYR OPEN IR & DOL W XLN MINOR DOLATZATR PYR IR & DOL W POR NO FLDOR, NO CUT								
1557.30	Core #2 1557.30m - 1562.4m Slave Pt. cut 7.2m rec. 7.2m 7.0hrs								
1557.30	DOL DK GRN, GSF, F-MED XL, 1-1/111, XL CALC. S. IR ARG MAT COIG XL DOL REPL. IR FOSS REPL. IR STYL IR & POR PR & POR (UUG) IR FRAC POR DOL FLD W XLN DOLATZATR PYR OPEN IR & DOL W XLN MINOR DOLATZATR PYR IR & DOL W POR NO FLDOR, NO CUT								FRACITURES: 1557.5-1562.4. FRACITURES LINED & OCCASIONALLY INFILLED WITH QTZ, PYR, & DOL CRYSTALS.
1557.75	DOL DK GRN, GSF, F-MED XL, 1-1/111, XL CALC. S. IR ARG MAT COIG XL DOL REPL. IR FOSS REPL. IR STYL IR & POR PR & POR (UUG) IR FRAC POR DOL FLD W XLN DOLATZATR PYR OPEN IR & DOL W XLN MINOR DOLATZATR PYR IR & DOL W POR NO FLDOR, NO CUT								COMMON VERTICAL FRACITURES AS ABOVE

NAME: Shall Calhoun 8-12

LOCATION: N-12:40010'W122210'E FIELD/AREA: Polaris F.W.D. #: 40362

255: 72/92/13

TIME: 1500

11-25-65: 11:00 AM - 11:45 AM

SR40: 410.26

FORMATION: Slave Pt.

000 000 000

INTEREST: 155.40 TO 1562.40

COUNTRY: 107

0000 0000 0000

TYPE SET: 24:00. 25

SMALL SEC. - NO. OF SHOTS: 1/4 NO. FEEDS: 1/4

42. 07 0000. 0

[illegible]

WELLNAME: Shell Delberta P-12 LOCATION: P-12-60-10-N122E101W FIELDNAME: Delberta U.S.D. #: W0502
DATE: 08/12/88 TIME: 1200 EXAMINER: Peter Talbot SRID: 410.0
FORM-100: 815499 CORR-50.1: 122 INTERVAL: 155.50 TO 155.50 RECOVERY: 10.7 CORR-50.2: 115.0
TYPE: 22.44 WASH: 0.00 W/A DRILLING: 12.00 SHUT: 0.00 NO. REELS: 0 NO. OF LOGS: 0

10-1-54

1551. 62
1552. 62
1553. 26
1554. 83
1555. 33
1556. 88
1557. 62
1558. 97
1559. 13
1560. 81
1561. 70
1562. 38
1563. 70
1564. 83

Shell Celibeta B-12

B-12: 60°10'N, 122°15'W - page 4-i-1

WIRELINE LOGGING SUMMARY

<u>Run No.</u>	<u>Date</u>	<u>Log Type</u>	<u>Interval</u>	<u>Remarks</u>
One a)	90/02/16	Phasor+BHCS+GR+SP+CAL	1450-0.00	Attempt to log from 1450. Bridge at 1098. Log 819- 686. No repeat.
Two a)	90/03/07	DLL+MSFL+GR+SP	1606-548	
b)		BHCS-GR+CAL	1597-0	
c)		CNL+LDT+Pe+GR+DAC	1592-548	
d)		Phasor+GR+SP	1589-1500 & 900-700	
e)		VSP+Check Shot Survey	1580-0	every 20 m.

Comparison of individual logs with each other (correlation) and with Driller's depth

DISCOVERY Geological Wellsite Consulting Ltd.

WELLSITE LOGGING SUMMARY

WELLNAME: Shell Celibeta B-12 DATE: 90/02/15 RUN #: 1
LOCATION: 300-B12-06010-11215-0 DEPTH (Driller): 1450.0 m KB

LOGGING COMPANY: Schlumberger ENGINEER: Brendan Reding
TRUCK NO./DISTRICT: 8210/High Level

TIME ORDERED OUT: 90/02/15 - 24:00 ARRIVED (On lease): 90/02/15 - 08:00
COMMENCED (Rig up): 90/02/15 - 08:30
FINISH (Tearing out): 90/02/15 - 14:00 TOTAL TIME (Logging): 0.75 hours
TOTAL METERS LOGGED: 140 m

LOGS RUN (With Respective Intervals):

- 1) PHAS IND-BCHC-GR-SP-CAL; BHCS-GR: 1450-0; PIL-SP-CAL: 1450-548

LOG QUALITY (Repeats, Baseline Shift, Zeroing, Etc.):

WELL LOGGING SUMMARY

LOGGING PROBLEMS AND ADDITIONAL COMMENTS:

(Breakdown/Repair, Waiting/Lost Time, Crew Attitude and Efficiency, Etc.)

TOOL	TIME STARTED IN	TIME ON BOTTOM	TIME OUT	DOWN TIME	TOTAL
------	-----------------	----------------	----------	-----------	-------

BHCS-GR	12:30	"	13:30	0.25 hrs	1 hr
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PHIL-SP-CAL	"	"	"		
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COMMENTS:

A decision was made at 15:00 hours, 90/02/14 that TD for logging would be 1450 m. Schlumberger was called out for 24:00 hours, 90/02/14, but the earliest a truck could get to the well site was 90/02/15, 08:00 hours.

The zone of interest (690 - 830 m) was first logged as a repeat section. On the way down for the main run, the tool bridged off at 1096 m, 13:00 hours. After attempting to work through the bridge, the tool pulled free at 75% of maximum. The tool was then pulled out, without logging the rest of the hole.

The loggers were reased at 00:30, 90/02/15.

A safety meeting was held prior to rigging up the sheaves.

Shell Celibeta B-12

B-12: 60°10'N, 122°15'W - page 4-i-3

WELL LOGGING SUMMARY:

PERFORMANCE RANKING:

WELLSITE SUPERVISOR:

PERFORMANCE RANKING:

OFFICE SUPERVISOR:

PRE-JOB SAFETY MEETING HELD: Y

WELLSITE LOGGING ENGINEER: Brendan Reding

Shell Celibeta B-12

B-12: 60°10'N, 122°15'W - page 4-1-4

WELLSITE LOGGING SUMMARY

WELLNAME: Shell Celibeta B-12 DATE: 90/03/06 RUN #: 2
LOCATION: 300-B12-06010-12215-G DEPTH (Driller): 1659.0 m KB

LOGGING COMPANY: Schlumberger ENGINEER: Heather Hammond
TRUCK NO./DISTRICT: 8175/GP

TIME ORDERED OUT: 90/03/06 - 03:00 ARRIVED (On lease): 90/03/06 - 03:00
COMMENCED (Rig up): 90/03/07 - 08:30
FINISH (Tearing out): 90/03/08 - 05:30 TOTAL TIME (Logging): 21.00 hours
TOTAL METERS LOGGED: 1606 m

LOGS RUN (With Respective Intervals):
DLL-MSFL-SP-GR 1606-548: BHCS-GR-CAL 1597-0
Phasor Ind.-GR-SP 1592-1500 & 900-700
CNL-LDT-Pe-GR-DAC 1589-548
Check shot survey every 20 m from 1580.

LOG QUALITY (Repeats, Baseline Shift, Zeroing, Etc.):
OK

WELL LOGGING SUMMARY

LOGGING PROBLEMS AND ADDITIONAL COMMENTS:
(Breakdown/Repair, Waiting/Lost Time, Crew Attitude and Efficiency, Etc.)

TOOL	TIME STARTED IN	TIME ON BOTTOM	TIME OUT	DOWN TIME	TOTAL
DLL-SP-GR	08:45	09:15	11:45		3.00 hours
BHCS-GR-CAL	12:50	13:05	16:35		3.75 hours
Phasor-GR-SP	17:00	17:15	18:15		1.25 hours
CNL-LDT-DAC	18:30	18:45	21:30		3.00 hours
VSP-Chest Shot	22:45	23:00	05:15		6.50 hours

COMMENTS:

A decision was made at 16:00 hours, 90/02/14 that TD for logging would be 1450 m. Schlumberger was called out for 24:00 hours, 90/02/14, but the earliest a truck could get to the well site was 90/02/15, 08:00 hours.

DISCOVERY Geological Wellsite Consulting Ltd.

Shell Celibeta B-12

B-12: 60°10'N, 122°15'W - page 4-i-5

COMMENTS: (cont'd)

The zone of interest (690 - 830 m) was first logged as a repeat section. On the way down for the main run, the tool bridged off at 1098 m, 13:00 hours. After attempting to work through the bridge, the tool pulled free at 75% of maximum. The tool was then pulled out, without logging the rest of the hole.

The loggers were released at 00:30, 90/02/15.

A safety meeting was held prior to rigging up the sheaves.

Shell Celibeta B-12

B-12: 60°10'N, 122°15'W - page 4-i-6

WELL LOGGING SUMMARY:

PERFORMANCE RANKING: Commendable

WELSITE SUPERVISOR: Peter Thomas

PERFORMANCE RANKING:

OFFICE SUPERVISOR:

PRE-JOB SAFETY MEETING HELD: Y

WELLSITE LOGGING ENGINEER: Heather Hammond

SHELL CANADA LIMITED PETROPHYSICAL ENGINEERING LOGGING INFORMATION SHEET

WELL NAME: Shell Celibeta B-12				PROVINCE: Northwest Territories	
LOCATION: UNIT 2 SECTION 12 GRID AREA: 60°10'N, 122°10'W					
V.I. 416.14m	S.L. 410.66m	T.D. 1450m	CASING @ 545m	MASS: 23.57 Kg/m	SIZE: 244.5mm
MUD TYPE: Gel Dracoidal		DENSITY: 1210	VIS: 75	W.L.: 11.7	
HOLE SIZE: 215.1 to 1300 m.; 215.9 to T.D.					
LOGS	INTERVAL	OPERATION SCALE	DEPTH SCALE		
1. Pressure Indicator	1450-545	0.2 - 2000.0	1:1200 & 1:1240		
2. PHO Sonic	1450-0	500-100-170	1:1240 & 1:1240		
3. Gamma Ray	1450-0				
4. Spontaneous Potential	1450-545				
5. 3 Arm Caliper	1450-545				
6.					
7.					
8.					
PRELIMINARY FIELD PRINTS REQUIRED [Y] NO. OF FIELD PRINTS <u>3</u> NO. OF FINAL PRINTS <u> </u>					
NOTE: 1) SHOW ALL CALIBRATIONS ON ALL LOGS RUN 2) TAPE ALL LOGS AND PROVIDE A LIS TAPE AND LISTING WITH THE FIELD PRINTS 3) TENSION CURVES ON ALL LOGS 4) REPEAT BOTTOM 30m OR OVER INTERVALS AS SPECIFIED: 5) RUN 90° PHASING BAR WITH NEUTRON/DENSITY 6) RUN STAND OFFS WITH RESISTANCE TOOLS 7) RECORD MAXIMUM BHT FOR EACH LOG RUN 8) CONFIRM LDT LOG SCALE 9) CONFIRM SURVEYED GROUND LEVEL 10) MUD SAMPLES OBTAINED [y] OBTAIN MUD SAMPLES [] 11) RECORD PROBLEMS ON REMARKS COLUMN OF LOG HEADING 12) OFFSET LOGS AVAILABLE [y] 13) DISCUSS AND CONVENE PRE-JOB SAFETY MEETING 14) DATA TRANSMISSION Y/N [y]: TRANSMISSION INTERVAL: TOTAL LOG 15) PETROPHYSICS CONTACT: Name: <u>NANCY HARRISON</u> ; Tel (office) <u>403-232-3982</u> (home) <u>403-276-2798</u> WELLSITE SUPERVISOR: <u>KEN HOLMES</u>					

SHELL CANADA LIMITED PETROPHYSICAL ENGINEERING LOGGING INFORMATION SHEET

WELL NAME: Shell Delibeta R-12				PROVINCE: Northwest Territories	
LOCATION: UNIT B SECTION 012 GRID AREA: 40°10'N, 122°15'W					
K.P. 416.14	S.L. 410.25	T.D. 1655	CASING @ 546m	MASS: 37.57 kg/m	SIZE: 244.5mm
MUD TYPE: Gel Drilling		DENSITY: 1255	VIB: 50+ 100" in x 50"		W.L. 10.2
HOLE SIZE: 12 1/4" 545-1000: 115.5 1000-1655 TIGHT SPOTS (depth)					
LOGS	INTERVAL	OPERATION SCALE		DEPTH SCALE	
1. Total Lithology	1606-546	0.2-2000		1:600 & 1:240	
2. Micro-Spherically Focused	1606-546	0.2-2000		1:600 & 1:240	
3. BAC Sonic	1597-0	300-200-100		1:600 & 1:240	
4. CML & LOT with dc curve	1589-546	Limestone Matrix: +45 -0 -15		1:240 & 1:240	
5. DAD (Dth. Vol.)	1589-546	Hole: 215.70216m Logging 100.7		1:240 & 1:240	
6. Gamma Ray	1597-0	0.2-150		1:600 & 1:240	
7. Spontaneous Potential	1606-546	+/- 10 (or appropriate)		1:600 & 1:240	
8. Phasor Induction	1592-1500 & 900-700	0.2-2000		1:600 & 1:240	
9. Check Shot Survey+VSP	1580-0 (every 20m)				
10.					
11.					
PRELIMINARY FIELD PRINT REQUIRED [Y]		NO. OF FIELD PRINTS <u>2</u>		NO. OF FINAL PRINTS: see contact	
NOTE: 1) SHOW ALL CALIBRATIONS ON ALL LOGS RUN 2) TAPE ALL LOGS AND PROVIDE A LOG TAPE AND LISTING WITH THE FIELD PRINTS 3) TENSION CURVES ON ALL LOGS 4) REPEAT BOTTOM 60m OR OVER INTERVALS AS SPECIFIED: 5) RUN 90° PHASING BAR WITH NEUTRON/DENSITY 6) RUN STAND OFFS WITH RESISTANCE TOOLS 7) RECORD MAXIMUM BHT FOR EACH LOG RUN 8) CONFIRM LOT LOG SCALE 9) CONFIRM SURVEYED GROUND LEVEL 10) MUD SAMPLES OBTAINED [X] OBTAIN MUD SAMPLES [] 11) RECORD PROBLEMS ON REMARKS COLUMN OF LOG HEADING 12) OFFSET LOGS AVAILABLE [Y] 13) DISCUSS AND CONVENE PRE-JOB SAFETY MEETING 14) LOGNET/DATREX LOGS TO PETROPHYSICAL CONTACT Y/N [Y]: Name: <u>Nancy Harrison</u> Transmission Interval: Total Interval Logged Tel: (office) 403-232-3992, (home) 403-276-2798 WELLSITE SUPERVISOR: <u>Peter Thomas</u> Page 1 of 2					

SHELL CANADA LIMITED
LOGGING INFORMATION SHEET
PETROPHYSICAL ENGINEERING

PRE LOGGING SAFETY MEETING CHECKLIST

WHILE RIGGING UP:

- BE CAREFUL WHILE RIGGING UP UTILIZING PROPER LIFTING TECHNIQUES AND WATCHING FOOTING (I.E. IN MUD AND ON V DOORS).
- KEEP HANDS, TOOLS AND OTHER LINES (I.E. CABLES) CLEAR OF SHEAVES, LOGGING TOOLS AND LOGGING LINES.
- ENSURE THAT THE SHEAVES ARE WELL SECURED. LOGGING OPERATOR SHOULD BE RESPONSIBLE FOR RIGGING UP AND/OR SHEAVE ESPECIALLY.
- USE HELP OF RIG PERSONNEL ONLY AS REQUIRED. CLEAR UNNECESSARY PERSONNEL FROM DRILL FLOOR.
- CLEAR DRILL FLOOR OF ANY UNNECESSARY TOOLS.
- ENSURE THAT THERE IS PROPER WORKING BOARD CLEARANCE (30-35 FEET IS MORE THAN ADEQUATE) AND USE SUFFICIENT ROOM FOR THE ENTIRE LOGGING TOOL STRING.
- ALERT DRILLING CREW WHEN RIGGING UP RADIOACTIVE TOOLS.
- DO NOT WALK ON THE LOGGING CABLE WHEN IT IS LAYING ON THE GROUND OR CATWALK.

WHILE LOGGING:

- STAY CLEAR OF LOGGING LINE (I.E. STAY OFF V-DOOR STAIRS AND DRILL FLOOR), ESPECIALLY IF PULLING TIGHT DUE TO THE POSSIBILITY OF THE LINE BREAKING.
- NOTIFY DRILLING CREW WHEN RADIOACTIVE TOOLS ARE BEING USED.
- HOISTING SPEED SHOULD NOT BE MORE THAN 10000-15000 FEET PER HOUR TO ENSURE THAT SWABBING OF THE WELL DOES NOT OCCUR. WELLS CONDITIONS MAY DICTATE A SLOWER SPEED.
- IF ENCOUNTERING MECHANICAL TOOL PROBLEMS, MOVE THE TOOL OCCASIONALLY TO PREVENT DIFFERENTIAL STICKING.
- WATCH FOR HOLE PROBLEMS. (I.E. BRIDGING, SLOUGHING, STICKING, ETC)
- BE AWARE OF THE AMOUNT THAT YOU CAN PULL ON THE LOGGING STRING, ALERT ENGINEER IF TIGHT HOLE CONDITIONS ARE DEVELOPING AND DO NOT PULL OUT OF THE WIRELINE SOCKET.
- EMERGENCY H2S AWARENESS IS VITAL. THE OPERATOR SHOULD BE ALERT TO ANY EMERGENCY MOVEMENTS BY THE RIG CREW AND THE LOGGING CREW SHOULD EVACUATE THE AREA USING PRESCRIBED ESCAPE ROUTES.
- ENSURE THAT VALID H2S TICKETS ARE HELD BY THE ENTIRE CREW.
- BE AWARE OF POSSIBLE OPERATOR FATIGUE PRIOR TO DRIVING OFF THE LEASE.

DRILLING CREWS:

- ASSIST LOGGING CREWS ONLY AS REQUIRED, OTHERWISE STAY AWAY FROM THE DRILL FLOOR WHILE LOGGING.
- LOCK OUT BRAWWORKS AND SECURE THE BLOCKS WHILE LOGGING.
- CONDUCT FLOW CHECKS OCCASIONALLY.
- CLOSE RAMS WHILE PICKING UP TOOLS.
- CLEAR DRILL FLOOR OF UNNECESSARY TOOLS.
- STAY CLEAR OF MOVING LINES AND SHEAVES.
- STAY AWAY FROM V-DOOR STAIRS AND DRILL FLOOR WHILE LOGGING DUE TO POSSIBILITY OF LOGGING LINE BREAKING.

5. DRILL STEM TEST SUMMARY

Test #	Formation	Interval	IMHP	PPP/ Time	ISIP/ Time	IFP	PPP/ Time	PSIP/ Time	PMHP	Flowrates and/or Recovery	Remarks
		(m)	Kpa	Kpa/ min	Kpa/ min	Kpa	Kpa/ min	Kpa/ min	Kpa		
One	Tetchu	731-766.81	8866	523/21	132/60	132	143/60	155/120	8843	None	No GTS, no fluid in pipe & tool.

Shell Celibeta B-12

B-12: 60°10'N,122°15'W - page 5-ii-1

DRILL STEM TEST REPORT

WELLNAME: Shell Celibeta B-12 DATE: 90/02/15 TEST #: 1
LOCATION: 300-B12-06010-12215-0 INTERVAL: 730.0 m KB to 767.0 m KB
FLD/AREA: Celibeta, NWT FORMATION: Devonian Tetcho

TYPE OF TEST: Inflated, closed chamber COMPANY: Schlumberger, Delta P

HOLE - K.B.: 416.14 G.L.: 410.66 T.D.: 1450 P.B.T.D.:
HOLE SIZE - DRILLED: 219.1 Calipered: 225.0 mm

CASING - SIZE: 244.5 WT: 53.57 SHOE DEPTH: 548.0 m
PERS INTERVAL: to m SHOTS/m: PHASING: deg.

MUD - TYPE: GelChem DEN: 1220 VIS: 72 WL: 9.6 FC: 1.5 pH: 9.6
GEL: Cl: 200

TRACER: N MUD RES: 4.2 ohm/m @ 15.0 deg. C. HOLE COND. TIME:

DRILL STEM TEST REPORT

TEST TIMES -

STARTED IN HOLE: 10:00 ON BOTTOM: 11:45 PACKER SET: 13:15
PRE-FLOW STARTED: 13:22 INITIAL SHUT-IN STARTED: 13:43
FINAL FLOW STARTED: 14:43 FINAL SHUT-IN STARTED: 15:43
PACKER PULLED LOOSE: 17:43 OUT OF HOLE: 21:00 TEST POSITIVE: Y

PRESSURE DATA - RECORDED NO: 10960 DEPTH: 752.26 m

CHART POINTS	IMHP	PFP	ISIP	IFP	FSIP	FFP	FHP
PRESSURE	8866	523	132	132	155	143	8843
TIME (mins)		21	60	60	120		

BHT: deg. C. DEPTH: TIME ON BOTTOM: 358 min.

