

E.C. COPY

PETRO-CANADA INCORPORATED

PCI CANTERRA BELE 0-35

WELL HISTORY REPORT

Prepared by: R. Hallsworth
April 21, 1986

WELL HISTORY REPORT

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PCI CANTERRA BELE 0-35

A. INTRODUCTION

1. Summary

PCI Caterra Bele 0-35, located in the Lac Belot area of the Northwest Territories, was drilled to a total depth of 1384 m. Drilling was completed in 41 days.

Petro-Canada Incorporated of Calgary operated the well. Jade Drilling Ltd. of Edmonton, the Contractor, used Jade Rig #5, a diesel mechanical rig built in 1980.

The location coordinates for this well are 66° 34' 58.1357" North Latitude and 126° 21' 32.1083" West Longitude. Ground elevation is 393.26 m.

This oil test well bottomed in the Proterozoic Clastic Sequence at a depth of 1384 m. The primary objective was the lower Cambrian Mt. Clark formation. Secondary objective was the Mt. Cap.

PCI Canterra Bele 0-35 was spudded on 1986-02-14 at 0015 hours. A 311mm hole was drilled and reamed to 444mm at a depth of 63 m. 339mm conductor casing was set at a depth of 63.0 m.

A 311mm hole was drilled to 100 m with water as the drilling fluid. At 100 m, drilling resumed with air as the drilling fluid. At 401 m, the hole was displaced to foam and drilling was continued to 777 m. The hole was logged from 776 m - 9 m. 244mm surface casing was set at 777 m.

First flow of water occurred at 363 m. The estimated flow was 16 m³/hr, the salinity was 125 mg/l and the calcium content was 240 mg/l. The flowrate was constant until 666 m when flow increased to 48 m³/hour, salinity 150 mg/l and calcium content 240 mg/l.

The 216mm mainhole was drilled with water to 790 m, and with a salt saturated mud from 790 - 1384 m.

Two conventional cores were cut, from 1330 - 1341 m, and from 1341 - 1353 m. The hole was logged from 1380 - 777 m.

One DST was run, 1384 m of 178mm production casing was set, and Jade Rig #5 was released on 86-04-02 at 1200 hours.

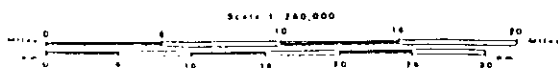
2. Location Map - Figure 1



126°00'W

LEGEND

- WINTER ROAD
- ACCESS ROUTE ON EXISTING SEISMIC LINE
- o PROPOSED WELLSITE
- SEISMIC LINE



PCI CANTERRA BELE O-35 WELLSITE
GRID AREA 66°40'N, 126°15'W

PCI CANTERRA BELE 0-35

B. GENERAL DATA

1. Well Name and Number: PCI Canterra Bele 0-35
Grid Area: 66° 40', 126° 15'
2. Well Location: North Latitude: 66° 34' 58.1357"
West Longitude: 126° 21' 32.1083"
3. Unique Well Identifier: 3000356640126150
4. Operator: Petro-Canada Incorporated
P.O. Box 2844
Calgary, Alberta
T2P 3E3

Contractor: Jade Drilling Ltd.
5825 - 98th Street
Edmonton, Alberta
T6E 3L5
5. Drilling Unit: Name: Jade Rig #5
Type: Triple Diesel Mechanical
Year Built: 1980
Location: Edmonton, Alberta
6. Position Keeping: Not applicable to this well.
7. Support Craft: Not applicable to this well.
8. Drilling Unit Performance: Not applicable to this well.
9. Difficulties and Delays: No difficulties or delays were encountered that were not directly associated with downhole operations.

PCI CANTERRA BELE 0-35

C. SUMMARY OF DRILLING OPERATIONS

1. Elevations: Ground: 393.26 m
 Kelly Bushing: 397.76 m
2. Total Depth: Drilled: 1384
 Logged: 1381
3. Date and Hour Spudded: 86-02-14 0015 hours
4. Date Drilling Completed: 86-03-26 1730 hours
5. Date of Rig Release: 86-04-02 1200 hours
6. Well Status: Suspended
7. Hole Sizes and Depths:

Class	Bit Numbers	Size (mm)	Depth (m)		Meters Drilled	Remarks
			In	Out		
Conductor	1A	311	0	39	39	Reamed hole to 444mm.
	2A	311	39	63	24	
	3A	444	0	37	37	
	Hole Opener	444	37	63	26	
Surface	4B	311	63	85	22	
	5B	311	85	270	185	
	6B	311	270	362	92	
	7B	311	362	573	211	
	8B	311	573	718	145	
	9B	311	718	777	59	
Main	10C	216	777	-	-	Pulled for plugged jets while drilling shoe. 4 broken teeth.
	11C	216	777	1149	372	Drilled out cement.
	12C	216	1149	1330	181	Coring. Coring.
	13C	215	1330	1341	11	
	14C	215	1341	1353	12	
	15C	216	1353	1384	31	

PCI CANTERRA BELE 0-35

8. Casing and Cementing Details

Hole Classification	Conductor	Surface		Main
Hole Size:	444	311		216
Casing Size:	339.7	245		177.8
Weight kg/m:	101.2	60		43.2
Grade:	K-55	K-55 & T-95		MN-80
Coupling:	BT&C	LT&C		LT&C
Number of Joints:	5	64		117
Number of Centralizers:	3	10		20
Date of Run:	86-02-19	86-03-10		86-04-01
Shoe Depth:	63.0	777.0		1384
Tonnes of Cement:	10.8	10	4.4	30
Type of Cement:	Class G	Class G	Class G	Class G
Additives:	3% CaCl ₂	2% CaCl ₂	2% CaCl ₂	0.5% D65
Height of Cement:	Surface	625 m	Surface	500 m
Based on:	Returns to Surface	Caliper Log	Returns to Surface	Caliper Log

9. Sidetracked Hole - Not applicable to this well.

10. Drilling Fluid

Gel chem was used from surface to 63 m; water was used from 63 to 100 m. Air was used to approximately 401 m; air foam was used to 777 m. Water was used to approximately 790 m. A saturated salt mud was used from 790 - 1384 m.

PCI CANTERRA BELE 0-35

Summary of Mud Properties

Section	Interval (m)	Weight (kg/m ³)	Funnel Vis (s/l)	Water Loss (Aver.Cm ³)	pH (Aver)	Cl (10 ³ mg/l)
Conductor	0-63	1070-1170	40-50	-	10.2	-
Surface	63-100	Water	-	-	-	-
Surface	100-401	Air	-	-	-	-
Surface	401-777	Air Foam	-	-	-	-
Main	777-790	Water	-	-	-	-
Main	790-1384	1215-1280	41-57	14.8	10.2	165-179

11. Fishing Operation

Saver sub twisted off when reaming at a depth of 37.5 m. Used a 6" basket grabble to recover fish, which was at 5.5 m.

When drilling at a depth of 362 m, dropped 12,000 daN of string weight. POOH, and ran in with overshot, latched onto fish and recovered same.

12. Well Kicks - None

13. Formation Leak-off Tests

A pressure integrity test was run on day 29 after drilling out the surface casing shoe at 777 m. Water was used for the test and a surface pressure of 7,000 kPa was reached. The pressure at surface held for 5 minutes. The formation integrity was 18.8 kPa/m.

PCI CANTERRA BELE 0-35

14. Time Breakdown

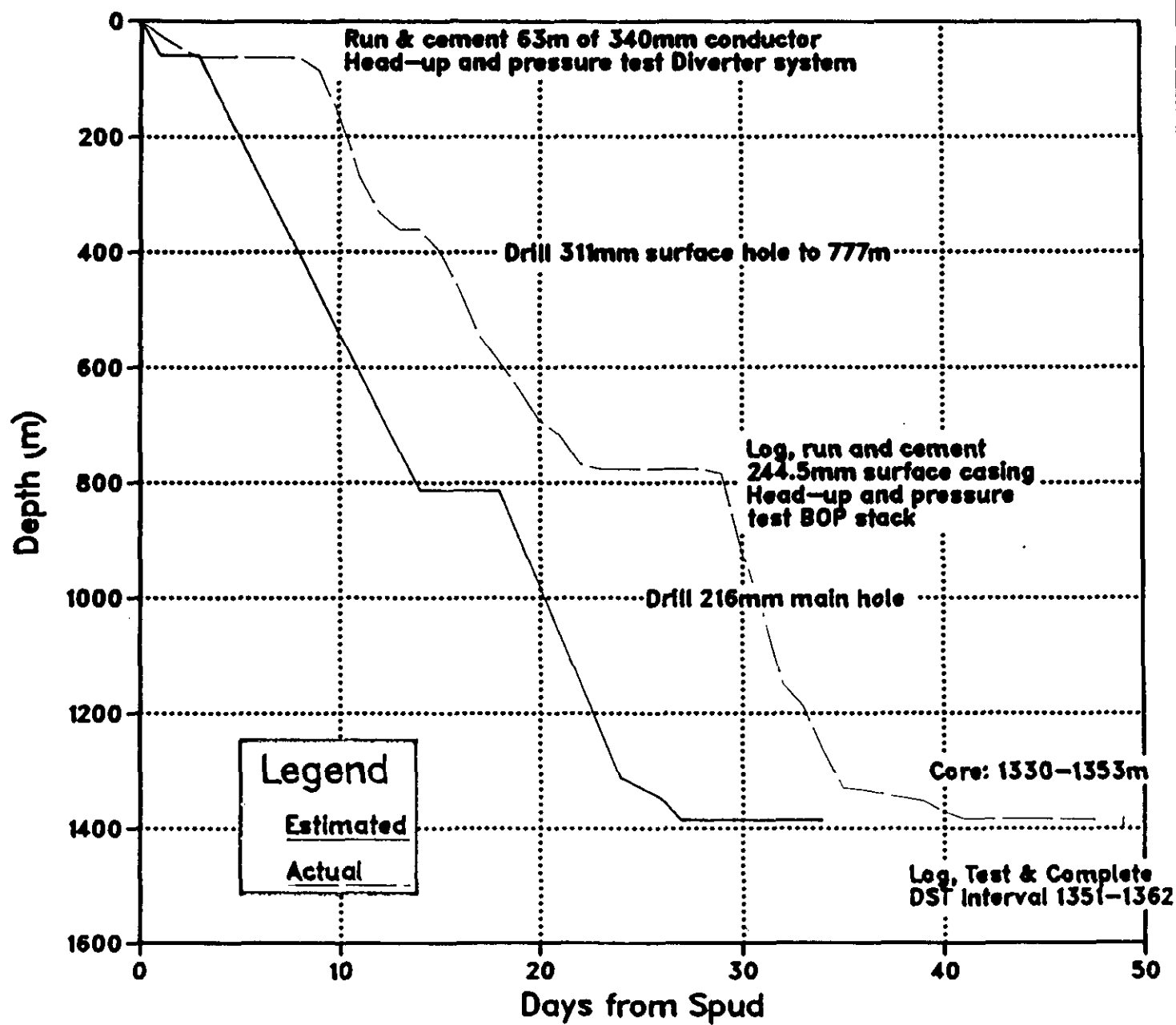
	Conductor	Surface	Main	Total
Drill	43.25	172.5	135.75	351.5
Trip	14.25	89.25	74.0	177.5
Ream/Clean	42.25	15	8.25	65.5
Conditioning	.5	28.25	21.75	50.5
Rig Service	4.0	13.5	9.75	27.25
Mechanical Downtime	.75	5.5	5	11.25
Survey	1.75	8.25	8.25	18.25
CSG-CMT-WOC	18.5	31.75	27.5	77.75
Head up/PR Test	54.25	50.50	8.75	113.50
Coring			72.5	72.5
Logging		14.5	32.25	46.75
DST			37.75	37.75
Drill Cement		2.5	6.5	9.0
Drill Out DV			3.5	3.5
WOO			2.5	2.5
Wait on Daylight			2.5	2.5
Tear Out			15	15
Rig up Air Drillers		2.5		2.5
Maintenance	5.75	12.5		18.25
Fishing	7	4.75		11.75
W.O. Tools		5.75		5.75
Wait on D.C. Inspection		8.25		8.25
Inspect D.C.		8.5		8.5
W.O. Cementers		2.25		2.25
TOTAL	192.25	476.0	471.5	1139.75

15. Deviation Survey

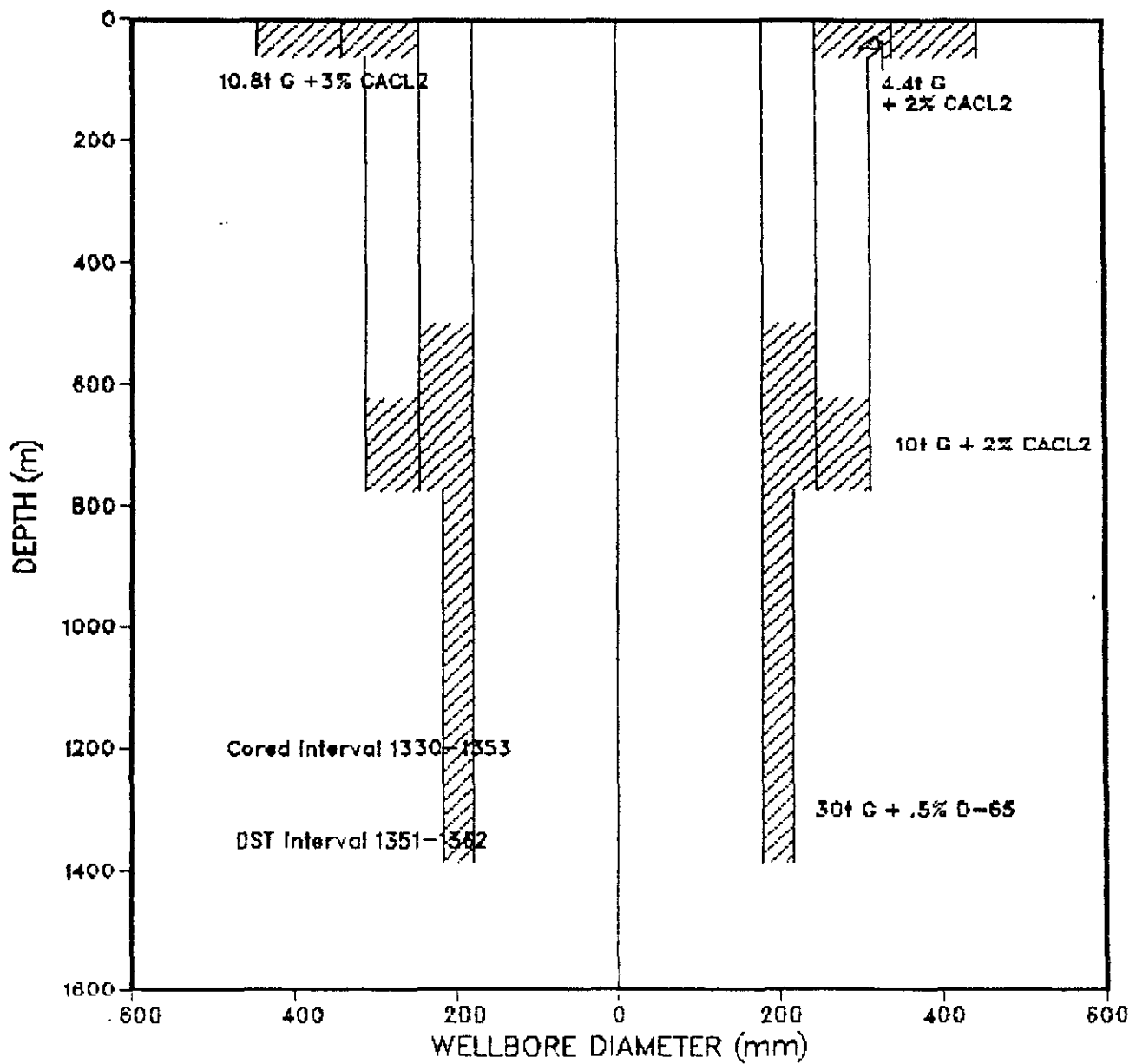
16. Abandonment Plugs - Not applicable to this well.

17. Composite Well Record

PCI CANTERRA BELE 0-35 Planned Penetration Curve



Wellbore Profile PCI CANTERRA BELE 0-35



EXACT RADIUS OF CURVATURE METHOD

TIE-IN LOCATION

MEASURED DEPTH	0.0	M
TRUE VERTICAL DEPTH	0.0	M
DISTANCE NORTH	0.0	M
DISTANCE EAST	0.0	M

BOTTOM HOLE LOCATION

COURSE LENGTH	59.2	M
COURSE AZIMUTH	50.1	DEG
MEASURED DEPTH	1380.0	M
TRUE VERTICAL DEPTH	1378.0	M
DISTANCE NORTH	38.0	M
DISTANCE EAST	45.4	M

REF 2285

VERTICAL SCALE = 1/100 CM/M

M/M

REF 2205

PAGE 1

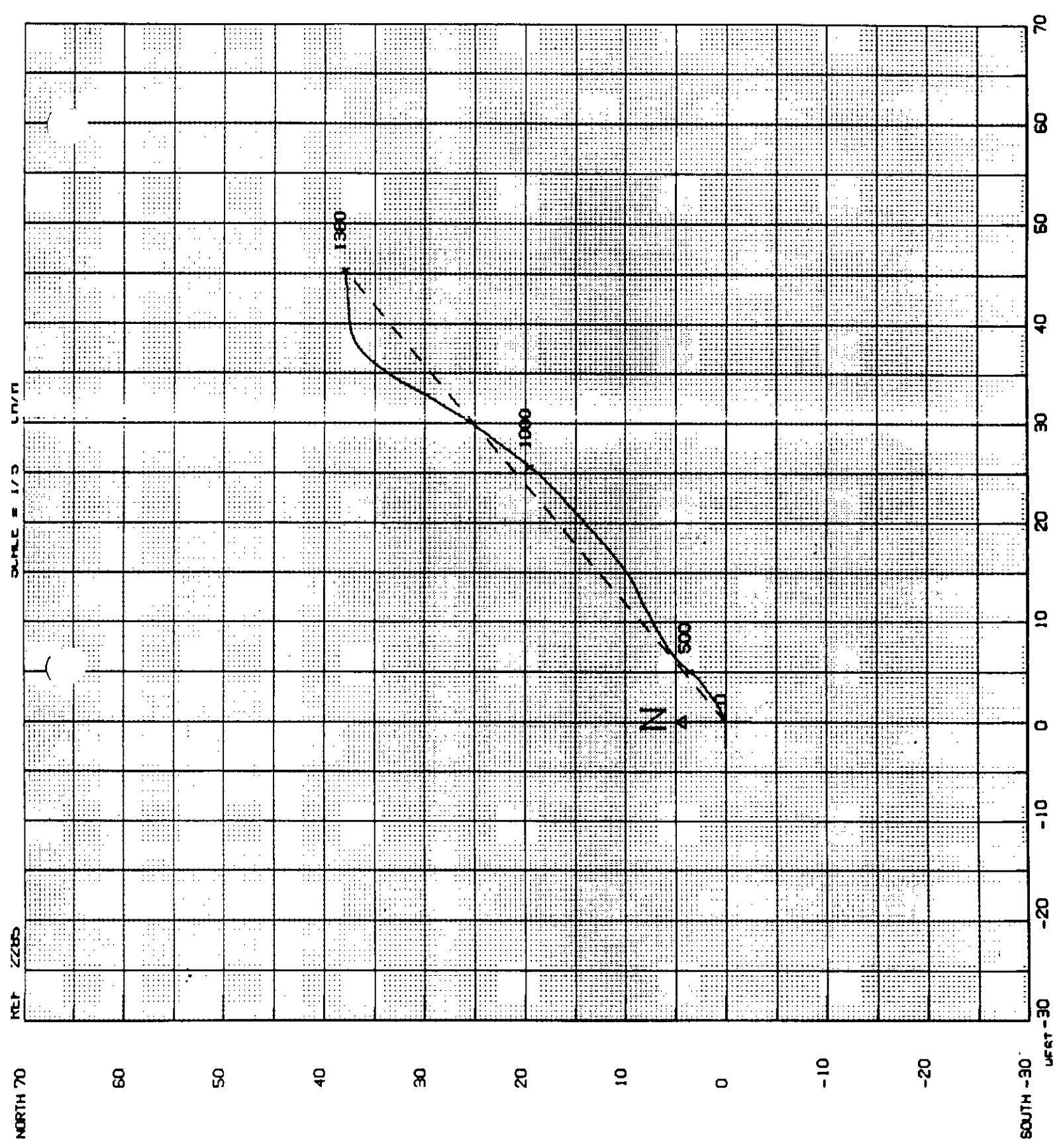
HEADS.	DEVIATION	AZIMUTH	TRUE	CO-ORDINATES		COURSE
DEPTH	DEGREES	DEGREES	VERTICAL	+ NORTH	+ EAST	LENGTH
M			M	- SOUTH	- WEST	M
0.0	0.0	0	0.0	0.0	0.0	0.0
20.0	0.2	13	20.0	0.1	0.1	0.1
40.0	0.4	25	40.0	0.1	0.1	0.2
55.7	0.5	35	55.7	0.2	0.1	0.2
60.0	0.4	49	60.0	0.2	0.2	0.3
80.0	0.4	79	80.0	0.3	0.3	0.4
100.0	0.3	96	100.0	0.3	0.4	0.5
120.0	0.4	78	120.0	0.3	0.5	0.6
140.0	0.5	68	140.0	0.3	0.7	0.8
160.0	0.7	76	160.0	0.4	0.8	0.9
180.0	0.8	73	180.0	0.5	1.1	1.2
200.0	0.9	59	200.0	0.6	1.3	1.4
220.0	0.8	53	220.0	0.7	1.5	1.7
240.0	0.8	54	240.0	0.9	1.8	2.0
260.0	1.0	61	260.0	1.1	2.0	2.3
280.0	0.9	57	280.0	1.3	2.3	2.6
300.0	1.1	59	300.0	1.5	2.6	3.0
320.0	0.8	45	320.0	1.7	2.8	3.3
340.0	0.9	52	340.0	1.8	3.1	3.6
360.0	0.9	63	360.0	2.0	3.3	3.9
380.0	0.9	55	380.0	2.2	3.6	4.2
400.0	0.9	50	400.0	2.4	3.8	4.5
420.0	0.9	57	420.0	2.5	4.0	4.8
440.0	1.0	48	440.0	2.7	4.3	5.1
460.0	1.0	38	460.0	3.0	4.5	5.4
480.0	1.1	42	480.0	3.3	4.8	5.8
500.0	1.3	37	500.0	3.6	5.1	6.2
520.0	1.3	38	519.9	4.0	5.4	6.7
540.0	1.5	44	539.9	4.3	5.7	7.1
560.0	1.5	42	559.9	4.7	6.0	7.7
580.0	1.7	55	579.9	5.1	6.4	8.2
600.0	2.2	53	599.9	5.5	7.0	8.9
620.0	2.3	61	619.9	5.9	7.7	9.7
640.0	2.1	59	639.9	6.3	8.3	10.4
660.0	2.2	62	659.9	6.7	9.0	11.2
680.0	2.1	59	679.9	7.0	9.6	11.9
700.0	2.2	66	699.8	7.4	10.3	12.7
720.0	2.2	61	719.8	7.7	10.9	13.4
740.0	2.0	61	739.8	8.1	11.6	14.1
760.0	2.2	67	759.8	8.4	12.2	14.8
780.0	3.1	68	779.8	8.7	13.0	15.6
800.0	3.4	66	799.8	9.2	14.1	16.8
820.0	3.7	54	819.7	9.8	15.1	18.0
840.0	4.0	52	839.7	10.7	16.2	19.4
860.0	4.3	49	859.6	11.6	17.3	20.8
880.0	4.5	48	879.6	12.4	18.4	22.3
900.0	4.8	48	899.5	13.7	19.7	24.0
920.0	4.8	47	919.4	14.8	20.9	25.6

