

## CORE LABORATORIES - CANADA LTD.

COMPANY BP EXPLORATION CANADA LIMITED  
 WELL BP ET AL WHITE M-04  
 FIELD WILDCAT - WHITE, NORTHWEST TERRITORIES  
 LOCATION 65° 33' 56.00" N. LAT.  
 123° 46' 30.00" W. LONG.

FORMATION CRETACEOUS / BEAR ROCK  
 DRILLING F.L.D. WATER BASE MUD  
 ELEVATION  
 ANALYSIS FULL DIAMETER  
 REMARKS

PAGE 1 of 3  
 FILE 7004-599  
 DATE REPORT MAR. 11/75  
 ANALYSTS BK DC

AST - APPEARS SIMILAR TO  
 FINE SAND  
 MS - MEDIUM SAND  
 CS - COARSE SAND

CONG - CONGLOMERATE  
 DOL - DOLOMITE  
 SH - SHALE  
 LIM - LIMESTONE

SHALY - SHALY  
 BREK - BREKTON  
 PYRO - PYROBITUMEN  
 CARB - CARBONACEOUS

AMMOLITE - AMMOLITE  
 FOSS - FOSSILIFEROUS  
 KLM - CRYSTALLINE  
 LAM - LAMINATIONS

V - VUGULAR  
 LY - LARGE VUGS  
 BY - SMALL VUGS  
 PPV - PORE POINT VUGS

I - INTERGRANULAR  
 STY - STYLOLITIC  
 HF - HORIZONTAL FRACTURE  
 VF - VERTICAL FRACTURE

SP - SMALL PLATE SAMPLE  
 SL - SLIGHTLY  
 V - VERY  
 W - WIDTH

SAMPLE NUMBER	INTERVAL REPRESENTED, FEET		PERMEABILITY TO AIR, MILLIDARCY			PERMEABILITY FEET	POROSITY, PER CENT	POROSITY FEET	DENSITY, gm./cc.		VISUAL EXAMINATION
	DEPTH	THICK	MAX	K90°	KV				BULK	GRAIN	

CORED INTERVAL 1445' - 1500'

CORE NO. 1 1445' - 1500' (REC. 55') (13 BOXES)

1	1445.0-46.3	1.3	4500.00	4240.00	877.00	5850.00	21.5	27.95	2.06	2.63	FS CS
2	1446.3-47.5	1.2	1460.00	1430.00	208.00	1752.00	17.6	21.12	2.17	2.64	MS CS
3	1447.5-48.8	1.3	904.00	809.00	257.00	1175.20	21.5	27.95	2.07	2.64	FS MS
4	1448.8-50.1	1.3	507.00	493.00	202.00	659.10	20.3	26.39	2.10	2.64	FS MS
5	1450.1-51.2	1.1	739.00	712.00	61.70	812.90	20.8	22.88	2.10	2.65	FS MS
6	1451.2-52.5	1.3	739.00	739.00	234.00	960.70	22.1	28.73	2.05	2.63	FS BIT/BKS
7	1452.5-53.6	1.1	1450.00	1340.00	512.00	1595.00	24.4	26.84	2.01	2.66	FS
8	1453.6-54.8	1.2	983.00	965.00	22.50	1179.60	21.6	25.92	2.06	2.63	FS BIT/BKS
9	1454.8-56.1	1.3	971.00	694.00	56.30	1262.30	21.2	27.56	2.09	2.65	FS VF
10	1456.1-57.4	1.3	730.00	692.00	25.10	949.00	19.9	25.87	2.12	2.64	FS MS BIT/BKS
11	1457.4-58.6	1.2	777.00	771.00	241.00	932.40	22.4	26.88	2.05	2.65	FS MS BIT/BKS
12	1458.6-59.8	1.2	834.00	695.00	30.10	1000.80	20.2	24.24	2.10	2.64	FS MS
13	1459.8-60.9	1.1	1870.00	1830.00	766.00	2057.00	22.3	24.53	2.06	2.65	FS MS
14	1460.9-61.9	1.0	3140.00	2550.00	857.00	3140.00	22.7	22.70	2.04	2.64	MS
15	1461.9-63.0	1.1	2940.00	2750.00	654.00	3234.00	20.9	22.99	2.09	2.64	MS
16	1463.0-64.0	1.0	1420.00	1320.00	359.00	1420.00	19.8	19.80	2.13	2.66	MS
17	1464.0-65.4	1.4	1140.00	1060.00	462.00	1596.00	23.1	32.34	2.03	2.64	FS MS
18	1465.4-66.7	1.3	2230.00	2130.00	193.00	2899.00	19.2	24.96	2.14	2.65	FS MS PEBBLES
-	1466.7-77.6	10.9	-	-	-	-	-	-	-	-	NOT ANALYZED BY REQUEST
19	1477.6-78.6	1.0	5.01	5.01	4.36	5.01	7.1	7.10	2.67	2.88	I SV
-	1478.6-81.6	3.0	-	-	-	-	-	-	-	-	NOT ANALYZED BY REQUEST
20	1481.6-83.2	1.6	17.40	8.20	21.80	27.84	12.3	19.68	2.50	2.86	I PPV VF
-	1483.2-89.3	6.1	-	-	-	-	-	-	-	-	NOT ANALYZED BY REQUEST

COMPANY BP EXPLORATION CANADA LIMITED  
WELL BP ET AL WHITE M-04PAGE 2 of 3  
FILE 7004-599

SAMPLE NUMBER	INTERVAL REPRESENTED, FEET		PERMEABILITY TO AIR, MILLIDARCY'S			PERMEABILITY FEET	POROSITY, PER CENT	POROSITY FEET	DENSITY, gm./cc.		VISUAL EXAMINATION
	DEPTH	THICK	KMAX	K <sup>90°</sup>	KV				BULK	GRAIN	
CORE NO. 1 (Cont'd)											
21	1489.3-90.7	1.4	3.92	3.83	2.48	5.49	4.9	6.86	2.72	2.86	BRECCIA F
-	1490.7-97.3	6.6	-	-	-	-	-	-	-	-	NOT ANALYZED BY REQUEST
22	1497.3-99.0	1.7	900.00	671.00	122.00	1530.00	12.6	21.42	2.50	2.86	I PPV
-	1499.0-00.0	1.0	-	-	-	-	-	-	-	-	NOT ANALYZED BY REQUEST