DRILL STEM TEST REPORT

RECORDER AND MISCELLANEOUS DATA

RECORDER NO.	13848	50077	6840	10960	50086	5026
DEPTH	712.00	713.52	720.80	732.06	732.06	768.97
CAPACITY	15617	99999	27513	23430	99999	20747
CLOCK	24	99	24	24	99	24
IN/OUT	IN	In	In	OUT	OUT	IN

CUSHION USED: N SALINITY:

WT OF D.P. - BEFORE: 32000 AFTER: 32000 WT ON PACKER: 6000

CHOKE SURFACE: 6.40 BOTTOM: 19.05 WT PACKER PULLED LOOSE: 39000

MUD LEVEL IN ANNULUS: Held steady

DRILL STEM TEST REPORT

FLOWS TO SURFACE

FLUID TYPE	TIME TO SURFACE	VOL/TEST TIME	RATE/ 24 HR	STATIC PRESS	DIFF. PRESS	ORIFICE	TEMP	%H ₂ S
------------	--------------------	------------------	----------------	-----------------	----------------	---------	------	-------------------

RECOVERY

FLUID TYPE	METERS	M3	TIME AFTER P.O.	SALINITY	DENSITY
------------	--------	----	-----------------	----------	---------

DRILL STEM TEST REPORT

SAMPLE CHAMBER - NO.: 41 VOL.:

WAS SAMPLER DRAINED: Y CONTENTS IF DRAINED: Empty

WERE GAS SAMPLES TAKEN: N NO.:

COMMENTS (BLOW DESCRIPTION):

Second Sample Chamber # 101 vol. 2, # 103 vol. 1

Preflow: No response on closed chamber, open bubble line to ensure took OK, very weak air blow, closed tool and restart preflow to ensure closed chamber integrity, 0.33 Kpa increasing ISI: no pressure changes. VO: no increase, slight decrease. PSI: no pressure change observed at surface.

WELLSITE REPRESENTATIVE: P. Thomas, K. Holmes

DRILL STEM TEST REPORTWELLNAME: Shell Celibeta B-12
LOCATION: 300-B12-06010-12215-0DATE: 90/02/15 TEST #: 1
INTERVAL: 730.0 m KB TO 767.0 m KB

ASSEMBLY DESCRIPTION	DEPTH FROM K.B.	LENGTH	O.D.
Stickup from rig floor 7.09 m			
1 single	-6.04	8.94	114.0
Rig floor (delta flr-KB=0 .35 m)	0.35		
Stabbing valve	2.20	0.60	163.0
17.33stds pipe; 5stds HW; 3stds DC totalling 683.15m	2.80		114.0
Pump out sub	685.95	0.29	150.0
1std DC with cross over	686.24	25.41	165.0
Pump out sub	711.65	0.31	126.0
AK1 recorder	711.96	1.52	127.0
Electronic recorder	713.48	1.82	127.0
Hydraulic tool	715.30	1.63	127.0
3 sample chamber with cross over	716.93	3.83	126.0

DRILL STEM TEST REPORT

ASSEMBLY DESCRIPTION	DEPTH FROM K.B.	LENGTH	O.D.
AK1 recorder	720.76	1.52	126.0
Extension joint and jars	722.28	3.44	126.0
Safety joint	725.72	0.68	126.0
Pump and screen and deflate system	726.40	2.82	139.0
Upper packer	729.22	1.78	171.0
Port sub	731.00	0.76	128.0
Recorder carrier (K2 and electronic)	731.76	1.97	134.0
Spacer pip; X0; 1std pipe; X0	733.73	32.66	114.0
Packer stub	766.39	0.42	126.0
Bottom packer	766.81	1.86	170.0
AK1 recorder	768.67	1.52	118.0
Belly Spring	770.19	1.56	120.0
Bullnose	771.75	0.61	119.0
Bottom of tool	772.36		

DRILL STEM TEST REPORTFLUID SAMPLE COLLECTION

<u>POINT OF SALE</u>				<u>FIELD ANALYSIS</u>							SENT TO LAB.
NO.	FLUID TYPE	METER ABOVE TOOL	TIME AFTER P.O.	SALIN.	pH	GRAVITY	TEMP	OTHER	DUMP	RETAIN	

Shell Celibeta B-12

B-12: 60°10'N, 122°15'W - page 5-ii-5

DRILL STEM TEST REPORT

FLUID SAMPLE COLLECTION (cont'd)

<u>POINT OF SALE</u>				<u>FIELD ANALYSIS</u>							SENT TO LAB.
NO.	FLUID TYPE	METER ABOVE TOOL	TIME AFTER P.O.	SALIN.	PH	GRAVITY	TEMP	OTHER	DUMP	RETAIN	

DRILL STEM TEST REPORT

GAS SAMPLE COLLECTION

NO.	POINT OF SALE	NO.	POINT OF SALE
-----	---------------	-----	---------------

COMMENTS:

No gas to surface, no recovery in drill pipe or collars.
Sample chamber #41 opened at lease with no recovery. Chamber was empty.
Sample chambers #101 and #103 were sent to C&G Laboratories in Edmonton,
with note to contact Nancy Harrison for instructions.

DISCOVERY Geological Wellsite Consulting Ltd.

DRILL STEM TEST ASSEMBLY SKETCH & DESCRIPTION

WELL NAME:	TEST #:	INTERVAL:
Shell Celibata B-12: 60°10'N, 122°15'W	One	731.00-766.81

SKETCH	ASSEMBLY DESCRIPTION	DEPTH FROM KB (m)	LENGTH (m)	OD (mm)	ID (mm)
	(Depth measured to top of tool part)				
	High torque from floor (AK1 #3548)	16.24	31.55	113	72
	1 single drill pipe				
	Rig floor (Delta 5110 #2 35m)	1.75		153	72
	1 1/2" stand drill pipe	2.90	445.40	113	72
	5 Stands heavy weight drill pipe (includes 1 single drill pipe)	448.68	138.20	114	72
	2 Stands drill collars (includes 1 KD and 1 single heavy weight pipe)	606.88	79.07	165	72
	Pump out sub (mechanical)	685.95	.29	150	69
	1 Stand drill collar	686.24	25.10	165	72
std	Cross over	711.34	.31	159	
	Pump out sub (pressure)	711.65	.31	127	67
Y	Upper recorder hanger	711.96	.30	127	
I	Recorder bomb well (AK1 #5048)	712.26	1.22	125	60
Y	Upper recorder hanger	713.48	.30	127	
I	Recorder bomb well (elec rec #50077)	713.78	1.52	124	60
+	Hydraulic tool	715.30	1.63	127	
Q	Sample chamber # 41	716.93	1.17	126	
Q	Sample chamber # 101	718.10	1.15	126	
Q	Sample chamber # 103	719.25	1.21	126	
9.4 X	Cross over sub	720.46	.30	127	
Y	Upper recorder hanger	720.76	.30	126	
I	Recorder bomb well (AK1 #6540)	721.06	1.22	126	60
I	Extension joint	722.28	1.73	125	
I	Jars (open)	724.01	1.71	126	
-	Safety joint	725.72	.68	126	49
	Pump	726.40	.60	139	
#	Screen	727.00	1.32	127	
	Packer release system	728.32	.90	140	
I	Upper packer	729.22	1.78	171	
I	Port stub (perforations)	731.00	.76	128	
I	Upper recorder hanger (K2 #10960)	731.76	.30	133	
I	Lower recorder hanger (elec. #50086)	732.06	1.67	134	
X	Cross over	733.73	.30	153	
	1 Stand drill pipe	734.03	26.89	114	72
X	Cross over	760.92	.30	150	69
	Spacer pipe	761.22	5.17	129	61
	Packer stub	766.39	.42	126	
I	Packer	766.81	1.86	170	
Y	Upper recorder hanger	768.67	.30	128	
I	Recorder bomb well (AK1 #5026)	768.97	1.22	118	60
(C)	Belly Spring	770.19	.36	120	68
U	Bull nose	771.78	.36	120	68
	Bottom of tool	771.78			

PIPE & CASING TALLY

WELL: Shell Celibeta B-12

B-12: 060°10'N.122°15'W

Test #: One

Joint No.	Length	
	Joint	Cumulative
01	25.43	SHH
02	25.67	SHH
03	25.73	SHH
04	26.07	SHH+1DP
05		
06		
07		
08		
09		
10		

104.17 Total

Joint No.	Length	
	Joint	Cumulative
31	26.65	
32	26.80	
33	26.83	
34	26.89	
35	26.87	
36	26.88	
37	26.83	
38	17.81	SDP
39		
40		

266.13 Total

Joint No.	Length	
	Joint	Cumulative
61		
62		
63		
64		
65		
66		
67		
68		
69		
70		

Total

Joint No.	Length	
	Joint	Cumulative
91		
92		
93		
94		
95		
96		
97		
98		
99		
00		

Total

Joint No.	Length	
	Joint	Cumulative
11	27.54	SHW
12	27.44	SHW
13	27.67	SHW
14	27.85	SHW
15	27.70	2HW+1DP
16		
17		
18		
19		
20		

138.20 Total

Joint No.	Length	
	Joint	Cumulative
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

Total

Joint No.	Length	
	Joint	Cumulative
71		
72		
73		
74		
75		
76		
77		
78		
79		
80		

Total

TALLY SUMMARY:

Group No.	Length	
	Group	Cumulative
Forward: Nil		
10	104.17	
20	138.20	
30	266.69	
40	206.13	
50		
60		
70		
80		
90		
00		

717.19 Total

Joint No.	Length	
	Joint	Cumulative
21	26.88	
22	26.90	
23	26.91	
24	26.80	
25	26.80	
26	26.90	
27	26.89	
28	26.87	
29	26.89	
30	26.85	

268.69 Total

Joint No.	Length	
	Joint	Cumulative
51		
52		
53		
54		
55		
56		
57		
58		
59		
60		

Total

Joint No.	Length	
	Joint	Cumulative
81		
82		
83		
84		
85		
86		
87		
88		
89		
90		

Total

TALLY BY: Driller

CHECKED BY: Thomas

6. DAILY DRILLING REPORT SUMMARY

DATE	DAY FROM SPUD	DEPTH	PROG	STATUS
90/01/23	0	0	0	Rig out
90/01/24	0	0	0	Rig out
90/01/25	0	0	0	Finish rig out
90/01/26	0	0	0	Travel to new lease
90/01/27	0	0	0	Start rig up
90/01/28	0	0	0	Rig up
90/01/29	0	0	0	Rig up
90/01/30	0	0	0	Rig up
90/01/31	0	0	0	Rig up
90/02/01	0	86	86	Survey, spud 90/02/01 0400 hours
90/02/02	1	141	55	Circulate casing
90/02/03	2	141	0	Nipple up
90/02/04	3	141	0	Pressure test
90/02/05	4	252	111	Survey
90/02/06	5	432	180	Tripping in with NB#3
90/02/07	6	538	106	Drilling
90/02/08	7	548	10	Nipple up and pressure test
90/02/09	8	548	0	Install air
90/02/10	9	548	0	Pressure test casing
90/02/11	10	558	10	Safety meeting prior to start of air drilling
90/02/12	11	848	190	Drilling
90/02/13	12	1290	442	Drilling
90/02/14	13	1340	50	Drilling, mud up at 1300 m
90/02/15	14	1450	110	Circulate and condition hole
90/02/16	15	1450	0	Run in hole with DST#1
90/02/17	16	1450	0	Reaming to bottom with NB#9RR8
90/02/18	17	1480	30	Reaming to bottom with NB#10
90/02/19	18	1496	16	Drilling
90/02/20	19	1528	32	Ream to bottom
90/02/21	20	1551	23	Run in hole with Core #1; 1551.6-1555.4
90/02/22	21	1562	11	Work stuck core barrel, Core #2 1555.4-1562.4
90/02/23	22	1580	18	Circulate up sample from drilling break
90/02/24	23	1591	11	Pump lost circulation material (59.5m³)
90/02/25	24	1591	0	Rig to pump cement for loss circ @ 1591 m
90/02/26	25	1591	0	Trip out wet

6. DAILY DRILLING REPORT SUMMARY (cont'd)

DATE	DAY FROM SPUD	DEPTH	PROG	STATUS
90/02/27	26	1592	1	Pump loss circulation material
90/02/28	27	1592	0	Mix loss circulation plug
90/03/01	28	1592	0	Mix mud to build volume
90/02/02	29	1592	0	Run in hole with N3#16RR
90/03/03	30	1624	32	Mix LCM and build volume
90/03/04	31	1659	35	Mix and condition mud
90/03/05	32	1659	0	Wait on cement, mix mud
90/03/06	33	1659	0	Mix LCM
90/03/07	34	1659	0	Pull out of hole to log
90/03/08	35	1659	0	Run in hole
90/03/09	36	1659	0	
90/03/10	37			
90/03/11	38			
90/03/12	39			



NORTHSTAR DRILLSTEM TESTERS

DATE 90/02/16
Ticket # 3173

Shell Canada Resources Limited DST.# 1

Shell Celibeta B-12 60-10-122-15

INTERVAL 731.00 to 766.81 m.
TOTAL DEPTH 1450.00 m.
NET PAY N/A m.
CUSTOMER REPRESENTATIVE Dan Hewitt
FORMATION GR. ELEVATION 410.66 m.
KELLY BUSHING 414.82 m.
TESTER Lee White

RECORDER DATA (all measurements are 'S')

Preflow 21 minutes
Initial Shut In 60 minutes
Second flow 60 minutes
Final Shut In 120 minutes

	KPa	KPa	KPa	KPa	KPa	KPa
A. Initial Hydrostatic	0	0	8865	8874	9032	9254
B. First Flow	0	0	527	543	437	0
B1. Final Flow	0	0	373	214	199	0
C. Initial Shut In	0	0	107	132	176	0
D. Initial Flow	0	0	107	132	176	0
E. Final Flow	0	0	110	181	234	0
F. Final Shut In	0	0	151	207	262	10258
G. Final Hydrostatic	0	0	8730	8860	8935	9254

Recorder #	50077	13848	6840	10960	50086	5026
Range	41364	25682	27579	23440	41364	20684
Clock	Elect.	24	24	24	Elect.	24
Depth	713.52	712.00	720.80	732.06	732.06	769.0
	Inside	Inside	Inside	Outside	Outside	Outside

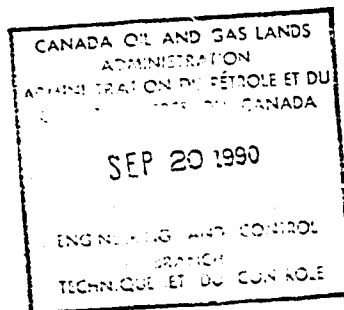
RECOVERY

Total Fluid On, On in D.C. and On in D.P.

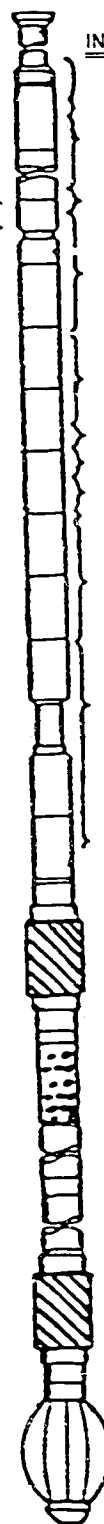
REMARKS & BLOW DESCRIPTION

Preflow: Closed Chamber

Second flow: Closed Chamber



TEST: Successful



INFLATE

Stick Up -7.28
Drill Pipe 613.31
Drill Collar 104.17

Stabbing Valve 0.60
PO 0.30
XO 0.30
PO 0.30

Upper Hanger m 712.00 0.30
Recorder # 13848
Bomb Well 1.22

Upper Hanger m 713.52 0.30
Recorder # 50077
Bomb Well 1.52

Hydraulic Tool 1.63
Sampler 1.17
Sampler 1.15

Sub 1.21
Sub 0.30
Upper Hanger m 720.80 0.30
Recorder # 6840

Bomb Well 1.22

Extension Joint 1.73
Jars 1.71
Safety Joint 0.68

Pump 0.86
Screen 1.32
Deflate 0.90
Top Packer 1.78

TOP INTERVAL m 731.00

Perfs 0.76
Upper Hanger m 732.06 0.30
Recorder # 10960
Recorder # 50086

Lower Hanger 1.67
XO's 0.60
Drill Pipe 26.89

Spacing 5.17
Stub 0.42
BOTTOM INTERVAL m 766.81

Bottom Packer 1.86
Upper Hanger m 768.97 0.30
Recorder # 5026

Bomb Well 1.22

Drag Spring 1.56
Bullnose 0.61
BOTTOM TOOLS m 772.36

WELL NAME Shell Celibeta B-12 60-10-122-15
TICKET NO 3173
DST. NO 1



NORTHSTAR DRILLSTEM TESTERS

DATE 90/02/16
Ticket # 3173

Shell Canada Resources Limited DST.# 1

Shell Celibeta B-12 60-10-122-15

HOLE AND TEST DESCRIPTION

Time Started	12:22 Hr.
Time on Bottom	12:30 Hr.
Time Open	13:22 Hr.
Time Pulled	17:43 Hr.
Time Out	21:00 Hr.
Tool Weight	2000 daN
Weight Set On Packer	6000 daN
Weight Pulled Loose	39000 daN
Initial String Weight	32000 daN
Unseated String Weight	32000 daN
Bottom Choke	19.05 mm
Hole Size	216 mm
Drill Collar I.D.	71.44 mm
Drill Pipe I.D.	97.20 mm
Drill Collar Length	104.17 m
Drill Pipe Length	613.31 m

MUD DATA

Mud Type	Gel Chem
Weight	1210
Viscosity	60
Mud Drop	Nil
Amount of Fill	Nil

Prepared By:

S. Sammartino

Reviewed By:

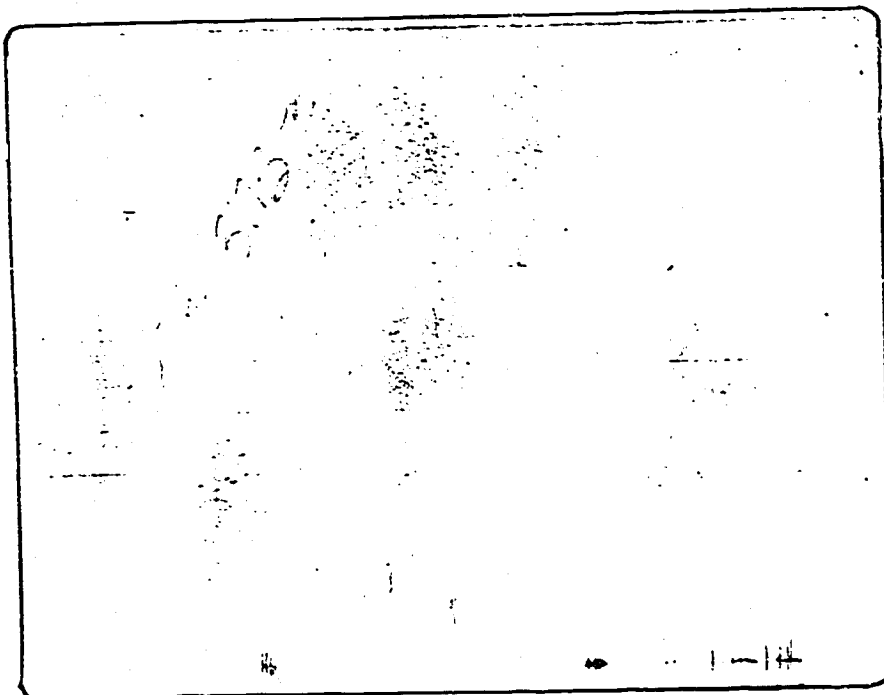
N. Marshall



NORTHSTAR DRILLSTEM TESTERS

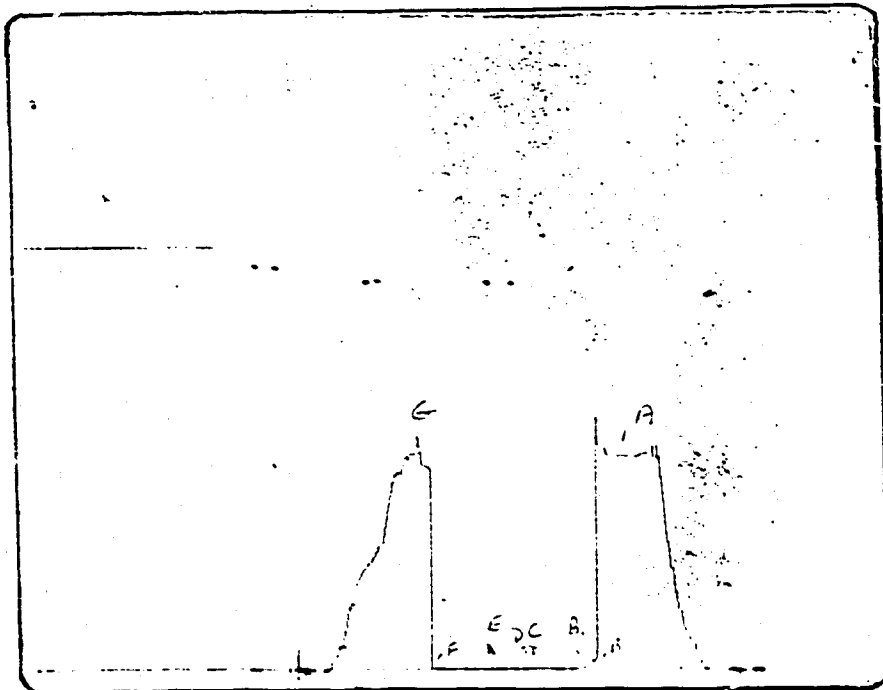
Shell Celibeta B-12 60-10-122-15

DST.# 1



A.	0	kPa
B.	0	kPa
B1.	0	kPa
C.	0	kPa
D.	0	kPa
E.	0	kPa
F.	0	kPa
G.	0	kPa

Recorder #	13848
Range	25682
Depth	712.00



A.	8865	kPa
B.	527	kPa
B1.	373	kPa
C.	107	kPa
D.	107	kPa
E.	110	kPa
F.	151	kPa
G.	8730	kPa

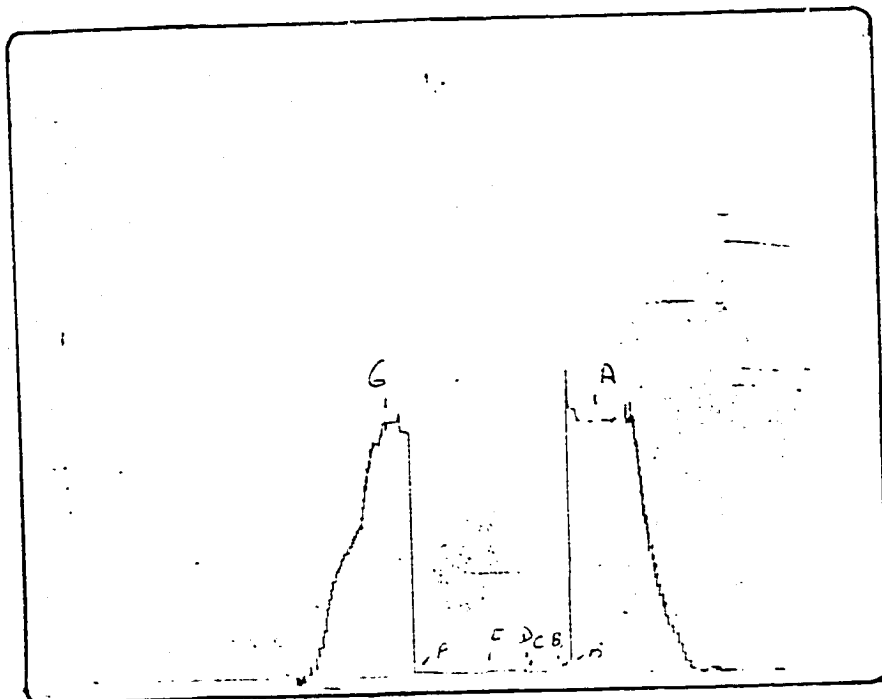
Recorder #	6840
Range	27579
Depth	720.80



NORTHSTAR DRILLSTEM TESTERS

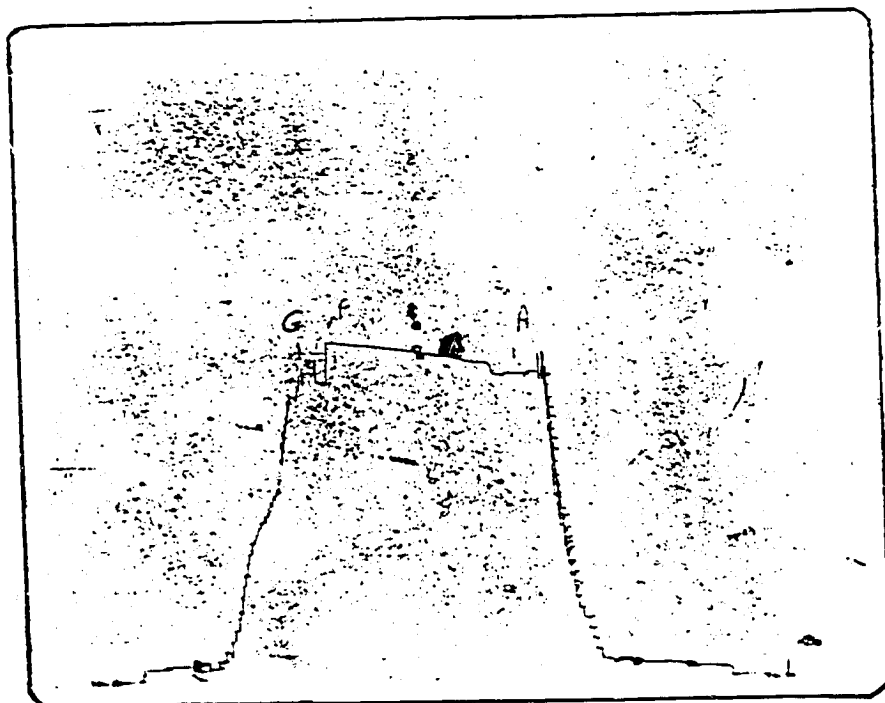
Shell Celibeta B-12 60-10-122-15

DST.# 1



A.	8874	kPa
B.	543	kPa
B1.	214	kPa
C.	132	kPa
D.	132	kPa
E.	181	kPa
F.	207	kPa
G.	8860	kPa

Recorder #	10960
Range	23440
Depth	732.06



A.	9254	kPa
B.	0	kPa
B1.	0	kPa
C.	0	kPa
D.	0	kPa
E.	0	kPa
F.	10258	kPa
G.	9254	kPa

Recorder #	5026
Range	20684
Depth	768.97

SUBSURFACE PRESSURE MEASUREMENTS

DST Number: 1
 Well: SHELL CELIBETA B-12
 Location: 60-10-122-15
 Date Of Test: 90/02/16
 Recorder Depth: 752.2
 Test Interval: 731-766.81
 Probe serial #: 50086
 Data File: 50086A.raw
 Probe Range: 0 - 41364 kPa
 Time Interval: 60 seconds

Page 1

SHELL CELIBETA B-12 (60-10-122-15) DST NO 1									
Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa	Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa
1	90/02/16 07:32	0:00	-2.4	23.5	44	90/02/16 08:15	0:43	15.9	80.5
2	90/02/16 07:33	0:01	-1.9	27.3	45	90/02/16 08:16	0:44	16.0	81.3
3	90/02/16 07:34	0:02	-1.4	31.1	46	90/02/16 08:17	0:45	16.1	80.6
4	90/02/16 07:35	0:03	-0.8	32.6	47	90/02/16 08:18	0:46	16.2	79.9
5	90/02/16 07:36	0:04	-0.3	33.5	48	90/02/16 08:19	0:47	16.4	80.6
6	90/02/16 07:37	0:05	0.2	35.1	49	90/02/16 08:20	0:48	16.5	78.5
7	90/02/16 07:38	0:06	0.6	36.7	50	90/02/16 08:21	0:49	16.6	78.5
8	90/02/16 07:39	0:07	1.3	30.3	51	90/02/16 08:22	0:50	16.7	80.0
9	90/02/16 07:40	0:08	1.8	22.4	52	90/02/16 08:23	0:51	16.8	79.3
10	90/02/16 07:41	0:09	2.8	14.0	53	90/02/16 08:24	0:52	16.9	79.3
11	90/02/16 07:42	0:10	3.8	9.9	54	90/02/16 08:25	0:53	17.1	80.8
12	90/02/16 07:43	0:11	4.8	6.5	55	90/02/16 08:26	0:54	17.2	79.4
13	90/02/16 07:44	0:12	5.8	1.7	56	90/02/16 08:27	0:55	17.3	78.7
14	90/02/16 07:45	0:13	6.8	0.0	57	90/02/16 08:28	0:56	17.4	81.6
15	90/02/16 07:46	0:14	7.8	0.0	58	90/02/16 08:29	0:57	17.5	80.2
16	90/02/16 07:47	0:15	8.8	0.0	59	90/02/16 08:30	0:58	17.5	79.5
17	90/02/16 07:48	0:16	9.9	0.0	60	90/02/16 08:31	0:59	17.6	80.2
18	90/02/16 07:49	0:17	10.2	0.0	61	90/02/16 08:32	1:00	17.7	79.5
19	90/02/16 07:50	0:18	10.4	0.0	62	90/02/16 08:33	1:01	17.7	80.3
20	90/02/16 07:51	0:19	10.7	10.3	63	90/02/16 08:34	1:02	17.8	79.6
21	90/02/16 07:52	0:20	11.0	20.5	64	90/02/16 08:35	1:03	17.8	78.8
22	90/02/16 07:53	0:21	11.3	27.8	65	90/02/16 08:36	1:04	17.9	80.3
23	90/02/16 07:54	0:22	11.6	34.5	66	90/02/16 08:37	1:05	18.0	79.6
24	90/02/16 07:55	0:23	11.9	71.5	67	90/02/16 08:38	1:06	18.0	80.3
25	90/02/16 07:56	0:24	12.2	73.8	68	90/02/16 08:39	1:07	18.1	80.4
26	90/02/16 07:57	0:25	12.5	75.3	69	90/02/16 08:40	1:08	18.1	79.6
27	90/02/16 07:58	0:26	12.7	76.8	70	90/02/16 08:41	1:09	18.2	80.4
28	90/02/16 07:59	0:27	12.9	78.3	71	90/02/16 08:42	1:10	18.2	79.7
29	90/02/16 08:00	0:28	13.2	77.7	72	90/02/16 08:43	1:11	18.3	79.0
30	90/02/16 08:01	0:29	13.4	79.9	73	90/02/16 08:44	1:12	18.4	81.2
31	90/02/16 08:02	0:30	13.6	79.2	74	90/02/16 08:45	1:13	18.4	80.4
32	90/02/16 08:03	0:31	13.9	78.6	75	90/02/16 08:46	1:14	18.4	79.7
33	90/02/16 08:04	0:32	14.1	79.3	76	90/02/16 08:47	1:15	18.5	79.0
34	90/02/16 08:05	0:33	14.3	78.7	77	90/02/16 08:48	1:16	18.5	79.0
35	90/02/16 08:06	0:34	14.5	80.9	78	90/02/16 08:49	1:17	18.5	79.7
36	90/02/16 08:07	0:35	14.6	80.2	79	90/02/16 08:50	1:18	18.5	78.3
37	90/02/16 08:08	0:36	14.8	79.5	80	90/02/16 08:51	1:19	18.6	79.0
38	90/02/16 08:09	0:37	15.0	79.6	81	90/02/16 08:52	1:20	18.6	79.8
39	90/02/16 08:10	0:38	15.2	79.6	82	90/02/16 08:53	1:21	18.7	80.5
40	90/02/16 08:11	0:39	15.4	81.1	83	90/02/16 08:54	1:22	18.7	78.3
41	90/02/16 08:12	0:40	15.5	79.7	84	90/02/16 08:55	1:23	18.8	79.8
42	90/02/16 08:13	0:41	15.6	79.7	85	90/02/16 08:56	1:24	18.8	79.1
43	90/02/16 08:14	0:42	15.8	81.2	86	90/02/16 08:57	1:25	18.9	79.1

Date: 90/02/16 07:32 to 90/02/16 08:57 Elapse time: 0:00 to 1:25

Northstar

SHELL CELIBETA B-12 (60-10-122-15)					DST NO 1				
Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa	Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa
87	90/02/16 08:58	1:26	19.0	80.6	162	90/02/16 10:13	2:41	23.2	838.1
88	90/02/16 08:59	1:27	19.0	79.9	163	90/02/16 10:14	2:42	23.3	838.9
89	90/02/16 09:00	1:28	19.1	79.2	164	90/02/16 10:15	2:43	23.4	838.2
90	90/02/16 09:01	1:29	19.1	79.9	165	90/02/16 10:16	2:44	23.6	840.3
91	90/02/16 09:02	1:30	19.1	78.4	166	90/02/16 10:17	2:45	23.7	935.1
92	90/02/16 09:03	1:31	19.2	77.0	167	90/02/16 10:18	2:46	23.8	1145.1
93	90/02/16 09:04	1:32	19.2	78.5	168	90/02/16 10:19	2:47	23.9	1143.7
94	90/02/16 09:05	1:33	19.2	78.5	169	90/02/16 10:20	2:48	24.0	1143.7
95	90/02/16 09:06	1:34	19.3	79.9	170	90/02/16 10:21	2:49	24.2	1144.5
96	90/02/16 09:07	1:35	19.3	80.7	171	90/02/16 10:22	2:50	24.3	1143.8
97	90/02/16 09:08	1:36	19.3	79.9	172	90/02/16 10:23	2:51	24.4	1287.6
98	90/02/16 09:09	1:37	19.4	78.5	173	90/02/16 10:24	2:52	24.5	1477.1
99	90/02/16 09:10	1:38	19.4	80.0	174	90/02/16 10:25	2:53	24.6	1474.9
100	90/02/16 09:11	1:39	19.5	77.8	175	90/02/16 10:26	2:54	24.8	1475.7
101	90/02/16 09:12	1:40	19.5	77.1	176	90/02/16 10:27	2:55	24.9	1475.0
102	90/02/16 09:13	1:41	19.6	109.7	177	90/02/16 10:28	2:56	25.0	1475.7
103	90/02/16 09:14	1:42	19.7	101.0	178	90/02/16 10:29	2:57	25.0	1476.4
104	90/02/16 09:15	1:43	19.7	117.7	179	90/02/16 10:30	2:58	25.1	1477.9
105	90/02/16 09:16	1:44	19.8	137.3	180	90/02/16 10:31	2:59	25.2	1478.6
106	90/02/16 09:17	1:45	19.8	149.6	181	90/02/16 10:32	3:00	25.2	1569.7
107	90/02/16 09:18	1:46	19.8	148.9	182	90/02/16 10:33	3:01	25.3	1753.4
108	90/02/16 09:19	1:47	19.9	159.8	183	90/02/16 10:34	3:02	25.3	1808.3
109	90/02/16 09:20	1:48	19.9	168.5	184	90/02/16 10:35	3:03	25.4	1807.6
110	90/02/16 09:21	1:49	19.9	167.1	185	90/02/16 10:36	3:04	25.5	1806.9
111	90/02/16 09:22	1:50	20.0	222.1	186	90/02/16 10:37	3:05	25.6	1808.3
112	90/02/16 09:23	1:51	20.0	222.1	187	90/02/16 10:38	3:06	25.7	1808.3
113	90/02/16 09:24	1:52	20.0	138.1	188	90/02/16 10:39	3:07	25.8	1808.3
114	90/02/16 09:25	1:53	20.1	137.4	189	90/02/16 10:40	3:08	25.9	2006.3
115	90/02/16 09:26	1:54	20.1	222.2	190	90/02/16 10:41	3:09	26.1	2170.8
116	90/02/16 09:27	1:55	20.1	221.4	191	90/02/16 10:42	3:10	26.2	2137.3
117	90/02/16 09:28	1:56	20.1	222.2	192	90/02/16 10:43	3:11	26.3	2135.9
118	90/02/16 09:29	1:57	20.2	222.9	193	90/02/16 10:44	3:12	26.4	2241.3
119	90/02/16 09:30	1:58	20.2	216.4	194	90/02/16 10:45	3:13	26.5	2470.6
120	90/02/16 09:31	1:59	20.2	216.4	195	90/02/16 10:46	3:14	26.5	2469.2
121	90/02/16 09:32	2:00	20.3	216.4	196	90/02/16 10:47	3:15	26.6	2805.3
122	90/02/16 09:33	2:01	20.3	215.7	197	90/02/16 10:48	3:16	26.6	2805.3
123	90/02/16 09:34	2:02	20.3	216.4	198	90/02/16 10:49	3:17	26.7	2803.8
124	90/02/16 09:35	2:03	20.3	222.9	199	90/02/16 10:50	3:18	26.8	2805.3
125	90/02/16 09:36	2:04	20.4	216.4	200	90/02/16 10:51	3:19	26.8	2806.7
126	90/02/16 09:37	2:05	20.4	221.5	201	90/02/16 10:52	3:20	26.9	3198.3
127	90/02/16 09:38	2:06	20.4	213.5	202	90/02/16 10:53	3:21	27.0	3142.1
128	90/02/16 09:39	2:07	20.5	214.3	203	90/02/16 10:54	3:22	27.1	3142.8
129	90/02/16 09:40	2:08	20.5	103.4	204	90/02/16 10:55	3:23	27.2	3142.1
130	90/02/16 09:41	2:09	20.5	0.0	205	90/02/16 10:56	3:24	27.4	3633.2
131	90/02/16 09:42	2:10	20.5	214.3	206	90/02/16 10:57	3:25	27.5	3473.3
132	90/02/16 09:43	2:11	20.5	100.5	207	90/02/16 10:58	3:26	27.6	3473.3
133	90/02/16 09:44	2:12	20.5	15.8	208	90/02/16 10:59	3:27	27.7	3835.4
134	90/02/16 09:45	2:13	20.5	220.8	209	90/02/16 11:00	3:28	27.8	3803.3
135	90/02/16 09:46	2:14	20.5	217.9	210	90/02/16 11:01	3:29	28.1	4130.4
136	90/02/16 09:47	2:15	20.5	217.2	211	90/02/16 11:02	3:30	28.3	4447.6
137	90/02/16 09:48	2:16	20.5	217.9	212	90/02/16 11:03	3:31	28.5	4455.5
138	90/02/16 09:49	2:17	20.5	217.9	213	90/02/16 11:04	3:32	28.8	4455.5
139	90/02/16 09:50	2:18	20.6	218.6	214	90/02/16 11:05	3:33	29.0	4457.0
140	90/02/16 09:51	2:19	20.6	218.7	215	90/02/16 11:06	3:34	29.2	4458.4
141	90/02/16 09:52	2:20	20.6	219.4	216	90/02/16 11:07	3:35	29.5	4458.5
142	90/02/16 09:53	2:21	20.6	217.9	217	90/02/16 11:08	3:36	29.7	4794.2
143	90/02/16 09:54	2:22	20.7	220.1	218	90/02/16 11:09	3:37	30.0	5218.5
144	90/02/16 09:55	2:23	20.7	219.4	219	90/02/16 11:10	3:38	30.2	5114.3
145	90/02/16 09:56	2:24	20.7	220.1	220	90/02/16 11:11	3:39	30.4	5443.6
146	90/02/16 09:57	2:25	20.8	218.7	221	90/02/16 11:12	3:40	30.7	5444.4
147	90/02/16 09:58	2:26	21.0	220.2	222	90/02/16 11:13	3:41	30.9	5445.1
148	90/02/16 09:59	2:27	21.1	220.9	223	90/02/16 11:14	3:42	31.1	5448.0
149	90/02/16 10:00	2:28	21.2	220.2	224	90/02/16 11:15	3:43	31.4	5774.5
150	90/02/16 10:01	2:29	21.3	220.3	225	90/02/16 11:16	3:44	31.6	6241.7
151	90/02/16 10:02	2:30	21.4	222.5	226	90/02/16 11:17	3:45	31.9	6124.6
152	90/02/16 10:03	2:31	21.6	228.3	227	90/02/16 11:18	3:46	32.2	6420.4
153	90/02/16 10:04	2:32	21.7	228.3	228	90/02/16 11:19	3:47	32.5	6917.0
154	90/02/16 10:05	2:33	21.9	537.7	229	90/02/16 11:20	3:48	32.8	6948.5
155	90/02/16 10:06	2:34	22.0	526.9	230	90/02/16 11:21	3:49	33.1	7065.6
156	90/02/16 10:07	2:35	22.2	524.7	231	90/02/16 11:22	3:50	33.4	7530.5
157	90/02/16 10:08	2:36	22.4	526.2	232	90/02/16 11:23	3:51	33.7	7315.7
158	90/02/16 10:09	2:37	22.6	527.7	233	90/02/16 11:24	3:52	34.0	7707.8
159	90/02/16 10:10	2:38	22.7	526.3	234	90/02/16 11:25	3:53	34.1	8186.2
160	90/02/16 10:11	2:39	22.9	527.0	235	90/02/16 11:26	3:54	34.3	8024.2
161	90/02/16 10:12	2:40	23.1	842.4	236	90/02/16 11:27	3:55	34.5	8581.9

Date: 90/02/16 08:58 to 90/02/16 11:27 Elapse time: 1:26 to 3:55

Northstar

SHELL CELIBETA B-12 (60-10-122-15)

