OTTAWA, Ontario K1A 0E4
May 13, 1980.

Memo to File.

Paramount HB et al Cameron B-13-60-10-117-00

The above mentioned well has not been drilled to the Total Depth due to the late season spud.

The well has been drilled to 911 m and plugged back to 712 m for technical reasons.

G.O. Guidotti,
District Geologist,
Mainland,
Northern Non-Renewable
Resources.

GUIDOTTI/lj 7-9444

WELL NAME: PARAMOUNT HB et al Cameron B-13-60-10-117-00

LOCATION: LATITUDE ° ' "N. LONGITUDE ° ' "W.

U.T.M. ZONE E. N.

LOGS AVAILABLE:

STATUS: SAMPLE QUALITY:

LOGGED BY: DATE:

K.B.

G.R.

T.D.

R.R.

SPUD DATE 1980-03-14 RR 1980-04-04

Units	Lithology	Remarks
100	1040 40	
200	1040 97	
300		244mm
400		
500	400	
600		BHL 695 Muskwa 750 Slave Point 770 Light blow of gas @ each connection
700		
800		
900		WELL SUSPENDED FOR 79-80 SEASON @ 911 m.

WELL PLUGGED BACK TO 695 m.

[illegible]
[illegible] et al Conoco D-13
[illegible] D.A.[illegible]

1980-03-31	725 m	Drilling with Navi Drill. Found top of cement at 712 m. M. Dens. 1070, Visc. 45.
1980-04-01	780 m	Cleaning out to top of fish. Polished plug to 715 m. Pulled out to change bit, Ran in with Navi Drill and drilled to 725 m. (Using 1.5° kick sub). Pulled out, changedbit and could not locate top of fish on way in. Attempting to locate top of fish to set another plug. No mud report.
1980-04-02	798 m 725 m P.B.D.	W.O.C. Reamed to 798 m. Ran cement plug from 798 m to 725 m with 6.0 tonnes Class "G" cement. Plug down 1980-04-02-0130 hrs.
1980-04-03	725 m P.B.D.	Preparing to move out. Roads deteriorating rapidly in warm weather.
1980-04-04	695 m P.B.D.	Rigging out. Ran in hole and tagged cement at 743 m. Ran plug No.2 from 741 m to 695 m with 6.0 tonnes Class "G" cement, plug down 1980-04-04-0315 hrs. Pulled out of hole and dropped last joint of drillpipe down the hole. Plug No.2 not felt. Will install swedge and valve on casing. R.R. 1980-04-04-1000 hrs.

Contractor:	Sedco 86	
Spud Date:	1980-03-19	
Projected TD:	1070 m	
Inspections:	1980-03-13	Pre-Spud
	1980-03-26	911 m

WEEKLY REPORT - 1980-03-31

Paramount HB et al Cameron B-13
B-13-60-10-117-00 D.A. 959

1980-03-24	911 m		Stuck in hole. Worked stuck pipe. Ran free point.
1980-03-25	911 m		Stuck in hole. Ran free point. Jarred. Shot pipe. Repaired wireline.
1980-03-26	911 m		Stuck in hole. Shot pipe. Fished broken sinker bar. Attempted to break circulation. Rigged up for rig jacker.
1980-03-27	911 m		Stuck in hole. Jacked pipe and ran acid pill. Ran free point. Worked pipe. Ran string shot.
1980-03-28	911 m 712 m	PBTD	Waiting on cement. Backed off at top of collars (110 m in hole). Pulled fish and tore out airhead. Ran in and circulated 110 tonnes class "G" set between 655 m to 520 m.
1980-03-29	911 m 712 m	PBTD	Running in hole to feel plug. Waited on cement. Tripped and cleaned to bottom. Circulated.
1980-03-30	911 m 712 m	PBTD	Cleaned to plug. Tripped out to surface casing, circulated and ran in and cleaned to 676 m.