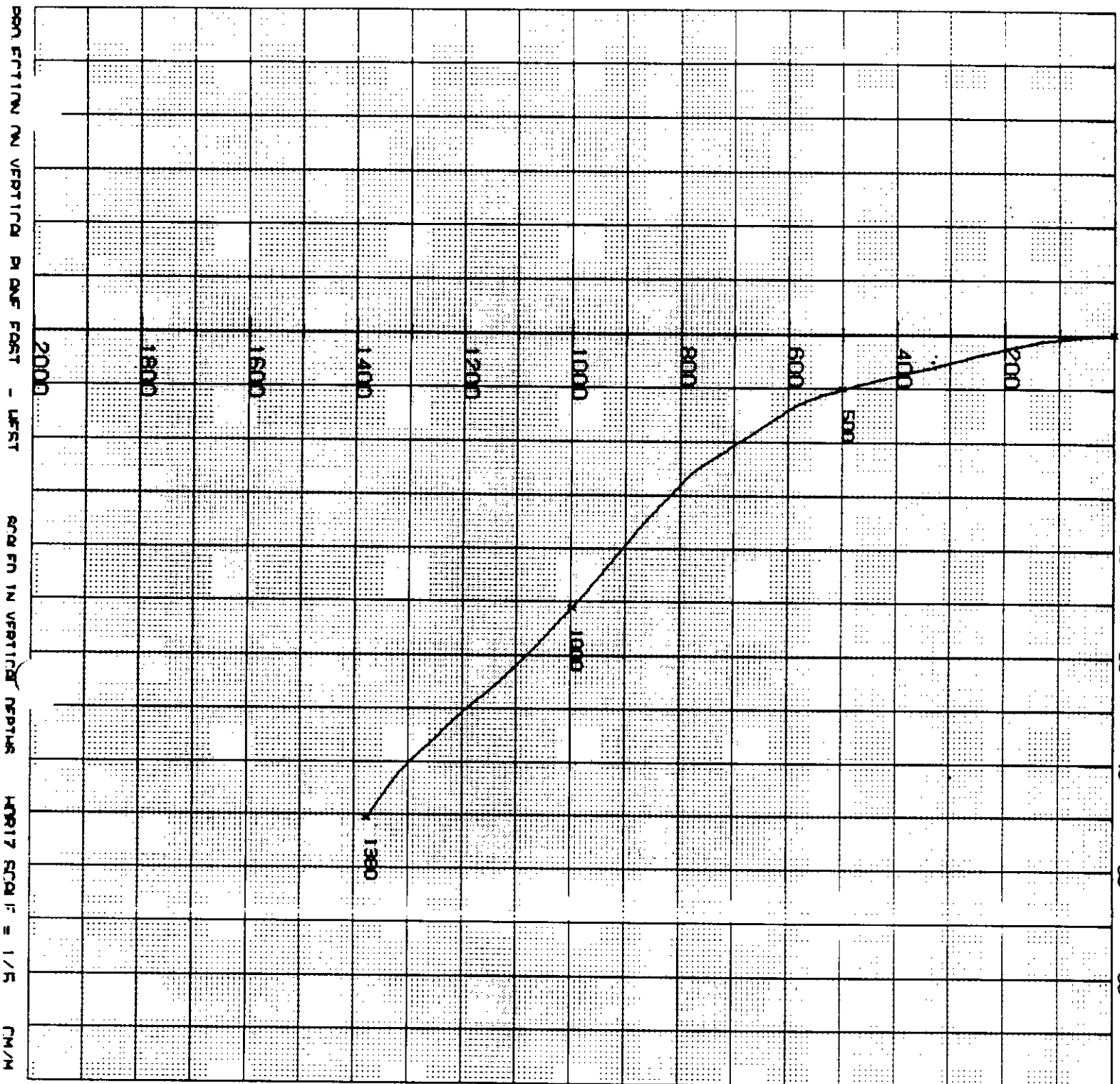
SCALE = 1/5

REF Z285

NORTH 70

SOUTH -30





VERTICAL SCALE = 1/100 CM/M

HORIZONTAL SCALE = 1/5 CM/M

DEPTH IN VERTICAL FEET

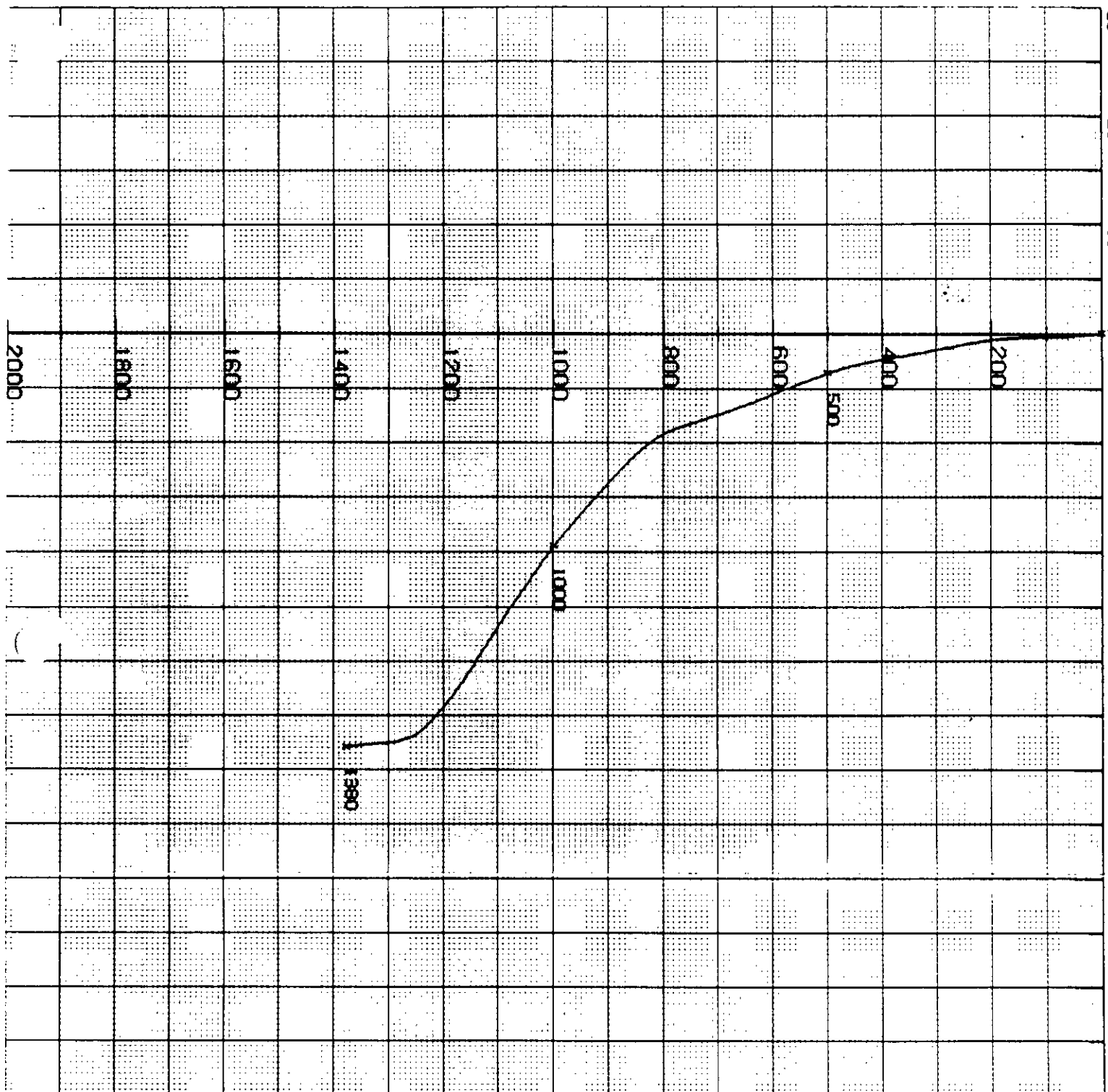
DISTANCE IN VERTICAL FEET

SOUTH

-30
-20
-10
0
10
20
30
40
50
60
70

NORTH

REF 2285



VERTICAL SCALE = 1/100 CM/M

CALGARY COPY

PETRO-CANADA INCORPORATED

PCI CANTERRA BELE 0-35

WELL HISTORY REPORT

Prepared by: R. Hallsworth
April 21, 1986

WELL HISTORY REPORT

A) INTRODUCTION

1. Summary
2. Location Map

B) GENERAL DATA

1. Well Name and Number
2. Well Location
3. Unique Well Identifier
4. Operator and Drilling Contractor
5. Drilling Unit
6. Position Keeping
7. Support Craft
8. Drilling Unit Performance
9. Difficulties and Delays

C) SUMMARY OF DRILLING OPERATIONS

1. Elevations
2. Total Depth
3. Date Spudded
4. Date Drilling Completed
5. Date of Rig Release
6. Well Status
7. Hole Sizes and Depth
8. Casing and Cementing Record
9. Sidetracked Hole
10. Drilling Fluids
11. Fishing Operation
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13. Formation Leak-Off Tests

C) SUMMARY OF DRILLING OPERATIONS (cont'd)

- 14. Time Breakdown
- 15. Deviation Survey
- 16. Abandonment Plugs
- 17. Composite Well Records

APPENDIX

Drilling Data

- 1. Deviation Records
- 2. Final Survey Plan
- 3. Wellbore Schematic

PCI CANTERRA BELE 0-35

A. INTRODUCTION

1. Summary

PCI Catterra Bele 0-35, located in the Lac Belot area of the Northwest Territories, was drilled to a total depth of 1384 m. Drilling was completed in 41 days.

Petro-Canada Incorporated of Calgary operated the well. Jade Drilling Ltd. of Edmonton, the Contractor, used Jade Rig #5, a diesel mechanical rig built in 1980.

The location coordinates for this well are 66° 34' 58.1357" North Latitude and 126° 21' 32.1083" West Longitude. Ground elevation is 393.26 m.

This oil test well bottomed in the Proterozoic Clastic Sequence at a depth of 1384 m. The primary objective was the lower Cambrian Mt. Clark formation. Secondary objective was the Mt. Cap.

PCI Canterra Bele 0-35 was spudded on 1986-02-14 at 0015 hours. A 311mm hole was drilled and reamed to 444mm at a depth of 63 m. 339mm conductor casing was set at a depth of 63.0 m.

A 311mm hole was drilled to 100 m with water as the drilling fluid. At 100 m, drilling resumed with air as the drilling fluid. At 401 m, the hole was displaced to foam and drilling was continued to 777 m. The hole was logged from 776 m - 9 m. 244mm surface casing was set at 777 m.

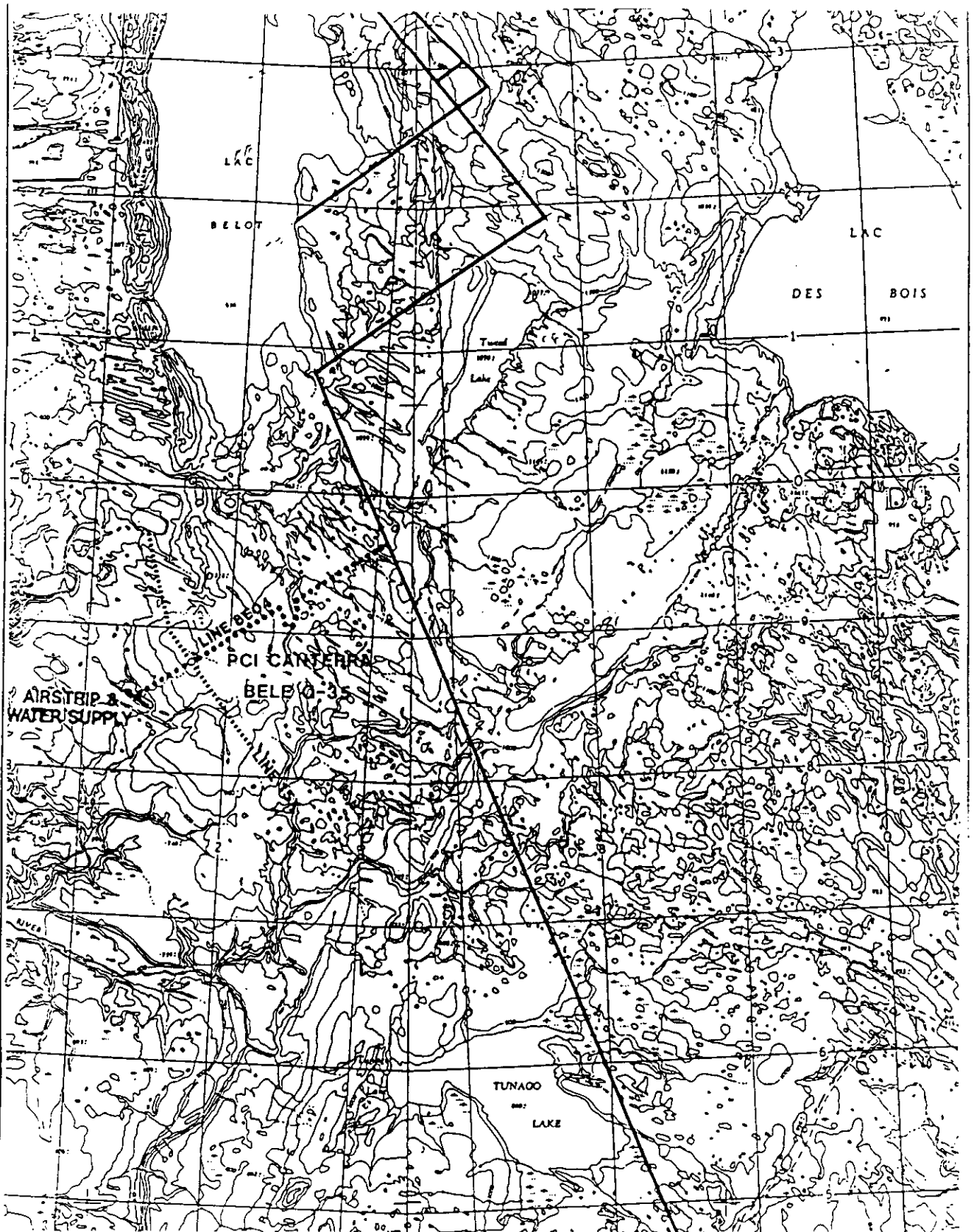
First flow of water occurred at 363 m. The estimated flow was 16 m³/hr, the salinity was 125 mg/l and the calcium content was 240 mg/l. The flowrate was constant until 666 m when flow increased to 48 m³/hour, salinity 150 mg/l and calcium content 240 mg/l.

The 216mm mainhole was drilled with water to 790 m, and with a salt saturated mud from 790 - 1384 m.

Two conventional cores were cut, from 1330 - 1341 m, and from 1341 - 1353 m. The hole was logged from 1380 - 777 m.

One DST was run, 1384 m of 178mm production casing was set, and Jade Rig #5 was released on 86-04-02 at 1200 hours.

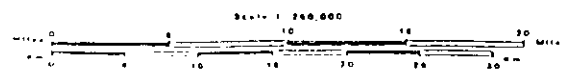
2. Location Map - Figure 1



126°00'W

LEGEND

- WINTER ROAD
- ACCESS ROUTE ON EXISTING SEISMIC LINE
- o PROPOSED WELLSITE
- SEISMIC LINE



PCI CANTERRA BELE O-35 WELLSITE

GRID AREA 66°40'N, 126°15'W

PCI CANTERRA BELE 0-35

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4. Operator: Petro-Canada Incorporated
P.O. Box 2844
Calgary, Alberta
T2P 3E3

Contractor: Jade Drilling Ltd.
5825 - 98th Street
Edmonton, Alberta
T6E 3L5
5. Drilling Unit: Name: Jade Rig #5
Type: Triple Diesel Mechanical
Year Built: 1980
Location: Edmonton, Alberta
6. Position Keeping: Not applicable to this well.
7. Support Craft: Not applicable to this well.
8. Drilling Unit Performance: Not applicable to this well.
9. Difficulties and Delays: No difficulties or delays were encountered that were not directly associated with downhole operations.

PCI CANTERRA BELE 0-35

C. SUMMARY OF DRILLING OPERATIONS

1. Elevations: Ground: 393.26 m
 Kelly Bushing: 397.76 m
2. Total Depth: Drilled: 1384
 Logged: 1381
3. Date and Hour Spudded: 86-02-14 0015 hours
4. Date Drilling Completed: 86-03-26 1730 hours
5. Date of Rig Release: 86-04-02 1200 hours
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7. Hole Sizes and Depths:

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PCI CANTERRA BELE 0-35

8. Casing and Cementing Details

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Hole Size:	444	311		216
Casing Size:	339.7	245		177.8
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Coupling:	BT&C	LT&C		LT&C
Number of Joints:	5	64		117
Number of Centralizers:	3	10		20
Date of Run:	86-02-19	86-03-10		86-04-01
Shoe Depth:	63.0	777.0		1384
Tonnes of Cement:	10.8	10	4.4	30
Type of Cement:	Class G	Class G	Class G	Class G
Additives:	3% CaCl ₂	2% CaCl ₂	2% CaCl ₂	0.5% D65
Height of Cement:	Surface	625 m	Surface	500 m
Based on:	Returns to Surface	Caliper Log	Returns to Surface	Caliper Log

9. Sidetracked Hole - Not applicable to this well.

10. Drilling Fluid

Gel chem was used from surface to 63 m; water was used from 63 to 100 m. Air was used to approximately 401 m; air foam was used to 777 m. Water was used to approximately 790 m. A saturated salt mud was used from 790 - 1384 m.

PCI CANTERRA BELE 0-35

Summary of Mud Properties

Section	Interval (m)	Weight (kg/m ³)	Funnel Vis (s/l)	Water Loss (Aver. Cm ³)	pH (Aver)	Cl (10 ³ mg/l)
Conductor	0-63	1070-1170	40-50	-	10.2	-
Surface	63-100	Water	-	-	-	-
Surface	100-401	Air	-	-	-	-
Surface	401-777	Air Foam	-	-	-	-
Main	777-790	Water	-	-	-	-
Main	790-1384	1215-1280	41-57	14.8	10.2	165-179

11. Fishing Operation

Saver sub twisted off when reaming at a depth of 37.5 m. Used a 6" basket grabble to recover fish, which was at 5.5 m.

When drilling at a depth of 362 m, dropped 12,000 daN of string weight. POOH, and ran in with overshot, latched onto fish and recovered same.

12. Well Kicks - None

13. Formation Leak-off Tests

A pressure integrity test was run on day 29 after drilling out the surface casing shoe at 777 m. Water was used for the test and a surface pressure of 7,000 kPa was reached. The pressure at surface held for 5 minutes. The formation integrity was 18.8 kPa/m.

PCI CANTERRA BELE 0-35

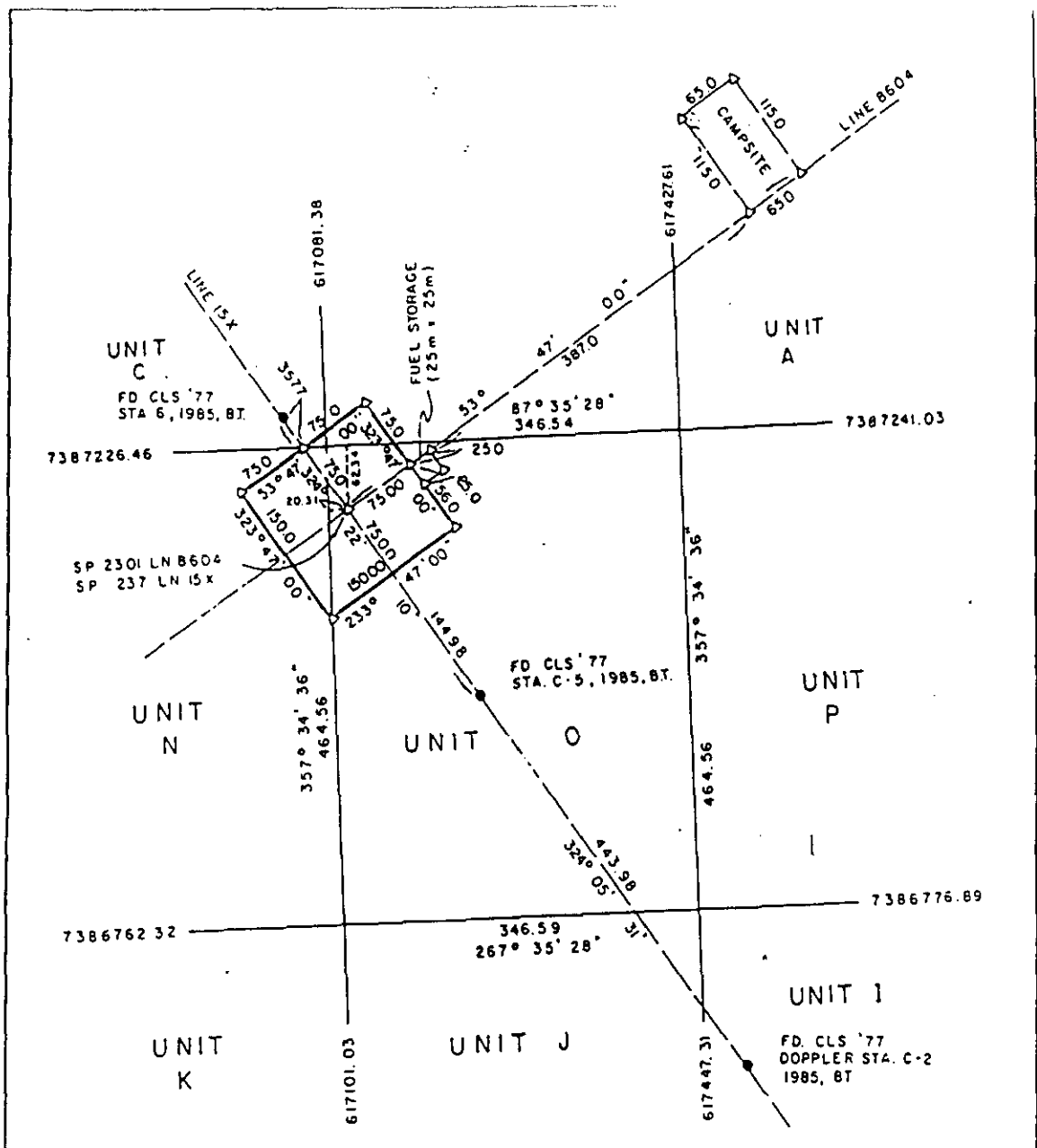
14. Time Breakdown

	Conductor	Surface	Main	Total
Drill	43.25	172.5	135.75	351.5
Trip	14.25	89.25	74.0	177.5
Ream/Clean	42.25	15	8.25	65.5
Conditioning	.5	28.25	21.75	50.5
Rig Service	4.0	13.5	9.75	27.25
Mechanical Downtime	.75	5.5	5	11.25
Survey	1.75	8.25	8.25	18.25
CSG-CMT-WOC	18.5	31.75	27.5	77.75
Head up/PR Test	54.25	50.50	8.75	113.50
Coring			72.5	72.5
Logging		14.5	32.25	46.75
DST			37.75	37.75
Drill Cement		2.5	6.5	9.0
Drill Out DV			3.5	3.5
WOO			2.5	2.5
Wait on Daylight			2.5	2.5
Tear Out			15	15
Rig up Air Drillers		2.5		2.5
Maintenance	5.75	12.5		18.25
Fishing	7	4.75		11.75
W.O. Tools		5.75		5.75
Wait on D.C. Inspection		8.25		8.25
Inspect D.C.		8.5		8.5
W.O. Cementers		2.25		2.25
TOTAL	192.25	476.0	471.5	1139.75

15. Deviation Survey

16. Abandonment Plugs - Not applicable to this well.

17. Composite Well Record



N.T.S. MAP SHEET: 96-L-9 METRIC NORTHWEST TERRITORIES

PETRO-CANADA INC.

PRELIMINARY SKETCH SHOWING WELL LOCATION

PCI CANTERRA BELE O-35

UNIT O, SECTION 35, GRID AREA 66° 40', 126° 15'

PETRO-CANADA INC.

[Signature]

CERTIFIED CORRECT:

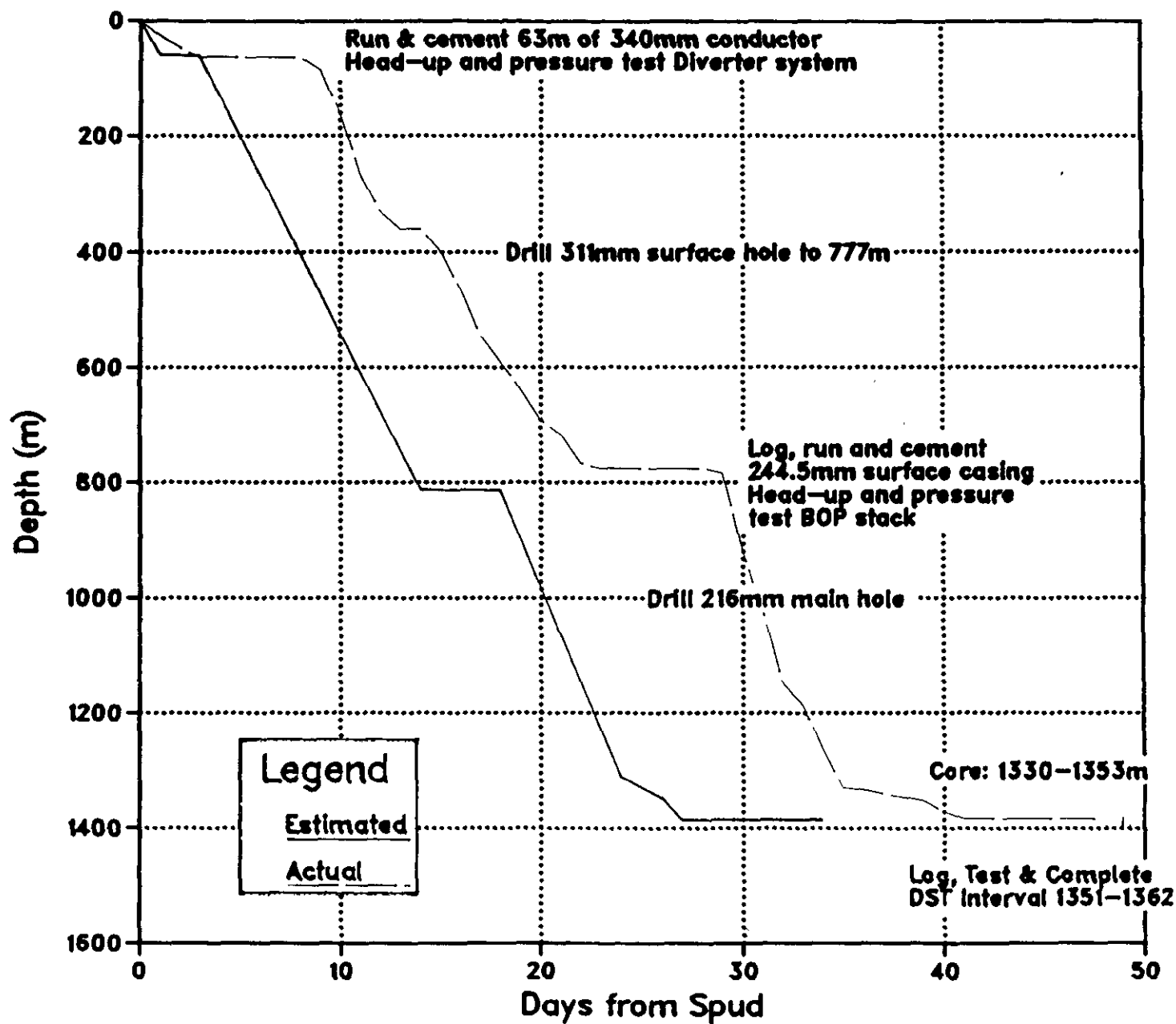
THIS 10th DAY OF SEPTEMBER, A.D. 1985

[Signature]

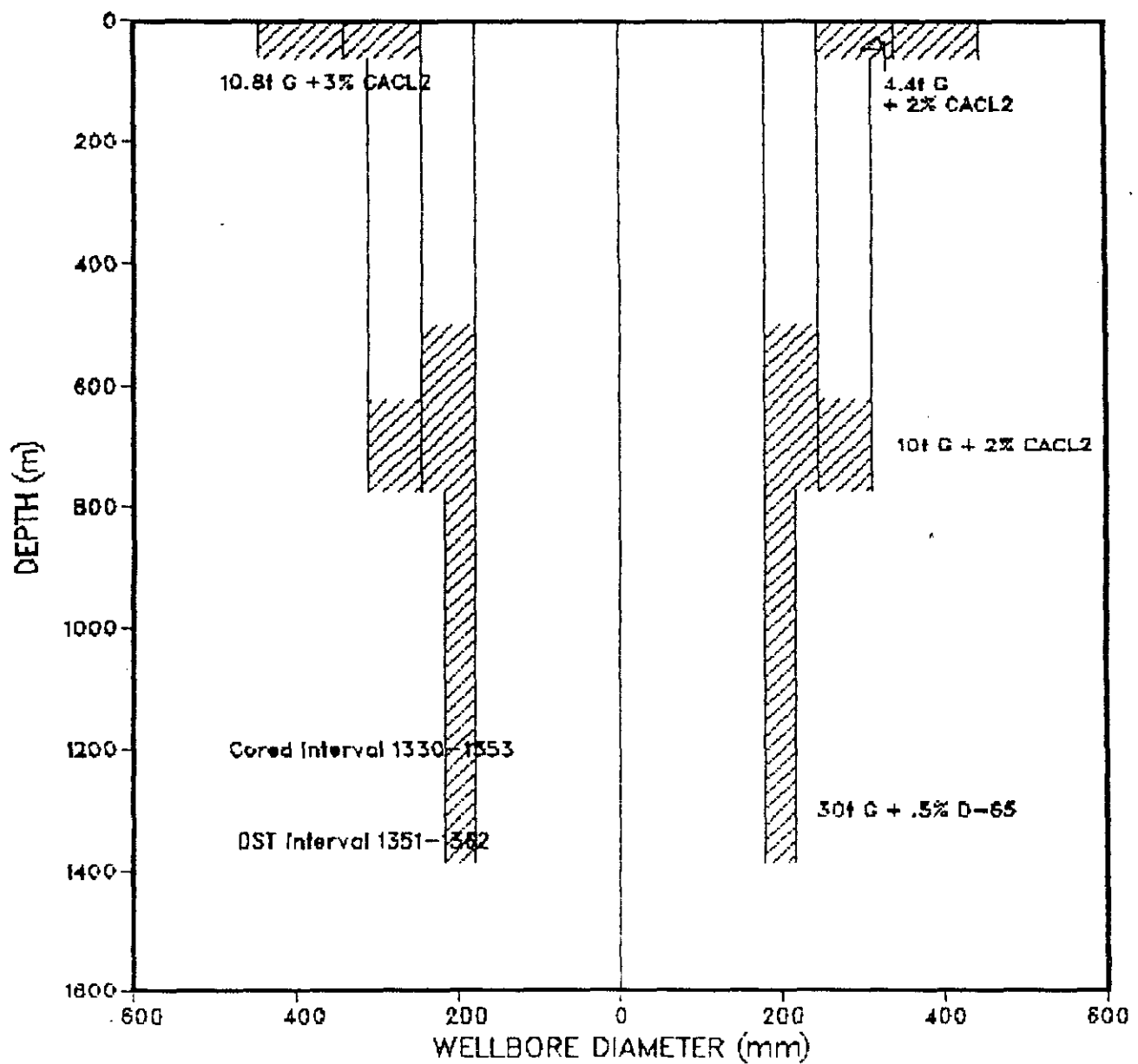
CANADA LANDS SURVEYOR

ELEVATION	GEOGRAPHIC CO-ORD'S.	U.T.M. CO-ORDINATES
ON GROUND : 392.62	NORTH LATITUDE: 66° 34' 58.1357" 66.58281547	NORTHING: 7387164.13
AT WELLHEAD :	WEST LONGITUDE: 126° 21' 32.1083" 126.35891897	EASTING: 617104.34
		CO-ORDINATES ARE COMPUTED FOR ZONE 9, CENTRAL MERIDIAN 129° W.
LEGEND	AREAS REQUIRED	HOSFORD, IMPEY, WELTER AND ASSOCIATES LTD.
Survey Monument found.....●	WELL SITE : 5.560 Acres 2.250 ha.	P.O. BOX 1409, YELLOWKNIFE, X1A 2P1
Survey Monument placed.....○	CAMP SITE : 1.847 Acres 0.748 ha.	NORTHWEST TERRITORIES
Traverse Station.....□	FUEL SITE : 0.154 Acres 0.062 ha.	
SCALE 1:5000	TOTAL : 7.56 Acres 3.06 ha.	FILE NO. Y65023 DATE: SEPT. 10/85 CWS