WELL:

BP ET AL WHITE M-04

PAGE: 3 OF 3

FORMATION:

CRETACEOUS - BEAR ROCK

FILE: 7004-599

SUMMARY INTERVAL:

1445.0 - 1500.0

TOTAL FOOTAGE:

55.0

FOOTAGE ANALYZED

27.4

FOOTAGE NOT ANALYZED:

TOTAL: 27.6 DENSE .0 LOST .0 DRILLED .0 \*NABR 27.6 RUBBLE .0

SUMMARY  
OF  
ANALYZED CORE:

TOTAL

27.4 100.00 18.79 514.71 1242.46 34043.34 .00 .00

BY  
PERM  
RANGES:

LESS THAN 0.10 Md.

.0 .00 .00 .00 .00 .00 .00 .00

0.10 - 0.49 Md.

.0 .00 .00 .00 .00 .00 .00 .00

0.50 - 0.99 Md.

.0 .00 .00 .00 .00 .00 .00 .00

1.00 - 9.99 Md.

2.4 8.76 5.82 13.96 4.37 10.50 .00 .00

GREATER THAN 9.99 Md.

25.0 91.24 20.03 500.75 1361.31 34032.84 .00 .00

\*NOT ANALYZED BY REQUEST



## DRILL STEM TEST DATA

TICKET NO. T-2818

DATE FEBRUARY 22, 1975

WELL NAME BP ET AL WHITE  
 WELL NUMBER M-04  
 COMPANY BP EXPLORATION CANADA LTD.  
 COMPANY REP. HERB GLENN  
 TESTER BUDVARSON

Test No. 1 Type SINGLE STRADDLE BYPASS  
 Interval 1420 To 1462 TD 1584  
 Formation Tested Net Pay..... Temp °F 76  
 Preflow 5 Min. ISI 30 Min. Flow 60 Min. FSI 60 Min.

Recorder Number	6889	2016	3851	
Ins. or outs.	IN	OUT	BTM	
Rec. Range (PSI)	3100	5450	5700	
Clock Range (hrs)	12	12	24	
Recorder Depth	1408	1455	1486	
Initial Hydro. Press.	699	705	726	
Initial Shut-in Press.	557	595		
Initial Flow Press.	559	589		
Final Flow Press.	559	595		
Final Shut-in Press.	563	596		
Final Hydro. Press.	693	701	726	

Fluid Recovery Total Feet 210 FEET  
 30 Ft. of DRILLING MUD  
 90 Ft. of SALT WATER CUT DRILLING MUD  
 20 Ft. of SALT WATER CUT CRILLING MUD  
 Ft. of (2.2 = 1925 PPM)  
 Ft. of Retractor tool

## Gas Recovery

Mins	Temp °F	Press (PSI)	Orifice Size	MCF Day

Orifice Well Tester  Pitot tube   
 Critical Flow Prover  Side Static  Riser Size .....  
 Gas Cont. No. Chem & Geo Lab  Core Lab

Main Hole Size 7.875 Packer Size 6.625

Rat hole Size Ft. of Rat Hole

Dr. Pipe Size 4.5. FH Wt. 16.60

Dr. Collar I.D. 2.875 Ft. Run above tool 3.56

Surface Choke Size CLOSED Bottom Choke Size 0.5

Cushion Amount Type

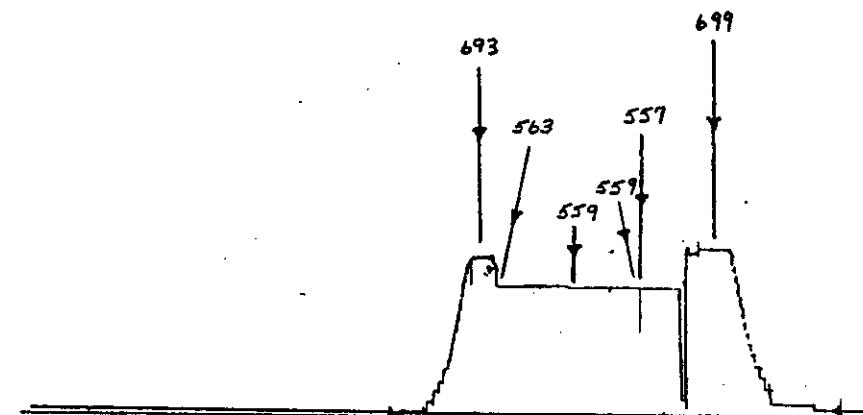
Mud Drop NIL Fluid Loss 11.4 Viscosity 9.0 Mud Wt. 9.6

Remarks: GOOD AIR BLOW ON PREFLOW WEAK  
 AIR BLOW ON FLOW DEAD IN 5  
 MINUTES

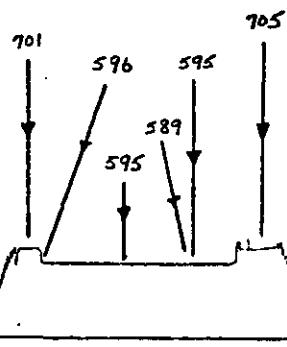
o	P.O. Sub	1.00	-90 FT ABO
	Co Sub	1.00	TOO
	Shut-in Tool	5.20	
	RFS No. 123	3.35	
	RFS No.		
	HMV	7.15	
	Jars	5.00	
	Rec. No. 6889	5.00	Depth 1408
	Rec. No.		Depth
	Temp Recorder		
	Safety Joint	1.75	
	By-Pass Sub	1.00	
	Packer		
	Packer	5.00	Depth 1420
	Anchor	1.00	
	By-Pass Sub	32.00	
	Rec. No. 2016	1.00	Depth 1455
	Rec. No.		Depth
x	Blank off Sub		
	Co Sub		
	Dr. Collars		
	Co Sub		
	Packer	3.00	Depth 1462
	Packer		
	Anchor	20.00	
	Rec. No. 3851	5.00	Depth 1486
	Anchor		
	Co Sub		
	Dr. Pipe or		
	Dr. Collars	90.00	
	Co Sub	1.00	
	Anchor		
	Bullnose	3.00	T.D. 1584
	Total Test Tool	109.00	
	Total Interval	42.00	
	Total Tailpipe	122.00	
	Weight of Tool	22.00	
	Wt. Indicator Reading Prior to setting Packers	42.00	