Contractor:	Sedco 86	
Spud Date:	1980-03-14	
Projected TD:	1070 m	
Inspections:	1980-03-13	Pre-spud
	1980-03-26	911 m

Paramount HB et al Cameron B-13
B-13-60-20-117-00 B.A. 999

1980-03-17	238 m	Drilling. Drilled 61 m. M.Dens. 1040, Visc. 37. Deviation 3½° @ 215 m. Bit 2 JD7 m in 21 ½ h. Condition 3:3:1.
1980-03-18	292 m	Drilling. Drilled 54 m. M.Dens. 1080, Visc. 40. Deviation 3½° @ 244 m 3½° @ 273 m.
1980-03-19	300 m	Rippling up. Drilled 8 m. Conditioned hole and ran 25 jts, 244 mm, 48.1 Kg/m, J-55. Casing landed @ 300.52 m K.B. Cemented w/25.6 tonnes class "G" + 37 $CaCl_2$. Welded on bowl. Bit 3 - 106 m 37½ h 1:2:1.
1980-03-20	300 m	Drying the hole. Headed up BOP's, drilled out shoe, pressure tested to 10 000 kPa - 15 mins. Leak off test 6895 kPa hydrostatic 2971 kPa. No breakdown.
1980-03-21	550 m	Drilling. Drilled 250 m w/air. M.Dens. ½, Visc. 400. Alternating shale & limestone. Bit #1 T04 250 m 20 hrs.
1980-03-22	814 m	Drilling. Drilled 264 m. Deviation ¼° @ 550 m 2½° @ 704 m Formation tops: Beaverhill Lake 695 Muskwa 750 Slave Point 770 Light blow gas @ each connection. Bit #1 JD4 - 404 m 4:4:1.
1980-03-23	911 m	Stuck in hole. Drilled 97 m. Deviation 1½° @ 866 m 3½° @ 909 m.

Contractor: Sedco 86
Spud Date: 1980-03-14
Projected TD: 1070 m
Inspections: 1980-03-13 Pre-Spud

WEEKLY REPORT - 1980-03-17

Paramount HB et al Cameron B-13
B-13-60-10-117-00 D.A. 959

1980-03-14	0 m K.B.	Rigging up.
1980-03-15	116 m K.B.	Drilling. Drilled 15 hrs. Progress 116 m. Bit #1 DTJ 116 m. Spud in: 1980-03-14- 1430 hrs. M. Dens. 1040, Visc. 40. Dev. ¼° @ 30 m. ¼° @ 60 m. ½° @ 98 m.
1980-03-16	177 m K.B.	Drilling. Drilled 21 hrs, progress 61 m. Tripped for bit #1 - 145 m - 24 hrs 4:6:1. Ran in w/bit #2 J D 7 32 m. M. Dens. 1040, Visc. 47. Dev. 3/4° @ 126 m.

Contractor: Sedco 86
Spud Date: 1980-03-14-1430 hrs.
Projected T.D.: 1070 m
Inspected: 1980-03-13

Chief Petroleum Engineer

Date: 80-02-07

Attention: M.K. El-Defrawy

Re:

Well Name: Paramount HB et al Cameron B-13-60-10-117-15

References: Canso et al Cameron Hills H-34
HB Cameron River J-12
Paramount HB et al Cameron Hills M-31
Volocities used were from HB Cameron J-12
Report # 38-6-4-10 line 207

Samples: To be collected every 5 m below the 244.5 casing shoe
Company to submit two washead samples packaged in vials

1 set to Yellowknife c/o M. Thomas
1 set to ISPG - Calgary

Coring Program:

Logging Program: As per company "Application for Drilling Authority" dated 80-01-11.

Testing Program: All prospective intervals to be adequately tested.

Comments:

1. The Paramount HB et al Cameron B-13 is located approx. 6.5 Km east of Paramount Cameron Hill M-31, appox. 1.6 Km north of HB Cameron River J-12 and approx. 11.3 Km west of Canso et al N. Cameron Hills H-34.
2. Drilling problems are anticipated in the Hay River Sh (Fort Simpson) (390-764)
3. Loss of circulation could be expected in the Devonian Carbonates which are the main hydrocarbon zones.