PCI CANTERRA BELE 0-35 Planned Penetration Curve



Wellbore Profile PCI CANTERRA BELE 0-35



EXACT RADIUS OF CURVATURE METHOD

TIE-IN LOCATION

MEASURED DEPTH	0.0	M
TRUE VERTICAL DEPTH	0.0	M
DISTANCE NORTH	0.0	M
DISTANCE EAST	0.0	M

BOTTOM HOLE LOCATION

COURSE LENGTH	59.2	M
COURSE AZIMUTH	50.1	DEG
MEASURED DEPTH	1380.0	M
TRUE VERTICAL DEPTH	1378.0	M
DISTANCE NORTH	38.0	M
DISTANCE EAST	45.4	M

REF 2285



REF 2205

PAGE 1

MEAS.	DEVIATION	AZIMUTH	TRUE	CO-ORDINATES		COURSE
DEPTH	DEGREES	DEGREES	VERTICAL	+ NORTH	+ EAST	LENGTH
M			M	- SOUTH	- WEST	M
0.0	0.0	0	0.0	0.0	0.0	0.0
20.0	0.2	13	20.0	0.1	0.1	0.1
40.0	0.4	25	40.0	0.1	0.1	0.2
55.7	0.5	35	55.7	0.2	0.1	0.2
60.0	0.4	49	60.0	0.2	0.2	0.3
80.0	0.4	79	80.0	0.3	0.3	0.4
100.0	0.3	96	100.0	0.3	0.4	0.5
120.0	0.4	78	120.0	0.3	0.5	0.6
140.0	0.5	60	140.0	0.3	0.7	0.8
160.0	0.7	76	160.0	0.4	0.8	0.9
180.0	0.8	73	180.0	0.5	1.1	1.2
200.0	0.9	59	200.0	0.6	1.3	1.4
220.0	0.8	53	220.0	0.7	1.5	1.7
240.0	0.8	54	240.0	0.9	1.8	2.0
260.0	1.0	61	260.0	1.1	2.0	2.3
280.0	0.9	57	280.0	1.3	2.3	2.6
300.0	1.1	59	300.0	1.5	2.6	3.0
320.0	0.8	45	320.0	1.7	2.8	3.3
340.0	0.9	52	340.0	1.8	3.1	3.6
360.0	0.9	63	360.0	2.0	3.3	3.9
380.0	0.9	55	380.0	2.2	3.6	4.2
400.0	0.9	50	400.0	2.4	3.8	4.5
420.0	0.9	57	420.0	2.5	4.0	4.8
440.0	1.0	48	440.0	2.7	4.3	5.1
460.0	1.0	38	460.0	3.0	4.5	5.4
480.0	1.1	42	480.0	3.3	4.8	5.8
500.0	1.3	37	500.0	3.6	5.1	6.2
520.0	1.3	38	519.9	4.0	5.4	6.7
540.0	1.5	44	539.9	4.3	5.7	7.1
560.0	1.5	42	559.9	4.7	6.0	7.7
580.0	1.7	55	579.9	5.1	6.4	8.2
600.0	2.2	53	599.9	5.5	7.0	8.9
620.0	2.3	61	619.9	5.9	7.7	9.7
640.0	2.1	59	639.9	6.3	8.3	10.4
660.0	2.2	62	659.9	6.7	9.0	11.2
680.0	2.1	59	679.9	7.0	9.6	11.9
700.0	2.2	66	699.8	7.4	10.3	12.7
720.0	2.2	61	719.8	7.7	10.9	13.4
740.0	2.0	61	739.8	8.1	11.6	14.1
760.0	2.2	67	759.8	8.4	12.2	14.9
780.0	3.1	68	779.8	8.7	13.0	15.6
800.0	3.4	66	799.8	9.2	14.1	16.8
820.0	3.7	54	819.7	9.8	15.1	18.0
840.0	4.0	52	839.7	10.7	16.2	19.4
860.0	4.3	49	859.6	11.6	17.3	20.8
880.0	4.5	48	879.6	12.6	18.4	22.3
900.0	4.8	48	899.5	13.7	19.7	24.0
920.0	4.8	47	919.4	14.8	20.9	25.6

REF	2205					PAGE	2
MEAS.	DEPTH	DEVIATION	AZIMUTH	TRUE	CO-ORDINATES		
M		DEGREES	DEGREES	VERTICAL	+ NORTH	+ EAST	COURSE
				DEPTH	- SOUTH	- WEST	LENGTH
				M			M
940.0	4.8	47	939.2	16.0	22.1	27.3	
960.0	4.9	46	959.3	17.1	23.3	28.9	
980.0	4.7	44	979.2	18.3	24.5	30.6	
1000.0	4.8	40	999.1	19.5	25.6	32.2	
1020.0	5.0	37	1019.1	20.9	26.7	33.9	
1040.0	5.1	37	1039.0	22.3	27.7	35.6	
1060.0	5.1	37	1058.9	23.7	28.8	37.3	
1080.0	5.2	35	1078.8	25.2	29.9	39.0	
1100.0	5.3	31	1098.7	26.7	30.9	40.8	
1120.0	5.2	32	1118.7	28.2	31.8	42.5	
1140.0	5.3	30	1138.6	29.8	32.8	44.3	
1160.0	4.9	29	1158.5	31.3	33.6	46.0	
1180.0	4.5	31	1178.4	32.8	34.4	47.6	
1200.0	4.4	36	1198.4	34.1	35.3	49.1	
1220.0	4.2	40	1218.3	35.3	36.2	50.6	
1240.0	4.0	50	1238.3	36.3	37.2	52.0	
1260.0	2.8	62	1258.2	37.0	38.2	53.2	
1280.0	2.7	73	1278.2	37.3	39.1	54.0	
1300.0	2.8	84	1298.2	37.5	40.0	54.8	
1320.0	3.5	85	1318.2	37.6	41.1	55.7	
1340.0	4.1	86	1338.1	37.7	42.4	56.7	
1360.0	4.2	85	1358.1	37.8	43.9	57.9	
1380.0	4.1	73	1378.0	38.0	45.4	59.2	

REF	2205			PAGE	3
BOTTOM HOLE LOCATION					
COURSE LENGTH:					59.2 M
COURSE AZIMUTH:					50.1 DEGREES
MEASURED DEPTH:					1380.0 M
TRUE VERTICAL DEPTH:					1378.0 M
DISTANCE NORTH:					38.0 M
DISTANCE EAST:					45.4 M
EXACT RADIUS OF CURVATURE METHOD					

SCALE = 1/S CM/M

REF 2285

NORTH 70

60

50

40

30

20

10

0

-10

-20

SOUTH -30

UPST -30

-10

0

10

20

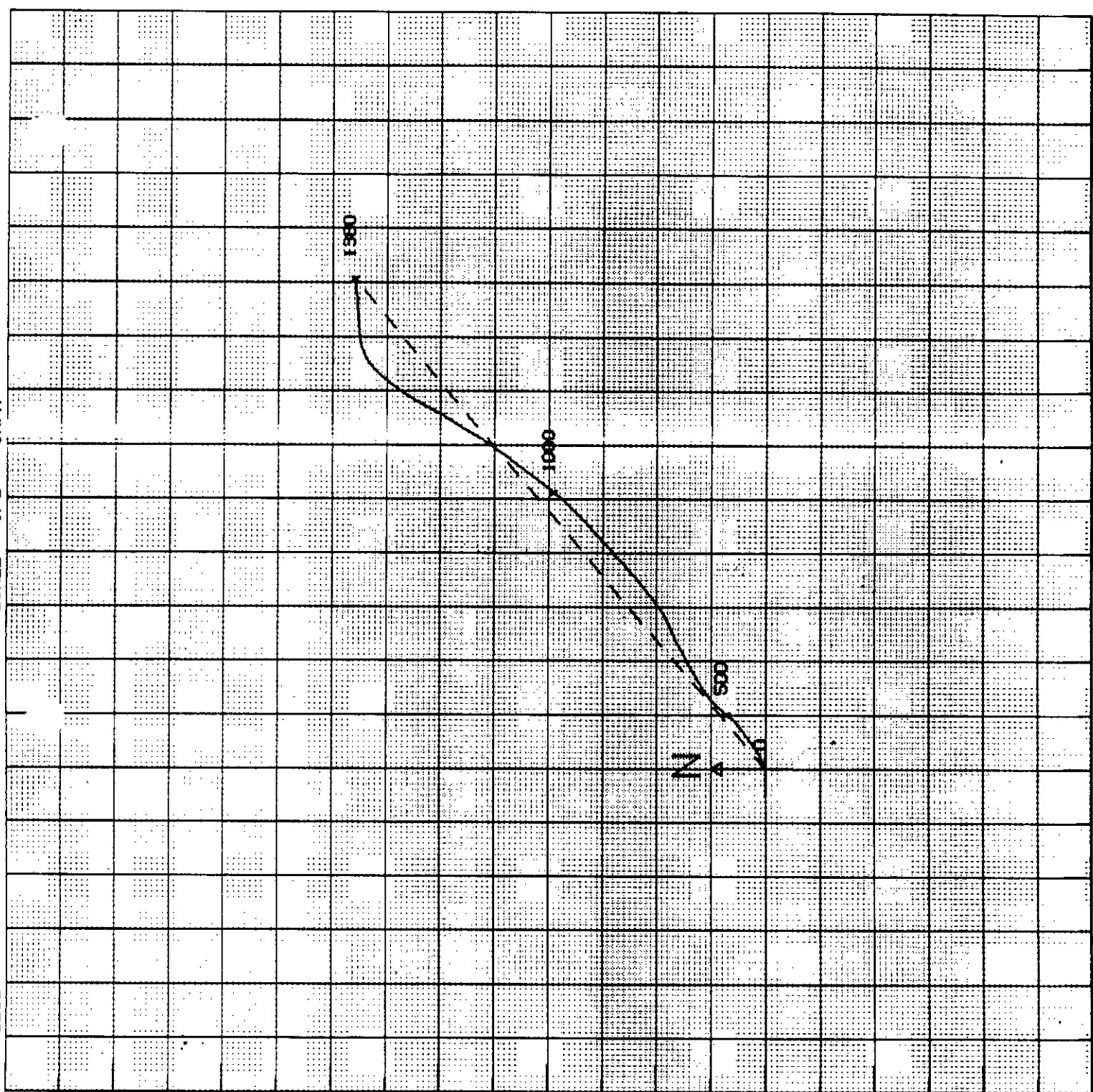
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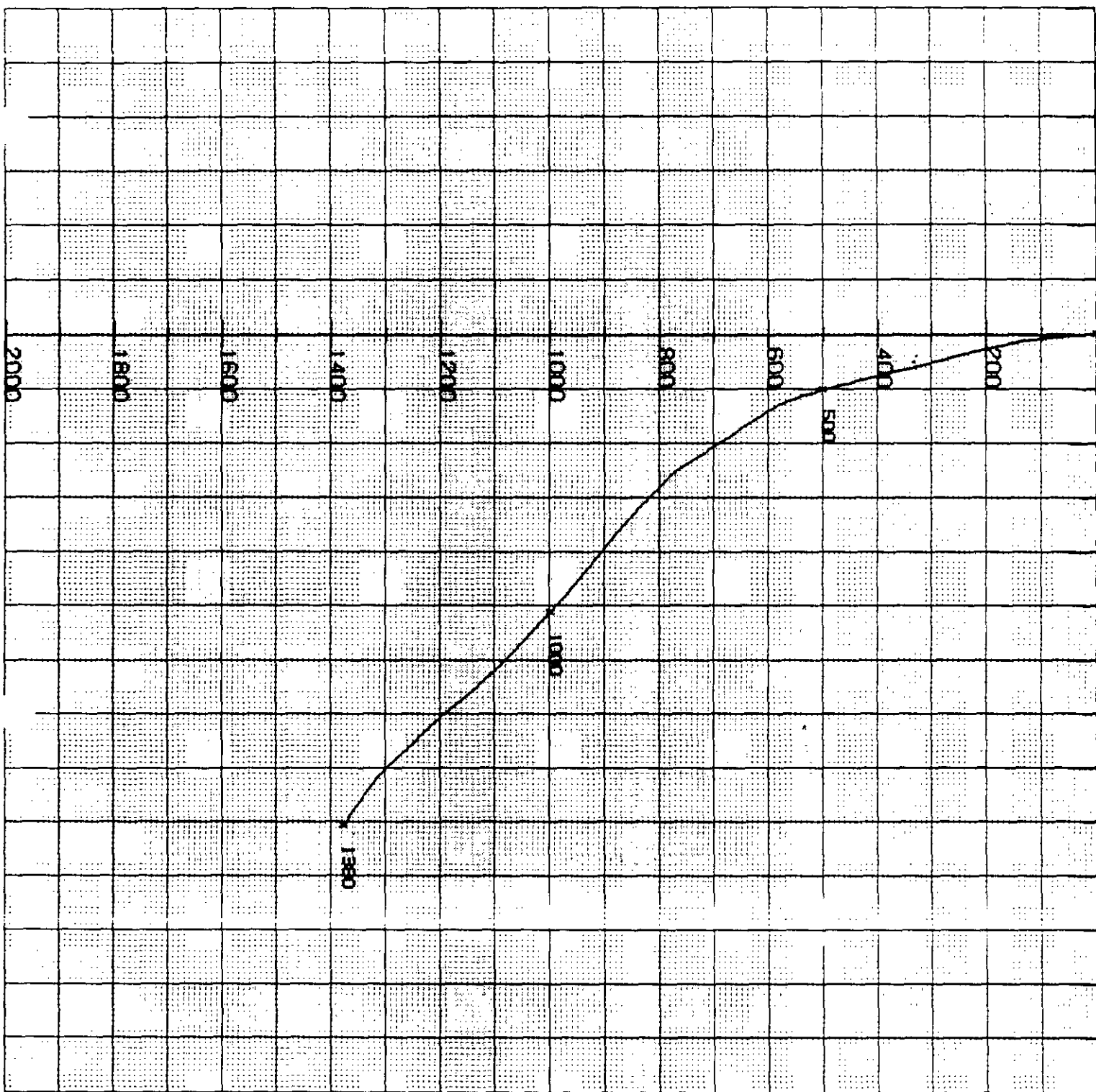
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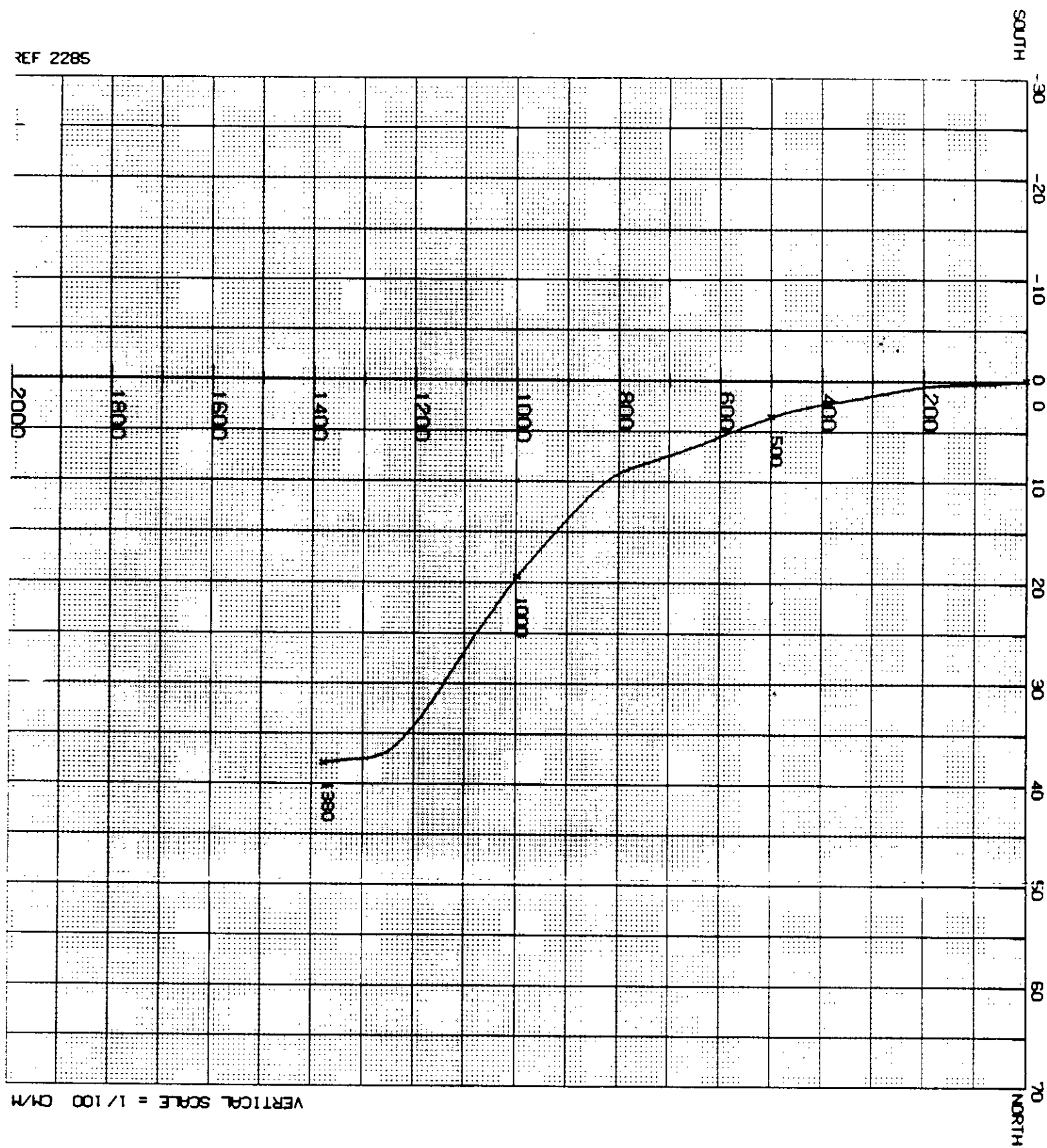
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POSSIBILITY IN VERTICAL PLANE FACT - WEST
SCALE IN VERTICAL PLANE
HORIZONTAL SCALE = 1/5
FM/M



VERTICAL SCALE = 1/100 CM/M

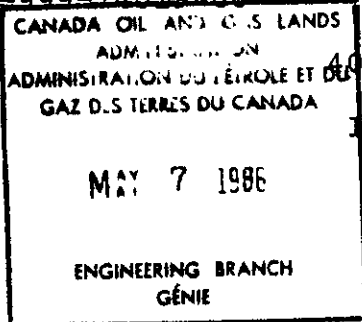


VERTICAL SCALE = 1/100 CM/M

9211-P28-3-1 clg

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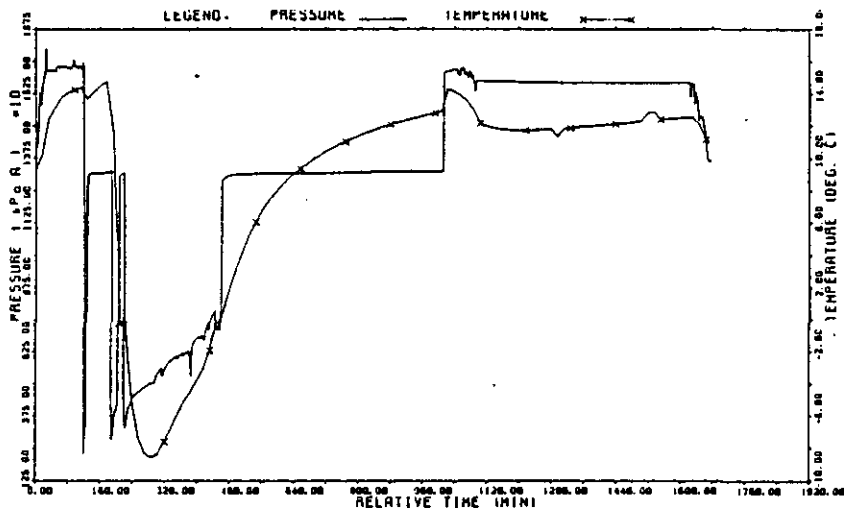
TEST DATE: 86/03/30



PCI CANTERRA BELE 0-35
0/ 66.345 / 126.210 / 00
DST#01
1351.00m to 1362.00m
MOUNT CLARK

DEPTH: 1354.00m

RECORDER # 001761

PRESSURE
kPa(a)

- 1) Initial Hydro : 17297.
- 2) 1st Flow Start: 2293.
- 3) 1st Flow End : 3284.
- 4) END 1st Shutin: 13238.
- 5) 2nd Flow Start: 2835.
- 6) 2nd Flow End : 4299.
- 7) END 2nd Shutin: 13238.
- 8) 3rd Flow Start: 3646.
- 9) 3rd Flow End : 7119.
- 10) END 3rd Shutin: 13264.
- 14) Final Hydro. : 17220.

TEST TIMES (MIN)

1stFLOW : 4.0
SHUTIN: 58.0
2ndFLOW : 16.0
SHUTIN: 14.0
3rdFLOW : 238.0
SHUTIN: 552.0

RECOVERY DATA

GAS TO SURFACE AT AN OPENING FINAL FLOW RATE OF 70 418.00 M3/D INCREASING TO 99 672.00 M3/D. TOTAL FLUID RECOVERY OF 46.00 M CONSISTED OF 30.00 M OF CONDENSATE AND 16.00 M OF CONDENSATE CUT DRILLING MUD.

REMARKS AND TEST SUMMARY

Test results indicate a mechanically successful test. Bottom hole pressures and the shape of the shut-in curves suggest HIGH PERMEABILITY within the interval tested. The final flow appears to be affected by fluid surging through the tools. Opened the tool for the final flow and the annulus started bubbling. Closed the tool, repumped the packers and continued with the test. The final shut-in stabilized in 458 minutes at 13 264.00 kPa, therefore was not extrapolated. Recorder #20426 - no pressures available due to excessive stylus drag.

TABLE OF CONTENTS

PAGE 1	PAGE 2	PAGE 3	PAGE 4
General Data	Tool Sequence	PRESSURE	Plot Summary
Blow Description	Recorder Summary	-TIME	Reservoir Calculations
Liquid Recovery	Mud and Hole Data	LISTING	-Parameters used
Gas Measurements			-Results

***** RECORDER PAGES & FIGURES *****

LYNES UNITED SERVICES LTD
DST#01 REPORT

p.1

Well name : PCI CANTERRA BELE O-35
Location : 400/ 66.345 / 126.210 /00
Interval : 1351.00m to 1362.00m
Test Date : 86/03/30
Test Type : INFLATE STRADDLE
Formation : MOUNT CLARK

K.B.Elevation : 397.80m
Grd.Elevation : 393.30m
TD @ test Date: 1384.00m
Ticket Number : 74019
Unit Number :

Started in hole at : 0030 hrs
Tool opened at : 0530 hrs
Reverse circulated?: NO
Contractor & Rig No: JADE #5
Lynes#1 : 1 of 1 on the same trip.

Operator: PETRO-CANADA INC.
ROOM 937 WEST
150 - 6TH AVE. S.W.
CALGARY ALBERTA
T2P3E3

Company Rep : HOPE Y
Testers : BARKER R

5 REPORTS(S) TO: CATHY BACKLAND
Company:

BLOW DESCRIPTION

Preflow: Weak blow increasing a very strong air blow in 1 minute. Gas to surface in 3 minutes.
Second flow: Strong blow with gas to surface immediately.
Final flow: Gas to surface immediately with a light water spray.

TOTAL LIQUID RECOVERY : 46.00m

For DST# 1 through DST# 1
3 Fluid Samples

Sent to: TAKEN BY THE
CUSTOMER.

Btm. Hole Sampler #: 206

Sent to: TAKEN BY THE
CUSTOMER.

30.00m CONDENSATE.
16.00m CONDENSATE CUT DRILLING MUD.