**DST RECORDER CHARTS**

BP ET AL WHITE M-04  
DST NO. 1  
INSIDE REC. NO. 6889  
DEPTH 1408

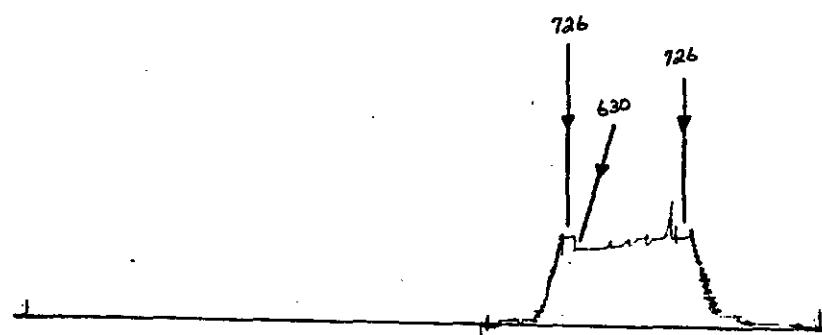


BP ET AL WHITE M-04  
DST NO. 1  
OUTSIDE REC. NO. 2016  
DEPTH 1455



# DST RECORDER CHARTS

BP ET AL WHITE M-04  
DST NO. 1  
BOTTOM REC. NO. 3851  
DEPTH 1486





# CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON — FORT ST. JOHN — CALGARY



CONTAINER IDENTITY

## — WATER ANALYSIS —

LABORATORY NUMBER

E75-6784

### OPERATOR NAME AND ADDRESS

BP OIL LIMITED

SAMPLE LOCATION

WELL OR SAMPLE LOCATION NAME

ELEVATIONS

BP ET AL WHITE M-04

KB GRO

FIELD OR AREA

POOL OR ZONE

NAME OF SAMPLER

COMPANY

B.J. SERVICES

TEST TYPE & NO.

TEST RECOVERY

D.S.T. 1

TEST INTERVAL OR PERFS

POINT OF SAMPLE

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

1420' - 1462'

TOP OF TOOL

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

WATER

BBLS/D

OIL

BBLS/D

GAS

MCF/D

### PRESURES - PSIG

### TEMPERATURES (°F)

SEPARATOR

RESERVOIR

CONTAINER  
WHEN  
SAMPLED WHEN  
RECEIVED

SEPARATOR

CONTAINER  
WHEN  
SAMPLED WHEN  
RECEIVED

DATE SAMPLED (D/M/Y)

DATE RECEIVED (D/M/Y)

DATE ANALYZED (D/M/Y)

24/03/75

ANALYST

R.J. MALONEY

REMARKS

ION	MG/L	MG%	MEQ/L
Na	2308	30.38	100.42
K			
Ca	315	4.15	15.70
Mg	39	0.51	3.24
Br			
SO <sub>4</sub>	2523	33.21	52.48
CO <sub>3</sub>	2	0.03	0.07
OH	NIL		
H <sub>2</sub> S	NIL		
Fe	PRESENT		

ION	MG/L	MG%	MEQ/L
Cl	2312	30.43	65.20
HCO <sub>3</sub>	98	1.29	1.60
CO <sub>3</sub>	2	0.03	0.07
OH	NIL		

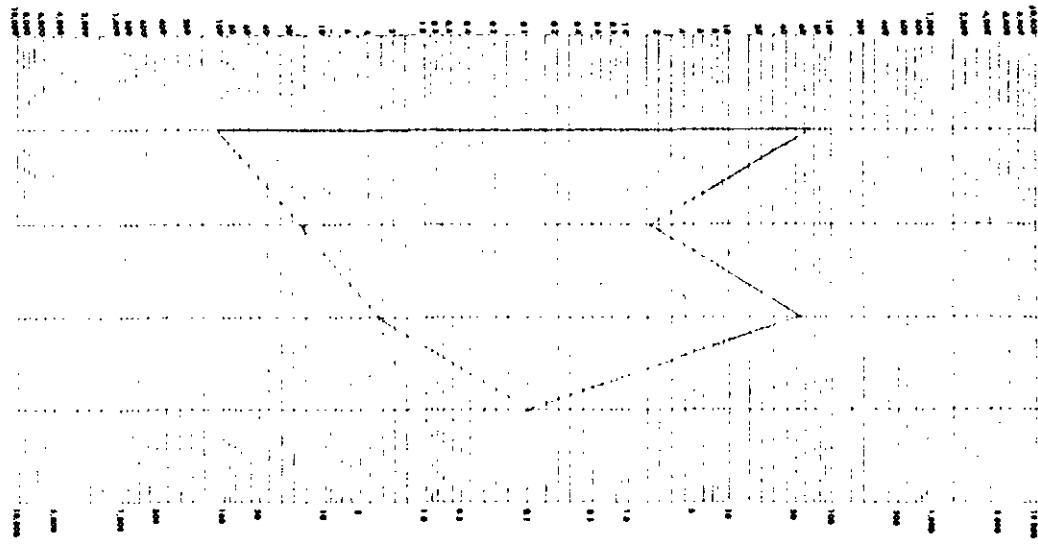
LOGARITHMIC PATTERN MEQ PER LITER

Na

Ca

Mg

Fe



### Remarks and Conclusions

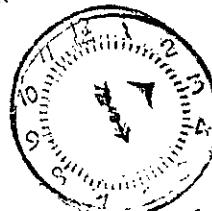
THE ANALYSIS WAS DETERMINED ON WATER RECOVERED FROM WATERY MUD AND IS CHARACTERISTIC OF A MUD FILTRATE WATER.