District Evaluation Geophysicist
Mainland District

District Evaluation Geologist
Mainland District

DINA Prognosis and Comments

WELL NAME: Paramount HB et al Cameron B-13-60-10-117-00

Horizon	Co. Tops m	DINA Tops m	Lithology	Comments
Water Depth				
Top Permafrost (s)				
Base Permafrost (s)				
Top Hydrate				
Base Hydrate				
Geological Markers:				
Hay River Sh. (Fort Simpson)	373	390		
Beaver Hill Ck	683			
Muskwa	741	744		
Slave Pt.	763	764		
Watt Mount	813	815		
Bistcho (Sulphur Pt.)	816	820		
Muskeg	826	850		
Keg River	948	951		
Chinchaga	1 031	1 040		
Pre Dev. Quarzite (Gran.Wash.)	1 048	1 050		
Pre Cambrian	1 061	1060		
FID	1 070			
Lost Circulation Zones				
Devonian Carbonates	764-1040			
High Pressure Shale				
Base H.P.S.				
Hay River Sh	390-764			
Hydrocarbon Zones				
Slave Pt.	764-815			
Sulphur Pt.	820-850			
Keg River	951-1040			

PARAMOUNT HB et al CANRON B-13

Ground Elevation 318.02 M KB est. 321

Reference well: H.B. Cameron River J-12

Expected Formation Tops

	Subsea	Depth (est.) M	B-13	J-12	DIAND
Hay River Shale	- 52	373	369		
Beaverhill Lake Marker	-362	683			
Muskwa	-420	741	735		
Slave Point	-442	763	754	763	
Watt Mountain	-492	813			
Bistcho	-495	816	802		
Muskeg Anhydrite	-505	826			
Keg River	-627	948	939	951	
Chinchaga	-710	1031	1017		
pre-Devonian quartzite	-727	1048	1037		
pre-Cambrian weathered granite	-740	1061	1049	1050	

Tops	Seismic time	Vavg (m/s)	TVD depth m (bsd)	
Hay River	0.43	1850	390	-69
Slave Pt	0.68	2247	764	-443
Bistcho	0.7	2341	820	-499
Keg River	0.744	2558	951	-630
Pre-Dev	0.776	2706	1050	-729
Pre-Cam	0.78	2720	1060	-732

1) Velocities used were from HB Cameron River J-12

5) Rig 1 = 38-6-4-10 line 207

Government of Canada / Gouvernement du Canada

MEMORANDUM — NOTE DE SERVICE

TO / A: H. Feldman
A/Chief, Oil & Gas Engineering Division
Hull, Quebec

FROM / DE: H. D. Thomas
Regional Conservation Engineer
Oil & Gas Section
Yellowknife, N.W.T.

SECURITY CLASSIFICATION / DE SÉCURITÉ:
OUR FILE / NOTRE RÉFÉRENCE:
YOUR FILE / VOTRE RÉFÉRENCE:
DATE: 1980-01-11

SUBJECT / OBJET: Paramount HB et al Cameron B-13 D.A.959
Application for a Drilling Authority

Attached for your perusal are the following for the above mentioned well:

— 1. Covering letter
— 2. Application for a Drilling Authority
— 3. The drilling procedure
— 4. The survey plat of the wellsite
— 5. The rig control panel layout
— 6. The rig, tanks, pump and line layout
— 7. The tank dimension diagram
— 8. Sump diagram
— 9. Degasser layout
— 10. Blowout preventor and well head
— 11. Line and choke layout
— 12. 1:50000 map of the area.
— 13. Copy of letter from Hudson's Bay Oil & Gas Co. Ltd. appointing Paramount Resources Ltd. as operator of their holdings in this area.

H. D. Thomas

Enclosures
/lm

1980-02-04 Rig & Equipment are exactly the same as for Cameron I-62 - Sedco Rig 86.
R. Smith

Paramount Resources Ltd.

1600 ELVEDEN HOUSE
707 - SEVENTH AVENUE SOUTH WEST
CALGARY, ALBERTA T2P 0Z3
PHONE 266-2047

January 8, 1980

Department of Indian Affairs
and Northern Development
P. O. Box 1500
Yellowknife, N.W.T.

Attention: Mr. Maurice D. Thomas

Dear Sirs:

Enclosed please find in triplicate an Application for a Drilling Authority for well B13 in the Cameron Hills area. Included are three copies of:

1) the drilling procedure
2) the survey plat of the wellsite
3) the rig control panel layout
4) the rig, tanks, pump and line layout
5) the tank dimension diagram
6) sump diagram
7) degasser layout
8) blowout preventor and well head
9) line and choke layout
10) 1:50000 map of the area.

We also enclose a letter from Hudson's Bay Oil and Gas Company Limited appointing Paramount Resources Ltd. as operator of their holdings in this area. This well is expected to spud about February 5th.

We trust that this will meet with your requirements.

Yours truly

PARAMOUNT RESOURCES LTD.