DST NO 1

Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa	Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa
237	90/02/16 11:28	3:56	34.7	8062.1	312	90/02/16 12:43	5:11	39.5	8812.7
238	90/02/16 11:29	3:57	34.9	8664.2	313	90/02/16 12:44	5:12	39.6	8819.2
239	90/02/16 11:30	3:58	35.0	8663.5	314	90/02/16 12:45	5:13	39.6	8818.5
240	90/02/16 11:31	3:59	35.2	8665.0	315	90/02/16 12:46	5:14	39.6	8820.6
241	90/02/16 11:32	4:00	35.4	8880.0	316	90/02/16 12:47	5:15	39.6	8821.3
242	90/02/16 11:33	4:01	35.5	8878.6	317	90/02/16 12:48	5:16	39.6	8821.3
243	90/02/16 11:34	4:02	35.6	8877.2	318	90/02/16 12:49	5:17	39.7	8821.4
244	90/02/16 11:35	4:03	35.7	8743.7	319	90/02/16 12:50	5:18	39.7	8822.1
245	90/02/16 11:36	4:04	35.9	8768.0	320	90/02/16 12:51	5:19	39.7	8823.5
246	90/02/16 11:37	4:05	35.0	8768.1	321	90/02/16 12:52	5:20	39.7	8824.9
247	90/02/16 11:38	4:06	36.1	8768.1	322	90/02/16 12:53	5:21	39.7	8829.9
248	90/02/16 11:39	4:07	36.2	8771.0	323	90/02/16 12:54	5:22	39.8	8831.4
249	90/02/16 11:40	4:08	36.3	8769.6	324	90/02/16 12:55	5:23	39.8	8837.8
250	90/02/16 11:41	4:09	36.5	8886.7	325	90/02/16 12:56	5:24	39.8	8853.5
251	90/02/16 11:42	4:10	36.6	8887.5	326	90/02/16 12:57	5:25	39.8	8875.7
252	90/02/16 11:43	4:11	36.7	8888.2	327	90/02/16 12:58	5:26	39.8	8930.7
253	90/02/16 11:44	4:12	36.8	8889.0	328	90/02/16 12:59	5:27	39.9	9002.1A
254	90/02/16 11:45	4:13	36.9	8889.0	329	90/02/16 13:00	5:28	39.9	9042.8
255	90/02/16 11:46	4:14	37.0	8890.5	330	90/02/16 13:01	5:29	39.9	9176.4
256	90/02/16 11:47	4:15	37.2	8892.0	331	90/02/16 13:02	5:30	39.9	9292.1
257	90/02/16 11:48	4:16	37.3	8890.6	332	90/02/16 13:03	5:31	39.9	9261.4
258	90/02/16 11:49	4:17	37.4	8892.0	333	90/02/16 13:04	5:32	39.9	9274.2
259	90/02/16 11:50	4:18	37.5	8892.8	334	90/02/16 13:05	5:33	39.9	9285.4
260	90/02/16 11:51	4:19	37.6	8892.8	335	90/02/16 13:06	5:34	39.9	9286.4
261	90/02/16 11:52	4:20	37.8	8892.9	336	90/02/16 13:07	5:35	39.9	9304.2
262	90/02/16 11:53	4:21	37.9	8895.1	337	90/02/16 13:08	5:36	39.9	9307.1
263	90/02/16 11:54	4:22	38.0	8894.4	338	90/02/16 13:09	5:37	39.9	9312.8
264	90/02/16 11:55	4:23	38.1	8896.6	339	90/02/16 13:10	5:38	39.9	9277.8
265	90/02/16 11:56	4:24	38.2	8896.6	340	90/02/16 13:11	5:39	39.9	9281.4
266	90/02/16 11:57	4:25	38.3	8898.0	341	90/02/16 13:12	5:40	39.9	9282.1
267	90/02/16 11:58	4:26	38.3	8875.2	342	90/02/16 13:13	5:41	39.9	9280.7
268	90/02/16 11:59	4:27	38.3	8883.1	343	90/02/16 13:14	5:42	39.9	9235.7
269	90/02/16 12:00	4:28	38.3	8888.1	344	90/02/16 13:15	5:43	40.0	9325.7
270	90/02/16 12:01	4:29	38.4	8890.2	345	90/02/16 13:16	5:44	40.0	9890.6
271	90/02/16 12:02	4:30	38.4	8891.7	346	90/02/16 13:17	5:45	40.0	4212.6
272	90/02/16 12:03	4:31	38.4	8702.1	347	90/02/16 13:18	5:46	40.0	437.1B
273	90/02/16 12:04	4:32	38.5	8852.4	348	90/02/16 13:19	5:47	40.0	440.0
274	90/02/16 12:05	4:33	38.5	8808.1	349	90/02/16 13:20	5:48	40.0	447.9
275	90/02/16 12:06	4:34	38.6	8806.7	350	90/02/16 13:21	5:49	40.0	453.7
276	90/02/16 12:07	4:35	38.6	8810.3	351	90/02/16 13:22	5:50	40.0	460.2
277	90/02/16 12:08	4:36	38.7	8811.8	352	90/02/16 13:23	5:51	40.0	463.8
278	90/02/16 12:09	4:37	38.8	8813.2	353	90/02/16 13:24	5:52	40.0	468.2
279	90/02/16 12:10	4:38	38.8	8813.9	354	90/02/16 13:25	5:53	40.0	473.9
280	90/02/16 12:11	4:39	38.9	8817.5	355	90/02/16 13:26	5:54	40.1	475.4
281	90/02/16 12:12	4:40	38.9	8816.1	356	90/02/16 13:27	5:55	40.1	329.0
282	90/02/16 12:13	4:41	38.9	8818.3	357	90/02/16 13:28	5:56	40.1	282.5
283	90/02/16 12:14	4:42	38.9	8816.8	358	90/02/16 13:29	5:57	40.1	281.0
284	90/02/16 12:15	4:43	38.9	8819.7	359	90/02/16 13:30	5:58	40.1	283.2
285	90/02/16 12:16	4:44	38.9	8818.3	360	90/02/16 13:31	5:59	40.1	539.7
286	90/02/16 12:17	4:45	38.9	8820.4	361	90/02/16 13:32	6:00	40.1	505.8
287	90/02/16 12:18	4:46	38.9	8822.5	362	90/02/16 13:33	6:01	40.1	501.4
288	90/02/16 12:19	4:47	38.9	8821.8	363	90/02/16 13:34	6:02	40.1	421.9
289	90/02/16 12:20	4:48	38.9	8823.3	364	90/02/16 13:35	6:03	40.1	195.8
290	90/02/16 12:21	4:49	39.0	8824.0	365	90/02/16 13:36	6:04	40.2	202.3
291	90/02/16 12:22	4:50	39.1	8825.4	366	90/02/16 13:37	6:05	40.2	198.0
292	90/02/16 12:23	4:51	39.1	8824.7	367	90/02/16 13:38	6:06	40.2	200.1
293	90/02/16 12:24	4:52	39.2	8827.6	368	90/02/16 13:39	6:07	40.2	199.4C
294	90/02/16 12:25	4:53	39.2	8829.1	369	90/02/16 13:40	6:08	40.2	198.7
295	90/02/16 12:26	4:54	39.3	8827.7	370	90/02/16 13:41	6:09	40.2	143.8
296	90/02/16 12:27	4:55	39.4	8830.5	371	90/02/16 13:42	6:10	40.2	137.3
297	90/02/16 12:28	4:56	39.4	8830.6	372	90/02/16 13:43	6:11	40.2	140.2
298	90/02/16 12:29	4:57	39.4	8831.3	373	90/02/16 13:44	6:12	40.2	133.7
299	90/02/16 12:30	4:58	39.4	8834.1	374	90/02/16 13:45	6:13	40.2	135.1
300	90/02/16 12:31	4:59	39.4	8834.1	375	90/02/16 13:46	6:14	40.3	134.4
301	90/02/16 12:32	5:00	39.4	8834.1	376	90/02/16 13:47	6:15	40.3	137.3
302	90/02/16 12:33	5:01	39.4	8834.8	377	90/02/16 13:48	6:16	40.3	138.0
303	90/02/16 12:34	5:02	39.4	8836.3	378	90/02/16 13:49	6:17	40.3	139.5
304	90/02/16 12:35	5:03	39.4	8836.3	379	90/02/16 13:50	6:18	40.3	140.2
305	90/02/16 12:36	5:04	39.4	8834.8	380	90/02/16 13:51	6:19	40.3	140.9
306	90/02/16 12:37	5:05	39.4	8837.0	381	90/02/16 13:52	6:20	40.3	139.5
307	90/02/16 12:38	5:06	39.4	8839.9	382	90/02/16 13:53	6:21	40.3	140.2
308	90/02/16 12:39	5:07	39.5	8797.7	383	90/02/16 13:54	6:22	40.3	143.1
309	90/02/16 12:40	5:08	39.5	8804.9	384	90/02/16 13:55	6:23	40.3	145.2
310	90/02/16 12:41	5:09	39.5	8814.2	385	90/02/16 13:56	6:24	40.4	145.3
311	90/02/16 12:42	5:10	39.5	8832.7	386	90/02/16 13:57	6:25	40.4	144.5

Date: 90/02/16 11:28 to 90/02/16 13:57

Elapse time: 3:56 to 6:25

Northstar

SHELL DELIBETA'B-12 (60-10-122-15)				DST NO 1					
Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa	Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa
387	90/02/16 13:58	6:26	40.4	146.7	462	90/02/16 15:13	7:41	41.0	220.5
388	90/02/16 13:59	6:27	40.4	148.1	463	90/02/16 15:14	7:42	41.0	221.3
389	90/02/16 14:00	6:28	40.4	148.1	464	90/02/16 15:15	7:43	41.0	221.3
390	90/02/16 14:01	6:29	40.4	148.9	465	90/02/16 15:16	7:44	41.0	221.3
391	90/02/16 14:02	6:30	40.4	148.9	466	90/02/16 15:17	7:45	41.0	222.0
392	90/02/16 14:03	6:31	40.4	148.9	467	90/02/16 15:18	7:46	41.0	219.8
393	90/02/16 14:04	6:32	40.4	150.3	468	90/02/16 15:19	7:47	41.0	222.0
394	90/02/16 14:05	6:33	40.4	151.8	469	90/02/16 15:20	7:48	41.0	221.3
395	90/02/16 14:06	6:34	40.4	152.5	470	90/02/16 15:21	7:49	41.0	222.7
396	90/02/16 14:07	6:35	40.4	152.5	471	90/02/16 15:22	7:50	41.0	222.0
397	90/02/16 14:08	6:36	40.4	153.2	472	90/02/16 15:23	7:51	41.1	222.0
398	90/02/16 14:09	6:37	40.4	155.4	473	90/02/16 15:24	7:52	41.1	222.0
399	90/02/16 14:10	6:38	40.4	154.7	474	90/02/16 15:25	7:53	41.1	224.2
400	90/02/16 14:11	6:39	40.4	156.1	475	90/02/16 15:26	7:54	41.1	224.9
401	90/02/16 14:12	6:40	40.4	158.3	476	90/02/16 15:27	7:55	41.1	224.9
402	90/02/16 14:13	6:41	40.5	158.3	477	90/02/16 15:28	7:56	41.1	225.6
403	90/02/16 14:14	6:42	40.5	159.0	478	90/02/16 15:29	7:57	41.1	227.8
404	90/02/16 14:15	6:43	40.5	161.2	479	90/02/16 15:30	7:58	41.1	228.5
405	90/02/16 14:16	6:44	40.5	160.5	480	90/02/16 15:31	7:59	41.1	230.0
406	90/02/16 14:17	6:45	40.5	160.5	481	90/02/16 15:32	8:00	41.1	229.2
407	90/02/16 14:18	6:46	40.5	162.6	482	90/02/16 15:33	8:01	41.1	230.7
408	90/02/16 14:19	6:47	40.5	161.9	483	90/02/16 15:34	8:02	41.1	231.4
409	90/02/16 14:20	6:48	40.5	163.4	484	90/02/16 15:35	8:03	41.1	232.1
410	90/02/16 14:21	6:49	40.6	162.6	485	90/02/16 15:36	8:04	41.2	232.9
411	90/02/16 14:22	6:50	40.6	164.8	486	90/02/16 15:37	8:05	41.2	233.6 E
412	90/02/16 14:23	6:51	40.6	164.1	487	90/02/16 15:38	8:06	41.2	232.9
413	90/02/16 14:24	6:52	40.6	164.8	488	90/02/16 15:39	8:07	41.2	234.3
414	90/02/16 14:25	6:53	40.6	167.0	489	90/02/16 15:40	8:08	41.2	155.6
415	90/02/16 14:26	6:54	40.6	167.7	490	90/02/16 15:41	8:09	41.2	144.7
416	90/02/16 14:27	6:55	40.6	167.0	491	90/02/16 15:42	8:10	41.2	145.5
417	90/02/16 14:28	6:56	40.6	168.4	492	90/02/16 15:43	8:11	41.2	149.8
418	90/02/16 14:29	6:57	40.7	172.1	493	90/02/16 15:44	8:12	41.2	150.5
419	90/02/16 14:30	6:58	40.7	171.3	494	90/02/16 15:45	8:13	41.2	149.8
420	90/02/16 14:31	6:59	40.7	172.1	495	90/02/16 15:46	8:14	41.2	152.0
421	90/02/16 14:32	7:00	40.7	172.8	496	90/02/16 15:47	8:15	41.2	154.9
422	90/02/16 14:33	7:01	40.7	173.5	497	90/02/16 15:48	8:16	41.3	154.1
423	90/02/16 14:34	7:02	40.7	173.5	498	90/02/16 15:49	8:17	41.3	157.8
424	90/02/16 14:35	7:03	40.7	175.7	499	90/02/16 15:50	8:18	41.3	160.6
425	90/02/16 14:36	7:04	40.7	175.7	500	90/02/16 15:51	8:19	41.3	162.1
426	90/02/16 14:37	7:05	40.7	176.4 C, P	501	90/02/16 15:52	8:20	41.3	160.6
427	90/02/16 14:38	7:06	40.8	317.3	502	90/02/16 15:53	8:21	41.3	163.5
428	90/02/16 14:39	7:07	40.8	301.4	503	90/02/16 15:54	8:22	41.3	165.0
429	90/02/16 14:40	7:08	40.8	255.2	504	90/02/16 15:55	8:23	41.3	167.2
430	90/02/16 14:41	7:09	40.8	253.7	505	90/02/16 15:56	8:24	41.3	167.9
431	90/02/16 14:42	7:10	40.8	253.0	506	90/02/16 15:57	8:25	41.3	167.2
432	90/02/16 14:43	7:11	40.8	216.2	507	90/02/16 15:58	8:26	41.3	172.2
433	90/02/16 14:44	7:12	40.8	214.0	508	90/02/16 15:59	8:27	41.3	172.9
434	90/02/16 14:45	7:13	40.8	214.0	509	90/02/16 16:00	8:28	41.3	175.1
435	90/02/16 14:46	7:14	40.8	215.4	510	90/02/16 16:01	8:29	41.3	175.1
436	90/02/16 14:47	7:15	40.8	215.4	511	90/02/16 16:02	8:30	41.3	175.8
437	90/02/16 14:48	7:16	40.8	214.7	512	90/02/16 16:03	8:31	41.3	178.0
438	90/02/16 14:49	7:17	40.8	214.0	513	90/02/16 16:04	8:32	41.3	179.4
439	90/02/16 14:50	7:18	40.8	216.2	514	90/02/16 16:05	8:33	41.3	181.6
440	90/02/16 14:51	7:19	40.8	214.7	515	90/02/16 16:06	8:34	41.3	181.6
441	90/02/16 14:52	7:20	40.8	216.2	516	90/02/16 16:07	8:35	41.3	182.3
442	90/02/16 14:53	7:21	40.8	216.9	517	90/02/16 16:08	8:36	41.3	183.8
443	90/02/16 14:54	7:22	40.8	215.5	518	90/02/16 16:09	8:37	41.3	185.2
444	90/02/16 14:55	7:23	40.9	217.6	519	90/02/16 16:10	8:38	41.3	185.9
445	90/02/16 14:56	7:24	40.9	217.6	520	90/02/16 16:11	8:39	41.3	186.0
446	90/02/16 14:57	7:25	40.9	218.3	521	90/02/16 16:12	8:40	41.4	186.7
447	90/02/16 14:58	7:26	40.9	216.9	522	90/02/16 16:13	8:41	41.4	188.8
448	90/02/16 14:59	7:27	40.9	217.6	523	90/02/16 16:14	8:42	41.4	188.8
449	90/02/16 15:00	7:28	40.9	216.9	524	90/02/16 16:15	8:43	41.4	188.8
450	90/02/16 15:01	7:29	40.9	217.6	525	90/02/16 16:16	8:44	41.4	190.3
451	90/02/16 15:02	7:30	40.9	218.4	526	90/02/16 16:17	8:45	41.4	190.3
452	90/02/16 15:03	7:31	40.9	218.4	527	90/02/16 16:18	8:46	41.4	191.7
453	90/02/16 15:04	7:32	40.9	219.1	528	90/02/16 16:19	8:47	41.4	191.7
454	90/02/16 15:05	7:33	40.9	219.1	529	90/02/16 16:20	8:48	41.4	193.2
455	90/02/16 15:06	7:34	40.9	219.8	530	90/02/16 16:21	8:49	41.4	193.9
456	90/02/16 15:07	7:35	40.9	220.5	531	90/02/16 16:22	8:50	41.4	195.4
457	90/02/16 15:08	7:36	40.9	219.8	532	90/02/16 16:23	8:51	41.4	195.4
458	90/02/16 15:09	7:37	41.0	218.4	533	90/02/16 16:24	8:52	41.4	197.5
459	90/02/16 15:10	7:38	41.0	219.8	534	90/02/16 16:25	8:53	41.4	196.8
460	90/02/16 15:11	7:39	41.0	220.5	535	90/02/16 16:26	8:54	41.4	199.0
461	90/02/16 15:12	7:40	41.0	220.5	536	90/02/16 16:27	8:55	41.5	199.0