175 P

HCO<sub>3</sub>

SO<sub>4</sub>

CO<sub>3</sub>



DIAMOND MINE LTD.  
WATER TEST

BP ET AL WHITE M-04  
WELL HISTORY REPORT

G. F. Chapman

G. F. Chapman  
Drilling Superintendent

A. F. Burchall

A. F. Burchall  
Manager, Exploitation and  
Joint Operations Branch

PA/AFB/bac

April 24, 1975

BP ET AL WHITE M-04

WELL HISTORY REPORT

I. SUMMARY OF WELL DATA

II. GEOLOGICAL SUMMARY

- (a) Formation Tops
- (b) Cored Intervals
- (c) Core Descriptions
- (d) Sample Descriptions
- (e) Paleontological Determinations

III. ENGINEERING SUMMARY

- (a) Report of Drill Stem Tests
- (b) Casing Record
- (c) Bit Record
- (d) Mud Report
- (e) Deviation Record
- (f) Abandonment Plugs
- (g) Lost Circulation Zones
- (h) Report of Blowouts
- (i) Fishing Operations

IV. LOGS - copies of logs included in this report

V. ANALYSES

- (a) Core Analysis
- (b) Water Analysis
- (c) Gas Analysis
- (d) Oil Analysis

VI. COMPLETION SUMMARY

- (a) Tubing Record
- (b) Perforation Record
- (c) Cementation Record
- (d) Acidization and Fracturing Record
- (e) Back Pressure and Production Tests

SUMMARY OF WELL DATA

I. SUMMARY OF WELL DATA

- (a) Name: BP et al White M-04
- (b) Permittee: Atlantic Richfield Canada Ltd.
- (c) Operator: BP Exploration Canada Limited
- (d) Location:

Grid System 65-40-123-45  
Univ. Well Loc. Ref. # 65.56556°N, Long. 123.77500°W  
Unique Well Identifier 300M046540123450
- (e) Co-ordinates: Latitude 65°33'56"N  
Longitude 123°46'30"W
- (f) Permit: 4988
- (g) Drilling Contractor: Regent Drilling Rig #11
- (h) Drilling Authority: No. 778, issued November 13, 1974
- (i) Classification: Exploratory
- (j) Elevations: Ground 578' K.B. 602'
- (k) Date Spudded: February 15th, 1975
- (l) Date Finished Drilling: February 21st, 1975
- (m) Total Depth: 1584'
- (n) Well Status: Dry and abandoned
- (o) Date Rig Released: February 23rd, 1975
- (p) Hole Sizes: 17-1/2" to 39' K.B., 12-1/4" to 358' K.B.,  
7-7/8" to 1584' K.B.
- (q) Casing: 14" O.D. conductor at 39' K.B.,  
8-5/8" O.D. 24 lb. J-55 surface casing at 337' K.B.

GEOLOGICAL SUMMARY

## 11. GEOLOGICAL SUMMARY

### (a) Formation Tops

<u>Formation</u>	<u>Log Depth</u>	<u>Sample Depth</u>
Cretaceous		
Lower Cretaceous Deltaic Sand	1088 (-396)	1090
Basal Cretaceous Sand	1406 (-714)	1410
Devonian		
Bear Rock	1464 (-772)	1464
Total Depth		1584

### (b) Cored Intervals

#1 1445' - 1500' Recovered 55' Basal Cretaceous/Bear Rock

Eight sidewall cores were taken on Logging Run #1.

### (c) Core Descriptions

Diamond core and sidewall core descriptions are included with this report.

### (d) Sample Descriptions

Included with this report.

### (e) Paleontological Determinations

Laboratory results not yet received.

B P EXPLORATION CANADA LTD.

CORE DESCRIPTION

BP et al WHITE M-04

Described by: P.A. Acham

Core #1      Interval 1445' -1502'

Recovery; 57'

Coring Times: 1445' -1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 1, 1, 2, 2, 3, 1, 6, 7, 5, 5,  
7, 8, 7, 7, 8, 8, 8, 5, 8, 6, 7, 5, 7, 6, 7, 8, 9, 9, 9, 8, 9, 7, 10,  
8, 6, 7, 6, 4, 4, 16, 8 - 1502'

<u>Intervals</u>	<u>Descriptions</u>
1445-1447 (2.0')	Sandstone, light grey, quartz, very fine grained grading to very coarse grained, angular to subangular, moderate sorting, friable, good porosity, minor scattered carbonaceous flecks, minor graded bedding.
1447-1461 (14.0')	Sandstone, light grey, quartz, very fine to very coarse grained, angular to subangular, moderate sorting, friable, good porosity, carbonaceous material along bedding planes, occasional concentrations of subrounded to subangular pebbles, rare irregular fractures filled with silt, cross-bedded, graded beds, rare scattered clay chips
1461-1464 (3.0')	Sandstone, light grey, quartz, very fine to very coarse grained, angular to subangular, moderate sorting, friable, good porosity, minor carbonaceous material along bedding planes, graded bedding.
1464-1502 (38.0')	Dolomite, light greyish brown, brecciated; angular blocks of microcrystalline to finely crystalline dolomite chaotically set in matrix of similar type material.

## BP EXPLORATION CANADA LIMITED

SIDEWALL CORE DESCRIPTIONS

BP et al White M-04

Described by P. A. Acham

<u>Depth</u>	<u>Description</u>
1245	Sandstone, light grey, very fine-grained, angular to subangular, fair to poorly sorted, unconsolidated, glauconitic, silty, scattered carbonaceous flecks.
1296	Shale, medium grey to medium dark grey, soft, with interbeds of Siltstone, light grey, soft, grading to Sandstone, light grey, very fine grained, glauconitic.
1352	Sandstone, light grey, very fine-grained to medium grained, angular to subangular, fair to poorly sorted, unconsolidated, trace glauconite, silty, minor iron staining.
1390	Sandstone, clear quartz, very fine to medium-grained, minor scattered quartz granules, angular to subangular, poorly sorted, unconsolidated.
1410	Sandstone, clear quartz, very fine-grained, angular to subangular, moderate to poorly sorted, unconsolidated, silty.
1420	Sandstone, clear quartz, very fine to fine-grained, angular to subangular, moderate sorting, unconsolidated, slightly silty, minor iron staining, thin irregular veins of carbonaceous material.
1430	Sandstone, clear quartz, fine to coarse grained, angular to subangular, moderate sorting, unconsolidated, rare angular chert fragments.