K. A. Harris
Vice President, Operations

KAH/ml

Enclosures

Drilling Procedure
Paramount HB et al Cameron B-13

1) Set 15 m of 406.4mm conductor pipe. Ensure it is straight and well cemented.

2) Head up to conductor pipe with a 406.4mm to 304.8 900 Series Adaptor flange and install Grant rotating head.

3) Spud and drill 311.2mm surface hole to 300 m using air; if penetration is not as good as expected after consultation with Calgary Office we may try a Nission Hammer to complete surface drilling. Deviation surveys to be run every 30 m with a maximum deviation of 1°.

4) Run 244.5mm, 48.07 kg/m H-40 ST&C casing complete with guide shoe and float collar, and centralizers over first 3 joints. Land casing on bottom and chain down, ensure that casing bowl is landed low enough to accommodate B.O.P. stack and rotating head. Possibly dig a cellar before welding on casing bowl. Cement with 16.7 tonnes of Oilwell Cement + 3% $CaCl_2$, bump plug at 7,000 kPa over pumping pressure. Wait on cement for 8 hours.

5) Install casing bowl and nipple up B.O.P.'s and Grant rotating head. Pressure test B.O.P.'s and manifold to 1500 kPa and 7000 kPa for 15 minutes each. Ensure manifold has a remote control choke (super choke) also install a P.V.T. and a gas detection system and keep in good working condition at all times.

6) Drill out float collar and shoe with water using 222.25mm bit. Drill approximately 3 m of hole and conduct a normal leak-off test. The formation is to be pressure tested to 1 1/3 times the formation pressure or a gradient of 11 kPa/m.

7) Assuming results of leak-off test are okay, dry hole with air.

8) Drill 222.3mm hole with air to total depth if possible, running tests as zones are encountered. If oil or water is encountered it may be necessary to set a secondary string. Keep a tank of 155.77 kg/m^3 mud mixed at all times.

9) If total depth is reached with air, pull up to surface casing and then start circulating hole to mud. Circulate on bottom for 4 hours.

10) Strap out and run IES and CNL-FDC logs from total depth to surface casing.

11) Run 139.7mm, 20.8 kg/m J-55 ST&C casing complete with float shoe and float collar with centralizers on first joint and above and below zones of interest - 3/joint with 3 m of free travel using limit clamps and collars.

12) Amount of cement used will be determined by open hole logs.

PARAMOUNT HB et al CAMERON B-13

Ground Elevation 318.02 M KB est. 321

Reference well: H.B. Cameron River J-12

Expected Formation Tops

	Subsea	Depth (est.) M
Hay River Shale	- 52	373
Beaverhill Lake Marker	-362	683
Muskwa	-420	741
Slave Point	-442	763
Watt Mountain	-492	813
Bistcho	-495	816
Muskeg Anhydrite	-505	826
Keg River	-627	948
Chinchaga	-710	1031
pre-Devonian quartzite	-727	1048
pre-Cambrian weathered granite	-740	1061

Affaires indiennes et du Nord Canada

Drilling Authority No. 324

NORTHERN NON-RENEWABLE RESOURCES BRANCH

DIRECTION DES RESSOURCES NON-RENOUVELABLES DU NORD

Date Issued ——

APPLICATION FOR A DRILLING AUTHORITY

DEMANDE D'AUTORISATION DE FORAGE

This notice of intention to begin drilling operations, in triplicate, and where required a plan of survey approved by the Surveyor General showing the target area or the site of the well must be submitted and approved before commencing operations.

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to drill:—

Name and number of well: Paramount H8 et al Cameron B-13

Location: Unit B Section 13 Grid 60° 10'N, 117°00'W

Latitude 60° 02' 15" N Longitude 117° 02' 46.75" W

Unique Well Identifier

Universal Well Location Reference Lat. 60.0375° Long. 117.046875°

Proposed Target Location (if different)

Elevation: Ground 318.32 K.B. 321 metres above sea level

Water Depth (for man-made islands, ice-islands and offshore wells)

Well is expected to produce from Keg River formation at a depth of about 940 metres Expected total final depth 1070 m

Area assigned to well

(In Quasi-Commercial Agreement Area only)

Exploration Agreement No. Production Licence No.