Date: 90/02/16 13:58 to 90/02/16 16:27

Elapse time: 6:26 to 8:55

Northstar

SHELL CELIBETA B-12 (60-10-122-15)				DST NO 1					
Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa	Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa
537	90/02/16 16:28	8:56	41.5	199.7	612	90/02/16 17:43	10:11	41.8	268.4
538	90/02/16 16:29	8:57	41.5	200.4	613	90/02/16 17:44	10:12	41.8	269.1
539	90/02/16 16:30	8:58	41.5	202.6	614	90/02/16 17:45	10:13	41.8	268.4
540	90/02/16 16:31	8:59	41.5	204.8	615	90/02/16 17:46	10:14	41.8	8629.9
541	90/02/16 16:32	9:00	41.5	204.0	616	90/02/16 17:47	10:15	41.8	8607.0
542	90/02/16 16:33	9:01	41.5	204.0	617	90/02/16 17:48	10:16	41.9	8599.2
543	90/02/16 16:34	9:02	41.5	206.2	618	90/02/16 17:49	10:17	41.9	8599.2
544	90/02/16 16:35	9:03	41.5	206.9	619	90/02/16 17:50	10:18	41.9	8501.3
545	90/02/16 16:36	9:04	41.5	207.7	620	90/02/16 17:51	10:19	41.9	8601.3
546	90/02/16 16:37	9:05	41.5	208.4	621	90/02/16 17:52	10:20	41.9	8604.2
547	90/02/16 16:38	9:06	41.5	209.1	622	90/02/16 17:53	10:21	41.9	8607.2
548	90/02/16 16:39	9:07	41.5	209.8	623	90/02/16 17:54	10:22	41.9	8607.1
549	90/02/16 16:40	9:08	41.5	210.6	624	90/02/16 17:55	10:23	41.9	8610.6
550	90/02/16 16:41	9:09	41.5	209.8	625	90/02/16 17:56	10:24	41.9	8613.5
551	90/02/16 16:42	9:10	41.6	210.6	626	90/02/16 17:57	10:25	41.9	8616.3
552	90/02/16 16:43	9:11	41.6	212.0	627	90/02/16 17:58	10:26	41.9	8618.5
553	90/02/16 16:44	9:12	41.6	212.7	628	90/02/16 17:59	10:27	41.9	8619.9
554	90/02/16 16:45	9:13	41.6	213.5	629	90/02/16 18:00	10:28	41.9	8624.2
555	90/02/16 16:46	9:14	41.6	216.3	630	90/02/16 18:01	10:29	41.9	8626.3
556	90/02/16 16:47	9:15	41.6	214.2	631	90/02/16 18:02	10:30	41.9	8628.5
557	90/02/16 16:48	9:16	41.6	218.5	632	90/02/16 18:03	10:31	41.9	8630.6
558	90/02/16 16:49	9:17	41.6	218.5	633	90/02/16 18:04	10:32	41.9	8892.8
559	90/02/16 16:50	9:18	41.6	220.0	634	90/02/16 18:05	10:33	41.9	8934.9 G
560	90/02/16 16:51	9:19	41.6	219.2	635	90/02/16 18:06	10:34	41.9	8909.9
561	90/02/16 16:52	9:20	41.6	221.4	636	90/02/16 18:07	10:35	41.9	8915.6
562	90/02/16 16:53	9:21	41.6	220.7	637	90/02/16 18:08	10:36	41.9	8906.3
563	90/02/16 16:54	9:22	41.6	221.4	638	90/02/16 18:09	10:37	41.9	8902.8
564	90/02/16 16:55	9:23	41.6	221.4	639	90/02/16 18:10	10:38	41.9	8905.6
565	90/02/16 16:56	9:24	41.6	222.9	640	90/02/16 18:11	10:39	41.9	8905.6
566	90/02/16 16:57	9:25	41.6	225.0	641	90/02/16 18:12	10:40	41.9	8907.0
567	90/02/16 16:58	9:26	41.7	226.5	642	90/02/16 18:13	10:41	41.8	8907.8
568	90/02/16 16:59	9:27	41.7	226.5	643	90/02/16 18:14	10:42	41.8	8908.5
569	90/02/16 17:00	9:28	41.7	227.2	644	90/02/16 18:15	10:43	41.8	8911.3
570	90/02/16 17:01	9:29	41.7	226.5	645	90/02/16 18:16	10:44	41.8	8912.0
571	90/02/16 17:02	9:30	41.7	230.1	646	90/02/16 18:17	10:45	41.8	8912.8
572	90/02/16 17:03	9:31	41.7	230.8	647	90/02/16 18:18	10:46	41.8	8913.5
573	90/02/16 17:04	9:32	41.7	231.5	648	90/02/16 18:19	10:47	41.8	8914.9
574	90/02/16 17:05	9:33	41.7	231.5	649	90/02/16 18:20	10:48	41.8	8916.2
575	90/02/16 17:06	9:34	41.7	233.0	650	90/02/16 18:21	10:49	41.8	8916.2
576	90/02/16 17:07	9:35	41.7	232.3	651	90/02/16 18:22	10:50	41.8	8917.0
577	90/02/16 17:08	9:36	41.7	233.7	652	90/02/16 18:23	10:51	41.8	8918.5
578	90/02/16 17:09	9:37	41.7	235.2	653	90/02/16 18:24	10:52	41.8	8919.2
579	90/02/16 17:10	9:38	41.7	235.2	654	90/02/16 18:25	10:53	41.8	8920.6
580	90/02/16 17:11	9:39	41.7	235.9	655	90/02/16 18:26	10:54	41.8	8503.5
581	90/02/16 17:12	9:40	41.7	236.6	656	90/02/16 18:27	10:55	41.8	8791.3
582	90/02/16 17:13	9:41	41.8	238.8	657	90/02/16 18:28	10:56	41.8	8790.6
583	90/02/16 17:14	9:42	41.8	239.5	658	90/02/16 18:29	10:57	41.8	8790.6
584	90/02/16 17:15	9:43	41.8	241.0	659	90/02/16 18:30	10:58	41.8	8791.3
585	90/02/16 17:16	9:44	41.8	242.4	660	90/02/16 18:31	10:59	41.8	8791.3
586	90/02/16 17:17	9:45	41.8	242.4	661	90/02/16 18:32	11:00	41.8	8789.9
587	90/02/16 17:18	9:46	41.8	243.1	662	90/02/16 18:33	11:01	41.8	8357.7
588	90/02/16 17:19	9:47	41.8	243.1	663	90/02/16 18:34	11:02	41.8	8559.9
589	90/02/16 17:20	9:48	41.8	245.3	664	90/02/16 18:35	11:03	41.8	8558.5
590	90/02/16 17:21	9:49	41.8	248.2	665	90/02/16 18:36	11:04	41.8	8151.3
591	90/02/16 17:22	9:50	41.8	246.7	666	90/02/16 18:37	11:05	41.7	8227.0
592	90/02/16 17:23	9:51	41.8	247.5	667	90/02/16 18:38	11:06	41.7	8212.7
593	90/02/16 17:24	9:52	41.8	250.3	668	90/02/16 18:39	11:07	41.7	8194.1
594	90/02/16 17:25	9:53	41.8	251.1	669	90/02/16 18:40	11:08	41.7	8229.1
595	90/02/16 17:26	9:54	41.8	251.8	670	90/02/16 18:41	11:09	41.6	8232.4
596	90/02/16 17:27	9:55	41.8	251.8	671	90/02/16 18:42	11:10	41.6	8236.3
597	90/02/16 17:28	9:56	41.8	253.2	672	90/02/16 18:43	11:11	41.6	8237.0
598	90/02/16 17:29	9:57	41.8	255.4	673	90/02/16 18:44	11:12	41.5	8238.4
599	90/02/16 17:30	9:58	41.8	254.0	674	90/02/16 18:45	11:13	41.5	8239.1
600	90/02/16 17:31	9:59	41.8	256.1	675	90/02/16 18:46	11:14	41.4	8239.8
601	90/02/16 17:32	10:00	41.8	257.6	676	90/02/16 18:47	11:15	41.4	8131.9
602	90/02/16 17:33	10:01	41.8	259.0	677	90/02/16 18:48	11:16	41.3	8125.5
603	90/02/16 17:34	10:02	41.8	261.2	678	90/02/16 18:49	11:17	41.3	8133.3
604	90/02/16 17:35	10:03	41.8	261.2	679	90/02/16 18:50	11:18	41.2	7611.2
605	90/02/16 17:36	10:04	41.8	261.9	680	90/02/16 18:51	11:19	41.1	7899.7
606	90/02/16 17:37	10:05	41.8	261.2	681	90/02/16 18:52	11:20	41.1	7466.1
607	90/02/16 17:38	10:06	41.8	264.1	682	90/02/16 18:53	11:21	40.9	7492.5
608	90/02/16 17:39	10:07	41.8	264.1	683	90/02/16 18:54	11:22	40.8	7193.2
609	90/02/16 17:40	10:08	41.8	265.5	684	90/02/16 18:55	11:23	40.7	7288.2
610	90/02/16 17:41	10:09	41.8	267.0	685	90/02/16 18:56	11:24	40.6	7096.0
611	90/02/16 17:42	10:10	41.8	265.5	686	90/02/16 18:57	11:25	40.5	6739.5

Data: 90/02/16 16:28 to 90/02/16 18:57

Elapse time: 8:56 to 11:25

Northstar

SHELL DELIBETA B-12 (60-10-122-15)					DST NO 1				
Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa	Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa
687	90/02/16 18:58	11:26	40.4	6937.4	762	90/02/16 20:13	12:41	25.2	1462.9
688	90/02/16 18:59	11:27	40.2	6460.8	763	90/02/16 20:14	12:42	25.0	1462.9
689	90/02/16 19:00	11:28	40.1	6637.3	764	90/02/16 20:15	12:43	24.8	1184.4
690	90/02/16 19:01	11:29	39.9	6147.7	765	90/02/16 20:16	12:44	24.5	1133.9
691	90/02/16 19:02	11:30	39.6	6304.9	766	90/02/16 20:17	12:45	24.3	1129.5
692	90/02/16 19:03	11:31	39.4	5853.9	767	90/02/16 20:18	12:46	24.0	1130.2
693	90/02/16 19:04	11:32	39.2	5985.4	768	90/02/16 20:19	12:47	23.8	1129.5
694	90/02/16 19:05	11:33	38.9	5523.0	769	90/02/16 20:20	12:48	23.6	1128.7
695	90/02/16 19:06	11:34	38.7	5628.7	770	90/02/16 20:21	12:49	23.4	1128.7
696	90/02/16 19:07	11:35	38.5	5276.4	771	90/02/16 20:22	12:50	23.3	795.4
697	90/02/16 19:08	11:36	38.2	5329.2	772	90/02/16 20:23	12:51	23.2	734.9
698	90/02/16 19:09	11:37	37.9	5330.5	773	90/02/16 20:24	12:52	23.1	737.0
699	90/02/16 19:10	11:38	37.6	5291.3	774	90/02/16 20:25	12:53	23.0	736.3
700	90/02/16 19:11	11:39	37.3	5222.6	775	90/02/16 20:26	12:54	22.9	737.0
701	90/02/16 19:12	11:40	37.0	5223.3	776	90/02/16 20:27	12:55	22.7	380.7
702	90/02/16 19:13	11:41	36.7	5110.3	777	90/02/16 20:28	12:56	22.6	230.0
703	90/02/16 19:14	11:42	36.5	5111.0	778	90/02/16 20:29	12:57	22.6	248.1
704	90/02/16 19:15	11:43	36.2	5111.0	779	90/02/16 20:30	12:58	22.5	586.3
705	90/02/16 19:16	11:44	35.9	5110.9	780	90/02/16 20:31	12:59	22.4	532.7
706	90/02/16 19:17	11:45	35.6	5008.7	781	90/02/16 20:32	13:00	22.4	532.7
707	90/02/16 19:18	11:46	35.4	5003.0	782	90/02/16 20:33	13:01	22.3	532.7
708	90/02/16 19:19	11:47	35.2	4894.3	783	90/02/16 20:34	13:02	22.3	533.4
709	90/02/16 19:20	11:48	34.9	4890.0	784	90/02/16 20:35	13:03	22.2	532.7
710	90/02/16 19:21	11:49	34.7	4781.4	785	90/02/16 20:36	13:04	22.1	532.7
711	90/02/16 19:22	11:50	34.4	4778.5	786	90/02/16 20:37	13:05	22.1	287.8
712	90/02/16 19:23	11:51	34.2	4599.8	787	90/02/16 20:38	13:06	22.0	195.1
713	90/02/16 19:24	11:52	34.0	4668.4	788	90/02/16 20:39	13:07	22.0	194.3
714	90/02/16 19:25	11:53	33.8	4669.1	789	90/02/16 20:40	13:08	21.9	192.9
715	90/02/16 19:26	11:54	33.6	4559.0	790	90/02/16 20:41	13:09	21.9	190.0
716	90/02/16 19:27	11:55	33.4	4558.3	791	90/02/16 20:42	13:10	21.8	221.8
717	90/02/16 19:28	11:56	33.3	4557.6	792	90/02/16 20:43	13:11	21.7	225.4
718	90/02/16 19:29	11:57	33.1	4404.7	793	90/02/16 20:44	13:12	21.7	222.5
719	90/02/16 19:30	11:58	32.9	4448.2	794	90/02/16 20:45	13:13	22.4	223.4
720	90/02/16 19:31	11:59	32.7	4447.5	795	90/02/16 20:46	13:14	23.2	221.4
721	90/02/16 19:32	12:00	32.6	4448.2	796	90/02/16 20:47	13:15	24.0	223.8
722	90/02/16 19:33	12:01	32.4	4447.4	797	90/02/16 20:48	13:16	24.8	216.7
723	90/02/16 19:34	12:02	32.2	4446.0	798	90/02/16 20:49	13:17	25.5	115.5
724	90/02/16 19:35	12:03	32.0	4338.8	799	90/02/16 20:50	13:18	26.3	0.0
725	90/02/16 19:36	12:04	31.8	4338.1	800	90/02/16 20:51	13:19	27.1	0.0
726	90/02/16 19:37	12:05	31.7	4225.2	801	90/02/16 20:52	13:20	27.8	0.0
727	90/02/16 19:38	12:06	31.5	4228.0	802	90/02/16 20:53	13:21	27.8	0.0
728	90/02/16 19:39	12:07	31.3	4087.3	803	90/02/16 20:54	13:22	27.7	11.9
729	90/02/16 19:40	12:08	31.1	4119.4	804	90/02/16 20:55	13:23	27.6	0.0
730	90/02/16 19:41	12:09	31.0	4120.1	805	90/02/16 20:56	13:24	27.6	0.0
731	90/02/16 19:42	12:10	30.9	4007.2	806	90/02/16 20:57	13:25	27.5	0.0
732	90/02/16 19:43	12:11	30.8	4008.6	807	90/02/16 20:58	13:26	27.5	0.0
733	90/02/16 19:44	12:12	30.7	3943.6	808	90/02/16 20:59	13:27	27.4	0.0
734	90/02/16 19:45	12:13	30.5	3893.6	809	90/02/16 21:00	13:28	27.4	0.0
735	90/02/16 19:46	12:14	30.4	3892.9	810	90/02/16 21:01	13:29	26.9	0.1
736	90/02/16 19:47	12:15	30.3	3720.0	811	90/02/16 21:02	13:30	26.4	5.7
737	90/02/16 19:48	12:16	30.2	3776.4	812	90/02/16 21:03	13:31	25.9	11.4
738	90/02/16 19:49	12:17	30.0	3775.0	813	90/02/16 21:04	13:32	25.5	12.7
739	90/02/16 19:50	12:18	29.8	3777.1	814	90/02/16 21:05	13:33	25.0	15.5
740	90/02/16 19:51	12:19	29.7	3672.1	815	90/02/16 21:06	13:34	24.5	16.1
741	90/02/16 19:52	12:20	29.5	3391.5	816	90/02/16 21:07	13:35	24.0	15.0
742	90/02/16 19:53	12:21	29.3	3452.0	817	90/02/16 21:08	13:36	23.6	15.1
743	90/02/16 19:54	12:22	29.1	3456.3	818	90/02/16 21:09	13:37	23.0	15.0
744	90/02/16 19:55	12:23	28.9	3455.6	819	90/02/16 21:10	13:38	22.5	14.1
745	90/02/16 19:56	12:24	28.8	3455.5	820	90/02/16 21:11	13:39	22.0	14.7
746	90/02/16 19:57	12:25	28.6	3267.5	821	90/02/16 21:12	13:40	21.4	12.4
747	90/02/16 19:58	12:26	28.4	3128.7	822	90/02/16 21:13	13:41	20.9	13.0
748	90/02/16 19:59	12:27	28.2	3129.4	823	90/02/16 21:14	13:42	20.4	11.4
749	90/02/16 20:00	12:28	28.1	2805.4	824	90/02/16 21:15	13:43	19.8	12.0
750	90/02/16 20:01	12:29	27.9	2789.0	825	90/02/16 21:16	13:44	19.3	11.8
751	90/02/16 20:02	12:30	27.7	2789.0	826	90/02/16 21:17	13:45	18.4	10.8
752	90/02/16 20:03	12:31	27.5	2605.3	827	90/02/16 21:18	13:46	17.4	11.3
753	90/02/16 20:04	12:32	27.4	2450.8	828	90/02/16 21:19	13:47	16.5	11.1
754	90/02/16 20:05	12:33	27.1	2452.2	829	90/02/16 21:20	13:48	15.5	15.2
755	90/02/16 20:06	12:34	26.9	2336.1	830	90/02/16 21:21	13:49	14.6	16.4
756	90/02/16 20:07	12:35	26.6	2121.0	831	90/02/16 21:22	13:50	13.6	16.8
757	90/02/16 20:08	12:36	26.4	2121.7	832	90/02/16 21:23	13:51	12.7	21.0
758	90/02/16 20:09	12:37	26.2	1960.8	833	90/02/16 21:24	13:52	11.7	24.3
759	90/02/16 20:10	12:38	25.9	1790.6	834	90/02/16 21:25	13:53	10.9	24.8
760	90/02/16 20:11	12:39	25.7	1791.9	835	90/02/16 21:26	13:54	10.1	26.8
761	90/02/16 20:12	12:40	25.5	1651.6	836	90/02/16 21:27	13:55	9.3	26.6

Date: 90/02/16 18:58 to 90/02/16 21:27 Elapse time: 11:26 to 13:55

Northstar

SHELL CELIBETA 8-12 (60-10-122-15)

DST NO 1

Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa	Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa
837	90/02/16 21:28	13:56	8.4	27.1					
838	90/02/16 21:29	13:57	7.6	26.9					
839	90/02/16 21:30	13:58	6.8	25.9					
840	90/02/16 21:31	13:59	6.0	27.9					
841	90/02/16 21:32	14:00	5.1	26.9					
842	90/02/16 21:33	14:01	5.1	26.9					
843	90/02/16 21:34	14:02	5.1	27.7					
844	90/02/16 21:35	14:03	5.1	28.4					
845	90/02/16 21:36	14:04	5.1	27.7					
846	90/02/16 21:37	14:05	5.1	28.4					
847	90/02/16 21:38	14:06	5.1	28.4					
848	90/02/16 21:39	14:07	5.1	27.7					
849	90/02/16 21:40	14:08	5.1	26.9					
850	90/02/16 21:41	14:09	5.1	25.5					
851	90/02/16 21:42	14:10	5.1	25.5					

Date: 90/02/16 21:28 to 90/02/16 21:42 Elapse time: 13:56 to 14:10

Northstar

SUBSURFACE PRESSURE MEASUREMENTS

DST Number: 1
 Well: SHELL CELIBETA B-12
 Location: 60-10-122-15
 Date Of Test: 90/02/16
 Recorder Depth: 713.5
 Test Interval: 731-766.81
 Probe serial #: 50077
 Data File: 50077A.raw
 Probe Range: 0 - 41364 kPa
 Time Interval: 60 seconds

Page 1

SHELL CELIBETA B-12 (60-10-122-15)				DST NO 1					
Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa	Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa
1	90/02/16 08:05	0:00	-5.4	0.0	431	90/02/16 15:15	7:10	35.5	0.0
11	90/02/16 08:15	0:10	-5.6	0.0	441	90/02/16 15:25	7:20	36.8	0.0
21	90/02/16 08:25	0:20	-5.8	0.0	451	90/02/16 15:35	7:30	37.4	0.0
31	90/02/16 08:35	0:30	-4.4	0.0	461	90/02/16 15:45	7:40	38.0	0.0
41	90/02/16 08:45	0:40	-4.9	0.0	471	90/02/16 15:55	7:50	38.5	0.0
51	90/02/16 08:55	0:50	-6.0	0.0	481	90/02/16 16:05	8:00	39.1	0.0
61	90/02/16 09:05	1:00	-6.3	0.0	491	90/02/16 16:15	8:10	39.1	0.0
71	90/02/16 09:15	1:10	-6.8	0.0	501	90/02/16 16:25	8:20	39.4	0.0
81	90/02/16 09:25	1:20	-7.5	0.0	511	90/02/16 16:35	8:30	39.6	0.0
91	90/02/16 09:35	1:30	-8.0	0.0	521	90/02/16 16:45	8:40	39.7	0.0
101	90/02/16 09:45	1:40	-8.2	0.0	531	90/02/16 16:55	8:50	39.8	0.0
111	90/02/16 09:55	1:50	-8.3	0.0	541	90/02/16 17:05	9:00	39.9	0.0
121	90/02/16 10:05	2:00	-8.3	0.0	551	90/02/16 17:15	9:10	40.0	0.0
131	90/02/16 10:15	2:10	-8.3	0.0	561	90/02/16 17:25	9:20	40.1	0.0
141	90/02/16 10:25	2:20	-8.4	0.0	571	90/02/16 17:35	9:30	40.4	0.0
151	90/02/16 10:35	2:30	-8.4	0.0	581	90/02/16 17:45	9:40	40.6	0.0
161	90/02/16 10:45	2:40	-8.4	0.0	591	90/02/16 17:55	9:50	40.7	0.0
171	90/02/16 10:55	2:50	-8.4	0.0	601	90/02/16 18:05	10:00	40.8	0.0
181	90/02/16 11:05	3:00	-7.7	0.0	611	90/02/16 18:15	10:10	41.0	0.0
191	90/02/16 11:15	3:10	-5.4	0.0	621	90/02/16 18:25	10:20	41.1	0.0
201	90/02/16 11:25	3:20	-2.9	0.0	631	90/02/16 18:35	10:30	41.1	0.0
211	90/02/16 11:35	3:30	-1.0	0.0	641	90/02/16 18:45	10:40	41.1	0.0
221	90/02/16 11:45	3:40	0.6	0.0	651	90/02/16 18:55	10:50	41.2	0.0
231	90/02/16 11:55	3:50	1.8	0.0	661	90/02/16 19:05	11:00	41.2	0.0
241	90/02/16 12:05	4:00	3.6	0.0	671	90/02/16 19:15	11:10	41.3	0.0
251	90/02/16 12:15	4:10	6.1	0.0	681	90/02/16 19:25	11:20	41.3	0.0
261	90/02/16 12:25	4:20	8.6	0.0	691	90/02/16 19:35	11:30	41.3	0.0
271	90/02/16 12:35	4:30	11.1	0.0	701	90/02/16 19:45	11:40	41.4	0.0
281	90/02/16 12:45	4:40	13.1	0.0	711	90/02/16 19:55	11:50	41.4	0.0
291	90/02/16 12:55	4:50	16.2	0.0	721	90/02/16 20:05	12:00	41.4	0.0
301	90/02/16 13:05	5:00	18.4	0.0	731	90/02/16 20:15	12:10	41.5	0.0
311	90/02/16 13:15	5:10	20.3	0.0	741	90/02/16 20:25	12:20	41.5	0.0
321	90/02/16 13:25	5:20	21.7	0.0	751	90/02/16 20:35	12:30	41.5	0.0
331	90/02/16 13:35	5:30	23.0	0.0	761	90/02/16 20:45	12:40	41.6	0.0
341	90/02/16 13:45	5:40	24.0	0.0	771	90/02/16 20:55	12:50	41.6	0.0
351	90/02/16 13:55	5:50	25.0	0.0	781	90/02/16 21:05	13:00	41.6	0.0
361	90/02/16 14:05	6:00	25.7	0.0	791	90/02/16 21:15	13:10	41.6	0.0
371	90/02/16 14:15	6:10	26.9	0.0	801	90/02/16 21:25	13:20	41.7	0.0
381	90/02/16 14:25	6:20	27.7	0.0	811	90/02/16 21:35	13:30	41.7	0.0
391	90/02/16 14:35	6:30	29.4	0.0	821	90/02/16 21:45	13:40	41.7	0.0
401	90/02/16 14:45	6:40	30.8	0.0	831	90/02/16 21:55	13:50	41.8	0.0
411	90/02/16 14:55	6:50	32.6	0.0	841	90/02/16 22:05	14:00	41.8	0.0
421	90/02/16 15:05	7:00	34.3	0.0	851	90/02/16 22:15	14:10	41.8	0.0