## BP EXPLORATION CANADA LTD.

## Sample Description

BP et al White M-04

February 22, 1975

Logged by: P. A. Acham

<u>Intervals</u>	<u>Descriptions</u>
0 - 280'	Gravel, unconsolidated, consisting of predominantly varicolored pebbles of igneous rock with minor amounts of sedimentary rocks - sandstone and shale.
280 - 290'	Siltstone 100%, medium grey to medium dark grey, hard, micromicaceous, very minor Sandstone, quartz, clear, very fine-grained, sub-angular, poorly sorted.
290 - 300'	Siltstone and Sandstone as above.
300 - 310'	Siltstone 90%, as above and Shale 10%, medium grey to dark grey, soft, very finely micromicaceous; very minor unconsolidated gravel.
310 - 320'	Siltstone, Shale and minor gravel as above.
320 - 330'	As immediately above.
330 - 340'	As immediately above.
340 - 350'	Siltstone 100%, as above, pyritic.
350 - 360'	Siltstone 90%, light grey, soft, micromicaceous. Shale 10%, medium grey to dark grey as at 300-310'.
360 - 370'	Siltstone 80% as at 350-360'. Shale 20% as at 350-360', rare angular chert fragments.
370 - 380'	Siltstone 90% as immediately above. Shale 10% as immediately above, minor amounts of angular and rounded to subrounded chert and quartz grains in a light grey siltstone matrix.
380 - 390'	Siltstone 100% as immediately above with small amounts of coalified plant fragments; minor amounts of gravel cavings.
390 - 400'	Siltstone 80%, as above. Shale 15%, as above. Sandstone 5%, light grey, very fine-grained, sub angular, moderate sorting, micromicaceous, slightly glauconitic.

<u>Intervals</u>	<u>Descriptions</u>
400 - 410'	Siltstone 70%, as above. Shale 10%, as above. Sandstone 20%, as above; minor amounts of coalified plant fragments.
410 - 420'	As immediately above.
420 - 430'	Siltstone 80%, as above. Shale 15%, as above. Sandstone 5%, as above.
430 - 440'	As immediately above with rare ironstone and conglomeric fragments.
440 - 450'	Siltstone 95%, as above. Shale 5%, dark grey, soft, very finely micromicaceous, trace of light grey sandstone as above.
450 - 460'	As immediately above with chert and quartz grains in a light grey siltstone matrix.
460 - 470'	As immediately above.
470 - 480'	As above.
480 - 490'	As above.
490 - 500'	Siltstone 90%, light grey as above. Siltstone 10%, medium grey to medium dark grey, hard, micromicaceous, trace of shale, medium grey to dark grey, soft, very finely micromicaceous.
500 - 510'	Siltstone 95%, light grey as above. Shale 5%, as above; abundant gravel cavings.
510 - 560'	No samples.
560 - 570'	Siltstone 95%, light grey as above. Shale 5%, as above.
570 - 580'	As immediately above.
580 - 590'	As above.
590 - 600'	As above.
600 - 610'	Siltstone 90% as above. Shale 10% as above, rare angular chert fragments.
610 - 620'	Siltstone 95% as above. Shale 5% as above, trace of Siltstone, medium grey to medium dark grey as above.

<u>Intervals</u>	<u>Descriptions</u>
620 - 630'	Siltstone 95% as above with increasing amounts of micromicaceous material.
630 - 650'	No samples.
650 - 660'	Siltstone 95%, light grey as above. Shale 5%, as above, rare fibrous calcite.
660 - 670'	Siltstone 95%, as above. Shale 5%, as above.
670 - 680'	Shale 100%, medium grey to dark grey, soft, micro-micaceous to very finely micromicaceous fissile, slightly silty.
680 - 690'	As immediately above with minor amounts of angular chert fragments.
690 - 700'	As immediately above.
700 - 710'	Shale 90%, as above. Siltstone 10%, light grey as above, rare angular chert fragments.
710 - 720'	Shale 95% as above with trace of iron staining and rare glauconite, Siltstone 5% as above; trace of Sandstone, quartz, clear, very fine grained, angular, moderate sorting.
720 - 730	Shale 95%, as at 670-680', minor white calcite veins.
730 - 740'	Shale 100% as at 670-680'.
740 - 750'	Shale 100% as immediately above, very silty, rare iron staining and disseminated pyrite.
750 - 760'	Shale 100% as immediately above with a trace of siltstone, light grey as above.
760 - 770'	Shale 100% as immediately above, minor white calcite veins.
770 - 780'	Shale 100% as above.
780 - 790'	Shale 100%, as above with coalified plant fragments common; trace of Sandstone, quartz, clear, fine to medium-grained, fair sorting.
790 - 800'	Shale 100% as immediately above with rare scattered clear quartz granules.
800 - 810'	Shale 100%, medium grey, soft, micromicaceous, slightly silty, minor amounts of nodular and disseminated pyrite, trace calcite prisms.