Permit No. Lease No. Containing Hectares

Permittee, licensee, or lessee Hudson's Bay Oil & Gas Company Limited

Exploratory Licence No. #2806

Surface Owned by Crown or Crown

(If not Crown, name of surface owner)

Paramount Exploratory Licence No. 2805

We propose to use the following strings of casing either cementing or landing them as indicated below:—

	Casing Size O.D. (mm)	Mass (kg/m)	Wall thickness (mm)	Grade	New or Used	Estimated Depth	Mass of Cement
1	244.5	48.07	7.93	H-40	New	300	16.7 tonnes
2	139.7	20.8	5.79	J-55	New	Approx. 1070	As required to reach surface
3							
4							
5							

Expected water, gas, and oil horizons and type of control equipment Gas in Slave Point and Bistcho, gas or oil in Keg River

Well will be drilled with Rotary Rig No. 86 by Sedco Drilling

(Name of Contractor)

Responsible agent of applicant:— Contractor's Business Licence No.

At well At registered office

Address Address

It is understood that if changes become necessary, notice of the change of plan will be submitted.

Dated at Calgary, Alberta, this 8th day of January 19 80

Signed by Company Paramount Resources Ltd.

Title Vice President - Operations Operator's Licence No. 2805

(FOR BRANCH USE ONLY)

APPROVED

This application has been examined and approved subject to the following conditions:

Dated 19

(Signature of Director)

Forms to be submitted to District Conservation Engineer, Department of Indian Affairs and Northern Development.

(Revised 1978)

Volume 2

Chief Petroleum Engineer

Date: 80-02-07

Attention: M.K. El-Defrawy

Re:

Well Name: Paramount HB et al Cameron B-13-60-10-117-15

References: Canso et al Cameron Hills H-34
HB Cameron River J-12
Paramount HB et al Cameron Hills M-31
Volocities used were from HB Cameron J-12
Report # 38-6-4-10 line 207

Samples: To be collected every 5 m below the 244.5 casing shoe
Company to submit two washead samples packaged in vials

1 set to Yellowknife c/o M. Thomas
1 set to ISPG - Calgary

Coring Program:

Logging Program: As per company "Application for Drilling Authority" dated 80-01-11.

Testing Program: All prospective intervals to be adequately tested.

Comments:

1. The Paramount HB et al Cameron B-13 is located approx. 6.5 Km east of Paramount Cameron Hill M-31, appox. 1.6 Km north of HB Cameron River J-12 and approx. 11.3 Km west of Canso et al N. Cameron Hills H-34.
2. Drilling problems are anticipated in the Hay River Sh (Fort Simpson) (390-764)
3. Loss of circulation could be expected in the Devonian Carbonates which are the main hydrocarbon zones.