GAS MEASUREMENTS Device: ORIFICE WELL TESTER

Device:
Riser: 50.8mm

Gas Measurements Continued on Next Page

Dst#01
PCI CANTERRA BELE O-35
1351.00m To 1362.00m

p.1a

FLOW #	TIME MIN	CHOKE mm	READING kPa	CUBIC METRES/D
3	10.	31.75	375.	70418.0
3	15.	31.75	400.	74113.0
3	20.	31.75	450.	81496.0
3	25.	31.75	470.	84439.0
3	30.	31.75	480.	85910.0
3	35.	31.75	480.	85910.0
3	40.	31.75	485.	86645.0
3	45.	31.75	485.	86645.0
3	50.	31.75	490.	87381.0
3	55.	31.75	490.	87381.0
3	60.	31.75	490.	87381.0
3	65.	31.75	495.	88116.0
3	70.	31.75	500.	88852.0
3	205.	38.10	300.	94796.0
3	210.	38.10	300.	94796.0
3	215.	38.10	310.	97248.0
3	220.	38.10	310.	97248.0
3	238.	38.10	320.	99672.0

TOOL SEQUENCE

RECORDER SUMMARY

SUB	LENGTH (m)	
PUMP OUT SUB	.33	1) NUMBER : 001761 ELECTRONIC GAUGE.
CROSS OVER SUB	.30	TYPE : DMRB PRESSURES AND
BAR STOP SUB	.30	LOCATION: OUTSIDE TEMPERATURE.
INSIDE RECORDER	1.22	RANGE: 34500.00kPa (a)
HYDRAULIC TOOL	1.50	DEPTH : 1354.00m
BTM. HOLE SAMPLER	1.03	2) NUMBER : 012420 ABOVE INTERVAL.
HYDRAULIC JARS	2.22	TYPE : K-3
INSIDE RECORDER	1.38	LOCATION: INSIDE
SAFETY JOINT	.65	RANGE: 20300.00kPa
INFLATE PUMP	2.28	DEPTH : 1344.00m
SCREEN	1.16	3) NUMBER : 019661 BELOW INTERVAL.
TOP INFALTE PACKER	1.78	TYPE : K-3
PACKER STICK DOWN	.82	LOCATION: INSIDE
PORT SUB	.30	RANGE: 22800.00kPa
OUTSIDE RECORDER	2.02	DEPTH : 1365.00m
SPACING	7.44	4) NUMBER : 020426 ABOVE HYDRAULIC
PACKER STICK UP	.42	TYPE : K-3 TOOL. NO
BTM.INFLATE PACKER	1.90	LOCATION: INSIDE READINGS.
SPACING	.61	RANGE: 19500.00kPa
RECORDER CARRIER	1.38	DEPTH : 1337.00m
PERFORATED SPACING	.61	5) NUMBER : 020618
BELLY SPRING	2.00	TYPE : K-3
		LOCATION: OUTSIDE
		RANGE: 21500.00kPa
		DEPTH : 1354.00m
***** TOOL TOTAL	31.65	
DRILL COLLARS		
ID= 60.0mm:	133.40	
ID= :		
DRILL PIPE		
OD=114.3mm:	1204.83	
OD= :		
COLLAR-PIPE TOTAL	1338.23	
STICK UP ABOVE TABLE :	1.38	
TOOL ABOVE INTERVAL :	14.15	
TOTAL INTERVAL :	11.00	
BOTTOM CHOKE SIZE:	25.40 mm	

MUD AND HOLE DATA

Calipered Hole Size @ Test Depth:	220.00mm	Water Loss :	8.5cc/s
Hole Condition at Test Time :	GOOD	Filter Cake:	1.2 mm
Hole Conditioned Prior to Test? :	YES		
Mud Weight :	1290.0 kg/m3	Main Hole Size:	215.00mm
Mud Type :	GEL CHEMICAL		
Viscosity :	65.0s/l	Temperature @1354.00m	= 14.3C

Location: 400/ 66.345 / 126.210 /00
Test Type: INFLATE STRADDLE
Formation: MOUNT CLARK

Recorder Number: 001761
Recorder Depth: 1354.00 m
Subsea Depth: -956.20 m

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P kPa	PRESSURE(T+dt)/dt kPa(a)	PRESSURE SQUARED kPa(a) ² /10 ⁶
1	INITIAL HYDROSTATIC			17297	
2	START OF 1st FLOW	0.0		2293	
		2.0		3430	
3	END OF 1st FLOW	4.0		3284	
	1st SHUTIN PERIOD	0.0		3284	
		2.0	9041	12324	151.8884
		6.0	9894	13178	173.6491
		8.0	9903	13186	173.8759
		10.0	9911	13195	174.1028
		12.0	9911	13195	174.1028
		14.0	9911	13195	174.1028
		16.0	9920	13203	174.3298
		18.0	9920	13203	174.3298
		22.0	9928	13212	174.5570
		24.0	9928	13212	174.5570
		26.0	9928	13212	174.5570
		28.0	9928	13212	174.5570
		30.0	9928	13212	174.5570
		32.0	9928	13212	174.5570
		34.0	9928	13212	174.5570
		38.0	9928	13212	174.5570
		40.0	9928	13212	174.5570
		42.0	9937	13221	174.7869
		44.0	9937	13221	174.7869
		46.0	9937	13221	174.7869
		48.0	9946	13229	175.0144
		50.0	9946	13229	175.0144
		54.0	9946	13229	175.0144
		56.0	9954	13238	175.2420
4	END OF 1st SHUTIN	58.0	9954	13238	175.2420
5	START OF 2nd FLOW	0.0		2835	

* VALUES USED FOR EXTRAPOLATIONS

Location: 400/ 66.345 / 126.210 /00
 Test Type: INFLATE STRADDLE
 Formation: MOUNT CLARK

Recorder Number: 001761
 Recorder Depth: 1354.00 m
 Subsea Depth: -956.20 m

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P kPa	PRESSURE(T+dt)/dt kPa(a)	ABSCISSA	PRESSURE SQUARED kPa(a) ² /10 ⁶
		2.0		3016		
		6.0		3577		
		8.0		3766		
		10.0		3964		
		12.0		3934		
		14.0		4111		
6	END OF 2nd FLOW	16.0		4299		
	2nd SHUTIN PERIOD	0.0		4299		
		2.0	8775	13074	11.0000	170.9321
		6.0	8870	13169	4.3333	173.4200
		8.0	8887	13186	3.5000	173.8759
		10.0	8896	13195	3.0000	174.1028
		12.0	8930	13229	2.6667	175.0144
7	END OF 2nd SHUTIN	14.0	8939	13238	2.4286	175.2420
8	START OF 3rd FLOW	0.0		3646		
		12.0		4077		
		24.0		4494		
		34.0		4663		
		46.0		4809		
		58.0		4938		
		70.0		5059		
		80.0		5274		
		92.0		5611		
		104.0		5645		
		114.0		5878		
		126.0		6059		
		138.0		6145		
		150.0		6171		
		160.0		6248		
		172.0		6576		
		184.0		6817		
		194.0		6938		

* VALUES USED FOR EXTRAPOLATIONS

Location: 400/ 66.345 / 126.210 /00
Test Type: INFLATE STRADDLE
Formation: MOUNT CLARK

Recorder Number: 001761
Recorder Depth: 1354.00 m
Subsea Depth: -956.20 m

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P kPa	PRESSURE(T+dt)/dt kPa(a) ABSCISSA	PRESSURE SQUARED kPa(a)^2/10^6
		206.0		7300	
		218.0		7731	
		230.0		7127	
9	END OF 3rd FLOW	238.0		7119	
	3rd SHUTIN PERIOD	0.0		7119	
		18.0	5981	13100	15.3333
		36.0	6024	13143	8.1667
		56.0	6041	13160	5.6071
		74.0	6050	13169	4.4865
		92.0	6059	13178	3.8043
		110.0	6059	13178	3.3455
		128.0	6067	13186	3.0156
		146.0	6067	13186	2.7671
		164.0	6076	13195	2.5732
		184.0	6076	13195	2.4022
		202.0	6076	13195	2.2772
		220.0	6076	13195	2.1727
		238.0	6076	13195	2.0840
		256.0	6076	13195	2.0078
		274.0	6085	13203	1.9416
		292.0	6085	13203	1.8836
		312.0	6093	13212	1.8269
		330.0	6102	13221	1.7818
		348.0	6110	13229	1.7414
		366.0	6110	13229	1.7049
		384.0	6128	13247	1.6719
		402.0	6128	13247	1.6418
		420.0	6136	13255	1.6143
		440.0	6136	13255	1.5864
		458.0	6145	13264	1.5633
		476.0	6145	13264	1.5420
		494.0	6145	13264	1.5223
		512.0	6145	13264	1.5039
		530.0	6145	13264	1.4868

* VALUES USED FOR EXTRAPOLATIONS

Location: 400/ 66.345 / 126.210 /00
 Test Type: INFLATE STRADDLE
 Formation: MOUNT CLARK

Recorder Number: 001761
 Recorder Depth: 1354.00 m
 Subsea Depth: -956.20 m

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P kPa	PRESSURE(T+dt)/dt kPa(a)	ABSCISSA	PRESSURE SQUARED kPa(a) ² /10 ⁶
		548.0	6145	13264	1.4708	175.9258
10	END OF 3rd SHUTIN	552.0	6145	13264	1.4674	175.9258
14	FINAL HYDROSTATIC			17220		

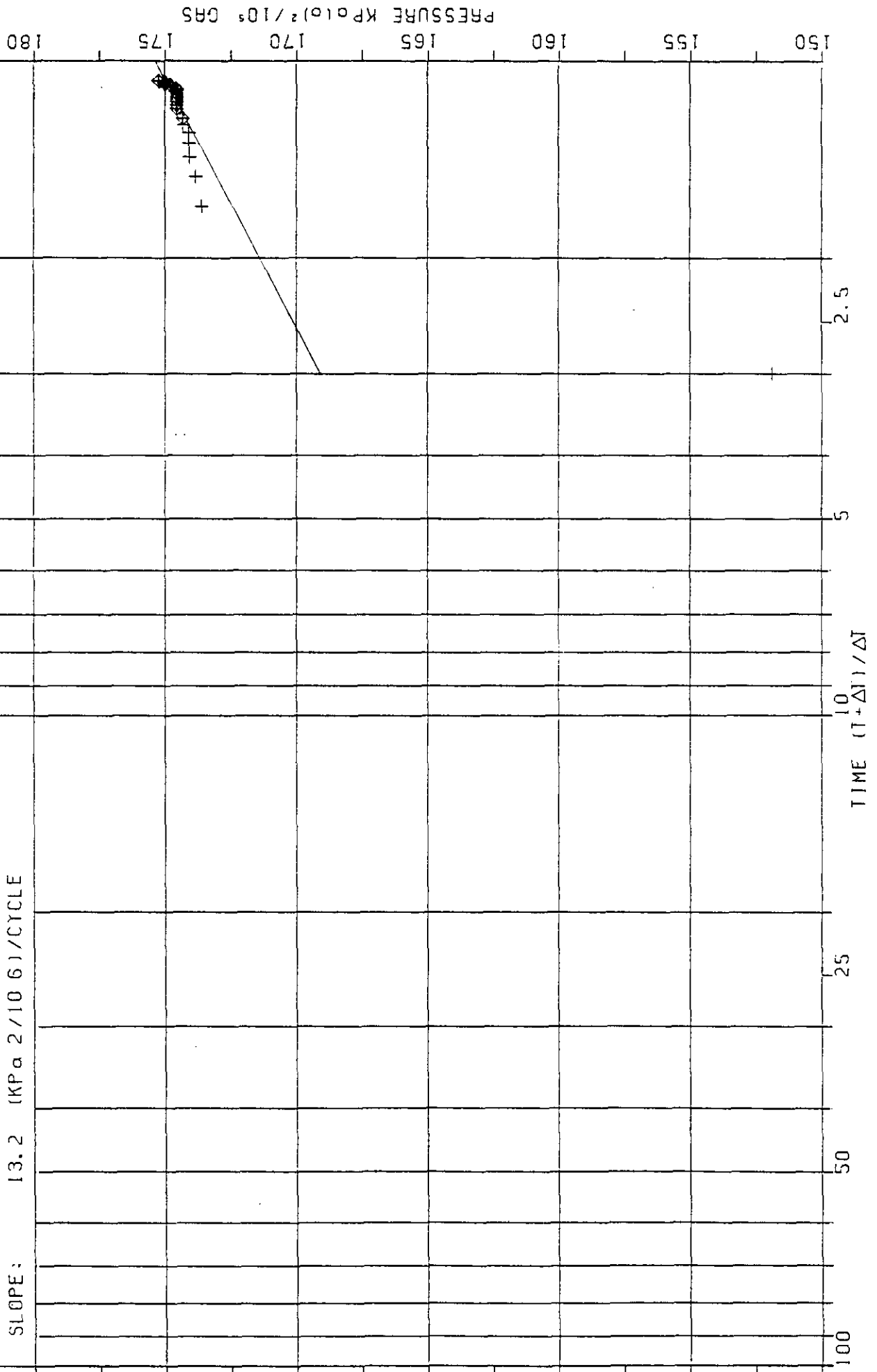
* VALUES USED FOR EXTRAPOLATIONS

1st SHUT-IN
 HORNER EXTRAPOLATION 13242.50 kPa(a)
 HORNER SLOPE 13.20833 (kPa(a)**2/10**6)/CYCLE

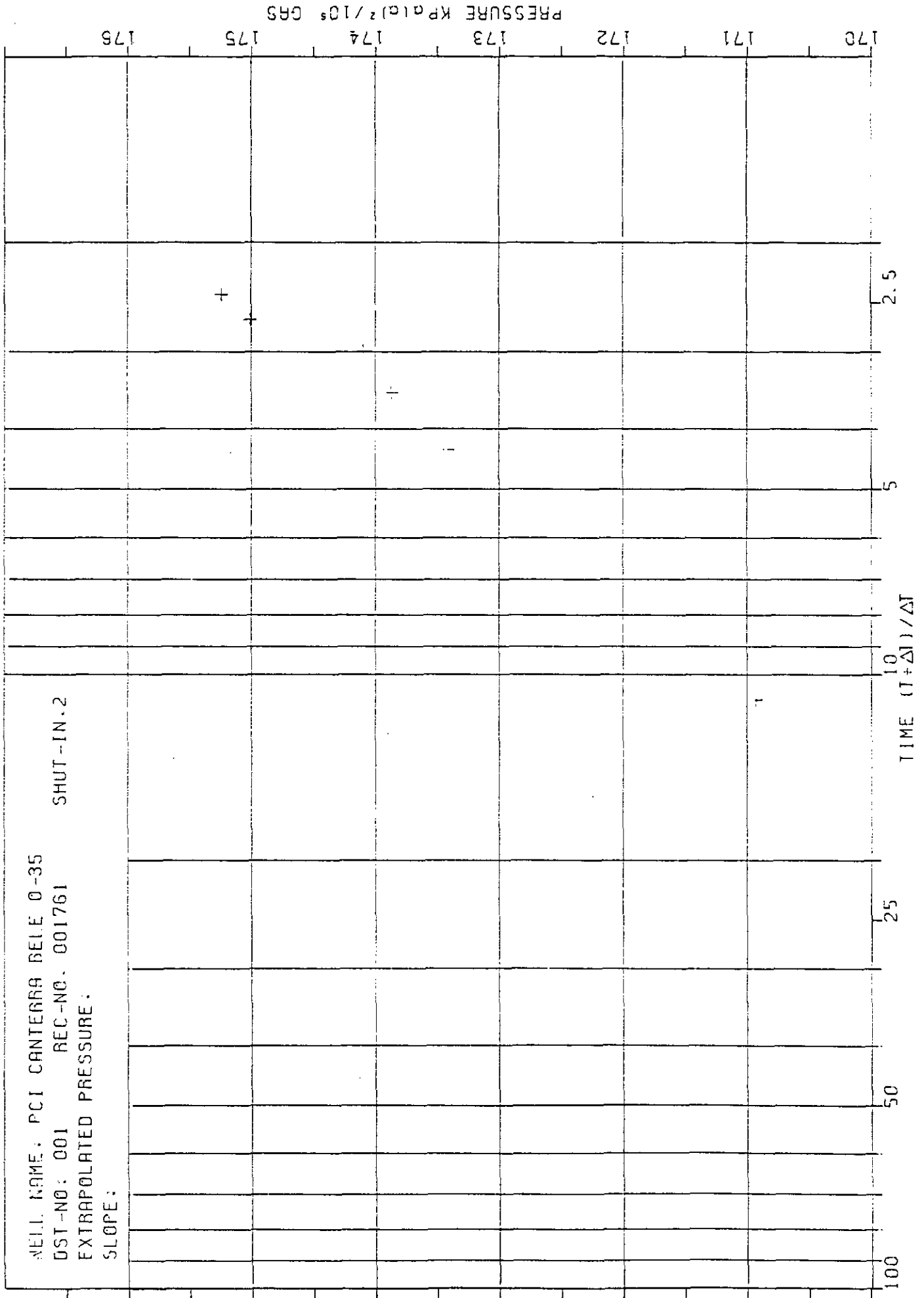
2nd SHUT-IN
 HORNER EXTRAPOLATION .00 kPa(a)
 HORNER SLOPE .00000 (kPa(a)**2/10**6)/CYCLE

3rd SHUT-IN
 HORNER EXTRAPOLATION .00 kPa(a)
 HORNER SLOPE .00000 (kPa(a)**2/10**6)/CYCLE

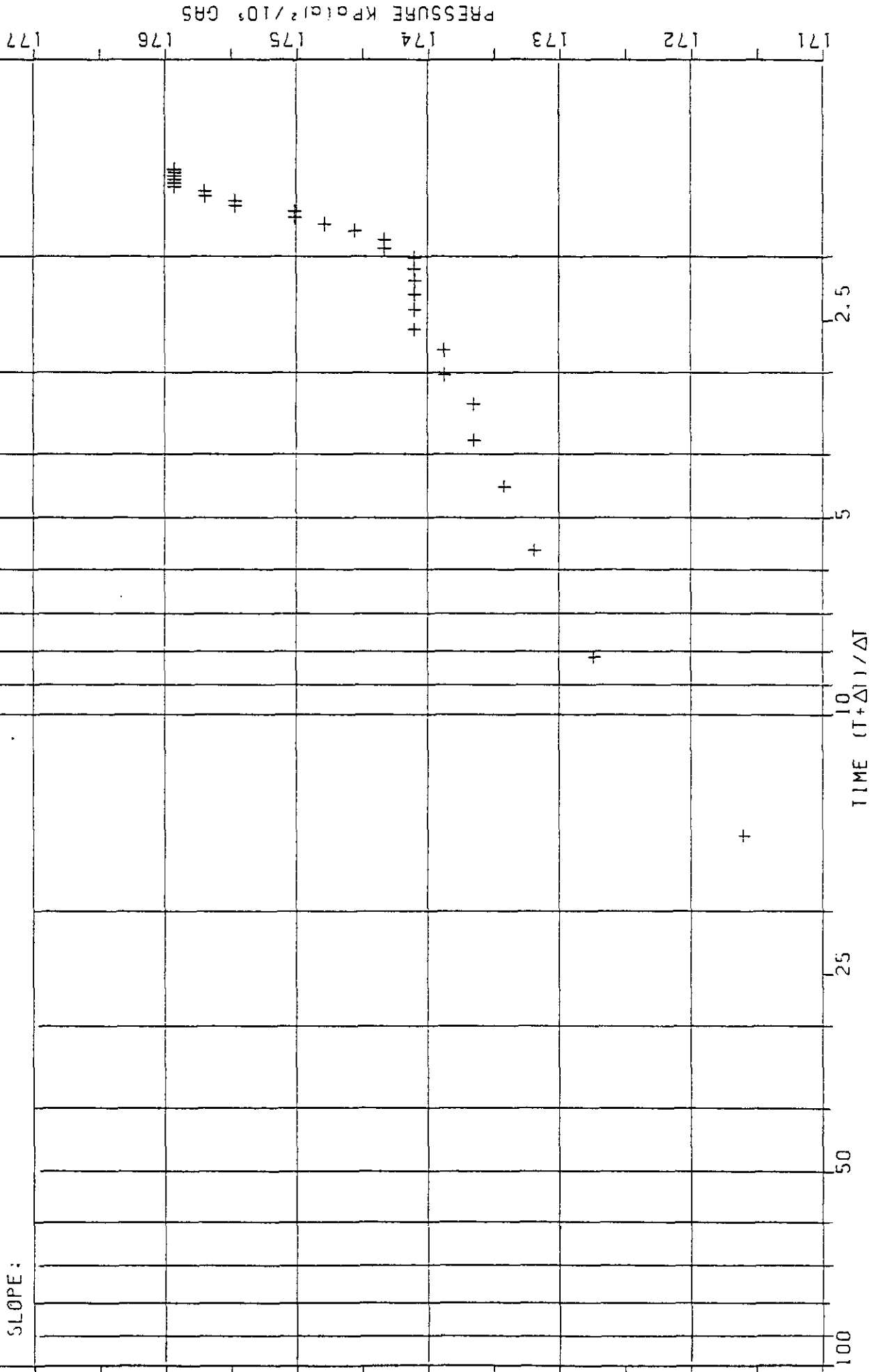
WELL NAME: PCI CANTERRA BELE 0-35
 DST-NO: 001 REC-NO. 001761 SHUT-IN: 1
 EXTRAPOLATED PRESSURE: 13242.5 kPa(a)
 SLOPE: 13.2 (KPa 2/10 6)/CYCLE



WELL NAME: PCI CANTARRA BELE 0-35
DST-NO: 001 REC-NO: 001761 SHUT-IN.2
EXTRAPOLATED PRESSURE:
SLOPE:



WELL NAME: PCI CANTERRA BELE 0-35
DST-NO: 001 REC-NO. 001761 SHUT-IN-3
EXTRAPOLATED PRESSURE:
SLOPE:



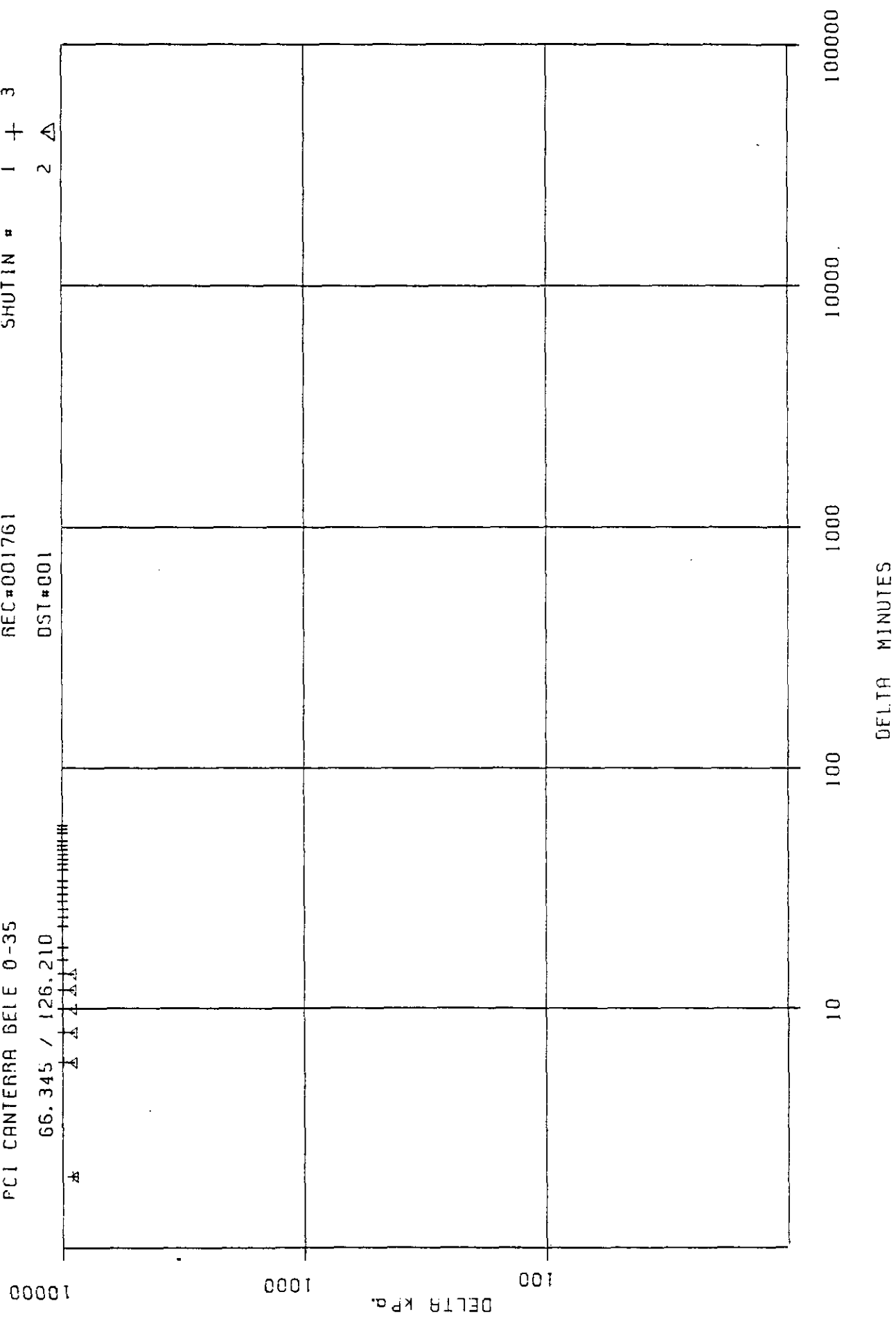
SHUTIN " 1 + 3

REC#001761

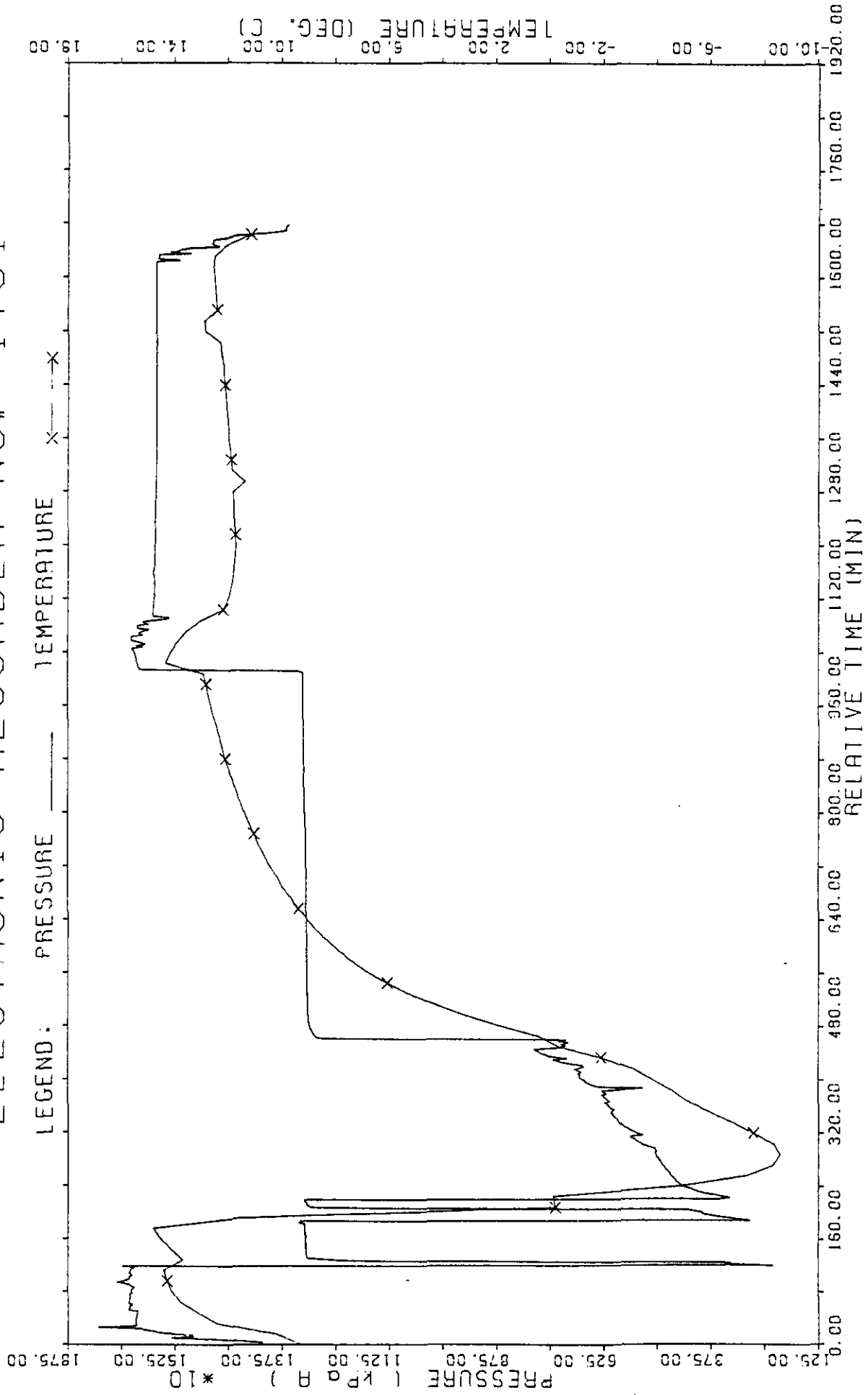
PCI CANTERRA BEL E 0-35

66. 345 / 126. 210

100-150

2 

PCI CANTERRA BELLE 0-35
66.345 126.210 DST NO. 1
ELECTRONIC RECORDER NO. 1761



DST#01
PCI CANTERRA BELE O-35
1351.00m to 1362.00m

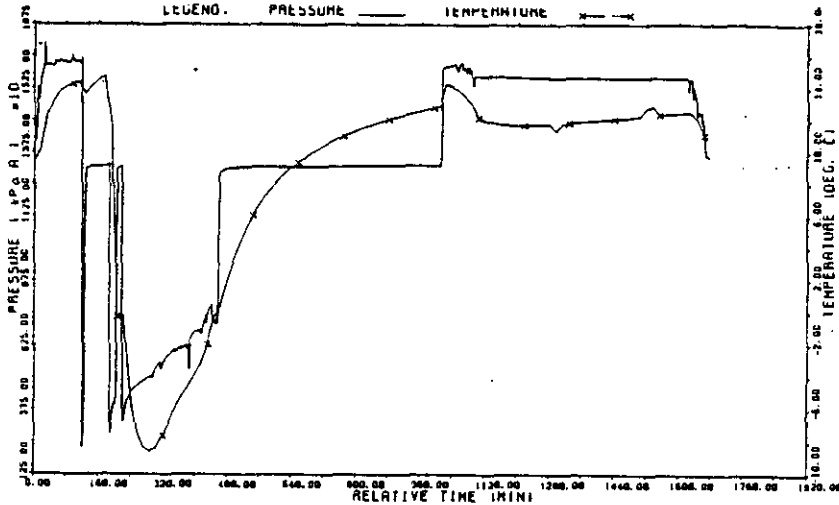
PRESSURE RECORDER NUMBER : 001761

DEPTH : 1354.00m
TYPE : DMRB

LOCATION : OUTSIDE
CAPACITY : 34500.00kPa(a)

PRESSURE
kPa(a)

***** TEMPERATURE AT RECORDER DEPTH = 43.0 C



- 1) Initial Hydro :17297.
- 2) 1st Flow Start: 2293.
- 3) 1st Flow End : 3284.
- 4) END 1st Shutin:13238.
- 5) 2nd Flow Start: 2835.
- 6) 2nd Flow End : 4299.
- 7) END 2nd Shutin:13238.
- 8) 3rd Flow Start: 3646.
- 9) 3rd Flow End : 7119.
- 10) END 3rd Shutin:13264.
- 14) Final Hydro. :17220.