<u>Intervals</u>	<u>Descriptions</u>
810 - 820'	Shale 100%, as immediately above.
820 - 830'	As above.
830 - 840'	As above.
840 - 850'	As above.
850 - 860'	Shale 100% as above with scattered carbonaceous flecks, trace of Siltstone, light grey as above.
860 - 870'	Shale 100%, medium grey to dark grey, soft, micromicaceous, slightly silty, minor amounts of coalified plant fragments, rare calcite prisms.
870 - 880'	Shale 100%, medium grey as at 800-810', trace calcite prisms.
880 - 890'	Shale 100%, medium grey to dark grey as at 860-870', rare Siltstone, light grey as above - cavings ??
890 - 900'	Shale 100%, medium grey as at 800-810', with scattered clear quartz granules.
900 - 910'	Shale 100%, medium grey to dark grey as at 860-870'.
910 - 920'	Shale 100%, medium grey as above.
920 - 930'	Shale 100%, medium grey to dark grey as above.
930 - 940'	Shale 100%, as immediately above, trace calcite prisms, very minor disseminated pyrite.
940 - 950'	Shale 100%, as immediately above, trace calcite prisms, rare coalified plant fragments.
950 - 960'	Shale 100%, medium grey, as above.
960 - 970'	Shale 100%, as immediately above.
970 - 980'	Shale 100%, as immediately above.
980 - 990'	Shale 100%, as immediately above, nodular and disseminated pyrite common, rare scattered quartz granules.
990 -1000'	Shale 100%, as immediately above, rare nodular pyrite.
1000 -1010'	Shale 100%, medium grey to dark grey, as above, trace calcite prisms, minor angular and rounded clear quartz fragments.
1010 -1020'	Shale 100% as immediately above, minor disseminated pyrite, angular and rounded colored quartz fragments.

<u>Intervals</u>	<u>Descriptions</u>
1020 - 1030'	Shale 100% as immediately above, disseminated pyrite common.
1030 - 1040'	As immediately above.
1040 - 1050'	Shale 100% as immediately above.
1050 - 1060'	Shale 100%, medium grey to dark grey as above, glauconitic.
1060 - 1070'	Shale 100%, as immediately above, glauconitic, minor amounts of nodular and disseminated pyrite.
1070 - 1080'	As immediately above.
<u>Lower Cretaceous Deltaic Sequence 1080'</u>	
1080 - 1090'	Shale 100%, medium grey to dark grey as above, with Limestone interbeds, nodular and disseminated pyrite common, glauconitic, abundant coalified plant fragments, clear and colored quartz granules common.
1090 - 1100'	Shale 85% as immediately above, nodular and disseminated pyrite common, rare clear and colored quartz granules and angular fragments and Sandstone 15%, light grey, very fine-grained, sub angular, fair to poorly sorted, silty, tight.
1100 - 1110'	Sandstone 60%, as immediately above. Shale 40%, as immediately above.
1110 - 1120'	Sandstone 80%, as above. Shale 20%, as above with abundant carbonaceous flecks and coalified plant fragments.
1120 - 1130'	Sandstone 70% as above. Shale 30% as above, minor limestone interbeds, nodular and disseminated pyrite common.
1130 - 1140'	Sandstone 60% as immediately above. Shale 40% as immediately above, nodular and disseminated pyrite common.
1140 - 1150'	Siltstone 60%, medium grey to medium dark grey, hard, micromicaceous. Shale 30%, medium grey to medium dark grey, soft, carbonaceous flecks and coalified plant fragments common. Sandstone 10%, light grey as above.
1150 - 1160'	Shale 100%, as above, silty, minor carbonaceous flecks.
1160 - 1170'	Shale 90%, medium grey to medium dark grey as above. Siltstone 10%, medium grey to medium dark grey as above.

<u>Intervals</u>	<u>Descriptions</u>
1170 - 1180'	As immediately above.
1180 - 1190'	Siltstone 40%, as above. Shale 30%, as above with nodular and disseminated pyrite common. Sandstone 30%, as above, with abundant carbonaceous flecks and carbonaceous material along bedding planes.
1190 - 1200'	Shale 80%, as above. Siltstone 15%, as above. Sandstone 5%, as above.
1200 - 1210'	Shale 100%, as above.
1210 - 1220'	Siltstone 70%, as above. Shale 20%, as above, trace of glauconite.
1220 - 1230'	Shale 80%, as above, trace of glauconite. Siltstone 15%, as above. Sandstone 5%, as above, minor amounts of colored quartz granules.
1230 - 1240'	Sandstone 60%, as above, glauconitic. Siltstone 30%, as above. Shale 10%, as above with carbonaceous material common.
1240 - 1250'	Shale 50%, as above. Siltstone 30%, as above. Sandstone 20%, as above.
1250 - 1260'	Siltstone 80%, as above. Shale 10%, as above. Sandstone 10%, as above.
1260 - 1270'	As immediately above with minor amounts of disseminated pyrite.
1270 - 1280'	Shale 80%, as above. Siltstone 20%, as above.
1280 - 1290'	Sandstone 90%, light grey, very fine-grained, subangular, moderate sorting, highly glauconitic, tight. Siltstone 5%, as above. Shale 5%, as above.
1290 - 1300'	Sandstone 85%, as above, micaceous, abundant carbonaceous material along bedding planes. Shale 15%, as above.
1300 - 1310'	Shale 100%, as above with pyrite nodules common, trace of Siltstone, medium grey to medium dark grey and Sandstone, light grey as above.

<u>Intervals</u>	<u>Descriptions</u>
1310 - 1320'	Siltstone, 100% as above, micaceous, abundant carbonaceous material along bedding planes, disseminated pyrite common, very minor Sandstone, light grey, glauconitic as above, rare clear quartz granules.
1320 - 1330'	As immediately above.
1330 - 1340'	Sandstone 80%, as above, minor glauconite. Siltstone 20%, as above with minor pyrite nodules.
1340 - 1350'	Shale 80%, as above, nodular and disseminated pyrite common. Sandstone 20%, clear quartz, fine to medium-grained, angular to subangular, poorly sorted, tight, minor carbonaceous flecks and ? bituminous material.
1350 - 1360'	Sandstone 70% as above, silty, minor glauconite, highly pyritic. Shale 30% as above.
1360 - 1370'	Siltstone 70%, medium grey to medium dark grey as above with carbonaceous material along bedding planes. Sandstone 30%, light grey as above, trace glauconite, highly pyritic.
1370 - 1380'	Sandstone 80% clear quartz, medium to very coarse grained, angular to subangular, poorly sorted, tight, pyritic, carbonaceous material along bedding planes, minor amount of Sandstone, light grey, glauconitic as above. Shale 20%, as above.
1380 - 1390'	Sandstone 85%, clear quartz, medium to very coarse grained with granules common, angular to subangular, poorly sorted, Siltstone 10%, light grey, soft. Shale 5%, as above.
1390 - 1400'	Shale 60% as above, highly pyritic, Sandstone 40%, light grey as above, with minor amounts of carbonaceous material.
1400 - 1410'	Siltstone 70%, medium grey to medium dark grey as above, glauconitic. Shale 30%, as above, trace of Sandstone, clear quartz as above, pyritic, minor amounts of colored chert fragments and granules.
<u>Basal Cretaceous Sandstone 1406'</u>	
1410 - 1420'	Sandstone 100%, clear quartz, very fine to fine grained, angular to subangular, moderate sorting, unconsolidated, slightly silty, good porosity, abundant cavings - poor sample.