District Evaluation Geophysicist
Mainland District

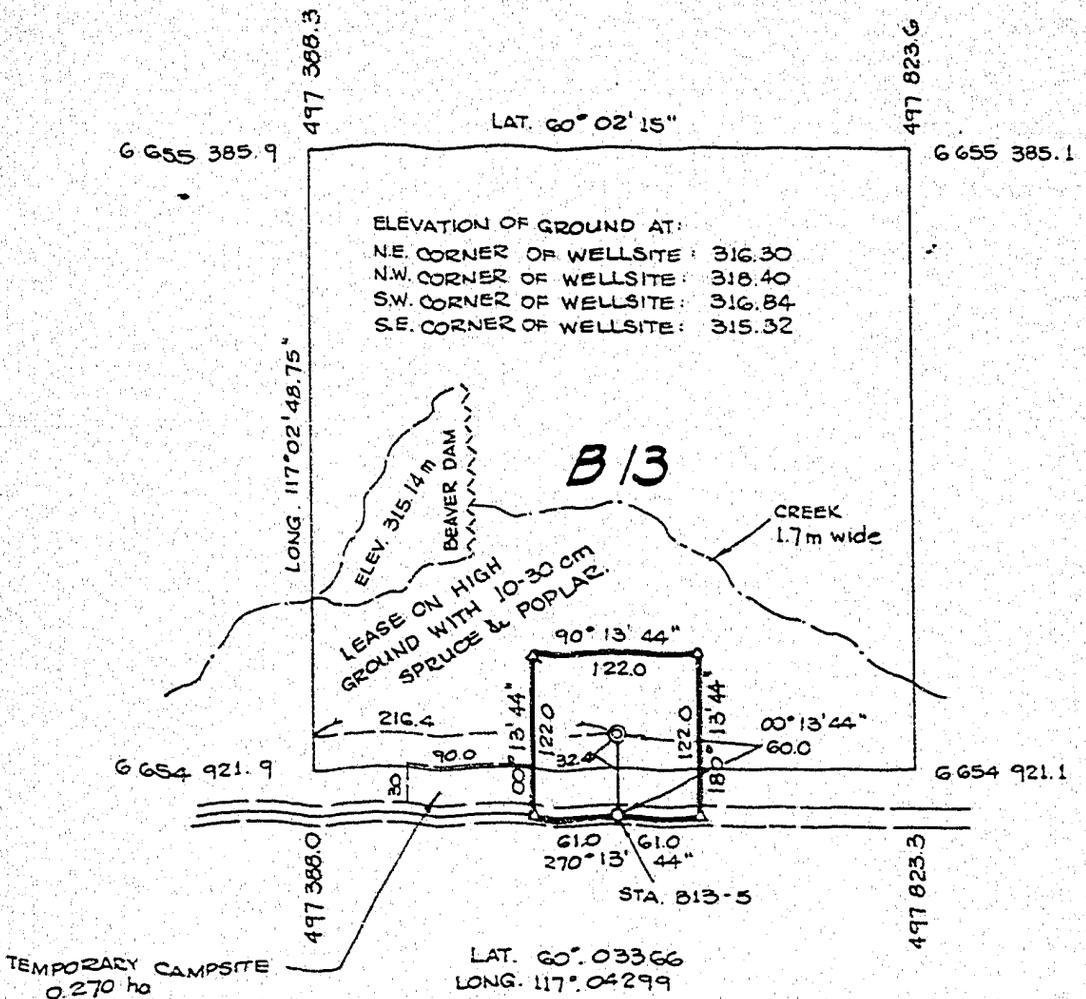
District Evaluation Geologist
Mainland District

DINA Prognosis and Comments

WELL NAME: Paramount HB et al Cameron B-13-60-10-117-00

Horizon	Co. Tops m	DINA Tops m	Lithology	Comments
Water Depth				
Top Permafrost (s)				
Base Permafrost (s)				
Top Hydrate				
Base Hydrate				
Geological Markers:				
Hay River Sh.(Fort Simpson)	373	390		
Beaver Hill Ck	683			
Muskwa	741	744		
Slave Pt.	763	764		
Watt Mount	813	815		
Bistcho (Sulphur Pt.)	816	820		
Muskeg	826	850		
Keg River	948	951		
Chinchaga	1 031	1 040		
Pre Dev. Quarzite (Gran.Wash.)	1 048	1 050		
Pre Cambrian	1 061	1060		
FID	1 070			
Lost Circulation Zones				
Devonian Carbonates	764-1040			
High Pressure Shale				
Base H.P.S.				
Hay River Sh	390-764			
Hydrocarbon Zones				
Slave Pt.	764-815			
Sulphur Pt.	820-850			
Keg River	951-1040			

Para HB et al Comeron B13
Well Site
Grid Area 60°10'N 117°00'W



I certify that the survey represented by this plan is correct and true to the best of my knowledge and was completed on the 17th day of January, 1980

Alberta Land Surveyor

Witness

McElhanney

Paramount Resources Ltd.

ELEVATION: 317.02 Ground

CO-ORDS: 32.4 N. of S. Boundary } B13
216.4 E. of W. Boundary }

N 6 654 953.9 } UTM CO-ORDINATES
E 497 604.4 }

AREAS:

	Hectares	Acres
Well Site =	1.488	3.68

SCALE: 1:5000

Survey monuments found are shown thus: ●
Survey monuments planted are shown thus: O
Portions referred to outlined in red.
Distances are in metres and decimals.

DATUM: TOP OF BRASS CAP (BDY. MON. 271)
ELEVATION: 321.27

McElhanney Surveying & Engineering Ltd. | 100434

Drilling Authority No. . . . 959 . . . . . .

CANADA

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

OIL AND MINERAL DIVISION

Application to Amend a Drilling Authority

This application, in triplicate, must be submitted and approved before commencing operations. If the well location is changed, this application must be accompanied where required, with a plan of survey approved by the Surveyor General.

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made to amend Drilling Authority No. . . . . 959 . . . . . , concerning . . . . . .

. . . . . Paramount. HB. et. al. Cameron. B-13 . . . . . .