ELECTRONIC GAUGE.
PRESSURES AND
TEMPERATURE.

TEST TIMES(MIN)

- | | | |
|----------|---|-------|
| 1st FLOW | : | 4.0 |
| SHUTIN: | : | 58.0 |
| 2nd FLOW | : | 16.0 |
| SHUTIN: | : | 14.0 |
| 3rd FLOW | : | 238.0 |
| SHUTIN: | : | 552.0 |

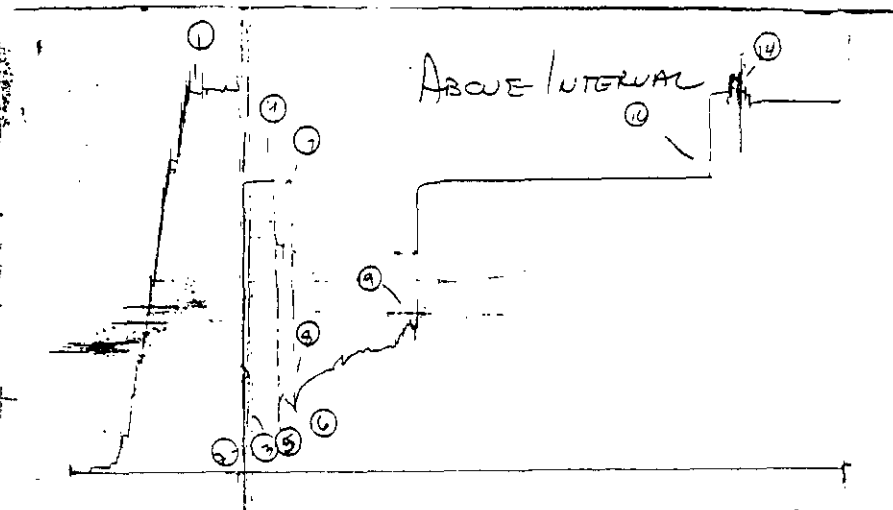
PRESSURE RECORDER NUMBER : 012420

DEPTH : 1344.00m
TYPE : K-3

LOCATION : INSIDE
CAPACITY : 20300.00 kPa

PRESSURE
kPa

- 1) Initial Hydro :17005.
- 2) 1st Flow Start: 1524.
- 3) 1st Flow End : 2724.
- 4) END 1st Shutin:13088.
- 5) 2nd Flow Start: 2256.
- 6) 2nd Flow End : 3490.
- 7) END 2nd Shutin:13088.
- 8) 3rd Flow Start: 2724.
- 9) 3rd Flow End : 6452.
- 10) END 3rd Shutin:13088.
- 14) Final Hydro. :16911.



ABOVE INTERVAL.

DST#01
PCI CANTERRA BELE O-35
1351.00m to 1362.00m

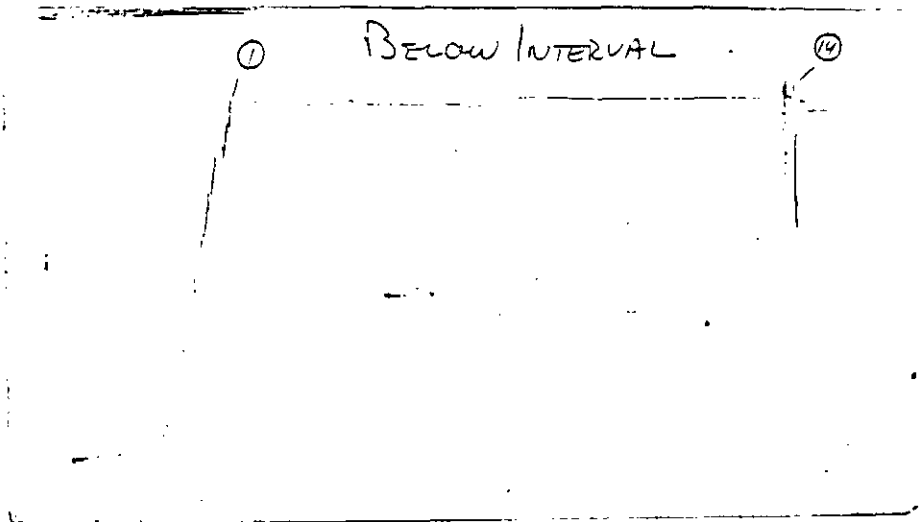
PRESSURE RECORDER NUMBER : 019661

DEPTH : 1365.00m
TYPE : K-3

LOCATION : INSIDE
CAPACITY : 22800.00 kPa

PRESSURE
kPa

1) Initial Hydro : 17331.
14) Final Hydro. : 17208.



BELOW INTERVAL.

TEST TIMES (MIN)
1st FLOW : 4.0
SHUTIN: 58.0
2nd FLOW : 16.0
SHUTIN: 14.0
3rd FLOW : 238.0
SHUTIN: 552.0

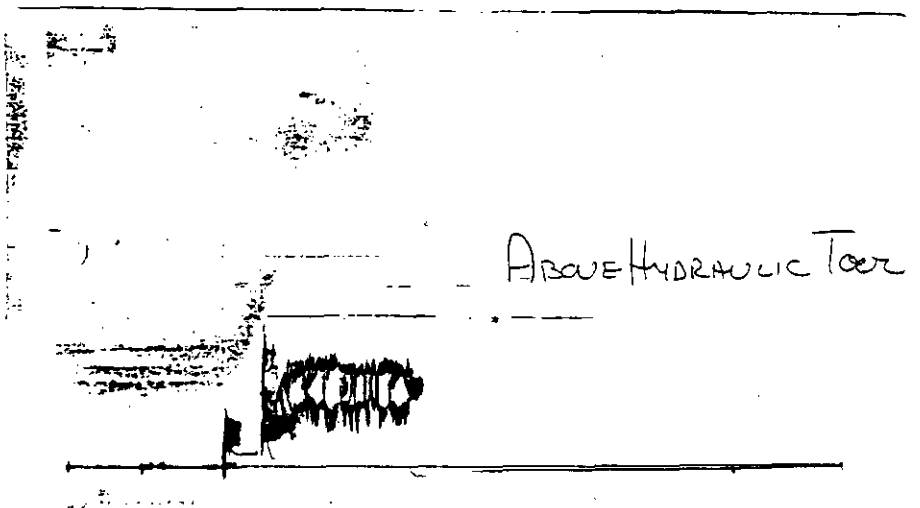
PRESSURE RECORDER NUMBER : 020426

DEPTH : 1337.00m
TYPE : K-3

LOCATION : INSIDE
CAPACITY : 19500.00 kPa

PRESSURE
kPa

1) Initial Hydro :
14) Final Hydro. :



ABOVE HYDRAULIC
TOOL. NO
READINGS.

DST#01
PCI CANTERRA BELE O-35
1351.00m to 1362.00m

PRESSURE RECORDER NUMBER : 020618

DEPTH : 1354.00m
TYPE : K-3

LOCATION : OUTSIDE
CAPACITY : 21500.00 kPa

PRESSURE
kPa

- 1) Initial Hydro : 17201.
- 2) 1st Flow Start: 1652.
- 3) 1st Flow End : 3322.
- 4) END 1st Shutin: 13150.
- 5) 2nd Flow Start: 2778.
- 6) 2nd Flow End : 3564.
- 7) END 2nd Shutin: 13114.
- 8) 3rd Flow Start: 3340.
- 9) 3rd Flow End : 6958.
- 10) END 3rd Shutin: 13132.
- 14) Final Hydro. : 17120.

STYLUS TOO LIGHT

TEST TIMES (MIN)

1st FLOW :	4.0
SHUTIN:	58.0
2nd FLOW :	16.0
SHUTIN:	14.0
3rd FLOW :	238.0
SHUTIN:	552.0

CORE LABORATORIES - CANADA, LTD.

COMPANY PETRO-CANADA EXPLORATION INC.
WELL PCI CANTERRA BELE 0-35
FIELD WILDCAT, N.W.T.
LOCATION 66 34'38.13" N LAT 126 21'32.10" W LONG.

FORMATION MT. CAP
CORING EQUIPMENT DIAMOND
CORE DIAMETER, (mm) 100
CORING FLUID WATER BASE MUD

PAGE 1
FILE 70175-86-539C
DATE 86-04-07
ANALYSIS BC

FULL DIAMETER ANALYSIS

Sample Number	Depth Metres (m)	Rep.	m	Sample Length	Permeability to Air		Perm. X	Porosity		Density: kg/m ³	Residual Saturation (Frac of Pore Vol)		VISUAL EXAMINATION
					mD Max.	mD 90 deg.		mD V	X		m	Oil	
CORE NO. 1 1330.50 m - 1340.60 (core received 9.80 m) (9 Boxes)													
LC	1330.50-40.30		9.80	-	-	-	-	-	-	-	-	-	sh
	1340.30-40.60		0.30	-	-	-	-	-	-	-	-	-	Lost core
CORE NO. 2 1340.60 m - 1353.20 (core received 12.60 m) (11 Boxes)													
	1340.60-41.21		0.61	-	-	-	-	-	-	-	-	-	sh
SP 1	1341.21-41.65		0.44	-	<0.01	-	-	0.041	0.018	-	2820	0.000	0.451 ss vf lmy pyr
SP 2	1341.65-42.07		0.42	-	<0.01	-	-	0.012	0.005	-	2860	0.000	0.744 ss vf dol glauc
	1342.07-44.25		2.18	-	-	-	-	-	-	-	-	-	sh
SP 3	1344.25-44.32		0.07	-	0.02	-	0.001	0.033	0.002	-	2800	0.000	0.810 ss vf f m glauc pyr
SP 4	1344.32-44.52		0.20	-	<0.01	-	-	0.006	0.001	-	2890	0.000	0.713 ss vf lmy pyr glauc
AST 6	1344.52-44.58		0.06	-	0.04	0.03	0.002	0.054	0.003	2680	2830	0.000	0.785 ss vf f m glauc pyr
SP 5	1344.58-44.66		0.08	-	0.02	-	0.002	0.014	0.001	-	2660	0.000	0.206 ss vf
6	1344.66-44.94		0.28	.14	0.04	0.03	0.011	0.054	0.015	2680	2830	0.000	0.785 ss vf f m glauc pyr
SP 7	1344.94-45.05		0.11	-	0.02	-	0.002	0.065	0.007	-	2860	0.000	0.909 ss vf f m glauc pyr
8	1345.05-45.45		0.40	.15	0.02	0.02	0.008	0.081	0.032	2620	2860	0.000	0.865 ss vf f m glauc pyr
SP 9	1345.45-45.70		0.25	-	0.02	-	0.005	0.051	0.013	-	2680	0.000	0.435 ss vf pyr
SP 10	1345.70-46.09		0.39	-	<0.01	-	-	0.041	0.016	-	2700	0.000	0.917 ss vf pyr
SP 11	1346.09-46.46		0.37	-	0.03	-	0.011	0.057	0.021	-	2660	0.000	0.575 ss vf
SP 12	1346.46-46.72		0.26	-	0.09	-	0.023	0.104	0.027	-	2660	0.000	0.596 ss vf
SP 13	1346.72-47.00		0.28	-	0.05	-	0.014	0.076	0.021	-	2670	0.000	0.824 ss vf pyr
14	1347.00-47.48		0.48	.12	<0.01	-	-	0.050	0.024	2540	2670	0.000	0.819 ss vf pyr

THESE ANALYSES, OPINIONS OR INTERPRETATIONS ARE BASED ON OBSERVATIONS AND MATERIALS SUPPLIED BY THE CLIENT TO WHOM; AND FOR WHOSE EXCLUSIVE AND CONFIDENTIAL USE; THIS REPORT IS MADE. THE INTERPRETATIONS OR OPINIONS EXPRESSED REPRESENT THE BEST JUDGMENT OF CORE LABORATORIES - CANADA LTD.(ALL ERRORS AND OMISSIONS EXCEPTED); BUT CORE LABORATORIES - CANADA LTD. AND ITS OFFICERS AND EMPLOYEES, ASSUME NO RESPONSIBILITY AND MAKE NO WARRANTY OR REPRESENTATIONS, AS TO THE PRODUCTIVITY, PROPER OPERATIONS, OR PROFITABLENESS OF ANY OIL, GAS OR OTHER MINERAL WELL OR SAND IN CONNECTION WITH WHICH SUCH REPORT IS USED OR RELIED UPON.

CORE LABORATORIES - CANADA, LTD.

COMPANY PETRO-CANADA EXPLORATION INC.
WELL PCI CANTERRA BELE 0-35

FORMATION
CORING EQUIPMENT

MT. CAP
DIAMOND

PAGE 2
FILE 70175-86-539C

FULL DIAMETER ANALYSIS

Sample Number	Depth Metres (m)	Rep.	Sample Length	Permeability to Air Millidarcys		Perm. X	Porosity %	Porosity X	Density:kg/m3	Residual Saturation (Frac of Pore Vol)			VISUAL EXAMINATION
				MD Max.	MD 90 deg.					MD V	Bulk	Grain	
CORE NO. 2 CONTINUED													
-	1347.48-47.77	0.29	-	-	-	-	-	-	-	-	-	-	sh
SP 15	1347.77-48.14	0.37	-	<0.01	-	-	0.065	0.024	-	2690	0.000	0.940	ss vf pyr
SP 16	1348.14-48.43	0.29	-	0.07	-	0.020	0.093	0.027	-	2670	0.000	0.870	ss vf pyr
SP 17	1348.43-48.66	0.23	-	0.06	-	0.014	0.093	0.021	-	2670	0.000	0.762	ss vf pyr
a 18	1348.66-49.25	0.59	.14	<0.01	-	-	0.066	0.039	2480	2650	0.000	0.697	ss vf
-	1349.25-50.62	1.37	-	-	-	-	-	-	-	-	-	-	sh
a 19	1350.62-50.76	0.14	.07	0.06	-	0.008	0.072	0.010	2480	2670	0.000	0.674	ss vf
SP 20	1350.76-50.88	0.12	-	0.37	-	0.044	0.069	0.008	-	2680	0.000	0.716	ss vf f glauc
a 21	1350.88-51.18	0.30	.12	0.03	-	0.009	0.068	0.020	2490	2670	0.000	0.744	ss vf
-	1351.18-51.23	0.05	-	-	-	-	-	-	-	-	-	-	sh sdy
AST21	1351.23-51.32	0.09	-	0.03	-	0.003	0.068	0.006	2490	2670	0.000	0.744	ss vf
-	1351.32-52.10	0.78	-	-	-	-	-	-	-	-	-	-	sh
SP 22	1352.10-52.25	0.15	-	<0.01	-	-	0.070	0.010	-	2750	0.000	0.842	ss vf glauc
-	1352.25-52.32	0.07	-	-	-	-	-	-	-	-	-	-	sh
SP 23	1352.32-52.44	0.12	-	0.22	-	0.026	0.061	0.007	-	2740	0.000	0.853	ss vf f pyr
-	1352.44-52.69	0.25	-	-	-	-	-	-	-	-	-	-	sh sdy
a 24	1352.69-53.01	0.32	.13	<0.01	-	-	0.026	0.008	2580	2650	0.000	0.819	ss vf
SP 25	1353.01-53.20	0.19	-	0.30	-	0.057	0.067	0.013	-	2660	0.000	0.430	ss vf f

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CORE LABORATORIES - CANADA, LTD.
Petroleum Reservoir Engineering

CORE ANALYSIS

PETRO-CANADA EXPLORATION INC.

FCI CANTIERA BELE 0-35

WILDCAT, N.W.T.

66 34'58.13" N LAT 126 21'32.10" W LONG.

86-04-07

CORE LABORATORIES - CANADA, LTD.

WELLFCI CANTERRA BELE 0-35

FORMATIONMT. CAP

SUMMARY INTERVAL1330.50-1353.20

TOTAL22.70

METRES ANALYZED7.00

METRES NOT ANALYZED: TOTAL15.70DENSE15.40LOST0.30*NA0.00DRILLED0.00RUBBLE0.00

FILE70175-86-539C

PAGE3

SUMMARY OF ANALYZED CORE:	METRES	FRACTION OF		WEIGHTED AVERAGE POROSITY	POROSITY METRES	WEIGHTED AV. HORIZONTAL PERMEABILITY	PERMEABILITY		WEIGHTED AVERAGE RESID. OIL	WEIGHTED AVERAGE TOT. WATER	
		ANALYZED	CORE				METRES				
TOTAL	7.000	1.000		0.058	0.403	0.040	0.279		0.000		0.742
BY											
PERMEABILITY RANGES	(K max)										
LESS THAN	0.01 mD	3.360	0.480	0.043	0.146	0.005	0.017		0.000		0.770
0.01 -	0.09 mD	3.210	0.459	0.071	0.228	0.042	0.135		0.000		0.738
0.10 -	0.49 mD	0.430	0.061	0.066	0.028	0.297	0.128		0.000		0.623
0.50 -	0.99 mD	0.000	0.000	0.000	0.000	0.000	0.000		0.000		0.000
1.00 -	9.98 mD	0.000	0.000	0.000	0.000	0.000	0.000		0.000		0.000
GREATER THAN	9.99 mD	0.000	0.000	0.000	0.000	0.000	0.000		0.000		0.000
POROSITY Helium RANGE 0.000 - 0.460											
*NOT ANALYZED BY REQUEST											

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CORE LABORATORIES - CANADA, LTD.

CODE KEY - DESCRIPTIONS

anhy	= Anhydrite	hal	= Halite (Salt)	SCAL	= removed for special core analysis
AST	= Appears similar to	i	= Intergranular	sdv	= Sandy
bk	= Break	lam	= Laminar	SEM	= Scanning electron microscope analysis
bldr	= Boulder	lmy	= Laminar (Laminated)	sh	= Shale
c	= Coarse	ls	= Limestone	sltst	= Siltstone
calc	= Calcite (areous)	lv	= Large vug	slty	= Silty
carb	= Carbonaceous	m	= Medium	ss	= Sandstone
cbl	= Cobble	mi	= Mud invaded	sshy	= Slightly Shaly(<20%)
CEC	= Cation exchange capacity	mic	= Micaceous	sty	= Stylolite (ic)
cgl	= Conglomerate	mshy or shy	= Moderately shaly (20-40%)	sulf	= Sulphur
cht	= Chert	mv	= Medium vug	sv	= small vug
coal	= Coal/Coal Inclusion	NA	= Not analysed by request	tr	= Trace
dol	= Dolomite	NP	= No permeability measurement	TS	= Thin section
f	= Fine	ool	= Oolitic	uncons	= Unconsolidated
fest	= Ironstone	OB	= Overburden	vfrac	= Vertical fracture
foss	= Fossil (iferous)	P	= Preserved for future studies	vf	= Very fine
frac	= Fracture	Pbl	= Pebble	VOR	= Vertical overburden sample
fri	= Friable	FOA	= Portion removed for oil analysis	vshy	= Very shaly (>40%)
glauc	= Glauconite (ic)	pev	= Pinpoint Vug	vug	= Vuggy (ular)
grnl	= Granule	PSA	= Particle size analysis	*	= broken core
gyp	= Gypsum	pyr	= Pyrite (ic)	**	= Permeability > 10240 mD
h frac	= Horizontal fracture	pyrbit	= Pyrobitumen	SA	= Sieve Analysis
	CLEANING				

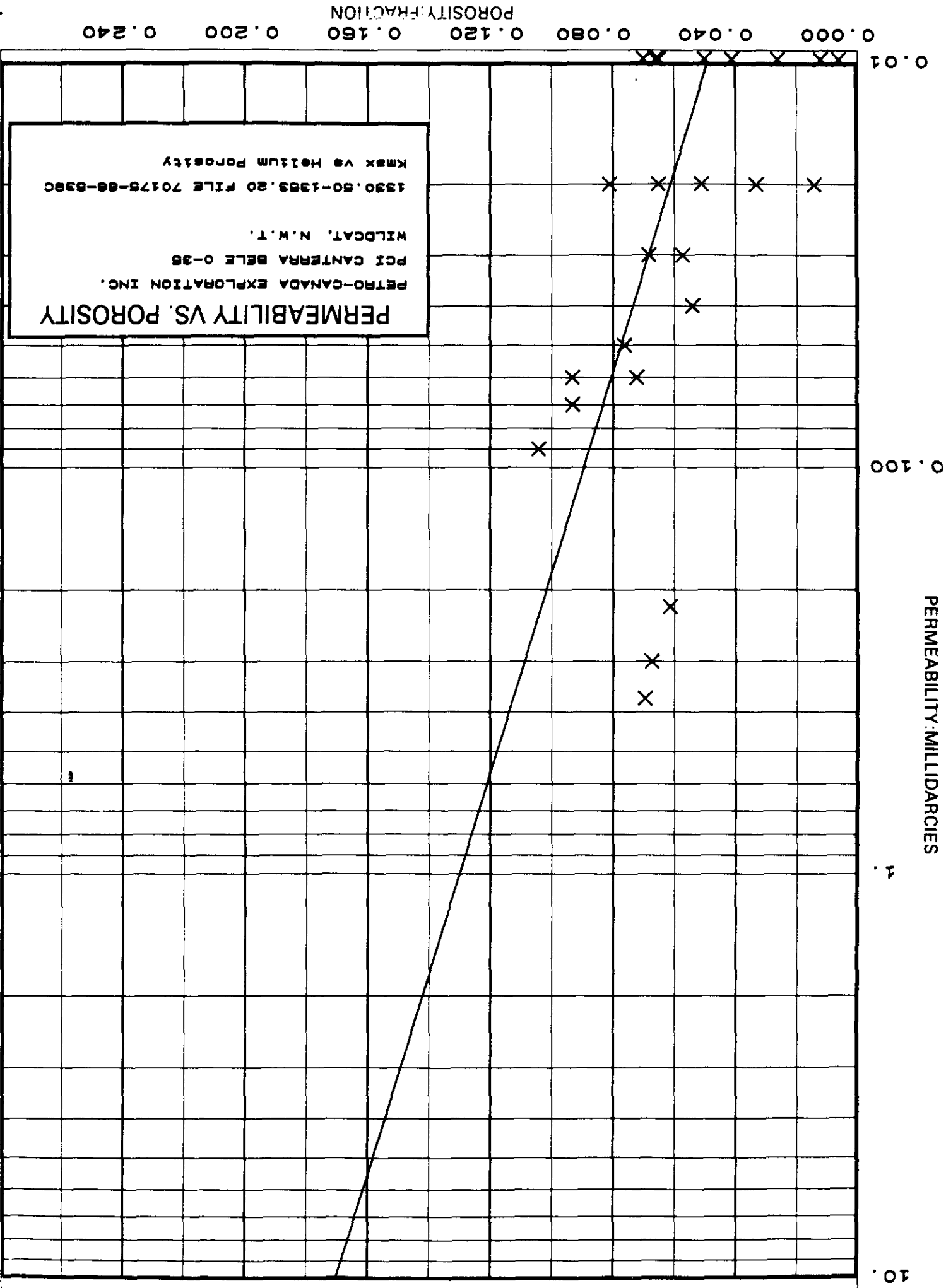
Solvent	TOLUENE	ANALYSIS	
Extraction Equipment	VAPOR PHASE EXTRACTOR		Pore volume measured by Boyle's Law in a Hassler holder using He
Extraction Time	24 HOURS	X Grain vol msrd by Boyle's Law in a modified U.S.R.M. Porosimeter using He	
Drying Equipment	GRAVITY OVEN	X Grain volume measured by Boyle's Law in a matrix cup using He	
Drying Time	24 HOURS	X Bulk volume measured by caliper	
Drying Temperature	132 DEG C.	Bulk Volume by Archimedes Principle	
		Porosity determined by summation of fluids (retort)	
		Fluid saturations by retort on end pieces of full diameter samples	
		X Fluid saturation by retort	
		Water saturations by Dean-Stark	
		Oil saturations by weight difference in Dean-Stark	
		Permeabilities measured on 20mm cubes	
		X Permeabilities measured on 25.4 mm diameter drilled plugs	
		X Core Gamma Composite	
		Core Gamma Spectral	

REMARKS:

1 X PERM-ANTLOG (0.2463) (POROSITY) + -3.2237

RANGE SYMBOL EQUATION OF THE LINE

EQUATION OF REDUCED LINE RELATING PERMEABILITY (K) TO POROSITY
LOG (K) = (SLOPE)(POROSITY) + LOG OF INTERCEPT
K = ANTLOG (SLOPE)(POROSITY) + LOG OF INTERCEPT



PERMEABILITY VS POROSITY

COMPANY: PETRO-CANADA EXPLORATION INC. WELL : PCI CANTERRA BELE 0-35
FIELD : WILDCAT, N.W.T. PROVINCE:
FORMATION: MT. CAF

AIR PERMEABILITY : MD - MAXIMUM (UNCORRECTED FOR SLIPPAGE)
POROSITY : FRACTION (HELIUM)

DEPTH INTERVAL	METERS ANALYZED	RANGE & SYMBOL	PERMEABILITY MINIMUM MAXIMUM	POROSITY MIN. MAX.	POROSITY AVERAGE	PERMEABILITY AVERAGES ARITHMETIC HARMONIC GEOMETRIC
1330.50 - 1353.20	7.00	1 (X)	0.000 10.0	0.000 0.480	0.058	0.04 0.01 0.02