Date: 90/02/16 08:05 to 90/02/16 22:15 Elapse time: 0:00 to 14:10

Northstar

SHELL CELIBETA B-12 (60-10-122-15)			DST NO 1						
Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa	Item #	Date	Total Elapse Time	Temperature °C	Pressure kPa
861	90/02/16 22:25	14:20	41.8	0.0	1611	90/02/17 10:55	26:50	10.9	0.0
871	90/02/16 22:35	14:30	41.8	0.0	1621	90/02/17 11:05	27:00	9.4	0.0
881	90/02/16 22:45	14:40	41.8	0.0	1631	90/02/17 11:15	27:10	7.1	0.0
891	90/02/16 22:55	14:50	41.8	0.0	1641	90/02/17 11:25	27:20	10.6	0.0
901	90/02/16 23:05	15:00	41.8	0.0	1651	90/02/17 11:35	27:30	12.4	0.0
911	90/02/16 23:15	15:10	41.8	0.0	1661	90/02/17 11:45	27:40	11.1	0.0
921	90/02/16 23:25	15:20	41.8	0.0	1671	90/02/17 11:55	27:50	9.9	0.0
931	90/02/16 23:35	15:30	41.9	0.0	1681	90/02/17 12:05	28:00	8.6	0.0
941	90/02/16 23:45	15:40	41.9	0.0	1691	90/02/17 12:15	28:10	8.1	0.0
951	90/02/16 23:55	15:50	42.0	0.0	1701	90/02/17 12:25	28:20	11.1	0.0
961	90/02/17 00:05	16:00	42.0	0.0	1711	90/02/17 12:35	28:30	11.9	0.0
971	90/02/17 00:15	16:10	42.1	0.0	1721	90/02/17 12:45	28:40	10.6	0.0
981	90/02/17 00:25	16:20	42.1	0.0	1731	90/02/17 12:55	28:50	8.6	0.0
991	90/02/17 00:35	16:30	42.1	0.0	1741	90/02/17 13:05	29:00	6.6	0.0
1001	90/02/17 00:45	16:40	42.2	0.0	1751	90/02/17 13:15	29:10	5.3	0.0
1011	90/02/17 00:55	16:50	42.2	0.0	1761	90/02/17 13:25	29:20	5.1	0.0
1021	90/02/17 01:05	17:00	42.2	0.0					
1031	90/02/17 01:15	17:10	42.3	0.0					
1041	90/02/17 01:25	17:20	42.3	0.0					
1051	90/02/17 01:35	17:30	42.3	0.0					
1061	90/02/17 01:45	17:40	42.3	0.0					
1071	90/02/17 01:55	17:50	42.3	0.0					
1081	90/02/17 02:05	18:00	42.3	0.0					
1091	90/02/17 02:15	18:10	42.3	0.0					
1101	90/02/17 02:25	18:20	42.3	0.0					
1111	90/02/17 02:35	18:30	42.3	0.0					
1121	90/02/17 02:45	18:40	42.3	0.0					
1131	90/02/17 02:55	18:50	42.3	0.0					
1141	90/02/17 03:05	19:00	42.3	0.0					
1151	90/02/17 03:15	19:10	42.3	0.0					
1161	90/02/17 03:25	19:20	42.3	0.0					
1171	90/02/17 03:35	19:30	42.3	0.0					
1181	90/02/17 03:45	19:40	42.3	0.0					
1191	90/02/17 03:55	19:50	42.3	0.0					
1201	90/02/17 04:05	20:00	42.4	0.0					
1211	90/02/17 04:15	20:10	42.4	0.0					
1221	90/02/17 04:25	20:20	42.5	0.0					
1231	90/02/17 04:35	20:30	42.5	0.0					
1241	90/02/17 04:45	20:40	42.6	0.0					
1251	90/02/17 04:55	20:50	42.6	0.0					
1261	90/02/17 05:05	21:00	42.6	0.0					
1271	90/02/17 05:15	21:10	42.4	0.0					
1281	90/02/17 05:25	21:20	42.1	0.0					
1291	90/02/17 05:35	21:30	41.8	0.0					
1301	90/02/17 05:45	21:40	41.4	0.0					
1311	90/02/17 05:55	21:50	40.6	0.0					
1321	90/02/17 06:05	22:00	39.8	0.0					
1331	90/02/17 06:15	22:10	38.5	0.0					
1341	90/02/17 06:25	22:20	37.3	0.0					
1351	90/02/17 06:35	22:30	36.0	0.0					
1361	90/02/17 06:45	22:40	34.8	0.0					
1371	90/02/17 06:55	22:50	33.6	0.0					
1381	90/02/17 07:05	23:00	32.8	0.0					
1391	90/02/17 07:15	23:10	31.9	0.0					
1401	90/02/17 07:25	23:20	31.3	0.0					
1411	90/02/17 07:35	23:30	30.1	0.0					
1421	90/02/17 07:45	23:40	29.2	0.0					
1431	90/02/17 07:55	23:50	28.4	0.0					
1441	90/02/17 08:05	24:00	27.2	0.0					
1451	90/02/17 08:15	24:10	25.5	0.0					
1461	90/02/17 08:25	24:20	25.2	0.0					
1471	90/02/17 08:35	24:30	24.3	0.0					
1481	90/02/17 08:45	24:40	23.7	0.0					
1491	90/02/17 08:55	24:50	23.1	0.0					
1501	90/02/17 09:05	25:00	22.6	0.0					
1511	90/02/17 09:15	25:10	22.1	0.0					
1521	90/02/17 09:25	25:20	21.9	0.0					
1531	90/02/17 09:35	25:30	21.4	0.0					
1541	90/02/17 09:45	25:40	20.7	0.0					
1551	90/02/17 09:55	25:50	19.4	0.0					
1561	90/02/17 10:05	26:00	18.2	0.0					
1571	90/02/17 10:15	26:10	16.8	0.0					
1581	90/02/17 10:25	26:20	15.2	0.0					
1591	90/02/17 10:35	26:30	13.9	0.0					
1601	90/02/17 10:45	26:40	12.1	0.0					

Date: 90/02/16 22:16 to 90/02/17 13:28 Elapse time: 14:11 to 29:23

Northstar

NORTHSTAR DRILLSTEM TESTERS

BOX 494, POSTAL STATION D
CALGARY ALBERTA T2P 2G2

3175

DATE FEB 16/90

COMPANY SHELL CANADA LTD FORMATION _____

WELL NAME SHELL CELIBETA B-12 TYPE OF TEST INF STRADDLE

WELL LOCATION 60-10-122-15 NET PAY _____ POROSITY _____

DST No. ONE Interval 731-764.81 KELLY BUSHING 416 GR. ELEVATION 410.66 TOTAL DEPTH 1450

REMARKS & BLOW DESCRIPTION

TEST: MISRUN ☐ SUCCESSFUL ☒

Pretlow: _____

CLOSED CHAMBER

Secondflow: _____

Comments: _____

PRESSURE DATA

Recorder # 1960 Depth 735'

kPa

A. Init. Hyd. 9866

B. First Flow 523

B1. Final Flow 155

C. Init. Shut In 132

D. Init. Flow 132

E. Final Flow 143

F. Final Shut In 155

G. Final Hyd. 8843

FLUID RECOVERY

Oil _____ m *API _____

Water _____ m

Mud _____ m

_____ m

_____ m

Total Fluid 0 m

Samples sent to: CSG Edm (2) BHS.

0 Fluid Samples 0 Gas Samples

GAS RECOVERY MEASURED WITH:

Time mins.	Onlce mm	Pressure Kpa	Rate m ³ /d
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

TEST DESCRIPTION

Time Started 13:22 hr

Time on Bottom 12:30 hr

Time Open 13:22 hr

Time Pulled 17:43 hr

Time Out 21:00 hr

Tool Weight 2000 daN

Weight Set On Packer 6000 daN

Weight Pulled Loose 39800 daN

Initial String Weight 32000 daN

Unseated String Weight 32000 daN

Bottom Choke 19.05

MUD DATA

Mud Type GEL

Weight 1210 kg/m³

Viscosity 68 s/L

Mud Drop 0 m

Amount of Fill — m

Bottom Hole Temp. _____ °C

HOLE DATA

Bit Size 215.9 mm

Top Packer Caliper 180 mm

Bottom Packer Caliper 180 mm

PIPE DATA

	O.D. mm	Mass kg/m	I.D. mm	Length m
Drill Collars	<u>165</u>	<u>136</u>	<u>71.44</u>	<u>104.17</u>
Drill Pipe	<u>114</u>	<u>24.7</u>	<u>47.2</u>	<u>613.31</u>
Water Cushion: _____	Stands _____	m		
Nitrogen Cushion: _____	kPa			

2 Pretlow 13:22 min 13:43 min

60 Initial Shut In 13:43 min 14:43 min

60 Secondflow 14:43 min 15:43 min

120 Final Shut In 15:43 min 17:43 min

Time End _____



NORTHSTAR DRILLSTEM TESTERS

BOX 6956, POSTAL STATION "D"
CALGARY, ALBERTA T2P 2G2

INFLATE - TALLY SHEET

Company SHELL CANADA LTD
Well Name and Number 20-10-122-15 W
SHELL CELIBETA B12
DST No. ONE Interval 731-766.81
Customer Representative DAN HEWITT
Tester LEE WHITE

1	2754	11	2680	21	2688	31		41	
2	2744	12	2689	22	2689	32		42	
3	2767	13	2687	23	2680	33		43	
4	2785	14	2689	24		34		44	
5	2770	15	2685	25		35		45	
6	2688	16	2688	26		36		46	
7	2690	17	2690	27		37		47	
8	2691	18	2689	28		38		48	
9	2680	19	2689	29		39		49	
10	2680	20	2689	30		40		50	
A	27249	B	26885	C	7197	D		E	

51		61		71		81		91	
52		62		72		82		92	
53		63		73		83		93	
54		64		74		84		94	
55		65		75		85		95	
56		66		76		86		96	
57		67		77		87		97	
58		68		78		88		98	
59		69		79		89		99	
60		70		80		90		100	
F		G		H		I		J	

DRILL PIPE	DRILL COLLARS	PIPE OUT
A	1	2510
B	2	2567
C	3	2633
D	4	2807
E	5	
F	6	
G	7	
H	8	
I	9	
J	10	
DP	DC	10417

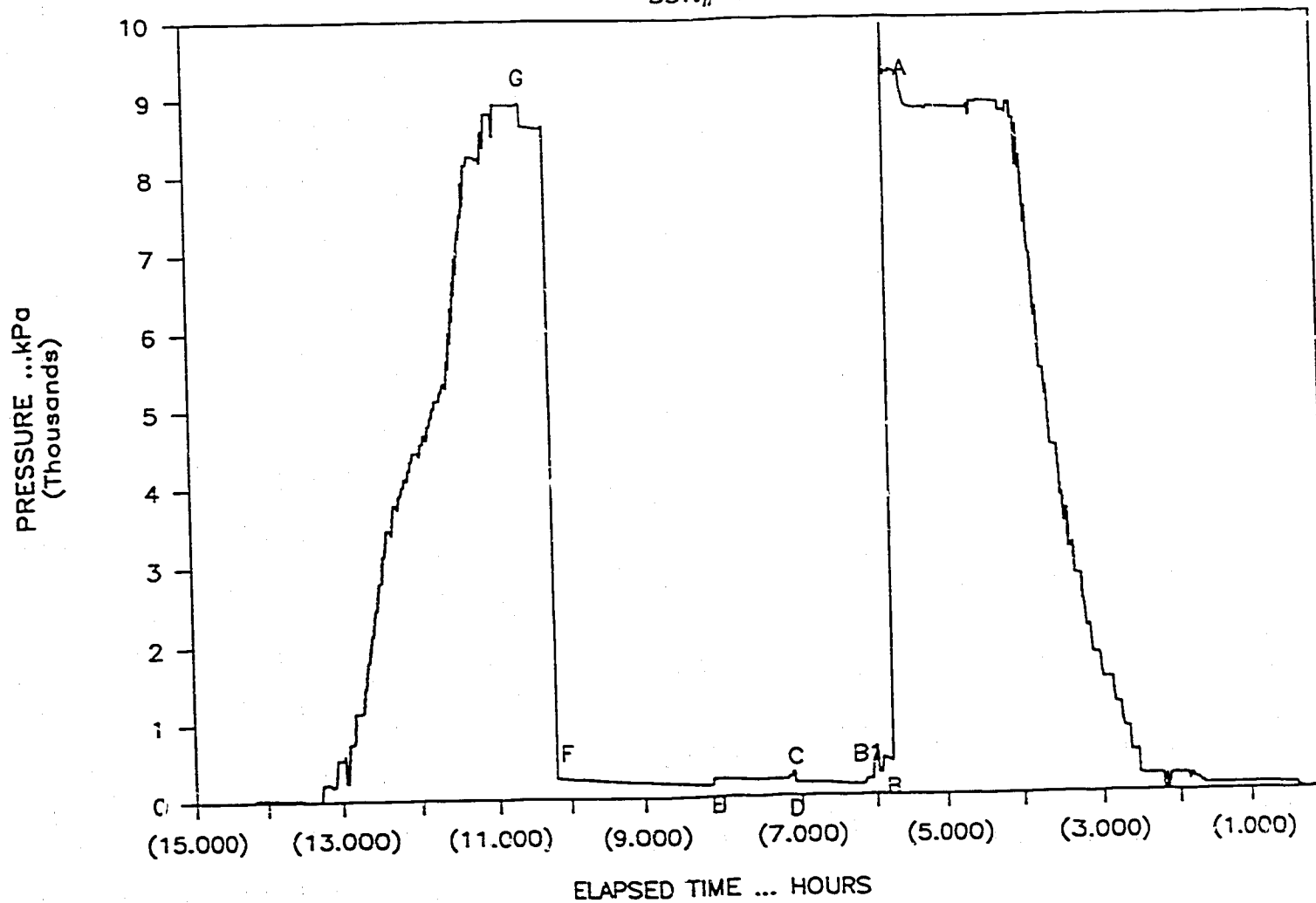
D.P. 613.31
D.C. 104.17
Total Pipe 717.48
Less Pipe Out 717.48
X Pipe Used 20.80
Y Tool Above Interval 20.30
X + Y 737.66
Z Top of Interval 731.00
Stickup 6.68
X + Y + Z 7.28

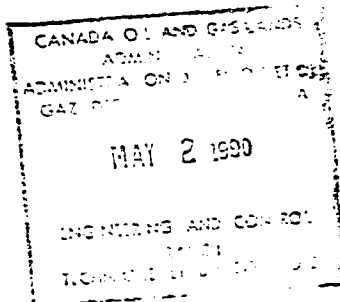
DELTA FLOOR TO KB.35
(STABING VALVE .60)

7.28
Stick Up (5.65) 1.10 0.00
KB 57.66 613.31
Drill Pipe Tally 704.17
Drill Collar Tally 613.31 104.17
REV Sub .30
XO sub .30
Reversing Sub .30
Choke Sub
HANGER .30 REC. # 1384
Bomb 1.22
Upper Hanger .30 712.00 713.52 Recorder # 5007
Time 08:30
Bomb Well 1.52
Hydraulic Tool 1.63
Sampler 1.17
Sampler 1.15
Sub 1.21
Upper Hanger .30 Recorder #
Bomb Well .30 720.80 Recorder # 6840
Upper Hanger
Bomb Well 1.22
Extension Joint 1.73
Jars 1.71
Safety Joint .68
Inflate Pump .86
Screen 1.32
Release System .90
Top Packer 1.78 731 TOP INTERVAL
Perforations .76 732.00
Upper Hanger .30 732.26 Recorder # 10960
Recorder # 50086
Time 07:30
Lower Hanger 1.67
XO Sub .30
PIPE 26.89
XO .30
SPACE 5.17
XO Sub
Packer Stub .42 746.81 BOTTOM INTERVAL
Bottom Packer 1.86
Upper Hanger .30 748.97 Recorder # 5020
Bomb Well 1.22
Upper Hanger
Bomb Well 1.56 772.36
Belly Spring .61 555 BOTTOM TOOLS
Bull Nose

Shell Celibeta B-12 60-10-122-15

DST.# 1





SHELL CELIBETA B-12

60-01-13.42-122 17 42.71

ANALYSIS OF CORES #1 AND #2

SLAVE POINT FORMATION

prepared for

SHELL CANADA LIMITED

File #90-GC-103

March 26, 1990

ORIGINAL

GEOTECHnical resources ltd.

4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3 (403) 230-4128
TELEX 03-821172 ENVOY 100: TELEX. GEO FAX: (403) 230-437C

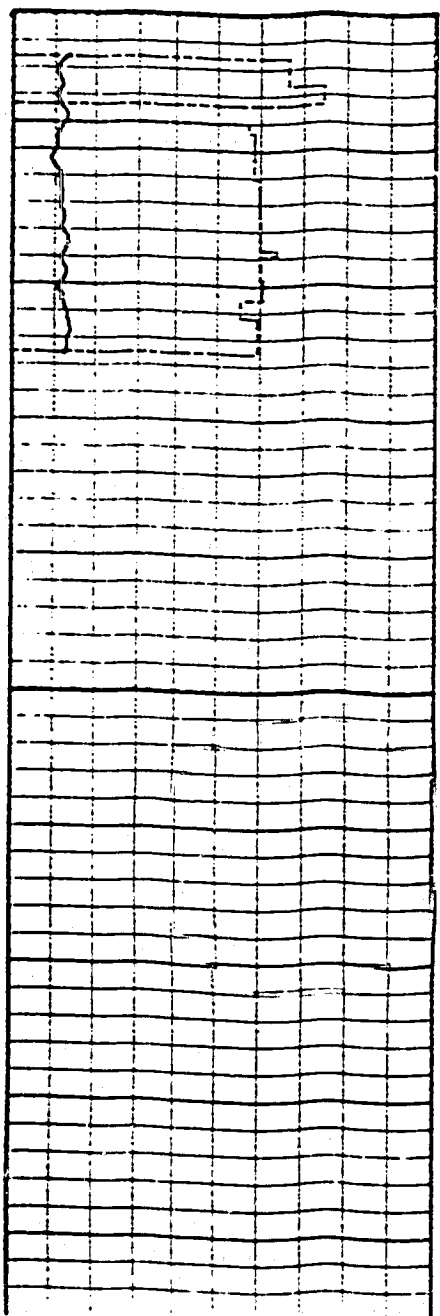
COMPANY: SHELL CANADA LIMITED
WELL NAME: SHELL CELIBETA B-12
LOCATION: 60-01-13.42-122 17 42.71