(Name and Number of Well)

Reasons for the amendments: . . Proposed. location. lay. between. two. streams. and. was . . .

. . . . . considered. likely. to. pollute. them. . . Location. was. moved. south. to . . . . . .

. . . . . Lat. 60°02'01.18". N. . . . . Long. . 117°02'34.76". W. . . . . .

. . . . . Universal. Well. Location. Reference. Lat. 60.03366°N. . Long. . 117.04299°W. . . . .

Dated at . . Calgary, . Alberta, this . . . 28th . . . . day of . September . . . . . , 19. 81. . . . . .

Signed by . . . . . .

Title . . . . . Vice. President, Operations . . . . . .

Company . . Paramount. Resources. Ltd. . . . . .

(For Oil and Mineral Division use only)

APPROVED

This application has been examined and approved subject to the following conditions: . . . . . .

Date Oct. 15, 1981

District Conservation Engineer

IAND 52-90-3 (8-71)

Forms to be submitted to the District Conservation Engineer, Department of Indian Affairs and Northern Development.

Voir au verso

Indian and Northern Affairs Canada / Affaires indiennes et du Nord Canada

ADEQUATE
REVIEWED BY

Drilling Authority No 959

NORTHERN NON-RENEWABLE RESOURCES BRANCH / DIRECTION DES RESSOURCES NON-RENOUVELABLES DU NORD

Date Issued 1980-02-12

APPLICATION FOR A DRILLING AUTHORITY / DEMANDE D'AUTORISATION DE FORAGE

This notice of intention to begin drilling operations, in triplicate, and where required a plan of survey approved by the Surveyor General showing the target area or the site of the well must be submitted and approved before commencing operations.

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to drill: —

Name and number of well: Paramount HB et al Cameron B-13

Location: Unit B Section 13 Grid 60° 10'N, 117°00'W

Latitude 60° 02' 15" N Longitude 117° 02' 48.75" W

Unique Well Identifier 300B136010117000

Universal Well Location Reference Lat. 60.0375° Long. 117.04688°

Proposed Target Location (if different)

Elevation: Ground 318.02 K.B. 321 metres above sea-level.

Water Depth (for man-made islands, ice-islands and offshore wells)

Well is expected to produce from Keg River formation at a depth of about 940 metres Expected total final depth 1070 m

Area assigned to well

(for District Conservation Engineer's use only)

Exploration Agreement No Production Licence No

Permit No Lease No 908 Containing not known Hectares

Permittee, licensee, or lessee Hudson's Bay Oil & Gas Company Limited

Exploratory Licence No 2806

Surface Owned by Crown or Crown

(If alienated submit name and address of owner and occupant)

Paramount Exploratory Licence No. 2805

We propose to use the following strings of casing either cementing or landing them as indicated below: —

	Casing Size O.D. (mm)	Mass (kg/m)	Wall thickness (mm)	Grade	New or Used	Estimated Depth	Mass of Cement
1	244.5	48.07	7.93	H-40	New	300	16.7 tonnes
2	139.7	20.8	5.79	J-55	New	Approx. 1070	As required to reach surface
3							
4							
5							

Expected water, gas, and oil horizons and type of control equipment Gas in Slave Point and Bistcho, gas or oil in Keg River - Equipment See Attachment 1 Page 1 & 2

Well will be drilled with Rotary Rig No. 86 by Sedco Drilling

(Drilling Contractor or company)

Responsible agent of applicant: —

At well Address

Contractor's Business Licence No.

At registered office Address

It is understood that if changes become necessary, notice of the change of plan will be submitted.

Dated at Calgary, Alberta, this 8th day of January 19 80

Signed by [signature] Company Paramount Resources Ltd.

Title Vice President, Operations Operator's Licence No. 2805

(FOR BRANCH USE ONLY)

APPROVED

This application has been examined and approved subject to the following conditions:

Dated 12 Feb 1980

[signature]
Regional District Conservation Engineer

Forms to be submitted to District Conservation Engineer, Department of Indian Affairs and Northern Development.