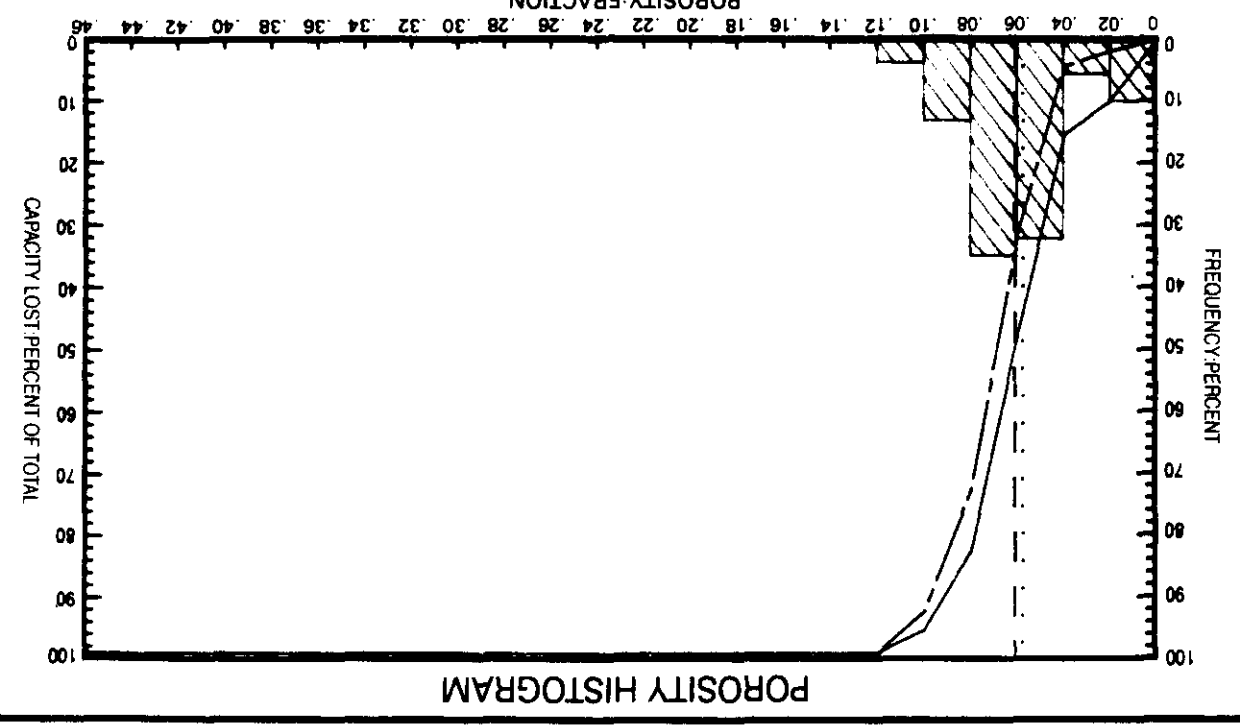
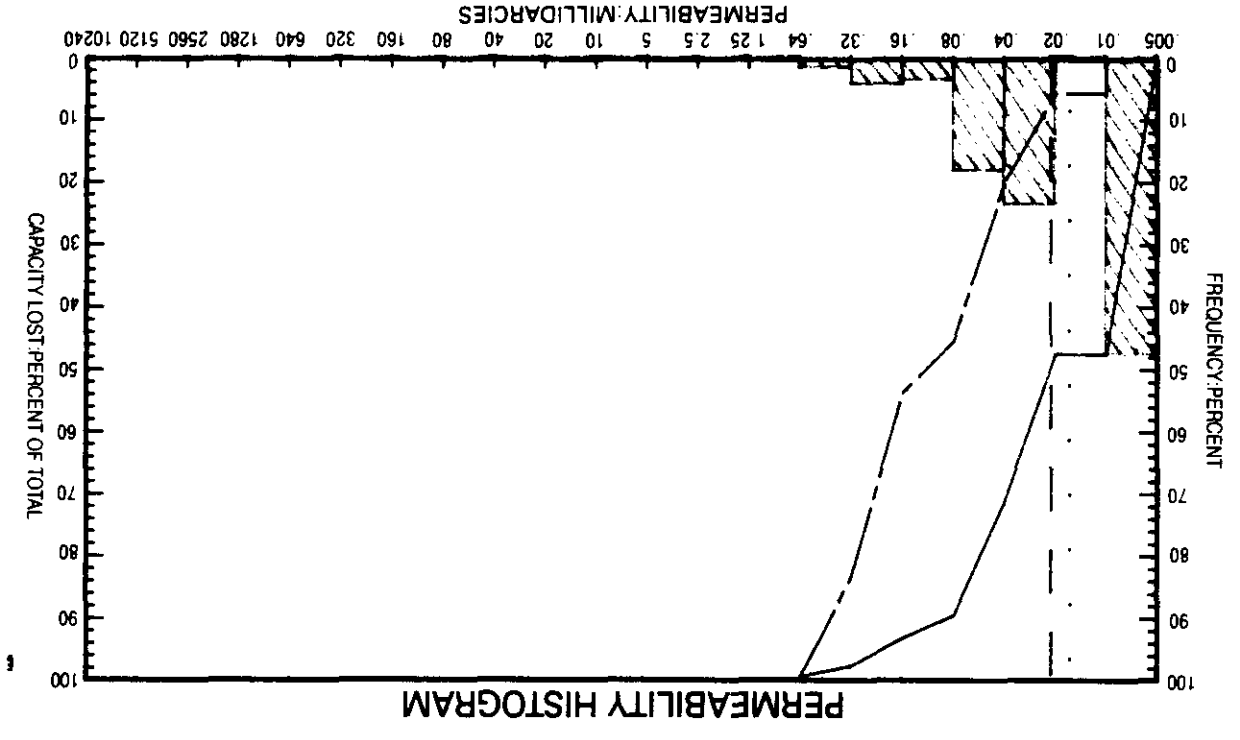
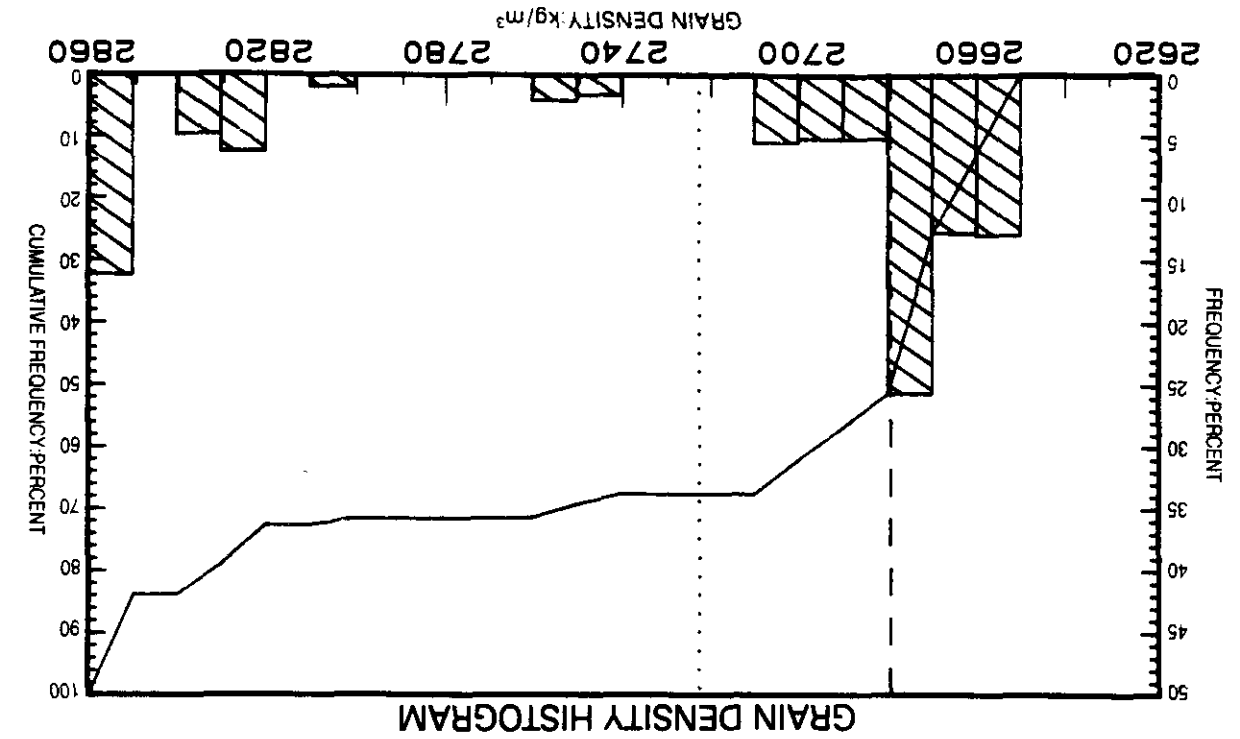
EQUATION OF REDUCED LINE RELATING PERMEABILITY(K) TO POROSITY :
LOG(K) = (SLOPE)(POROSITY) + LOG OF INTERCEPT
K = ANTILOG((SLOPE)(POROSITY) + LOG OF INTERCEPT)

RANGE EQUATION OF THE LINE
1 PERM = ANTILOG((0.2483)(POROSITY) + -3.2237)

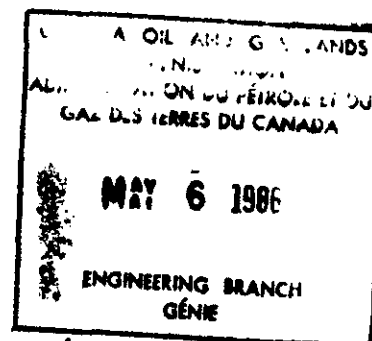
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PETRO-CANADA EXPLORATION INC.
PCI CANTERA BELE 0-35
WILLOCAT, N.W.T.
1330.50-1353.20 FILE 70175-86-539C
Kmax and Helium Porosity

LEGEND
————— MEDIAN VALUE
————— CUMULATIVE FREQUENCY
..... CUMULATIVE CAPACITY LOST
..... ARITHMETIC MEAN POROSITY
..... GEOMETRIC MEAN PERMEABILITY
..... ARITHMETIC MEAN GRAIN DENSITY



CALGARY COPY



GEOLOGICAL WELLSITE REPORT

FOR

PCI CANTERRA

BELE 0-35

9211-P28-3-1

Prepared For

PETRO CANADA RESOURCES

By

C.D. Frew

PRO GEO CONSULTANTS

April, 1986

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WELL SUMMARY

WELL NAME: PCI CANTERRA BELE 0-35

COORDINATES: 66° 34' 58" N; 126° 21' 32" W

LOCATION: Unit 0, Sec. 35, Grid Area 66° 40', 125° 15'

ELEVATIONS: Ground: 393.26m
KB: 397.76m

OPERATOR: Petro Canada Resources

DRILLING CONTRACTOR: Jade Drilling Rig #5

WELLSITE SUPERVISION: Toolpusher: D. Ostapovich/W. Zolkowski
Engineer: K. Steil/Y. Hope/D. Fletcher
Geologist: C.D. Frew

WELL SPUNDED: 0015 hours, 1986/02/14

DRILLING COMPLETED: 1740 hours, 1986/03/26

BIT SIZES: Surface: 311mm
Downhole: 215.9mm

CASING SIZES: Surface: 245mm
Production: 178mm

TOTAL DEPTH: Driller: 1384m K.B.
Logger: 1380m K.B.

BOTTOM HOLE FORMATION: Proterozoic

CORES CUT: #1 1330.5 - 1340.6m
#2 1340.6 - 1353.05m

LOGS RUN: DILL-MSFL; CNL-LDT-NGT-AMS; BHCS; HDT; MEL; WST

DRILL STEM TESTS: 1: 1351 - 1362m

RIG RELEASED: 2130 hours 1986/04/01

WELL STATUS: Cased and Abandoned

DAILY SUMMARY

1986/02/14

- Spud 0015 hours
- Drill 11 meters of main hole with 250mm bit
- Lay down 228mm drill collar, pick up shock sub and make up BHA
- Drill 311mm hole
- Survey at 18m - .75° - blow kelly
- Remodel and install cellar jet - washed out

1986/02/15

- Drill 311mm hole
- Survey at 27m - 1°, blow kelly
- Pull out to bit, run in, pick up jars
- Drill 311mm hole
- Trip for bit #2
- Drill 311mm hole

1986/02/16

- Drill 311mm hole
- Survey at 43m - 1/4°
- Blow kelly, lay down collars, jars and shock sub
- Blow kelly, make up bit, ream conductor
- Ream conductor to 444mm

1986/02/17

- Ream conductor hole
- Trip out with bit #3A, pick up hole opener
- Run in, pick up jars, unplug jets in hole opener
- Ream - twist off at Sabre Sub
- Blow Kelly, wait on overshot
- Fish with overshot - successful
- Blow Kelly, break circulation, resume reaming
- Ream 444mm hole

1986/02/18

- Ream 444mm hole
- Trip for hole opener
- Ream 444mm hole
- Circulate prior to tripping out
- Trip out - strap out (strap OK)
- Rig up to run casing
- Run same

1986/02/19

- Run casing
- Rig up to cement - circulate prior to cementing
- Cement casing with Dowell-Schlumberger
- Ran 5 joints of 340mm, 101.18 kg/m, K-55 BT&C conductor pipe. Landed at 63m
- Cemented with 11 tonnes Class "G" cement + 3% CaCl_2 displaced with $4.1\text{m}^3 \text{H}_2\text{O}$
- Plug down at 0450 hours
- Wait on cement
- Cut casing - bail out cellar
- Weld on bowl

1986/02/20

- Weld on bowl and pressure test
- Nipple up BOP's

1986/02/21

- Nipple up BOP's
- Rig up to drill mousehole and drill mousehole
- Nipple up BOP's
- Check motor kills, function test Hydrils and pressure test to 700 kPa - OK

1986/02/22

- Pressure test diverter stack to 700 kPa, pressure test motor kills,
- Test hydrill - OK
- Rig service
- Make up BHA and run in hole. Tag cement at 52m
- Drill out cement and float shoe to 63m
- Drill 311mm hole to 82m - torque dropped off.
- Drill ahead to 85m, torque increased suddenly
- Blow kelly and pull out of hole for bit trip

1986/02/23

- Continue tripping out bit #5B
- Drill ahead with water to 99.4m (changed pumps twice)
- Rig up to drill with air and drill ahead to 163m

1986/02/24

- Drilled 311mm hole to 270m
- Tripped for bit

1986/02/25

- Run in with bit #6B
- Ream undergauge hole
- Drill 311mm hole
- Misrun survey at 277m
- Drill 311mm hole
- Replace gasket on Blooey line
- Drill 311mm hole
- Pull out of hole to 228m drill collars
- Change water pumps on floor motor
- Run in hole

1986/02/26

- Run in hole
- Drill 311mm hole
- Check Hydrill and HCR - OK
- Drill 311mm hole
- Twist off at collars
- Pull out of hole - one 171mm DC and three 228mm DC left in hole
- Wait on fishing tools, pick up fishing tools, run in with same
- Fish for collars
- Pull out of hole with fish
- Wait on collar inspectors - run collars in hole

1986/02/27

- Break down fishing tool - lay down one collar
- Pull collars out of hole
- Wait on inspectors
- Run in with collars
- Thaw rathole, pick up kelly and blow steam through collars
- Inspect collars
- Make up bit, run in hole

1986/02/28

- Run in with collars - pick up 6 drill collars
- Run in drill pipe
- Pick up kelly, break circulation
- Ream to bottom from 354 - 362m
- Bail out cellar and switch blooey line to dispose of water
- (hole making approximately 100bbl/hour of fresh water)
- Drill 311mm hole
- Clean cellar
- Drill 311mm hole

1986/03/01

- Drill 311mm hole
- Circulate to clean hole, pull 3 joints of drill pipe for float
- Run in hole
- Survey at 410m - try to break circulation unsuccessfully
- Pull out of hole, break circulation, run in hole
- Drill 311mm hole
- Pull 1 joint of drill pipe and recover float
- Circulate hole clean prior to survey
- Check hydril and HCR
- Drill 311mm hole
- Circulate prior to survey
- Survey

1986/03/02

- Pressured up when breaking circulation after survey at 458m
- Made 5 stand dummy trip and spotted 25 gallons of alcohol
- Break circulation, run in hole and clean to bottom
- Drill 311mm hole to 497m, circulate and survey
- Break circulation, clean to bottom
- Drill 311mm hole

1986/03/03

- Circulate and survey
- Break circulation, clean 1 metre of fill, drill ahead
- Repair air drilling equipment
- Circulate prior to pulling out of hole
- Trip out, lay down six 165mm drill collars
- Run in hole
- Strap in, tally out by 2 singles
- Install Granthead, blow kelly,
- Break circulation - ream to bottom
- Drill ahead

1986/03/04

- Drill ahead
- Survey at 592m - 1.75°
- Reduce weight on bit from 12000 to 8000 DaN
- Drill ahead
- Survey at 614m - 2.125°
- Reduce weight on bit to 6000 DaN, increase RPM to 120
- Drill ahead
- Survey at 623m - 2.06°
- Drill ahead

1986/03/05

- Drill ahead
- Survey at 632m - 2.06°
- Drill ahead
- Survey at 652m - 2°
- Drill ahead
- Survey at 680m - 1.94°
- Drill ahead

1986/03/06

- Build pressure and break circulation
- Drill and survey ahead
- Survey at 709m - 2 1/2°
- Trip for bit
- Jars unserviceable, shock sub cracked and leaking oil from crack
- Lay down jars, shock sub, and one 228mm drill collar
- Wait on shock sub - from Atco 76
- Pick up new shock sub and 171mm jar
- Start trip in hole

1986/03/07

- Run in hole with bit #9B
- Steam kelly and break circulation
- Unload hole and drill ahead
- Survey at 726m - 2 1/4°
- Break circulation, clean 2m fill to bottom and drill ahead
- Circulate to survey - kept having fill on bottom
- Drilled ahead while stiffening foam

1986/03/08

- Drill to TD
- Circulate and condition hole
- Wiper trip to 9 inch drill collars
- Run in hole
- Install Granthead, break circulation and condition hole
- Survey 773m - 2 1/4°
- Pull out of hole to log
- Log with Schlumberger

1986/03/09

- Logged with Schlumberger: DLL-GR 777 - 63m
CNL-LDT-MGR-Dual Axis Caliper, 774 - Surface
BHCS, 777 - 265m
HDT-Cal, 777 - 63m
- Rig out loggers
- Run in hole
- Break circulation, circulate and condition hole - no fill
- Pull out of hole to run casing
- Lay down 228mm drill collars, shock sub and jars
- Rig up and run 245mm casing, T-lock and weld float shoe and collar

1986/03/10

- Ran 64 joints of 245mm casing
- Cemented casing
- Wait on cement, tear out hydril, Granthead, etc.
- Note: displaced casing with 30m³ H₂O prior to cementing Stage 1

1986/03/11

- Wait on cement
- Slack off casing, cut off casing
- Take off old stack - weld on bowl
- Commence heading up, put together 13 5/8" stack
- Install remote choke

1986/03/12

- Head up
- Try to install TOTCO remote choke; flanges not properly machined
- Replaced Willis CHokes
- Install test plug - could not stop it from leaking
- Pressure test all valves and chokes on Manifold at 1400 KpA - 10 minutes
- Tried high test - nothing would hold
- DOWELL cementing unit leaking back through valve - repaired cementing unit
- Pressure test manifold and chokes at 21000 kPa for 10 minutes
- Install new test plug
- Pressure test: both HCR valves, two kill line valves, check valves and blind rams - 1400 kPa and 21000 kPa, both for 10 minutes

1986/03/13

- Pressure kill lines valves and check valve
- Retrieve test plug
- Slip and cut 244mm drilling line
- Run in hole while inspecting drill collars
- Pressure hydril and stabbing valves at 1400 and 10500 kPa
pipe rams at 1400 and 19000 kPa
- Drill out DV tool
- Blow kelly, pick up jars and run in hole while inspecting drill collars

1986/03/14

- run in hole
- Pressure test kelly cocks, inside BOP's and casing at 1400 and 15000 kPa
- Drill out float collar
- Drill 7m into shoe joint
- Pressure test casing and stabbing valves at 1400 and 15000 kPa
- Clean gravel from pump
- Drill out shoe
- Run PIT on formation to 7000 kPa
- Held 5minutes, no leak off
- Total pressure at shoe: 14622 kPa, minimum 18.8 kPa/m
- Tripped out bit #10C for plugged jets at 772m
- Had 5 broken teeth

1986/03/15

- Drill ahead - held BOP drill
- Drill ahead - survey at 818m - 2 1/2°
- Change shaker screens and pumps
- Drill ahead - survey at 866m - 2 7/8°
- Drill ahead
- Work tight hole at 920m
- Drill 216mm hole - 2 plugged jets
- Tried to unplug - unsuccessfully

1986/03/16

- Drill 216mm hole
- Trip out for plugged jets
- Run in hole - no fill
- Drill ahead
- Trip out to pick up stabilizers

1986/03/17

- Run in hole with new BHA
- Drill 216mm hole
- Surveyed frequently, declination going out (max. $3\frac{1}{2}^{\circ}$)
- Attempted to control deviation by varying WOB and RPM
- Drill ahead

1986/03/18

- Pull out of hole, change bit #11C, make up new BHA
- Run in hole
- Drill 216mm hole

1986/03/19

- Drill 216mm hole
- Held BOP drill - crews in place and well shut in within 3 minutes
- Drill 216mm hole

1986/03/20

- Drill 216mm hole
- Circulated and evaluated sample at 1330.5m (core point)
- Made 10 stand wiper trip - tight hole from 1330 to 1236m on trip out
- Held BOP drill - crews in place in $2\frac{1}{2}$ minutes

1986/03/21

- Completed 10 stand wiper trip
- Circulate and condition mud and hole (cleaned 4 meters of fill to bottom)
- Made 5 stand wiper trip, circulate and conditioned mud and hole
- Pull out of hole to cut core #1 (strapped out - OK)
- Lay down shock sub and stabilizers
- Make up core barrel and run in hole to cut core #1
- Dropped ball and cleaned 3 meters fill
- Cut core #1
- Held BOP drill - crews in place and well shut in in 2 minutes

1986/03/22

- Cut Core #1
- Mix 20 sack pill and pump same
- Core appears to have jammed off
- Pull out of hole with core #1

1986/03/23

- Finish pulling out of hole with core #1
- Recover core
- Service core barrel
- Run in hole with core barrel to cut core #2
- Break circulation and clean 5 meters fill to bottom, drop ball
- Cut Core #2
- Note: recovered 10.1m (100%) on core #1 (1330.5 = 1340.6m)

1986/03/24

- Cut Core #2 (1340.6 - 1353.0m) core jammed
- Mix and pump pill
- Pull out of hole with core #2
- Work tight hole
- Pull out of hole with core #2

1986/03/25

- Finish pulling out of hole with core #2 (1340.6 - 1353.05m) rec. 12.4m (100%)
- Service core barrel and wait on orders
- Lay down core barrel, bit sub and jars
- Run in hole with bit #15C - clean 10 meters, fill to bottom
- Drill 216mm hole
- Circulate sample at 1359m
- Survey at 1368m (2 7/8°)
- Drill ahead

1986/03/26

- Drill 216mm hole to 1384m KB (FTD)
- Circulate bottom hole sample
- Dummy trip 10 stands - first stand pulled tight, rest OK
- Cleaned 4 meters of fill to bottom
- Circulate and condition hole to log

1986/03/27

- Pull out of hole to log - recover wear bushing
- Attempt to log - tool held up at 1197m
- Run in hole for clean out trip
- ream 9m undergauge hole - 4m fill
- Circulate and condition hole
- Made 10 stand dummy trip
- Did not pull tight on trip out
- No fill on trip in
- Circulate and condition
- Pull out of hole to log - rig up Schlumberger

1986/03/28

- Log with Schlumberger
DLL-MSFL
CNL-LDT-NGT-AMS
BHCS

1986/03/29

- Log with Schlumberger
 - HDT
 - MEL
 - CNL-LDT repeat with different tool
 - WST
- Rig out Schlumberger

1986/03/30

- Run in to condition hole
- Circulate and condition in preparation for testing
- Rig up Lynes-Baker
- Prepare for DST #2

1986/03/31

- Run DST No. 1 1351 - 1362m
- Complete DST #1
- Rig out Lynes-Baker
- Run in hole to condition prior to running casing

1986/04/01

- Lay down pipe
- Flow check, circulate out gas cut mud - approx. 1m^3
- Lay down drill pipe and drill collars
- Rig up and run casing, circulate casing, rig up cementer and cement
- set slips, tear out BOP's
- No problems while cementing
- full fluid returns at all times
- Rig release at 2130 h ours

CASING SUMMARY

Surface Casing

Ran 64 jts 245mm 60 kg/m casing (H-55 for bottom 37.97m and for top 513.58 m, T-95 for middle 223.37 meters). Landed at 777.7m. Cemented with : Stage 1 777 - 625m with 10 tonnes 0:1:0 class "G" + 2% CaCl_2 mixed at 1895 kg/m, slurry volume 7.57m^3 . Displaced with theoretical displacement of 191 bbl. Plug did not bump. Displaced 6 more bbl and shut in casing for 6 hours. Filled casing with water and pressured to 13000 kPa. Inflated ECP at 60m, dropped dart and opened stage tool. Stage 2: 60m - surface with 4.4 tonnes 0:1:0 Class "G" + 2% CaCl_2 mixed at 1895 kg/m 3 . Slurry volume 3.3m^3 . Plug down at 1635 hours, 10/03/86. had 2m^3 cement returns.

Production Casing

Ran 117 joints 43.16 kg/m, 178mm, MN-80 with 20 centralizers. Cemented by Dowell-Schlumberger with 30 tonnes Class "G" + 0.5% D-65 (20% excess) Landed at 1384.33m. Plug down at 2100 hours 1986/04/01. Good cement returns to surface.

DRILLSTEM TEST SUMMARY

DST #1 1351 - 1362m Fm: Mt. Clarke Type: Straddle Inflate

TIMES: 6/60/240/540
 PF: weak to very strong in 1 minute
 VO: Information not available
 RECOVERY: 30m condensate, 16m condensate cut mud
 HP: 17151/17065 kPa
 SIP: 13037/13037 kPa
 FP: 3235/6810 kPa
 OTHER:

GEOLOGICAL SUMMARY

PCI Cantera Bele 0-35 was drilled with the intent of further delineating the productive horizon of the Cambrian Mount Clarke formation obtaining hydrocarbon production and investigating the reservoir and the nature of its contents.

The well was spudded at 0015 hours 1986/02/14 by Jade Drilling Ltd. Rig #5. After conductor casing was set at 63m KB drilling continued with foamed air supervised by Air Drilling International - through the Bear Rock and Franklin Mountain formations into the Upper Saline River formation (refer to following formation descriptions).

Surface casing of 245mm diameter was set at 777m KB in the Upper Saline River formation; cemented by Dowell-Schlumberger. Drilling with Gel-Chem mud resumed after surface casing was set.

Sampling commenced at surface. Large bags of unwashed sample were collected every 5 meters, "jar" samples were collected every 10 meters and small bag samples were caught at 2.5m intervals for Thermal Electric Chromatography analysis - commenced at 1200m KB.

Two cores were cut - 1330.5 - 1340.6m KB and 1340.6 - 1353.05m KB. Coring was supervised by Norton-Christensen. There was 100% recovery of each core: refer to detailed core descriptions.

The primary zone of interest was the Cambrian Mount Clarke formation. It was encountered in Core 32 at 1344.46m KB (-946.70m SS). The core examined (and subsequent samples in this formation) consisted of fine - medium grained, tight barren Chloritic Sandstones and pale, hard, tight, very fine - medium grained quartzites. At the base of the core there was a section of medium - coarse grained quartzite, it was clear, well rounded, moderately sorted, very poorly consolidated and very friable in part.

The portions that were cemented showed siliceous overgrowth cement, it was clean to slightly argillaceous, tight where cemented - probably very porous where not well cemented but due to the extreme friability of the quartzite its porosity is difficult to quantify accurately.

Subsequent to coring sample quality worsened considerably with abundant cavings (shale mostly) from uphole. Despite this fact there was some quartzite as described above. There was a drilling break at 1357.5m KB and a sample was circulated to surface; however again the sample quality was very poor and aside from cavings the only evidence of sandstone/quartzite was scattered individual medium - coarse grains. Unfortunately coincident with this sample, a motor operating a crucial part of the hydrocarbon logging apparatus (the gas trap) seized and stopped functioning. The problem was discovered very quickly as an inspection of the hydrocarbon logging system was being conducted while the sample was being circulated. However, repairs required almost 45 minutes; consequently, any gas circulated to the surface was missed as the sample lag was 30 = 35 minutes.

The presence of hydrocarbons in the Mount Clarke was detected from the wireline logs (logging conducted by Schlumberger). Subsequent drillstem testing has supported this fact (refer to Drillstem Test Results).

A secondary zone of interest was in the lower Cambrian Mount Cap formation, specifically of interest were thin sandstone stringers in the lower "High Gamma Shale" portion. There were minor Sandstone stringers therein, they were medium brown, very fine grained - silty, calcareous, tight, with poor slow pale milky yellow cut fluorescence. The Mount Cap formation was encountered at 1121m KB - 723.24m KB Subsea. It consisted of dolomites and shales, the dolomite was white, buff, medium brown, microcrystalline - very fine crystalline, massive, sucrosic in part, dull - earthy, occasionally vitreous, soft - moderately hard, slightly anhydrous, tight, with rare poor intercrystalline porosity and no shows. The shale was light - medium grey green, soft, brittle, dull - occasionally micromicaceous subfissile, slightly calcareous, no shows.