DATE: MAR 23, 1990
FILE: 90-6C-103

TECHLOG

0 GR 150
2500 Grain Den. 3000

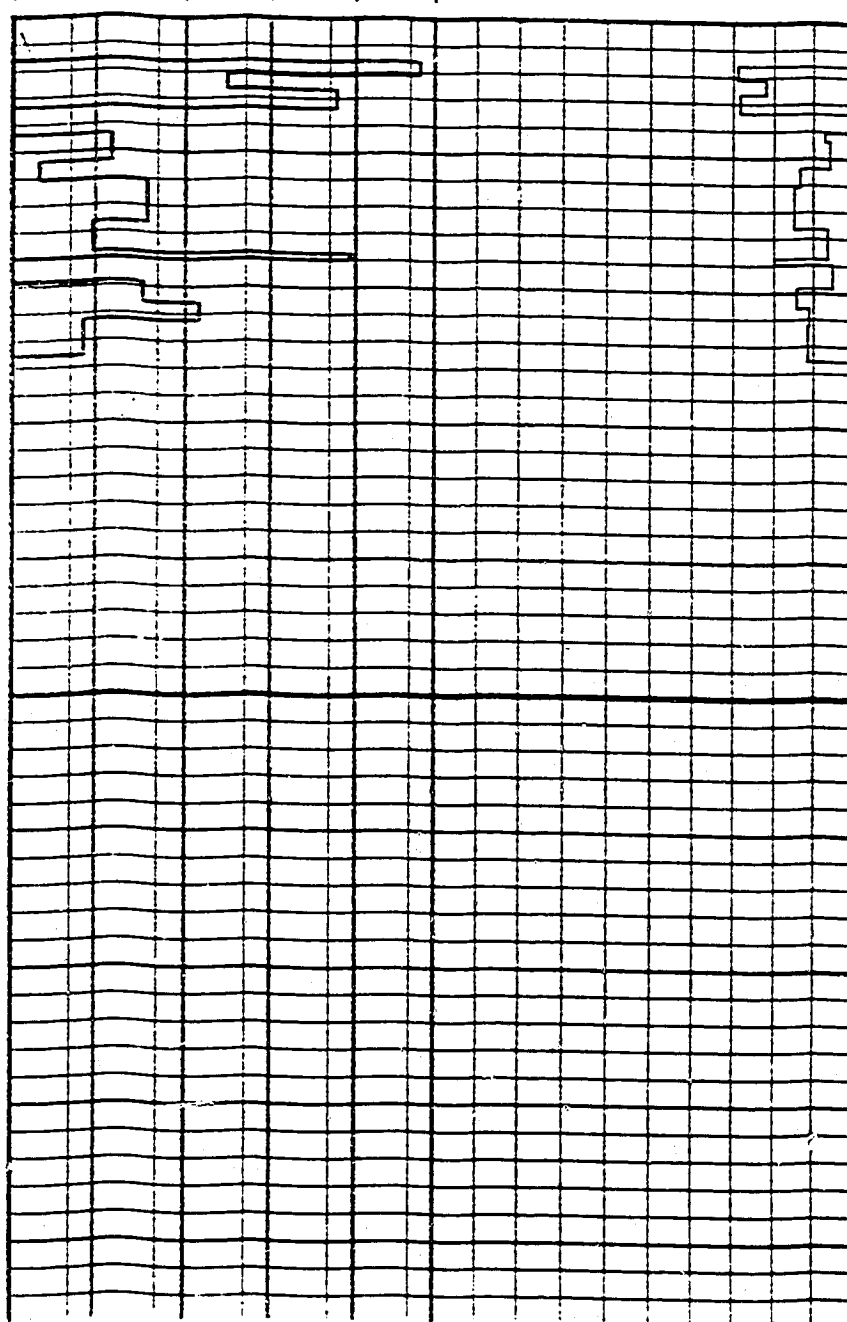


30 BOYLE'S LAW $\phi \%$ 0

.01 Kh mD 1000

1550

1575





SHELL CANADA LIMITED

SHELL CELIBETA B-12

60-01-13.42-122 17 42.71

File #90-GC-103

CORE INTERVALS	RECOVERY/CUT	FORMATION	# OF BOXES
1) 1551.60-1555.40 m	3.80/3.80 m	Slave Point	3
2) 1555.40-1562.58 m	7.18/7.18 m	Slave Point	6

Coring Diameter: 111 mm

SAMPLE PREPARATION AND CLEANING

Sample Cutting Fluid:	Water
Solvent:	Toluene
Extraction Equipment:	Vapour Phase
Extraction Time:	14 days
Drying Equipment:	Convection Oven
Drying Time:	24 hours
Drying Temperature:	150°C

ANALYSIS

Grain Volume measured by:	Boyle's Law Helium Porosimeter
Bulk Volume measured by:	Mercury/Caliper
No fluid saturations requested.	

Plugs are 38.1 mm diameter.

"X" P denotes preliminary sample.

SHELL CANADA LTD.

SHELL CELIBETA B-12
60-01-13.42-122 17 42.71

File #90-GC-103

GEOLOGIST: Janet Sawicki

Core #1: 1551.60-1555.40 m
Recovery: 3.80 m
Formation: Slave Point

Core #2: 1555.40-1562.58 m
Recovery: 7.18 m
Formation: Slave Point

<u>Depth</u>	<u>Lithology</u>	<u>Description</u>
Core #1		
1551.60-1554.07 m	Dolostone	- dark grey - hard - very fine to fine crystalline, slightly sucrosic - highly recrystallized - numerous pinpoint to small and occasional larger vugs, produced by leaching of biostromes and fossils - vugs are often concentrated into bands and patches - larger vugs may be isolated and are lined by well developed medium to very coarse crystalline drusy dolomite - local vugs completely filled by coarse crystalline dolomite - black abundant intercrystalline pyrobitumen - occasional pyrite patches - rare stylolites - scattered short microfractures, lined with pyrobitumen and locally connecting vugs - <u>poor to fair visible intercrystalline, fair vuggy porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>
1554.07-1554.40 m	Dolostone	- dark grey - hard - fine to medium crystalline - massive with rare scattered pinpoint vugs and small vugs lined with medium to coarse crystalline drusy dolomite - abundant intercrystalline pyrobitumen - <u>no to poor visible intercrystalline porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>

SHELL CELIBETA B-12
60-01-13.42-122 17 42.71

Page 2

<u>Depth</u>	<u>Lithology</u>	<u>Description</u>
1554.40-1555.40 m	Dolostone	- dark grey - hard - fine to medium crystalline - fossiliferous with highly re-crystallized ghosts of branching stromatoporoids and occasional bulbous stromatoporoids - small scattered vugs, often isolated, partially to nearly completely lined by drusy dolomite - scattered short vertical fractures, completely infilled by dolomite - vugs and re-crystallized fossils decrease in abundance towards base - abundant intercrystalline pyrobitumen - scattered stylolites - <u>no to poor visible intercrystalline, vuggy porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>
Core #2		
1555.40-1557.65 m	Dolostone	- dark grey - fine to medium crystalline, slight local sucrosic texture - fossiliferous floatstone to rudstone, often framework supported, consisting of branching stromatoporoids, small and large bulbous stromatoporoids and occasional tabular stromatoporoids - rare gastropods - size and abundance of fossils decreases towards base and in local beds - fossils are occasionally weakly to locally strongly leached, producing scattered pinpoint vugs and smaller vugs, occasional larger isolated vugs - larger vugs often partially lined by coarse crystalline drusy dolomite - abundant intercrystalline pyrobitumen - local short vertical fractures, partially open - <u>poor visible intercrystalline, poor to fair vuggy porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>

SHELL CELIBETA B-12
60-01-13.42-122 17 42.71

Page 3

<u>Depth</u>	<u>Lithology</u>	<u>Description</u>
1557.65-1559.13 m	Dolostone	- dark grey - hard - fine to coarse crystalline - highly re-crystallized - scattered branching stromatoporoid fragments - local bands of strongly leached horizontally aligned tabular stromatoporoids, producing vugs that have been subsequently completely to partially infilled by coarse crystalline dolomite and scattered pyrite framboids - local patches sparry calcite - abundant intercrystalline pyrobitumen - scattered vertical to subvertical open fractures, occasional shorter vertical fractures infilled by dolomite, or healed locally - <u>no to poor visible intercrystalline porosity, local fair visible vuggy porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>
1559.13-1561.26 m	Dolostone	- dark grey - hard - fine to coarse crystalline - highly re-crystallized - occasional re-crystallized ghosts of branching stromatoporoids (<u>Amphipora</u> and <u>Stachyodes</u>), rare gastropods, often concentrated in beds - rare leached and re-crystallized tabular stromatoporoids - rare isolated vugs (leached bulbous stromatoporoids), partially to completely filled by coarse crystalline drusy dolomite - local patches pyrite - scattered vertical fractures, open locally, closed otherwise or infilled by dolomite - rare stylolites - abundant intercrystalline pyrobitumen - <u>no to poor visible intercrystalline and vuggy porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>

SHELL CELIBETA B-12
60-01-13.42-122 17 42.71

Page 4

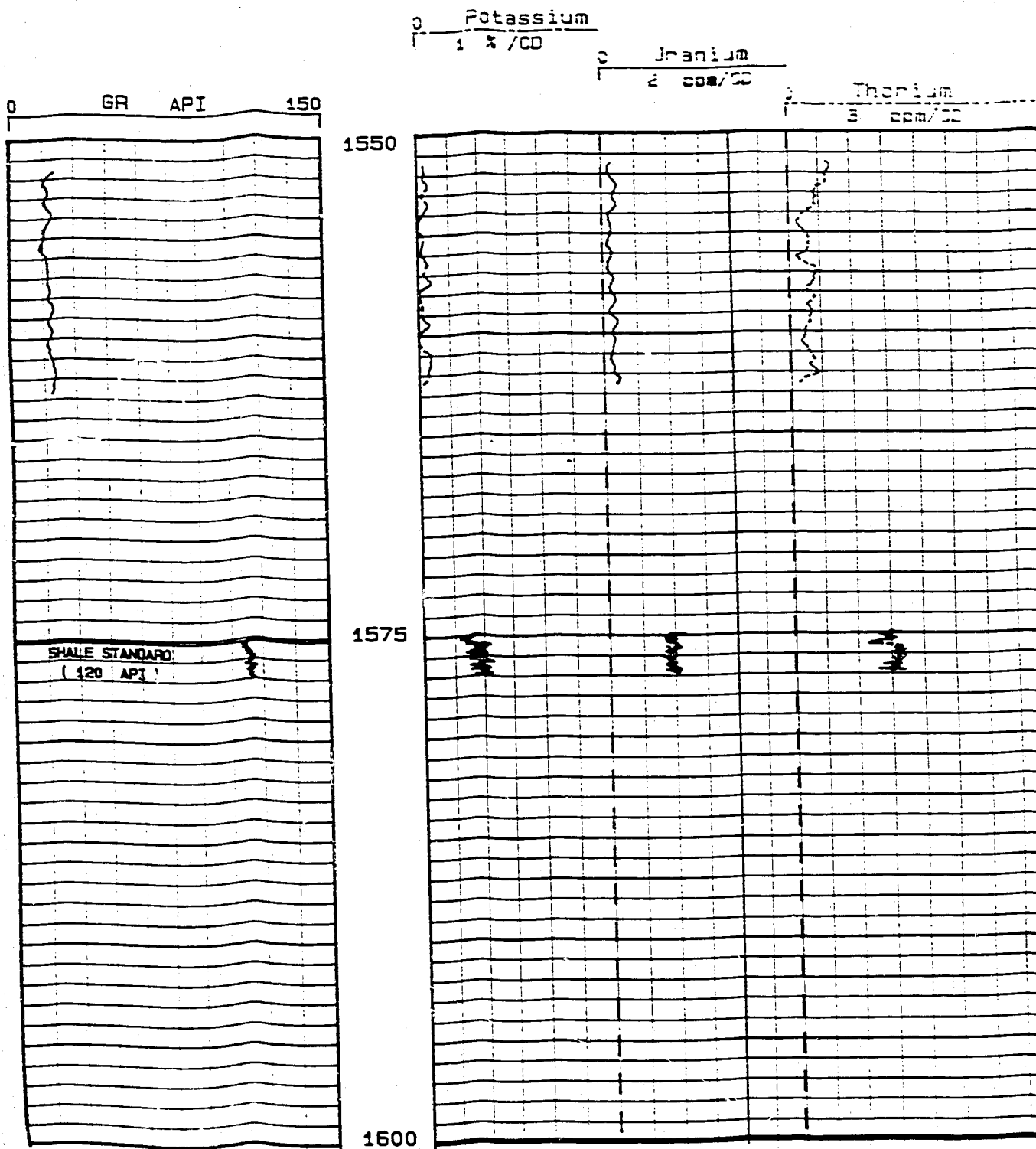
<u>Depth</u>	<u>Lithology</u>	<u>Description</u>
1561.26-1562.58 m	Dolostone	- dark grey - hard - fine to coarse crystalline - highly re-crystallized - fossiliferous with abundant ghosts of <u>Amphipora</u> and <u>Stachyodes</u> locally forming grainstone - scattered partially leached bulbous stromatoporoids and stromatoporoid fragments forming local patches of small vugs - vugs are lined by medium to coarse crystalline drusy dolomite - rare stylolites - scattered, open, subvertical to high angle fractures, often aligned parallel - abundant intercrystalline pyrobitumen - <u>no to poor visible intercrystalline, vuggy porosity</u> - <u>no visible oil stain</u> - <u>no visible oil fluorescence</u>