<u>Interval</u>	<u>Descriptions</u>
1420 - 1430'	Sandstone 100%, clear quartz, fine to coarse grained, angular to subangular, moderate sorting, unconsolidated, good porosity, rare angular chert fragments.
1430 - 1445'	Sandstone 100%, as immediately above.
1445 - 1502'	See Core Description.
<u>Top of Devonian (Bear Rock) 1464'</u>	
1500 - 1510'	Dolomite, light brown, cryptocrystalline to very fine crystalline, slightly argillaceous, <del>sulfosic</del> , scattered vuggy porosity, trace pyrobitumen, trace of interbedded Shale, dark grey.
1510 - 1520	Dolomite as above.
1520 - 1530'	Dolomite, as above with minor pyrite and calcite filled fractures.
1530 - 1540'	Dolomite, as above with increasing amounts of interbedded Shale, dark grey.
1540 - 1550'	Dolomite, as above, with trace of interbedded Shale, dark grey.
1550 - 1584'	Dolomite, as above.

Total Depth 1584'



### III. ENGINEERING SUMMARY

#### (a) Report of Drill Stem Tests

DST #1 1420' - 1462' Basal Cretaceous

PF 5, ISI 30, VO 60, FSI 60

Good air blow on preflow. Weak air blow on valve open, dead in 5 minutes. No gas to surface.

Recovered 30' mud, 180' salt water cut mud.

IHP 705 ISIP 595 IFP 589

FHP 701 FSIP 596 FFP 595

Flow pressures indicate tool plugging.

Temperature 76°F

Copies of drillstem tests charts submitted previously.

#### (b) Casing Record

Conductor 14" O.D. set at 39' K.B. Cemented with 43 sacks cold set cement.

Surface 8-5/8" O.D. 24 lb. J-55 landed at 337' K.B. Cemented with 357 sacks cold set cement. Plug down 4:45 P.M., February 17, 1975 with 7 bbl returns.

#### (c) Bit Record

Bit No.	Size	Type	Depth Out	Feet	Hours	Wt.	RPM
-	17-1/2	-	39	39	-	-	-
1A	12-1/4	XIG	259	220	24-1/2	A11	100
2A	12-1/4	XDV	358	99	5-3/4	8	100
1	7-7/8	J-55	1445	1087	18-3/4	15	130
2	7-27/32	Diamond	1500	55	5	10	65
RR2	7-7/8	J-55	1584	84	8-1/2	25	46

(d) Mud Report

Gel - water system. Quantities of mud for the well are as follows:

<u>Chemical</u>	<u>Quantity</u>
Gel	15,450 lb
Caustic	275 lb
Lime	200 lb
Bi-Carb	200 lb
CMC	200 lb
Sawdust	19 sacks

(e) Deviation Record

80'	1/2°	782'	1-1/2°
139'	1°	910'	4-1/2°
167'	1-1/8°	1000'	7-1/8°
193	1-1/4°	1191'	7-7/8°
227'	1/8°	1282'	8°
330'	1/8°	1376'	8°
440'	1-1/2°	1584'	9°

(f) Abandonment Plugs

No. 1	1584' - 1350'	Basal Cretaceous/ Bear Rock	41 sacks cement. Plug down 6:00 A.M. February 23, 1975
No. 2	387' - 287'	Surface Casing	30 sacks cement. Plug down 6:45 A.M. February 23, 1975

Casing cut 3' below ground level. Ran 5 sack plug into top of casing and welded on steel plate.

(g) Lost Circulation Zones

Lost approximately 400 barrels of mud in the interval 533' - 910'.

(h) Report of Blowouts

None to report.

(i) Fishing Operations

None to report.

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IV. LOGS

<u>Date</u>	<u>Log</u>	<u>Interval</u>	<u>Run No.</u>
February 21, 1975	Dual Induction-Laterolog	1572' - 333'	1
February 21, 1975	BHC Sonic-Gamma-Caliper	1573' - 332'	1
February 21, 1975	BHC Density-Gamma-Caliper	1576' - 332'	1

Copies of logs included with this report.

ANALYSES

V. ANALYSES

(a) Core Analysis

Submitted previously.

(b) Water Analysis

Submitted previously

(c) Gas Analysis

None

(d) Oil Analysis

None



VI. COMPLETION SUMMARY

(a) Tubing Record

None

(b) Perforation Record

None

(c) Cementation Record

<u>Date</u>	<u>Abandonment Plug</u>	<u>Position No.</u>	<u>Position Ft. - K.B.</u>	<u>Geological Formation</u>	<u>Sacks Cement</u>	<u>Depth Felt</u>
Feb. 23/75	1		1584' - 1350'	Bear Rock/ Lwr. Cretaceous	41	No feel
Feb. 23/75	2		387' - 287'	Surface Casing	30	284'

Ran 5 sack plug into casing top and welded on steel plate.