With respect to the test of the formations encountered, drilling commenced in the Bear Rock formation. This consisted of Dolomite: light grey and grey-brown, white to pale brown in part, microcrystalline to very fine crystalline in part, massive - sucrosic hard, vitreous, clean, occasional medium-dark brown live oil stain predominantly tight with abundant vug and occasional good intercrystalline porosity, pale yellow direct fluorescence, excellent yellow cut fluorescence with rapid ribbon streaming. This Dolomite was manifested at surface and samples of such were forwarded to Petro-Canada in Calgary. The oil staining decreased at the base of this formation.

The Bear Rock was underlain by the Franklin Mountain formation of the Ronning Group. This formation came in at 120m KB (-277.76m ASL). This formation consisted of dolomite white, variable grey and variable brown, microcrystalline to very fine crystalline, massive - sucrosic hard, vitreous, clean, traces of massive pyrite, tight, no shows. There were occasional indications of vuggy porosity: euhedral quartz crystals, extreme torque while drilling and poor

sample returns in part. However, this vuggy porosity was sporadic and difficult to quantify. As well, throughout the Franklin Mountain there was abundant chert - white, translucent to opaque, hard, clean, sharp fragments, brittle in part.

The Franklin Mountain Formation terminated at 765m KB -367.24m SS at which point the Saline River formation was encountered. The upper portion was marked by Shales: green, reddish brown, mottled in part moderately hard, firm, brittle in part, blocky, dull, silty in part, no shows. There was also abundant Anhydrite herein: white-blue grey, very fine - fine crystalline, massive, vitreous - pearly, brittle, tight. From 821m KB -423.24m SS to 1039m KB the Saline River was made up of Salt: clear occasionally pale orange, massive - crystalline, soft, brittle, tight. From 1039 - 1121m KB there was abundant Dolomite and Shale interbedded with the Salt.

Subsequent to the Mount Cap and Mount Clarke formations mentioned previously the Proterozoic was encountered the first indication thereof was a Red Shale at 1359.6m KB -961.84m SS, this was pale-medium red, mottled red-green, soft moderately hard, blocky, dull, friable, very silty in part, hematitic, calcareous no shows. This Shale was almost certainly derived from the underlying Basalt, which was first encountered at 1363.8m KB -965.44m Subsea, this Basalt was red-brown, mottled, red-green, white in part, aphanitic, very hard, no visible phenocrysts, hematitic, calcareous in part.

Drilling was completed in the Proterozoic Basalt at 1740 hours, 1986/03/26. Following completion of drilling the forementioned wireline logging was conducted. Subsequent drillstem testing was performed by Lynes.

FORMATION TOPS

FORMATION	SAMPLE		LOG	
	Depth	Subsea	Depth	Subsea
Franklin Mt.	120.0	+277.76	120.0	+277.76
Saline River	765.0	-367.24	762.5	-364.74
Upper Salt	802.0	-404.24	800.75	-402.99
Shale Member	809.0	-411.24	812.0	-414.24
Lower Salt	821.0	-423.24	817.0	-419.24
Mount Cap	1121.0	-723.24	1120.25	-722.49
Mount Clarke	1344.46	-946.70	1343.7	-945.94
Red Shale	1359.60	-961.84	1361.0	-963.24
Basalt	1363.20	-965.44	1362.5	-964.74
FTD	1384.0	-986.24	1380.0	-982.24

- 5 - 52m Dolomite; light grey and grey brown, white to pale brown in part, microcrystalline to very fine crystalline in part, massive - sucrosic, hard, vitreous clean, occasional medium - dark brown live oil stain, predominantly tight with abundant vug and occasional good intercrystalline porosity, pale yellow direct fluorescence, excellent yellow cut fluorescence with rapid ribbony streaming
- 52 - 60m Dolomite; white - pale grey, microcrystalline, massive - sucrosic hard but friable, vitreous, clean, tight with poor intercrystalline porosity, no shows
- 60 - 120m Dolomite; white - occasional very light brown, microcrystalline to very fine crystalline, hard but friable, dull, clean, tight, no shows, abundant cement in part.

FRANKLIN MOUNTAIN 120m KB (277.76m ASL)

- 120 - 130m Dolomite; light blue-grey, very fine to fine crystalline, hard, firm, dull, vitreous in part, clean calcareous, traces of disseminated pyrite, tight, no shows, traces of light brown dolomite as above, traces of chert.
- 130 - 140m No samples
- 145 - 160m Dolomite; white - light grey, occasional red-brown iron staining cryptocrystalline to microcrystalline, rarely very fine crystalline vitreous - dull, clean, abundant massive and disseminated pyrite, tight - no shows, there is also abundant chert, white, translucent to opaque, clean, hard, sharp fragments, brittle in part
- 160 - 210m Dolomite, white - buff, light grey, rare iron staining, cryptocrystalline to microcrystalline, rare subhedral crystals, vitreous, hard, traces of pyrite, tight, no shows, traces of Chert, as above, traces of Quartz, Note; insufficient samples at 180, 190 and 200m KB
- 210 - 290m Dolomite, white, light grey, light grey brown, microcrystalline - very fine crystalline, massive - sucrosic, hard, vitreous, clean, traces of massive pyrite, tight, no shows
Abundant Chert, white, translucent - opaque, hard, clean, sharp fragments, brittle in part
- 290 - 300m Dolomite, medium grey - light grey in part, microcrystalline - very fine crystalline, massive, sucrosic in part, hard, clean, vitreous - dull in part, traces of massive and disseminated pyrite, traces of calcite crystals, tight, no shows

- 300 - 335m Dolomite, white - light grey in part, microcrystalline, very fine to fine crystalline in part, massive - occasionally sucrosic in part, hard, clean, vitreous, dull in part, tight with rare poor intercrystalline porosity, no shows. Abundant Chert at top of interval: white, opaque, hard sharp fragments. Rare trace of red shale at base of interval.
- 335 - 340m No sample
- 340 - 345m Dolomite; as above
- 345 - 355m No sample
- 355 - 395m Dolomite; light to medium grey, occasionally white, very fine to fine crystalline, massive - occasionally sucrosic in part, hard, clean, rare disseminated pyrite, tight - no shows
- 395 - 420m Dolomite, white, microcrystalline to very fine crystalline, massive - occasionally sucrosic, hard, clean, minor disseminated pyrite, tight - no shows
- 420 - 445m Dolomite; white-light grey, microcrystalline to very fine crystalline in part, massive - sucrosic in part, very hard, clean, tight, no shows
- 445 - 450m Dolomite; light brown, light grey-brown, pale grey, microcrystalline rare fine crystalline (consisting of euhedral dolomite rhombs in white limestone matrix), massive, vitreous, very hard, predominantly clean - slightly argillaceous in part, occasional euhedral quartz crystals, tight, no shows
- 450 - 485m Dolomite; medium - dark brown and grey-brown, traces of white, very fine crystalline - fine crystalline in part, massive, vitreous, hard-brittle in part, slightly argillaceous, traces of calcite crystals, rare buff coloured Chert, tight, no shows
- 485 - 500m Dolomite; medium-dark grey brown, light brown in part, microcrystalline massive, vitreous - dull in part, hard, slightly argillaceous, tight - no shows
- 500 - 525m Dolomite; medium - dark brown, occasional white - light brown, very fine crystalline, massive, vitreous, hard but friable, slightly calcareous, slightly argillaceous, tight, no shows
- 525 - 550m Dolomite; light grey, occasional medium - dark brown, microcrystalline - very fine crystalline in part, massive, vitreous, hard, rarely brittle in part, clean, slightly argillaceous, slightly calcareous in part, tight, no shows

- 550 - 570m No samples due to pipe tally being 21 metres out with respect to the geolograph
- 570 - 580m Dolomite; white to light grey brown, very fine crystalline - microcrystalline in part, massive sucrosic, very hard, clean, rare iron staining, tight, no shows
- 580 - 600m Dolomite; white - light grey, dark grey in part, very fine crystalline - microcrystalline in part, massive - sucrosic in part, hard, clean, occasional iron staining, tight, no shows
- 600 - 615m Dolomite; medium - dark grey brown, cryptocrystalline, massive, dull - vitreous in part, moderately hard, slightly argillaceous, tight, no shows
- 615 - 630m Dolomite; medium - dark grey brown, light grey and light brown in part, cryptocrystalline - very fine crystalline, massive, dull - vitreous, moderately hard, brittle - friable in part, slightly argillaceous, occasional calcite crystals, tight, no shows
- 630 - 635m Dolomite; medium - dark grey, buff, cryptocrystalline - very fine crystalline in part, massive - sucrosic, dull - vitreous, friable, occasional calcite crystals, tight, no shows
- 635 - 650m Dolomite; white, grey, light brown, very fine crystalline - cryptocrystalline in part, rare medium dolomite crystals in very fine matrix, massive, sucrosic, hard, brittle and friable in part, rare iron staining, rare chert and quartz, rare poor intercrystalline porosity, no shows, poor returns
- 650 - 655m Dolomite; medium brown and grey brown, microcrystalline - very fine crystalline, massive, vitreous - dull, hard - brittle in part, slightly argillaceous, rare brown chert, tight, no shows
- 655 - 665m Dolomite; white - pale brown, medium brown in part, microcrystalline - very fine crystalline, massive - sucrosic in part, vitreous - dull in part, hard - brittle in part, clean - occasionally slightly argillaceous in part, rare coarse euhedral quartz crystals, tight, no shows
- 665 - 680m Dolomite; white, light - medium grey brown, microcrystalline - very fine crystalline, fine crystalline in part, massive, dull - vitreous, hard, brittle in part, slightly argillaceous, rare white chert, rare coarse euhedral quartz crystals, tight, no shows
- 680 - 690m Dolomite; white, light grye, light grye brown, microcrystalline - very fine crystalline, occasionally fine crystalline (euhedral crystals in Limestone matrix), massive, vitreous - dull in part, slightly calcreous, hard, brittle and friable in part, slightly argillaceous, rare quartz, trace iron stain, tight - rare poor intercrystalline porosity, no shows

790 - 802m Shale; as above, with abundant Anhydrite; white - blue grey, very fine - fine crystalline, massive, vitreous - pearly, brittle, tight, interbedded with Shale, minor Dolomite; as above, Traces of cement

FIRST SALT MEMBER 802m KB (-904.24m SS)

802 - 809m Salt; clear, orange-red, massive-crystalline, soft, brittle, tight, no shows, with Shale; grey-green, moderately hard, firm, blocky, platy in part, dull - waxy, no shows Minor Dolomite; white, light grey, very fine crystalline, massive, moderately hard, clean, slightly anhydrous, tight, no shows, trace Anhydrite

SHALE MEMBER 809m (-911.24m SS)

809 - 815m Shale as above, becoming reddish-brown in part Some Dolomite; as above, becoming very anhydrous

815 - 820m Anhydrite; white - light blue-grey, very fine crystalline, massive, pearly, dull, brittle, tight, some Shale; grey-green, reddish brown, moderately hard, firm, blocky - platy in part, dull - waxy, no shows minor Salt, clear, massive - crystalline, soft, brittle, tight, no shows

LOWER SALT MEMBER 821m KB (-423.24m SS)

820 - 840m Salt, clear, orange-red in part, massive-crystalline, soft, brittle, tight - no shows

840 - 855m Salt; as above, minor Cement, trace Anhydrite, rare trace metal flakes

855 - 870m Salt, clear, rarely pale orange, massive, crystalline, soft, brittle, clean, tight, no shows

870 - 885m Salt, clear, rarely pale orange, massive, crystalline, soft, brittle, clean, tight, no shows

885 - 900m Salt, clear, massive - crystalline, soft, brittle, clean, tight, no shows Trace red-green Shale

900 - 920m Salt; clear, massive - crystalline, soft, brittle, clean, tight, no shows, trace red-green Shale

- 920 - 930m Poor sample quality - Abundant Cement and thick mud.
Shale; light grey-green, soft, friable, subfissile,
 dull, calcareous, tight, no shows,
Dolomite; light grey, microcrystalline, moderately,
 hard, clean - slightly argillaceous, massive, dull -
 slightly vitreous, tight, no shows
- 930 - 945m Salt; clear, occasionally pale orange, massive-
 crystalline, soft, brittle, tight, no shows, rare metal
 flakes
- 945 - 960m Salt; clear, occasionally pale orange, massive -
 crystalline, soft, brittle, tight, no shows, occasional
 abundant cement, traces of metal flakes
- 960 - 965m Salt; clear, occasional pale orange, massive -
 crystalline, soft, brittle, tight, no shows
- 965 - 970m Poor sample quality, abundant cement and thick mud
Salt as above
Minor Shale; light grey, light grey-green, brittle,
 subfissile, dull-waxy, slightly calcareous, no shows
- 970 - 985m Salt; clear, white, massive - crystalline, soft,
 brittle, clean, tight, no shows
- 985 - 1000m Poor sample quality, abundant cement, and thick mud
Salt; clear, white, massive - crystalline, soft,
 brittle, clean, tight, no shows
Minor Shale; pale green, occasional red-brown, soft,
 friable, subfissile, waxy (cavings?), slightly
 calcareous, no shows
Minor Anhydrite; white, light brown, microcrystalline,
 soft, massive, clean, tight,
- 1000 - 1020m Salt, clear, white, massive-crystalline, soft, brittle,
 clean, tight, traces Shale; cement, metal flakes
- 1020 - 1039m Salt; clear, white, rare pale orange, massive -
 crystalline, soft, brittle, clean, tight, trace shale
- 1039.5 - 1045m No sample, mud badly polymerized
- 1045 - 1050m Poor sample, mud polymerized
Shale; light grey-green, soft, friable, subfissile,
 waxy, calcareous, no shows,
 Abundant Dolomite; light - medium grey, light brown,
 microcrystalline - very fine crystalline, massive -
 sucrosic in part, soft - moderately hard, dull - earthy
 in part, slightly argillaceous, slightly anhydrous,
tight, no shows

- 1050 - 1060m Dolomite; light - medium, light brown, microcrystalline - very fine crystalline, massive, sucrosic in part, soft - moderately hard, dull - earthy in part, slightly argillaceous, slightly anhydrous, tight, no shows
Minor Shale; light - medium green, soft, friable, subfissile, waxy, calcareous, no shows
 Trace Anhydrite, white, microcrystalline, massive, soft, dull - earthy, tight
- 1060 - 1070m Dolomite; as above, trace cement, metal flakes, rare trace Anhydrite
- 1070 - 1075m No sample, 100% cement, trace Dolomite
- 1075 - 1080m Dolomite; light grey, microcrystalline, massive, soft, friable, dull - earthy in part, slightly argillaceous, slightly anhydrous, tight, no shows
 Abundant Salt, clear, white, massive, crystalline, soft, brittle, clean, tight, no shows
- 1080 - 1085m Poor sample - poor returns
Dolomite as above
- 1085 - 1100m Salt, clear, white, massive - crystalline, soft, brittle, clean, tight, no shows, trace Dolomite
- 1100 - 1105m Salt; clear, white, massive - crystalline, soft, brittle, clean, tight, no shows,
 Abundant Shale; light - medium green, soft, friable, subfissile, waxy, slightly calcareous, no shows
 Minor Dolomite
- 1105 - 1113m Dolomite; light grey, microcrystalline, moderately hard, massive - sucrosic in part, dull - earthy in part, slightly argillaceous, slightly anhydrous, tight, no shows
 Trace Shale; light - medium grey, soft - moderately hard, friable, subfissile, dull, slightly calcareous, no shows
- 1113 - 1121m Salt; clear, white, rare pale yellow, massive - crystalline, soft, clean, brittle, tight, no shows
 Minor Dolomite; as above,
- MT. CAP 1121m (-723.24m SS)
- 1121 - 1135m Dolomite; light grey, pale brown, white in part, microcrystalline - very fine crystalline, massive, moderately hard, dull - earthy in part, slightly argillaceous, slightly anhydrous, tight, no shows
 Abundant Shale; grey-green, soft, friable, subfissile, dull - waxy, slightly calcareous, no shows
 Trace Anhydrite; white - blue grey, very fine crystalline, soft, brittle, tight

- 1135 - 1145m Dolomite; as above, with rare poor intercrystalline porosity
Trace Anhydrite; as above
- 1145 - 1155m Dolomite; pale brown, light grey, white in part, crypto-crystalline - very fine crystalline, massive - sucrosic in part, dull - earthy in part, moderately hard, slightly argillaceous, slightly anhydrous, tight - rare poor pinpoint and intercrystalline porosity, predominantly no shows - rare slow poor pale milky yellow cut fluorescence, no streaming
Some Shale; medium grey-green, soft, friable, subfissile, dull, slightly calcareous, no shows
Trace Anhydrite; white, soft, massive, earthy - pearly, tight
Trace dark brown Chert; rare trace metal flakes
- 1155 - 1160m Dolomite; pale brown, light grey, white in part, crypto-crystalline, microcrystalline in part, massive - sucrosic in part, dull - earthy, moderately hard, slightly argillaceous, slightly anhydrous, tight - rare poor to fair, intercrystalline and pinpoint porosity, predominantly no shows - rare poor pale slow milky yellow cut fluorescence, no streaming
Abundant Anhydrite; white, pale brown, cryptocrystalline - microcrystalline, massive, dull - earthy, soft, tight
Minor Shale; light - medium grey-green, soft, friable in part, blocky - subfissile, dull - waxy in part, slightly calcareous, no shows
- 1160 - 1168m Anhydrite; pale - medium brown, white, microcrystalline - very fine in part, massive - sucrosic, very soft and friable, dull - earthy, tight
Minor Shale; as before, minor Dolomite; as before
- 1168 - 1171m Salt; clear, white, massive - crystalline, soft, brittle, clean, tight
- 1171 - 1190m Dolomite; white, buff, medium brown, microcrystalline - very fine crystalline, massive, sucrosic in part, dull - earthy, occasionally vitreous, soft - moderately hard, slightly anhydrous, tight with rare poor intercrystalline porosity, no shows
Some Anhydrite; white, massive - sucrosic, soft, earthy - pearly, very fine crystalline, tight
Some Shale; grey-green, soft, friable, subfissile, dull - waxy, slightly calcareous, no shows traces brown Chert
- 1190 - 1200m Shale; light - medium grey-green, soft, brittle, dull - occasionally micromicaceous, subfissile, slightly calcareous, no shows

- 1200 - 1210m shale; light - medium grey and greenish grey, moderately hard, firm, subfissile, dull, very slightly calcareous, no shows
Abundant Dolomite; medium - dark brown, light brown in part, micro - very fine crystalline, massive - sucrosic in part, moderately hard, slightly argillaceous, shaly in part, slightly calcareous, tight, no shows
- 1210 - 1225m Shale; medium-dark grey, black in part, soft-moderately hard, firm, friable in part, blocky-subfissile, dull - rarely micromicaceous, carbonaceous in part, no shows
- 1225 - 1230m Shale; medium grey - green, medium - dark grey in part, soft, friable, subfissile - fissile, dull - waxy, micromicaceous, slightly calcareous, no shows
- 1230 - 1240m Shale; medium - grey, soft, firm, friable in part, subfissile - fissile, splintery, dull, rarely micromicaceous, very calcareous, no shows
- 1240 - 1250m Shale; light - dark grey, soft, brittle, dull - micromicaceous, subfissile, no shows; trace white - brown pyritic Dolomite; rare dark brown Chert
- 1250 - 1260m Shale; light - dark grey, green in part, soft, brittle, micromicaceous - waxy, subfissile, slightly calcareous, no shows
Traces Dolomite; pyrite, rare Chert
- 1260 - 1275m Shale; light - dark grey, medium grey, soft, brittle, subfissile, waxy-dull, slightly silty, no shows
Traces Dolomite; pyrite, rare Chert
- 1275 - 1290m Shale; dark grey-black, medium brown, moderately hard, blocky, dull - micromicaceous, very calcareous, silty in part, carbonaceous in part, very slow pale milky yellow cut fluorescence
Minor Dolomite; pale grey, micro - very fine crystalline, massive - sucrosic in part, soft - moderately hard, dull, calcareous, tight, no shows
Traces white Limestone, dark brown Chert
- 1290 - 1295m Dolomite; light grey brown, white, mottled in part, cryptocrystalline, massive, moderately hard - hard, dull, slightly argillaceous, calcareous tight, no show
Abundant Shale; medium grey-green, dark grey-black in part, soft, moderately hard, subfissile - splintery, dull - micromicaceous, slightly calcareous, occasionally silty in part, no shows rare trace massive pyrite
- 1295 - 1305m Shale; as above, trace Dolomite as above

1305 - 1320m Shale; medium grey, medium grey green, soft-moderately hard, subfissile - fissile, platy, dull - waxy, micromicaceous in part, silty - sandy in part, slightly calcareous, rare fossils (pelecypods), no shows
Minor Dolomite; white, light grey brown, cryptocrystalline, massive, moderately hard, slightly argillaceous, tight, no shows, limey in part
Minor Sandstone; medium-dark brown, very fine grained - silty in part, subrounded, well sorted, well consolidated, white calcareous cement, argillaceous, tight, poor slow milky pale yellow cut fluorescence, no streaming

1320 - 1327.5m Dolomite; light brown, medium grey brown, white in part, crypto-microcrystalline with massive, moderately hard, dull - vitreous in part, clean - slightly argillaceous, rare silty and sandy, calcareous - frequently grading to Limestone; rare trace fossils, rare trace glauconite, tight, no shows
Abundant Shale; medium grey, medium grey-green, soft-moderately hard, subfissile-fissile, platy, dull-micromicaceous in part, silty in part, no shows

1327.5-1330.5m Sandstone; white, very fine crystalline - silty in part, subangular, well sorted, clear, siliceous cement, calcareous in part, clean trace glauconite, tight, no shows
Some Shale; medium grey, medium grey-green, soft, moderately hard, subfissile-fissile platy, dull-micromicaceous in part, silty in part, no shows

COMMENCED CUTTING CORE #1 AT 1330.5m KB

COMMENCED CUTTING CORE #2 AT 1340.6m KB

SEE DETAILED CORE DESCRIPTION

1353.05-1359.6m Shale; (cavings most likely), light grey-green, medium grey, black in part, soft, firm, fissile, micromicaceous - waxy in part, occasional abundant muscovite, slightly silty, no shows
Abundant Quartzite; white, pale grey, very fine - fine grained in part, subrounded - rounded, well sorted, well consolidated, siliceous overgrowth cement, very hard, tight, no shows, traces clear - white, coarse-medium grained Quartzite, poor siliceous overgrowth cement, friable, tight, no shows

RED SHALE 1359.5m KB (-961.84m SS)

1359.6-1363.2m Shale; pale - medium red, mottled red-green, soft, moderately hard, blocky, dull, friable, very silty in part, hematitic, calcareous, no shows

1363.2-1384.0m Basalt; dark red-brown, mottled red-green, occasionally white in part, aphanitic, very hard, no visible phenocrysts, hematitic, calcareous in part

DETAILED CORE DESCRIPTIONS

Core #1 1330.5 - 1340.6m Cut 10.1m Recovered 10.1m

Coring Times:

4,12,20,16,26,44,34,34,26,42,34,30,32,28,22,26,26,18,48,36,28,28,36,32,30,30,28,34,28,34,44,46,73,80,34,36,36,30,34,30,26,26,38,28,26,36,56,58,54,52

1330.5 - 1330.84m 0.34m Shale; medium grey-green, moderately hard, firm, non-fissile, micromicaceous, very slightly calcareous, no shows, slightly silty, sandy at top 5cm of interval

1330.84 - 1331.45m 0.61m Light to medium grey green Shale showing horizontal bedding; minor horizontally oriented Dolomite; stringers (bound by Stylolites); horizontal Stylolites at top of interval; rare pyrite stringers
Shale; light - medium grey-green, soft, firm, non-fissile, micromicaceous, slightly silty, no shows
Dolomite; medium grey, cryptocrystalline, massive, hard, clean, vitreous, calcareous, rare disseminated pyrite, tight, no shows

1331.45 - 1331.63m 0.18 Light green Shale; showing soft sediment deformation
Shale; light greenish grey, soft, firm, non-fissile, micromicaceous, slightly silty, no shows

1331.63 - 1332.44m 0.81m Shale; showing no bedding, no structures
Shale; medium grey-green, soft, firm-brittle, non-fissile, dull to micromicaceous in part, no shows

1332.44 - 1333.16m	0.72m	<p><u>Shale</u>; showing soft sediment deformation and horizontal bedding; minor <u>Dolomite</u> stringers; top and base of interval marked by bitumen</p> <p><u>Shale</u>; medium grey-green, soft, firm, non-fissile, micromicaceous, slightly silty in part, <u>no shows</u></p> <p><u>Dolomite</u>; medium grey-brown, cryptocrystalline, massive, hard, vitreous, slightly argillaceous, calcareous, rare damaged fossils, rare glauconite, <u>tight, no shows</u></p>
1333.16 - 1336.36m	4.20m	<p><u>Shale</u> with rare soft sediment deformation</p> <p><u>Shale</u>; dark grey-green, soft, firm, non-fissile, dull - micromicaceous in part, <u>no shows</u></p>
1336.36 - 1336.86m	0.50m	<p><u>Dolomite</u> showing abundant soft sediment deformation (deformation as horizontal trend at base, random at top); base of interval marked by stylolites with abundant stylolites throughout, randomly oriented white calcite fracture filling throughout, massive pyrite blebs at base of interval</p>
1336.86 - 1337.90	1.04m	<p><u>Shale</u> with no bedding, no structures or inclusions.</p> <p><u>Shale</u>; dark grey green, soft, firm, non-fissile, dull, rarely micromicaceous, <u>no shows</u></p>
1337.9- 1339.4m	1.50m	<p><u>Shale</u>; showing horizontally oriented soft sediment deformation</p> <p><u>Shale</u>; medium greenish grey, soft, firm, nonfissile, dull - micromicaceous, <u>no shows</u></p>
1339.4 - 1339.8m	0.40m	<p>Dark calcareous <u>Shale</u> with clasts of light calcareous <u>Shale</u></p> <p><u>Shale</u>; light - dark grey brown, moderately hard, firm, non-fissile, micromicaceous, calcareous, silty in part, <u>no shows</u></p>
1339.8 - 1340.6m	0.80m	<p>Large fossiliferous <u>Dolomite</u> clasts in matrix of bituminous <u>Shale</u> and stylolites; <u>Dolomite</u> is horizontally oriented</p> <p><u>Dolomite</u>; medium brown, cryptocrystalline, massive, hard, argillaceous, dull - vitreous in part, minor calcite crystals, occasional crinoids and crinoidal debris, <u>tight, no show</u></p>

Core #2 1340.6 - 1353.05m Cut 12.45m Recovered 12.45m

Coring Times:

34,50,44,60,42,44,30,40,34,42,28,24,20,20,32,20,44,40,20,24,18,32,50,32
52,38,58,16,20,24,20,28,28,38,20,20,18,22,16,30,32,30,38,30,46,34,38,60,
60,60,36,38,44,46,42,42,46,46,122,110