COMPANY: SHELL CANADA LIMITED
WELL NAME: SHELL CELIBETA B-12
LOCATION: 60-01-13.42-122 17 42.71



DATE: MAR 23, 1990
FILE: 90-GC-103

SPECTRAL GAMMA RAY



COMPANY: SHELL CANADA LIMITED
WELL NAME: SHELL CELIBETA B-12
LOCATION: 60-01-13.42-122 17 42.71

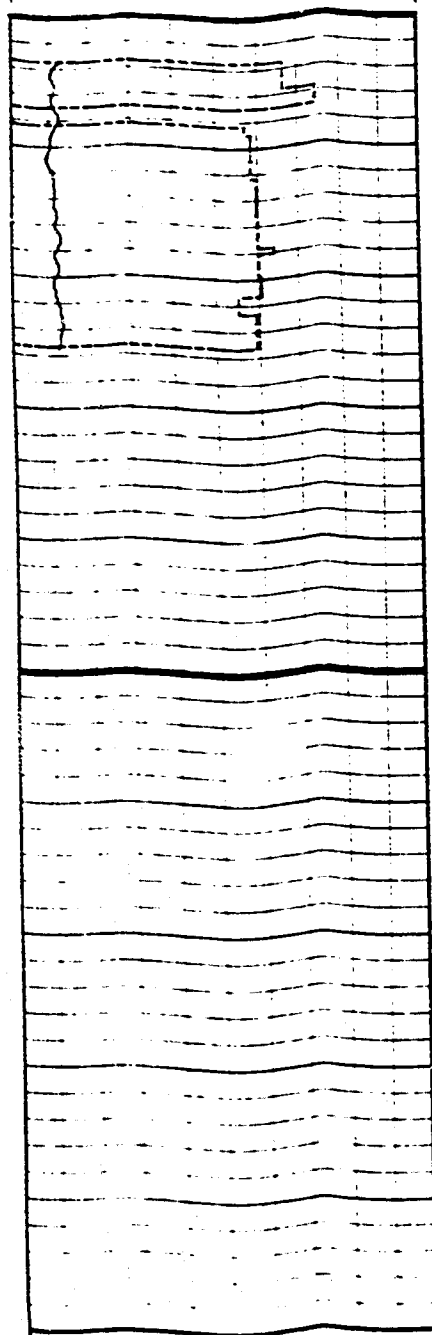
GEOTECH

DATE: MAR 23, 1990

FILE: 90-GC-103

TECHLOG

0 GR 150
2500 Grain Den. 3000



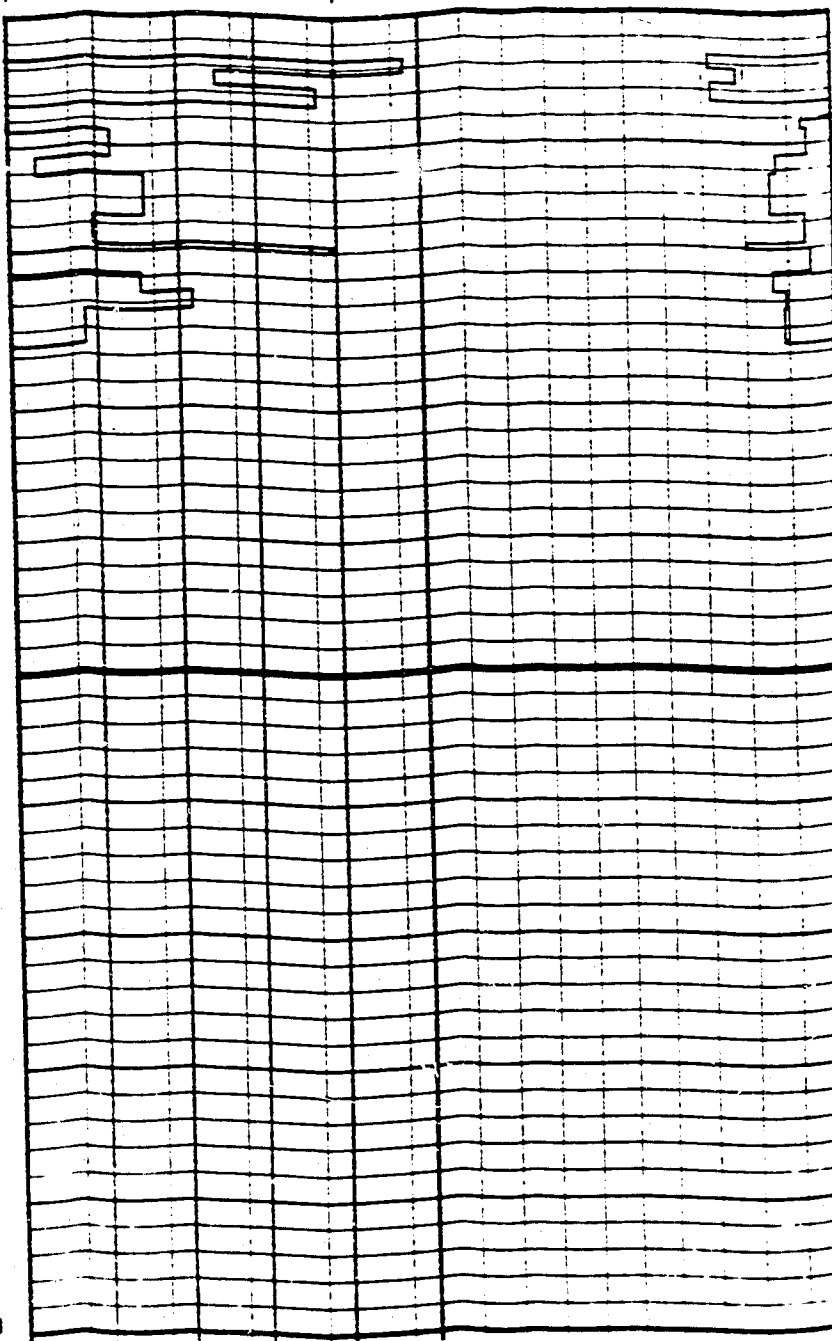
1550

1575

1600

30 BOYLE'S LAW ϕ % 0

.01 Kh mD 1000



COMPANY: SHELL CANADA LIMITED

WELL NAME: SHELL CELIBETA B-12

LOCATION: 60-01-13.42-122 17 42.71

GEOTECH

DATE: MAR 23, 1990

FILE: 90-GC-103

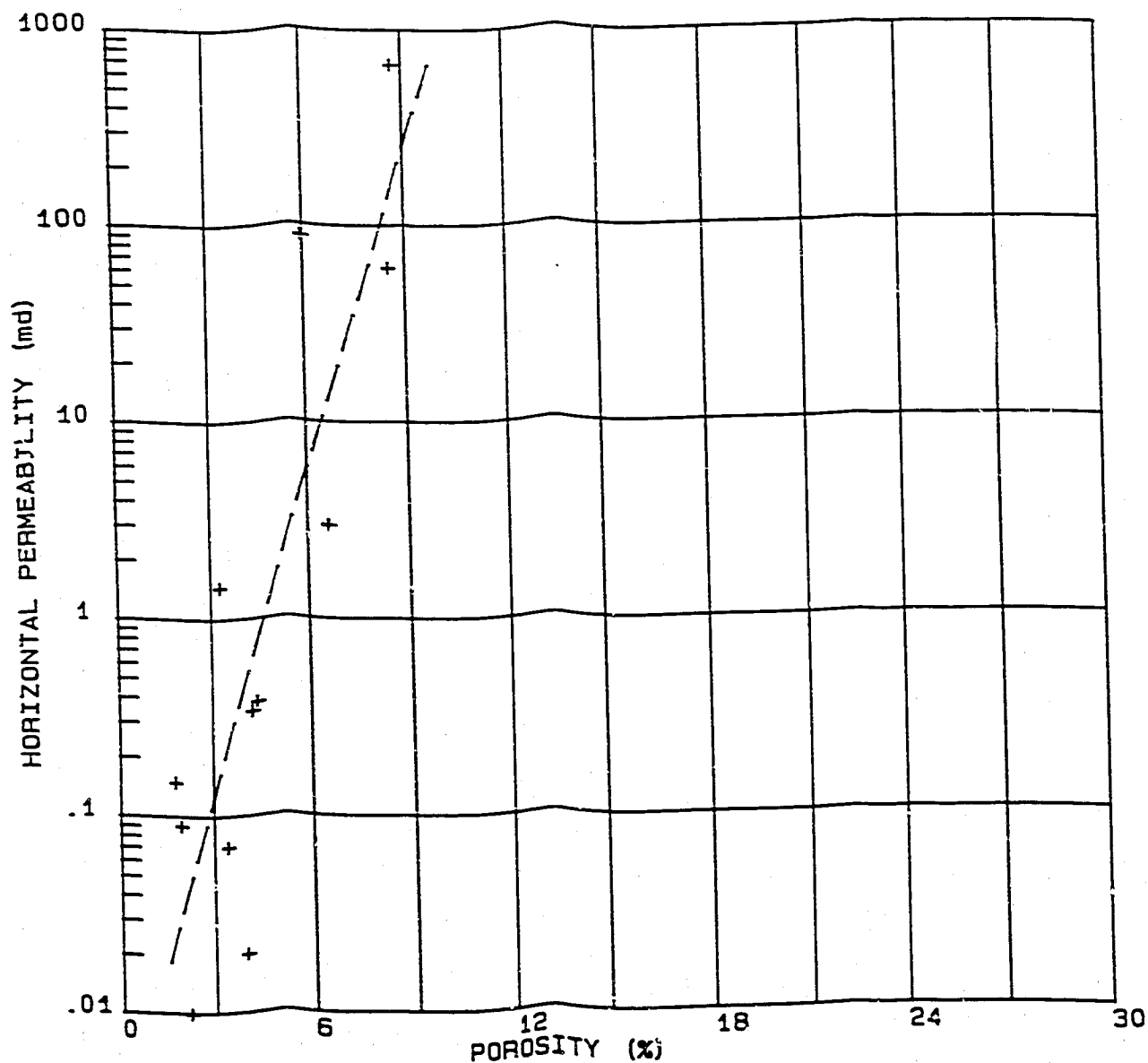
POROSITY
VS
HORIZONTAL PERMEABILITY

SLAVE POINT FORMATION

DEPTH: 1551.5 m to 1562.58 m

EQUATION : $\text{Log}(Kh) = -2.5689 + .5534 * (\Phi)$

CORRELATION COEFFICIENT : .7453 — — — —



COMPANY: SHELL CANADA LIMITED

WELL NAME: SHELL CELIBETA B-12

LOCATION: 60-01-13.42-122 17 42.71

GEOTECH

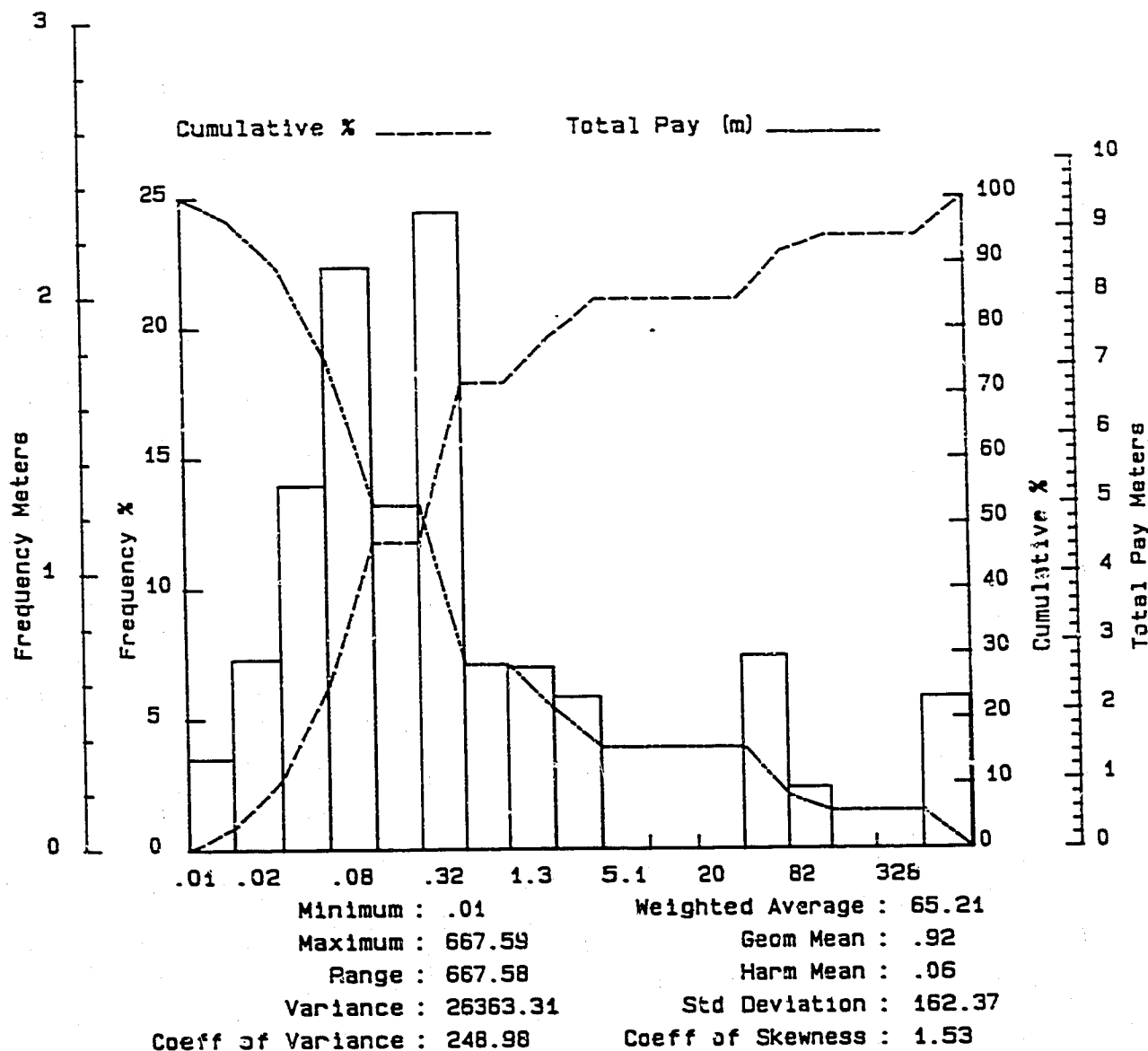
DATE: MAR 23, 1990

FILE: 90-GC-103

HORIZONTAL PERMEABILITY FREQUENCY DISTRIBUTION

SLAVE POINT FORMATION

DEPTH: 1551.6 m to 1562.58 m



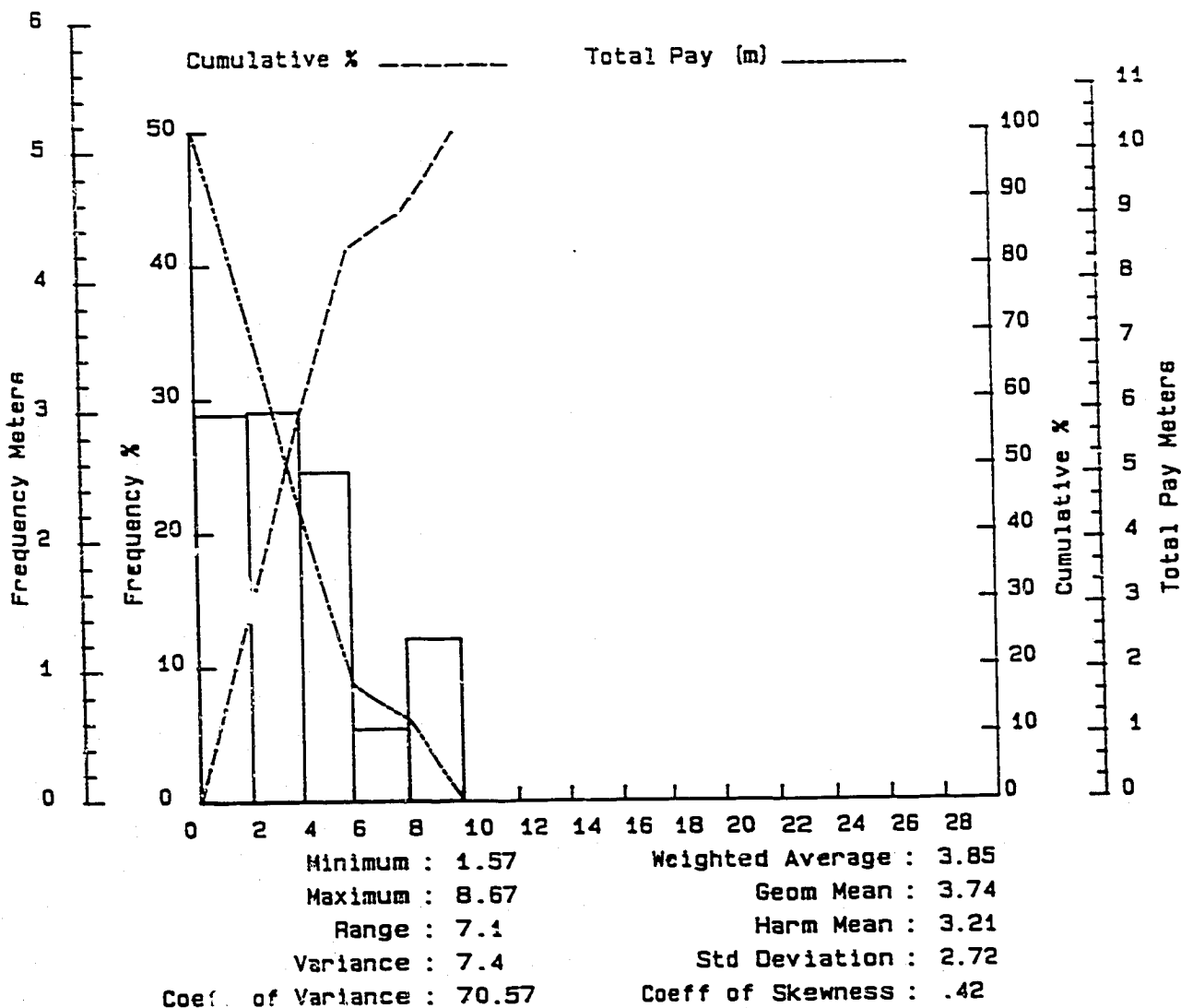
COMPANY: SHELL CANADA LIMITED
WELL NAME: SHELL CELIBETA B-12
LOCATION: 60-01-13.42-122 17 42.71



DATE: MAR 23, 1990
FILE: 90-GC-103

POROSITY FREQUENCY DISTRIBUTION

SLAVE POINT FORMATION
DEPTH: 1551.6 m to 1562.58 m



GEOTECH

COMPANY: SHELL CANADA LIMITED
WELL NAME: SHELL CELIBETA B-12
LOCATION: 60-01-13.42-122 17 42.71

DATE: MAR 23, 1990
FILE: 90-GC-103
PAGE: 1

CORE ANALYSIS REPORT

Sample Number	Depth (meters)	Thick (m)	Sample Depth (meters)	Sample Length (m)	Permeability			Porosity (%)	Grain Density (kg/mc)	Remarks
					Horz (mD)	Horz'90 (mD)	Vert (mD)			
SLAVE POINT FORMATION										
CORE # 1 1551.60 m - 1555.40 m										
RECOVERY/CUT : 3.80 m / 3.80 m										
1	1551.60-1552.10	0.50	1551.92	0.11				12.1	2830	FD:1P broken K n/a
2	1552.10-1552.50	0.40	1552.15	0.14	0.17	0.13	0.01	4.8	2798	FD:pyrbit
3	1552.50-1552.75	0.25	1552.57	0.09	8.43	3.15	4.12	8.1	2831	FD:2P styl,pyrbit
4	1552.75-1553.08	0.33	1552.93	0.09				10.0	2879	FD:3P broken K n/a,pyr
5	1553.08-1553.37	0.29	1553.12	0.10	4.23	2.27	0.52	11.4	2853	FD:
6	1553.37-1553.70	0.33	1553.51	0.12	1.02	0.98	0.27	4.3	2805	FD:pyrbit, styl
7	1553.70-1554.07	0.37	1553.88	0.12	1.91	0.23	0.33	5.8	2797	FD:pyrbit,vrtl frac
8	1554.07-1554.40	0.33	1554.07	0.09	0.02	0.02	<0.01	3.5	2785	FD:4P pyrbit
9	1554.40-1554.80	0.40	1554.62	0.10	0.17	0.10	0.04	2.1	2789	FD:5P pyrbit
10	1554.80-1555.10	0.30	1555.00	0.09	2.09	1.19	0.34	4.3	2799	FD:pyrbit, pyr
11	1555.10-1555.40	0.30	1555.27	0.09	0.22	0.03	0.02	1.6	2733	FD:pyrbit,vrtl styl
CORE # 2 1555.40 m - 1562.58 m										
RECOVERY/CUT : 7.18 m / 7.18 m										
12	1555.40-1555.78	0.38	1555.64	0.14	0.02	0.01	<0.01	4.6	2793	FD:6P pyrbit
13	1555.78-1555.98	0.20	1555.79	0.12	0.54	0.50	0.10	4.0	2775	FD:pyrbit

* Plug permeability - sample not suitable for full diameter measurement

COMPANY: SHELL CANADA LIMITED
 WELL NAME: SHELL CELIBETA B-12
 LOCATION: 60-01-13.42-122 17 42.71

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CORE ANALYSIS REPORT

Sample Number	Depth (meters)	Thick (m)	Sample Depth (meters)	Sample Length (m)	Permeability			Porosity (%)	Grain Density (kg/mc)	Remarks
					Horz (mD)	Horz'90 (mD)	Vert (mD)			
14	1555.98-1556.35	0.37	1556.03	0.11	0.47	0.37	0.37	6.3	2791	FD:pyrbit
15	1556.35-1556.68	0.33	1556.40	0.10	11.19	1.27	1.31	5.9	2793	FD:pyrbit,vugs
16	1556.68-1557.05	0.37	1556.74	0.12	0.61	0.36	1.75	5.3	2793	FD:7P pyrbit,vrtl frac
17	1557.05-1557.35	0.30	1557.18	0.10	1.94	0.70	1.54	7.6	2797	FD:vugs,vrtl frac,pyrbit
18	1557.35-1557.65	0.30	1557.37	0.10	0.01	0.01	0.07	4.6	2768	FD:vrtl frac,pybit
19	1557.65-1557.88	0.23	1557.81	--	0.22	*		5.1	2799	P:fractured zone,pyrbit
20	1557.88-1558.10	0.22	1557.93	0.09				6.2	2808	FD: broken K n/a
21	1558.10-1558.50	0.40	1558.14	0.12	0.19	0.07	1.24	2.4	2805	FD:8P fractured zone
22	1558.50-1558.76	0.26	1558.60	--	0.02	*		3.4	2822	P:
23	1558.76-1559.13	0.37	1558.92	0.11	532.94	24.70	2.47	6.7	2818	FD:9P vrtl frac,lrg vugs
24	1559.13-1559.70	0.57	1559.62	0.11				3.1	2799	FD:10P broken K n/a,pyrbit
25	1559.70-1560.25	0.55	1560.10	0.13	8.69	0.15	0.84	3.1	2774	FD:vrtl fracs,pyrbit
26	1560.25-1560.65	0.40	1560.30	0.16	1.20	0.76	3.15	5.6	2806	FD:11P vrtl fracs
27	1560.65-1561.26	0.61	1560.72	0.13	1.69	0.14	1.70	4.7	2778	FD:12P vrtl fracs,pyrbit
28	1561.26-1561.55	0.29	1561.43	0.08				6.4	2807	FD:broken K n/a
29	1561.55-1562.00	0.45	1561.64	0.13	0.09	0.07	<0.01	4.5	2796	FD:13P pyrbit
30	1562.00-1562.58	0.58	1562.44	0.09	8.65	5.51	3.01	5.2	2820	FD:vugs,vrtl frac

* Plug permeability - sample not suitable for full diameter measurement

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PRELIMINARY CORE ANALYSIS REPORT

Sample Number	Interval (meters)	Thick (m)	Sample Depth (meters)	Permeability Horizontal (mD)	K x Thickness	Porosity (%)	Phi x Thickness	Saturation Oil (%)	H2O (%)	Grain Density (kg/mc)	Remarks
SLAVE POINT FORMATION											
CORE # 1 1551.60 m - 1555.40 m RECOVERY/CUT : 3.80 m / 3.80 m											
1	1551.60-52.15	0.55	1551.92	667.59	367.21	8.7	0.05			2830	FD:vugs
2	1552.15-52.70	0.55	1552.57	2.99	1.64	6.6	0.04			2830	FD:
3	1552.70-53.40	0.70	1552.93	61.26	42.89	8.5	0.06			2871	FD:vugs, pyr bit, dol, loc vugs
	1553.40-54.07	0.67									
4	1554.07-54.40	0.33	1554.07	0.01	0.00	2.2	0.01			2784	FD:
5	1554.40-55.40	1.00	1554.62	0.15	0.15	1.8	0.02			2791	FD:
CORE # 2 1555.40 m - 1562.58 m RECOVERY/CUT : 7.18 m / 7.18 m											
6	1555.40-56.09	0.69	1555.74	0.02	0.01	4.0	0.03			2791	FD:
7	1556.09-57.65	1.56	1556.74	0.38	0.59	4.4	0.07			2797	FD:
8	1557.65-58.76	1.11	1558.14	0.09	0.10	1.9	0.02			2798	FD:
9	1558.76-58.98	0.22	1558.92	88.54	19.48	6.0	0.01			2817	FD:vugs
10	1558.98-59.85	0.87	1559.62			1.6	0.01			2798	FD:broken K n/a
11	1559.85-60.60	0.75	1560.30	0.34	0.25	4.3	0.03			2801	FD:
12	1560.60-61.26	0.56	1560.72	1.46	0.96	3.3	0.02			2774	FD:vrtl frac
13	1561.26-62.58	1.32	1561.64	0.07	0.09	3.4	0.05			2795	FD:

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CORE SUMMARY

CUTOFFS		AVERAGES		Porosity Meters	RESULTS by VOLUME	NET PAY	
Phi (%)	K (md)	Phi (%)	K (md)		Permeability Meters	Porosity Meters	Permeability Meters
SLAVE POINT FORMATION							
None	None	4.0	45.91	0.412	433.385	10.310	9.440
2.00	0.50	6.7	161.26	0.178	432.178	2.680	2.680
2.00	1.00	6.7	161.26	0.178	432.178	2.680	2.680
2.00	5.00	8.2	292.21	0.120	429.570	1.470	1.470
2.00	10.00	8.2	292.21	0.120	429.570	1.470	1.470
3.00	0.00	5.0	61.88	0.352	433.132	7.000	7.000
3.00	0.50	6.7	161.26	0.178	432.178	2.680	2.680
3.00	1.00	6.7	161.26	0.178	432.178	2.680	2.680
4.00	0.00	5.9	99.78	0.257	432.062	4.330	4.330
4.00	0.50	7.8	213.47	0.157	431.214	2.020	2.020
4.00	1.00	7.8	213.47	0.157	431.214	2.020	2.020
6.00	0.00	8.0	228.74	0.143	411.738	1.800	1.800
6.00	0.50	8.0	228.74	0.143	411.738	1.800	1.800
6.00	1.00	8.0	228.74	0.143	411.738	1.800	1.800
7.00	0.00	8.6	328.04	0.107	410.094	1.250	1.250
7.00	0.50	8.6	328.04	0.107	410.094	1.250	1.250
7.00	1.00	8.6	328.04	0.107	410.094	1.250	1.250
7.00	5.00	8.6	328.04	0.107	410.094	1.250	1.250
8.00	0.00	8.6	328.04	0.107	410.094	1.250	1.250
8.00	0.50	8.6	328.04	0.107	410.094	1.250	1.250
8.00	1.00	8.6	328.04	0.107	410.094	1.250	1.250
8.00	5.00	8.6	328.04	0.107	410.094	1.250	1.250

If cutoffs different from the above sets are required, please contact GEOTECH CORE SERVICES.

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ENGINEERING SUMMARY

Sample No.	Thick (m)	Sumt (m)	Kh (md)	K x t (md.m)	Sum K x t (md.m)	Sample No.	Thick (m)	Sumt (m)	Phi (%)	Phi x t (m)	Sum Phi x t (m)
SLAVE POINT FORMATION											
1	0.55	0.55	667.59	357.207	357.207	1	0.55	0.55	8.67	0.048	0.048
9	0.22	0.77	88.54	19.476	386.683	3	0.70	1.25	8.49	0.059	0.107
3	0.70	1.47	61.26	42.886	429.570	2	0.55	1.80	6.60	0.036	0.143
2	0.55	2.02	2.99	1.644	431.214	9	0.22	2.02	5.97	0.013	0.157
12	0.66	2.68	1.46	0.964	432.178	7	1.56	3.53	4.41	0.069	0.225
7	1.56	4.24	0.38	0.593	432.771	11	0.75	4.33	4.25	0.032	0.257
11	0.75	4.99	0.34	0.255	433.026	6	0.69	5.02	3.99	0.028	0.285
5	1.00	5.99	0.15	0.150	433.176	13	1.32	6.34	3.43	0.045	0.330
8	1.11	7.10	0.09	0.100	433.275	12	0.66	7.00	3.29	0.022	0.352
13	1.32	8.42	0.07	0.092	433.368	4	0.33	7.33	2.17	0.007	0.359
6	0.69	9.11	0.02	0.014	433.382	8	1.11	8.44	1.93	0.021	0.380
4	0.33	9.44	0.01	0.003	433.385	5	1.00	9.44	1.76	0.018	0.398
10	0.87	9.44	0.00	0.000	433.385*	10	0.87	10.31	1.57	0.014	0.412

*-Indicates no data for this sample