(d) Acidization and Fracturing Record

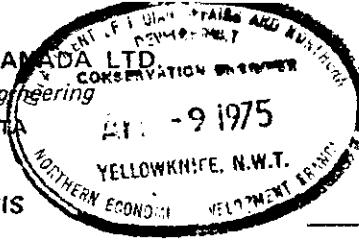
None

(e) Back Pressure and Production Tests

None



CORE LABORATORIES - CANADA LTD.  
Petroleum Reservoir Engineering  
CALGARY ALBERTA



Plastic

WATER ANALYSIS

7021-5386

CONTAINER IDENTITY

BP Exploration Canada Ltd.

LABORATORY NUMBER

1 of 2

PAGE

685'

65° 33' 56.00 N.L.  
123° 46' 30.00 W.L.

OPERATOR  
BP et al White M-04

LOCATION  
White Area, Northwest Territories

KS ELEV.  
GRD. ELEV.

FIELD OR AREA

POOL OR ZONE

SAMPLER

DST #1

30' Drilling Mud

TEST TYPE & NO.

TEST RECOVERY

@ OF

Top of Fluid

POINT OF SAMPLE

AMT. & TYPE CUSHION

MUD RESISTIVITY

1420' - 1462'

PUMPING

FLOWING

GAS LIFT

SWAB

WATER

BBLS/D. OIL

BBLS/D. GAS

MFC/D.

TEST INTERVALS OR PERFS.

SEPARATOR RESERVOIR

@ OF  
CONTAINER WHEN SAMPLED

@ OF  
CONTAINER WHEN RECEIVED

SEPARATOR

PRESSES, PSIG

TEMPERATURES, °F

Feb. 22/75

March 25/75

April 2/75

L.S.

DATE SAMPLED (D/M/Y)

DATE RECEIVED (D/M/Y)

DATE ANALYSED (D/M/Y)

ANALYST

REMARKS

ION	MG/L	MG%	MEQ/L
Na+K	2023	30.7	88.0
K			
Ca	274	4.1	13.7
Mg	8	0.1	0.7
Ba			
Sr			
Fe	TRACE		

ION	MG/L	MG%	MEQ/L
Cl	1797	27.2	50.7
Br			
I			
HCO <sub>3</sub>	73	1.1	1.2
SO <sub>4</sub>	2423	36.7	50.5
CO <sub>3</sub>	0	0.0	0.0
OH	0	0.0	0.0
H <sub>2</sub> S	NOT DETECTED		

TOTAL SOLIDS MG/L

BY EVAPORATION @ 110°C

BY EVAPORATION @ 150°C

6597

AT IGNITION

CALCULATED

1.0051 @ 60°F

1.3328 @ 24°C

SPECIFIC GRAVITY

REFRACTIVE INDEX

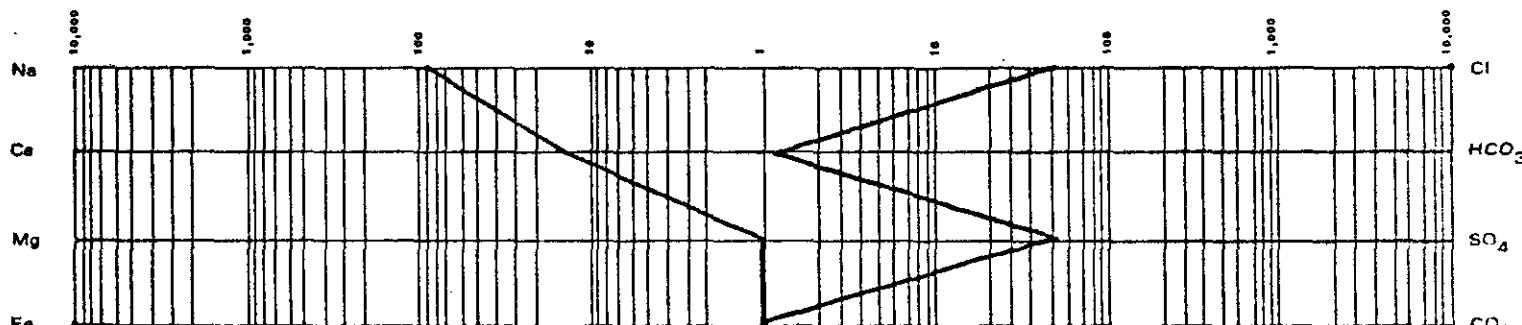
7.2

1.05

@ 25°C

PH RESISTIVITY (OHM/METERS)

LOGARITHMIC PATTERN MEQ PER LITER



REMARKS

NaCl equiv 5327



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Petroleum Reservoir Engineering  
CALGARY ALBERTA



Plastic

7021-5386

CONTAINER IDENTITY		BP Exploration Canada Ltd.		LABORATORY NUMBER	
65° 33' 56.00 N.L. 123° 46' 30.00 W.L.		OPERATOR		2 of 2	
LOCATION		BP et al White M-04		PAGE	
White Area, Northwest Territories		WELL OR SAMPLE LOCATION NAME		KB ELEV.	GRD. ELEV.
FIELD OR AREA		POOL OR ZONE		SAMPLER	
DST #1		30' Drilling Mud		TEST RECOVERY	
TEST TYPE & NO.		* See Below		@ OF	
POINT OF SAMPLE		AMT. & TYPE CUSHION		MUD RESISTIVITY	
1420' - 1462'		PUMPING	FLOWING	GAS LIFT	SWAB
TEST INTERVALS OR PERFS.		WATER	BBLS/D.	OIL	BBLS/D.
SEPARATOR	RESERVOIR	@ OF CONTAINER WHEN SAMPLED	@ OF CONTAINER WHEN RECEIVED	SEPARATOR	
PRESSURES, PSIG		TEMPERATURES, °F			
Feb. 22/75	March 25/75	April 2/75	L.S.	REMARKS	
DATE SAMPLED (D/M/Y)	DATE RECEIVED (D/M/Y)	DATE ANALYSED (D/M/Y)	ANALYST		

ANALYSIS OF WATER SAMPLES

\* Point of Sample Resistivity (Ohm-meters)

Top of Tool 1.05 @ 25°C

Middle of Fluid 1.05 @ 25°C