<u>Depth</u>	<u>Length (m)</u>	<u>Description</u>
1340.6 - 1343.09m	2.49	<u>Dolomite</u> showing abundant soft sediment deformation and occasional clasts in a <u>Shale</u> matrix, minor randomly oriented calcite fracture filling, dolomite is fossiliferous - occasional crinoid pieces, rare massive pyrite throughout, rare horizontally oriented stylolites <u>Dolomite</u> medium to dark grey brown, occasionally medium to dark grey green, microcrystalline - massive, hard, vitreous, slightly argillaceous, <u>tight, no shows</u> , <u>Shale</u> ; medium to dark grey, soft, firm, non-fissile, micromicaceous, slightly silty, <u>no shows</u>
1343.09 - 1344.25m	1.16	<u>Shale</u> ; showing minor soft sediment deformation for first 5cm of interval with abundant small horizontally oriented siltstone stringers. Base of interval is marked by darker siltstone stringers and abundant soft sediment deformation. <u>Shale</u> ; medium - dark green, soft, firm, nonfissile, very silty becoming sandy and calcareous at base of interval
1344.25 - 1344.46m	0.21m	Fossiliferous <u>Dolomite</u> (crinoids), very minor and very thin shale <u>Dolomite</u> medium to dark grey brown, cryptocrystalline, very hard, massive slightly argillaceous, vitreous, <u>tight, no shows</u> <u>Shale</u> ; dark grey brown, soft, fissile, waxy, calcareous, <u>no shows</u>

MOUNT CLARKE 1344.46m (-946.70m SS)

1344.46 - 1345.47m	1.01m	Chloritic <u>Sandstone</u> no visible bedding, quartzite stringer (8cm in thickness) from 1344.56 - 1344.64m, small quartzite stringer at 1344.50m <u>Chloritic Sandstone</u> ; dark green-black, fine - medium grained, subrounded, poorly sorted, well consolidated, chloritic cement, slightly argillaceous, calcareous in part, <u>tight, no shows</u>
1345.47 - 1346.13m	0.66m	Quartzite with <u>Shale</u> stringers, abundant soft sediment deformation which is horizontally oriented, rare massive pyrite <u>Quartzite</u> light grey-green, very fine to medium grained, subround to rounded, poorly sorted, well consolidated, clean to slightly argillaceous, very slightly calcareous, <u>tight, no shows</u>
1346.13 - 1346.8m	0.67	<u>Quartzite and Shale</u> stringers showing abundant soft sediment deformation <u>Quartzite</u> ; pale grey, silty to very fine grained, subrounded, well sorted, very well consolidated, siliceous, clean, <u>tight, no shows</u>
1346.8 - 1348.03m	1.23m	<u>Silty Shale</u> with Quartzite clasts, interval shows horizontally oriented bedding and soft sediment deformation. <u>Shale</u> ; medium grey-green, soft, firm, non-fissile, micromicaceous, abundant muscovite in part, <u>no shows</u> <u>Quartzite</u> as in previous interval
1348.03 - 1349.15m	1.12m	<u>Quartzite</u> clasts in a <u>Shale</u> matrix showing horizontally oriented bedding and soft sediment deformation; base of interval grades into <u>Shale</u> <u>Quartzite</u> ; pale brown, very fine grained, subangular, well sorted well consolidated, clean, <u>tight, no shows</u> <u>Shale</u> ; medium to dark grey-brown, soft, fissile, micromicaceous, abundant muscovite, <u>no shows</u>
1349.15 - 1350.13m	0.98m	<u>Shale</u> with occasional Quartzite clasts at top of interval - rare at base; <u>Shale</u> shows some horizontal bedding and clasts are horizontally oriented <u>Shale</u> ; dark grey-green, soft, non-fissile, micromicaceous with abundant muscovite <u>no shows</u>

1350.13 - 1350.65m	0.52m	<u>Shale</u> ; top of interval marked by rubble, shows some horizontal bedding and minor soft sediment deformation, minor black <u>Shale</u> bands throughout <u>Shale</u> ; dark grey-green to black, soft, fissile, dull, <u>no shows</u>
1350.65 - 1351.37m	0.72m	<u>Quartzite</u> ; clasts in a shale matrix, horizontally oriented <u>Quartzite</u> ; white - light grey, very fine grained, subangular, well sorted, well consolidated, well consolidated, siliceous, clean, <u>tight</u> , <u>no shows</u> <u>Shale</u> ; medium green, soft, fissile, waxy, <u>no shows</u>
1351.37 - 1352.20m	0.83m	<u>Shale</u> with rare horizontally oriented quartzite clasts <u>Shale</u> dark green, soft, fissile, waxy, <u>no shows</u>
1352.20 - 1352.50m	0.30	Chloritic <u>Sandstone</u> interbedded with <u>Shale</u> ; (Shale as above) Chloritic <u>Sandstone</u> ; dark green-black, medium-coarse grains in a very fine grained sandy and chloritic matrix, grains well rounded, poorly sorted, well consolidated, slightly argillaceous, <u>tight</u> , <u>no shows</u>
1352.50 - 1352.80m	0.30m	<u>Quartzite</u> with minor <u>Shale</u> showing some horizontal bedding and some horizontal soft sediment deformation, <u>Shale</u> at top of interval
1352.80 - 1353.05m	0.25m	Massive <u>Quartzite</u> <u>Quartzite</u> , clear - pale grey, medium-coarse grained, well rounded, moderately sorted, poorly consolidated, friable in part, clean - slightly argillaceous, occasional coarse grained spherical pyrite nodules, traces unidentified black mineralization, <u>no shows</u>



CALGARY COPY

CORE LABORATORIES - CANADA LTD.
Petroleum Reservoir Engineering
CALGARY ALBERTA

70490-86-305
9211-P25-31



Plastic

CONTAINER IDENTITY

OIL ANALYSIS

70490-86-305

LABORATORY NUMBER

Petro Canada Inc.

OPERATOR

1 of 2

PAGE

66° 34' 58.13" NL
126° 21' 32.10" WL

LOCATION

PCI Canterra Bele 0-35

WELL OR SAMPLE LOCATION NAME

397.8 393.3

AB ELEV m GRD ELEV m

Mount Clarke

POOL OR ZONE

Lynes United Services

SAMPLER

DST #1

TEST TYPE & NO.

TEST RECOVERY

Top of Recovery

POINT OF SAMPLE

AMT. & TYPE

PUMPING

FLOWING

GAS LIFT

1351 - 1362

TEST INTERVALS OR PERFS

WATER

m³/d

OIL

m³/d

GAS

13

1000

SEPARATOR RESERVOIR

CONTAINER
WHEN SAMPLED

CONTAINER
WHEN RECEIVED

PRESSURES, kPa

SEPARATOR
ENGINEERING BRANCH
TEMPERATURES, °C

86 03 31

DATE SAMPLED (Y/M/D)

86 04 10

DATE RECEIVED (Y/M/D)

86 04 15

DATE ANALYSED (Y/M/D)

ANALYST

REMARKS

SAMPLE PROPERTIES

COLOR OF CLEAN OIL

Trace

0.001

0.001

WATER

SS

TOTAL SS&W

GRAVITY

SPECIFIC

A.P.I. @ 15.6°C

0.6950

72.1

AS RECEIVED

AFTER CLEANING

AS RECEIVED

AFTER CLEANING

POUR POINT

0.0002

TOTAL SULPHUR
(MASS FRACTION)

<0.010

TOTAL SALT
kg/m³

U.S.B.M.

A.S.T.M.

<-60°C

CARBON RESIDUE

R.V.P.

CONRADSON

RAMSBOTTOM

VISCOSITY

TEMP °C	mPa's	mm ² /s	
10	0.4371	0.6253	
20	0.4015	0.5793	
30	0.3702	0.5389	

DISTILLATION

ASTM

METHOD

88.3

BAROM. PRESS.
kPa OF HG

20

ROOM TEMP. (°C)

34

INITIAL SOIL PT. (°C)

DISTILLATION SUMMARY

204°C NAPHTHA

274°C KEROSENE

343°C LIGHT GAS/OIL

0.99

RECOVERED

0.00

RESIDUE

0.01

DISTILLATION LOSS

SPECIFIC GRAVITY

DISTILLATE

RESIDUE

BASE TYPE

CHARACTERIZATION
FACTOR

FRACTION DISTILLED	TEMP °C
0.05	51
0.10	60
0.15	65
0.20	70
0.25	73
0.30	77
0.35	81
0.40	85
0.45	89
0.50	93
0.55	96
0.60	101
0.65	106
0.70	110
0.75	115
0.80	121
0.85	128
0.90	136
0.95	151
0.99	204*
F.P.	*
CRACKED	

REMARKS



CORE LABORATORIES - CANADA LTD.
Petroleum Reservoir Engineering
CALGARY ALBERTA



Plastic		70489-86-241	
CONTAINER IDENTITY		LABORATORY NUMBER	
Petro-Canada Inc.		2 of 2	
OPERATOR		PAGE	
66° 34' 58.13" NL	PCI Canterra Bele 0-35	397.8	393.3
126° 21' 32.10" WL	WELL OR SAMPLE LOCATION NAME	KB ELEV	GRD. ELEV.
LOCATION	Mount Clarke	Lynes United Services	
FIELD OR AREA	POOL OR ZONE	SAMPLER	
DST #1	TEST RECOVERY		
TEST TYPE & NO.	TEST RECOVERY		
Top of Recovery	°C		
POINT OF SAMPLE	AMT. & TYPE CUSHION		MUD RESISTIVITY
1351 - 1362	PUMPING FLOWING GAS LIFT SWAB		
TEST INTERVALS OR PERFS.	WATER m ³ /d OIL m ³ /d GAS m ³ /d		
SEPARATOR RESERVOIR	CONTAINER WHEN SAMPLED °C	CONTAINER WHEN RECEIVED °C	SEPARATOR
PRESSURES, kPa	TEMPERATURES, °C		
86 03 31	86 04 10	86 04 15	
DATE SAMPLED (Y/M/D)	DATE RECEIVED (Y/M/D)	DATE ANALYSED (Y/M/D)	ANALYST
REMARKS			

MUD FILTRATE ANALYSIS

Resistivity (Ohm-metres @ 25°C): 0.038

Chloride (mg/litre): 184000

9211-P28-3-1

PETRO-CANADA INC.

PCI BELE 0 - 35

FILE: 70179 - 86 - 439

CALGARY COPY

Canada Oil Field Development
Administration
dos fundos do Canadá

MAY 26 1986

To: _____

File #: _____

PCI BELE 0-35

LAB

10

20

30

40

50

60

1334.05

PCI BEI E 0-35

LAB

10
20
30
40
50
60

133772

LAB

CORE 2 1340 60

WELL NAME: _____
LOCATION: _____
RECOVERY: _____

10 20 30 40 50 60

134121

PCI BELE 0-35

CORE 21341.21

10 20 30 40 50 60

1344 59

PCI BELE 0-35

LAB

1348 08

10 20 30 40 50 60

PCI BELE 0-35

LAB

CORE 2 107000

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62

135146



PCI BELE 0-35

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1353.20

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: PETRO-CANADA EXPLORATION INC.
FIELD : WILDCAT, N.W.T.

WELL : FCI CANTERRA BELE 0-35
PROVINCE:

GROUPING BY POROSITY RANGES

POROSITY RANGE	METRES IN RANGE	AVERAGE POROSITY	AVERAGE PERM. (GEOM.) (ARITH)	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.000 -0.020	0.7	0.011	0.006	10.0	10.0
0.020 -0.040	0.4	0.027	0.006	5.6	15.6
0.040 -0.060	2.3	0.049	0.011	32.4	48.0
0.060 -0.080	2.5	0.068	0.022	35.1	83.1
0.080 -0.100	0.9	0.088	0.039	13.1	96.3
0.100 -0.120	0.3	0.104	0.090	3.7	100.0

TOTAL NUMBER OF METRES = 7.00

THESE ANALYSES, OPINIONS OR INTERPRETATIONS ARE BASED ON OBSERVATIONS AND MATERIALS SUPPLIED BY THE CLIENT TO WHOM AND FOR WHOSE EXCLUSIVE AND CONFIDENTIAL USE; THIS REPORT IS MADE. THE INTERPRETATIONS OR OPINIONS EXPRESSED REPRESENT THE BEST JUDGMENT OF CORE LABORATORIES - CANADA LTD.(ALL ERRORS AND OMISSIONS EXCEPTED); BUT CORE LABORATORIES - CANADA LTD. AND ITS OFFICERS AND EMPLOYEES, ASSUME NO RESPONSIBILITY AND MAKE NO WARRANTY OR REPRESENTATIONS, AS TO THE PRODUCTIVITY, PROPER OPERATIONS, OR PROFITABLENESS OF ANY OIL, GAS OR OTHER MINERAL WELL OR SAND IN CONNECTION WITH WHICH SUCH REPORT IS USED OR RELIED UPON.

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

PAGE 3
FILE 70175-86-539C

COMPANY: PETRO-CANADA EXPLORATION INC.
FIELD : WILDCAT, N.W.T.

WELL : PCI CANTERRA BELE 0-35
PROVINCE:

GROUPING BY PERMEABILITY RANGES

PERMEABILITY RANGE	METRES IN RANGE	AVERAGE PERM. (GEOM.)	(ARITH)	AVERAGE POROSITY	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.005 - 0.010	3.4	0.005	0.005	0.043	48.0	48.0
0.020 - 0.039	1.7	0.024	0.025	0.062	23.9	71.9
0.039 - 0.078	1.3	0.054	0.055	0.077	18.3	90.1
0.078 - 0.156	0.3	0.090	0.090	0.104	3.7	93.9
0.156 - 0.312	0.3	0.266	0.269	0.065	4.4	98.3
0.312 - 0.625	0.1	0.370	0.370	0.069	1.7	100.0

TOTAL NUMBER OF METRES = 7.00

THESE ANALYSES, OPINIONS OR INTERPRETATIONS ARE BASED ON OBSERVATIONS AND MATERIALS SUPPLIED BY THE CLIENT TO WHOM; AND FOR WHOSE EXCLUSIVE AND CONFIDENTIAL USE; THIS REPORT IS MADE. THE INTERPRETATIONS OR OPINIONS EXPRESSED REPRESENT THE BEST JUDGMENT OF CORE LABORATORIES - CANADA LTD.(ALL ERRORS AND OMISSIONS EXCEPTED); BUT CORE LABORATORIES - CANADA LTD. AND ITS OFFICERS AND EMPLOYEES, ASSUME NO RESPONSIBILITY AND MAKE NO WARRANTY OR REPRESENTATIONS, AS TO THE PRODUCTIVITY, PROPER OPERATIONS, OR PROFITABILITY OF ANY OIL, GAS OR OTHER MINERAL WELL OR SAND IN CONNECTION WITH WHICH SUCH REPORT IS USED OR RELIED UPON.

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

PAGE 4
FILE 70175-86-539C

COMPANY: PETRO-CANADA EXPLORATION INC.
FIELD : WILLCAT, N.W.T.

WELL : PCI CANTERRA BELE 0-35
PROVINCE:

POROSITY-METRES OF STORAGE CAPACITY LOST FOR SELECTED POROSITY CUT OFF

POROSITY CUT OFF	METRES LOST	CAPACITY LOST (%)	METRES REMAINING	CAPACITY REMAINING (%)	ARITH	
					MEAN	MEDIAN
0.000	0.0	0.0	7.0	100.0	0.058	0.061
0.020	0.7	1.8	6.3	98.2	0.063	0.064
0.040	1.1	4.5	5.9	95.5	0.065	0.066
0.060	3.4	31.8	3.6	68.2	0.075	
0.080	5.8	73.2	1.2	26.8	0.091	
0.100	6.7	93.3	0.3	6.7	0.104	
0.120	7.0	100.0	0.0	-0.0	0.000	

TOTAL STORAGE CAPACITY IN POROSITY-METRES = 0.403

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STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: PETRO-CANADA EXPLORATION INC.
FIELD : WILDCAT, N.W.T.

WELL : PCI CANTERRA BELE 0-35
PROVINCE:

MILLIDARCY-METRES OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

PERMEABILITY CUT OFF	METRES LOST	CAPACITY LOST (%)	METRES REMAINING	CAPACITY REMAINING (%)	GEOM MEAN	MEDIAN
0.005	0.0	0.0	7.0	100.0	0.02	0.02
0.010	3.4	6.0	3.6	94.0	0.05	0.04
0.020	3.4	6.0	3.6	94.0	0.05	0.04
0.039	5.0	20.7	2.0	79.3	0.08	
0.078	6.3	45.8	0.7	54.2	0.19	0.19
0.156	6.6	54.2	0.4	45.8	0.29	
0.312	6.9	84.1	0.1	15.9	0.37	
0.625	7.0	100.0	0.0	0.0	1.00	

TOTAL FLOW CAPACITY IN MILLIDARCY-METRES(ARITHMETIC) = 0.28

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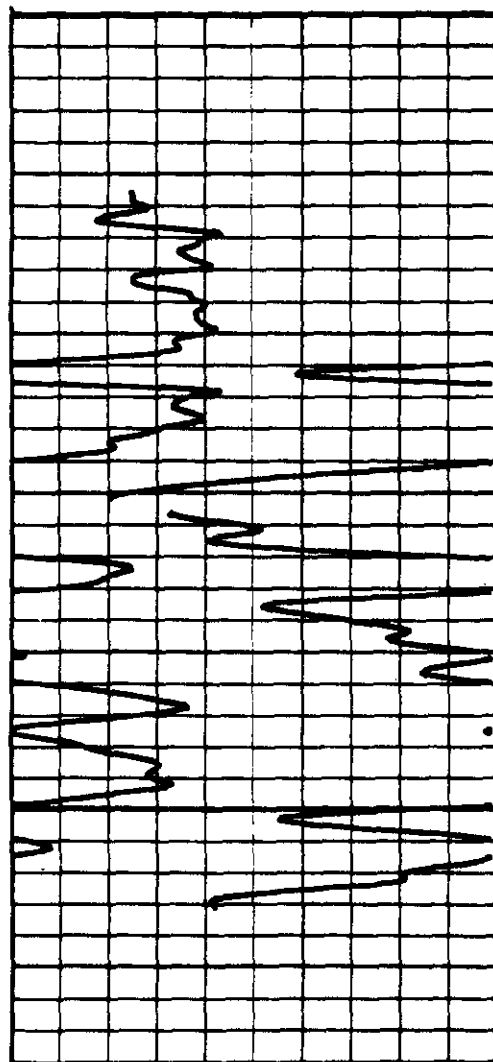
COMPANY PETRO-CANADA EXPLORATION INC. FILE NO. 70175-86-539C
WELL PCI CANTERRA BELE 0-35 DATE _____
FIELD WILDCAT, N.W.T FORMATION MT. CAP ELEV. _____
PROVINCE _____ DRUG. FLD. WATER BASE MUD CORES 1,2
LOCATION 66 34'58.13" N LAT. 126 21 '32.10" W LONG.

CORRELATION COREGRAPH

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories-Canada, Ltd., (all errors or omissions excepted), but Core Laboratories-Canada, Ltd., and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

VERTICAL SCALE: 10 cm = 24m

Gamma Ray
API UNITS
0 200



Depth
meters

1325

1335

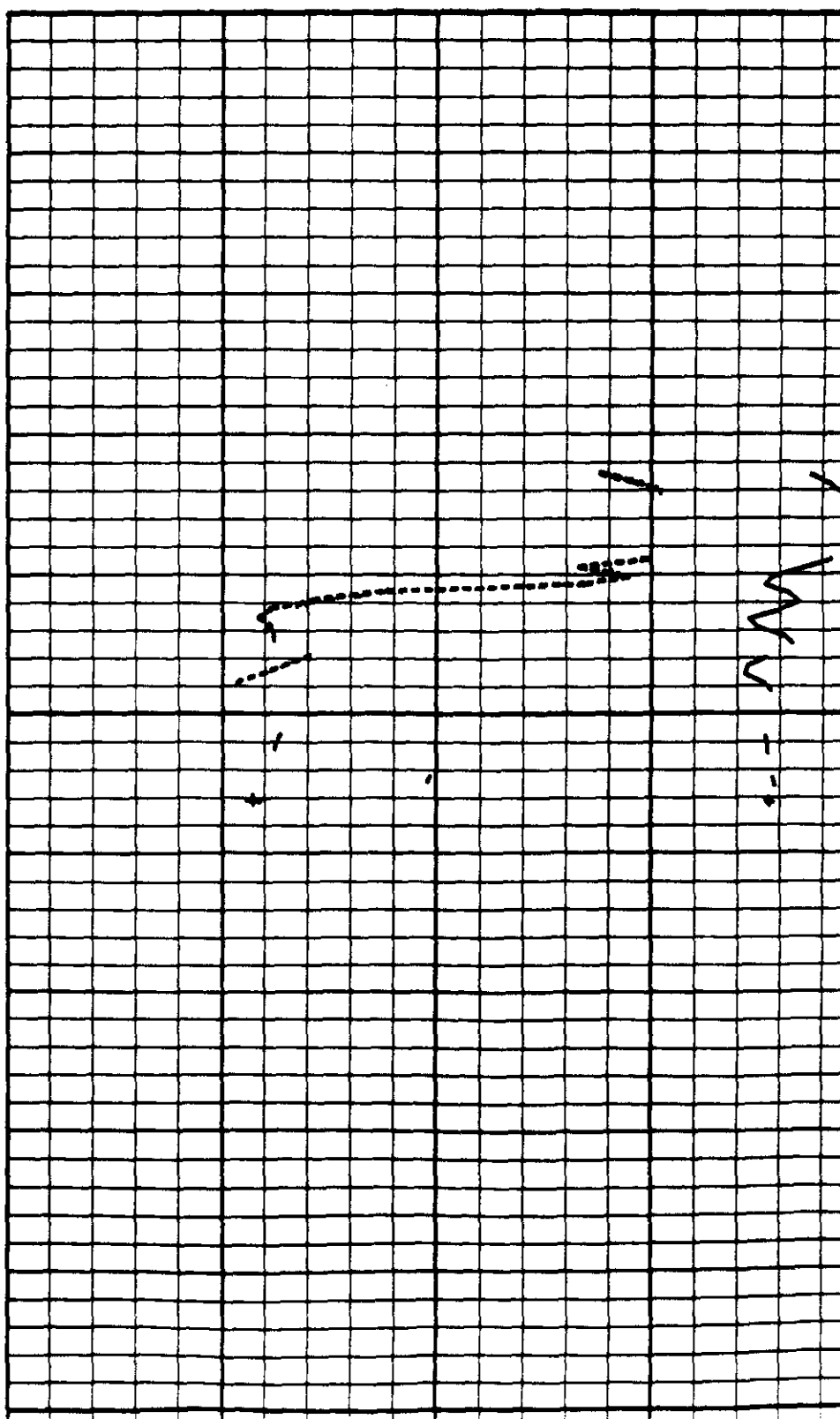
1345

1355

1365

1375

Grain Density (Kg/m³) _____
2550 2650 2750 2850
Porosity (FRACTION) _____
.60 .45 .30 .15



CORE LABORATORIES – CANADA, LTD.

LAB

Petroleum Reservoir Engineering

COMPANY PETRO-CANADA EXPLORATION INC. FILE NO. 70175-86-539C
WELL PCI CANTERRA BELE 0-35 DATE _____
FIELD WILDCAT, N.W.T. FORMATION MT. CAP ELEV. _____
PROVINCE _____ DRUG. FLD. WATER BASE MUD CORES 1,2
LOCATION 66 34 '58.13" N LAT. 126 21 '32.10" W LONG.

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VERTICAL SCALE: 10 cm = 24m

Gamma Ray

RADIATION INCREASE

API

Permeability X .01

MILLIDARCIES

Porosity

FRACTION

Total Water

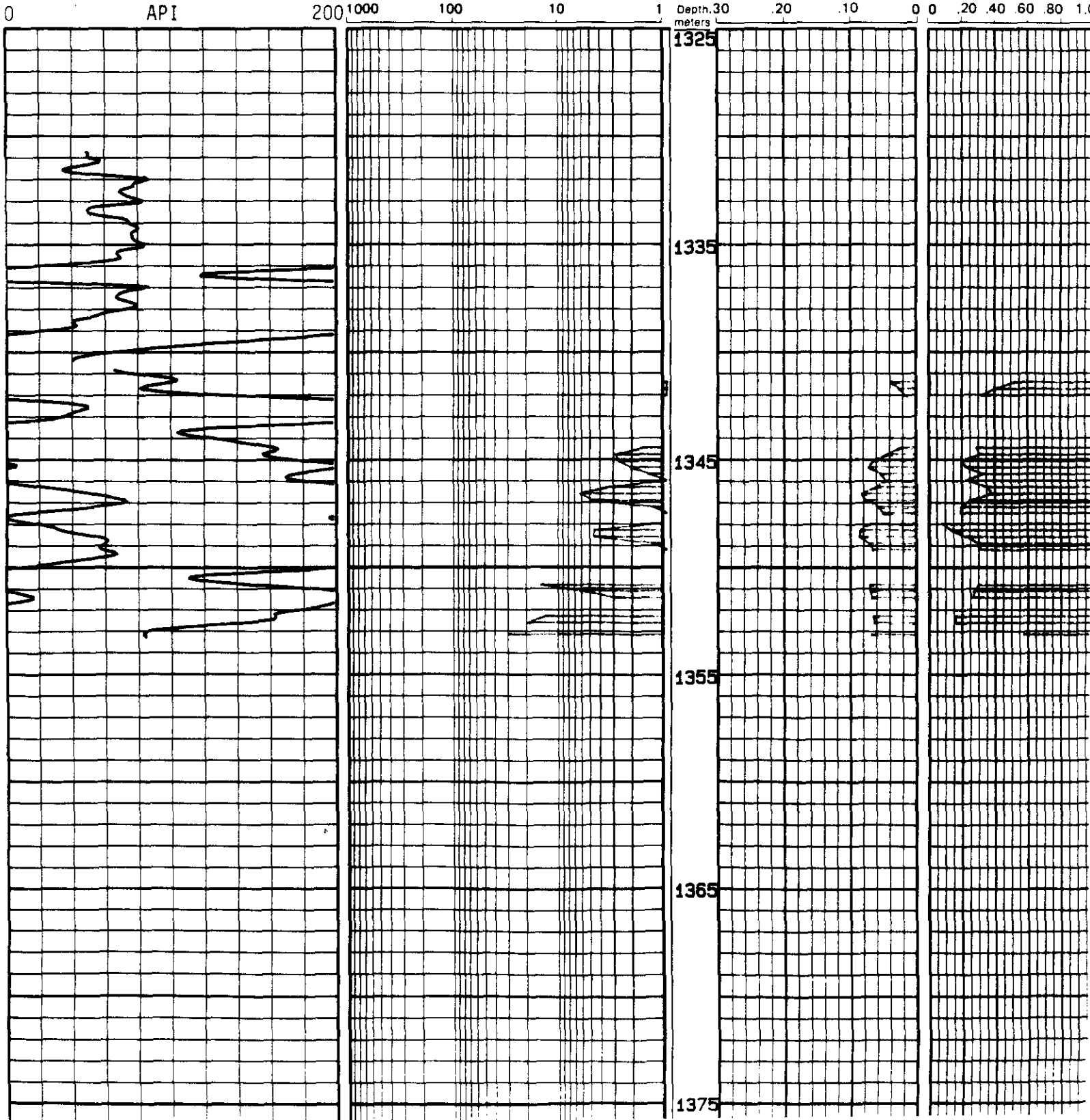
FRACTION PORE SPACE

1.00 .80 .60 .40 .20 0

Oil Saturation

FRACTION PORE SPACE

0 0 .20 .40 .60 .80 1.0



COMPANY: PETRO-CANADA EXPLORATION INC.

WELL : FCI CANTERRA RELE 0-35

FIELD : WILDCAT, N.W.T.

PROVINCE:

AIR PERMEABILITY : MD. (MAXIMUM) RANGE USED 0.000 TO 10.

POROSITY : FRACTION (HELIUM) RANGE USED 0.000 TO .46

(PERMEABILITY UNCORRECTED FOR SLIPPAGE)

DEPTH LIMITS : 1330.50 - 1353.20 INTERVAL LENGTH : 22.70

METRES ANALYZED IN ZONE : 7.00 LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

POROSITY	PERMEABILITY AVERAGES		
AVERAGE	ARITHMETIC	HARMONIC	GEOMETRIC
-----	-----	-----	-----
0.058	0.04	0.01	0.02

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