IAND 52-80-1 (3-78)

Voir au verso

Drilling Authority No. 959

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application to Abandon a Well ~~or Suspend Drilling~~

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to abandon, to suspend drilling:—

Name and number of well: Paramount HB et al Cameron B-13

Location: Unit: B Section: 13 Grid 60°10'N 117°00'W

Latitude: 60°02'01.18" N Longitude: 117°02'34.76" W

From Established Reference Marker:

Universal Well Location Reference: Lat. 60.03366° Long. 117.04299°

Permit No.: Lease No. 908-71

Hudson's Bay Oil and Gas Company Limited
(Permittee, Licencee, Lessee)

Date of commencement of proposed program:

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at:

Gas at:

Water at:

Total Depth 911 metres Date of last operations 4 April, 1980

Present condition of well: A fish was lost in this hole. Attempts to sidetrack were halted by spring break up in 1980, and cement plugs were set to 695 metres. The casing was capped with a valve and the well was suspended.

CASING RECORD

	Casing Size O.D. Inches	Weight	Amount	Set At—	Sacks of Cement and Additives	Amount Pulled
1.	244 mm	48.1 kg/m	25 joints	300.52 m	25.6 tonnes	–
2.						
3.						
4.						
5.						

PROPOSED ABANDONMENT PROGRAM

Plug No.	Plug Position	Geological Formation	Number of Sacks of Cement	Remarks
1	795–743	Slave Pt. & Muskwa	6 tonnes	Already in place
2	741–695	Beaverhill Lake	6 tonnes	March 1980
3	10–surface	inside surface casing	0.6 tonnes	

The following logs have been run: none, lost hole above the Slave Point.

Other operations proposed: none

Operations to be carried out by: Harold Stumpf Contractor Licence No.: no contractor required

Address: Indian Cabins Address:

Responsible Agent in field: Harold Stumpf

Dated at Calgary, this 23rd Day of February 19 81

Signed by: [signature] Company: Paramount Resources Ltd.

Title: Vice-President, Operations Operator's Exploratory Licence No.: 2805

Note:—The District Conservation Engineer's office must be notified before work is commenced.

(For OIL AND MINERAL DIVISION use only)

APPROVAL

This application has been examined and proposed programme approved, subject to the following conditions:

Dated April 27, 1981

[signature]
District Conservation Engineer

IAND 52-90-5 (7-71)

Forms to be submitted in triplicate to District Conservation Engineer, Department of Indian Affairs and Northern Development.

Voir au verso

CANADA

Drilling Authority No. 959

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application to [redacted] Suspend Drilling

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to abandon, to suspend drilling:—

Name and number of well Paramount HB et al Cameron B-13

Location: Unit B Section 13 Grid 60°10'N 117°00°W

Latitude 60° 02' 01.18" N Longitude 117° 02' 34.76" W

From Established Reference Marker

Universal Well Location Reference Lat. 60.03366° Long 117.04299°

Permit No. Lease No. 908

(Permittee, Licencee, Lessee)

Date of commencement of proposed program 4 April, 1980

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at

Gas at

Water at

Total Depth 911 Date of last operations 4 April, 1980

Present condition of well Spring weather forced abandonment of the site before the well could be finished. The well has been plugged back to 695 metres, which is above any porous member. It has been capped with an open valve, and plans are to re-enter and finish it next winter.

CASING RECORD

	Casing Size O.D. Inches	Weight	Amount	Set At—	Sacks of Cement and Additives	Amount Pulled
1.	244mm	48.1 kg/m	25 jts.	300.52 m	25.6 tonnes	-
2.						
3.						
4.						
5.						

PROPOSED ABANDONMENT PROGRAM

No.	Plug Position	Geological Formation	Number of Sacks of Cement	Remarks
1	795 - 725	Sulphur Point and Slave Pt.	6 tonnes G	Felt at 743
			+ .75% D65	
2	741 - 695	Muskwa and Beaverhill Lake	6 tonnes G	

The following logs have been run none

Other operations proposed re-enter and finish in next winter season.

Operations to be carried out by not yet determined Contractor Licence No.

Address Address

Responsible Agent in field

Dated at Calgary, Alberta, this 9th Day of April 1980

Signed by [signature] Company Paramount Resources Ltd.

Title Vice-President, Operations Operator's Exploratory Licence No. 2805

Note:—The District Conservation Engineer's office must be notified before work is commenced.

(For OIL AND MINERAL DIVISION use only)

APPROVAL

This application has been examined and proposed programme approved, subject to the following conditions:

See Attachment #1

Dated April 18 1980 D. A. Whitehead
District Conservation Engineer

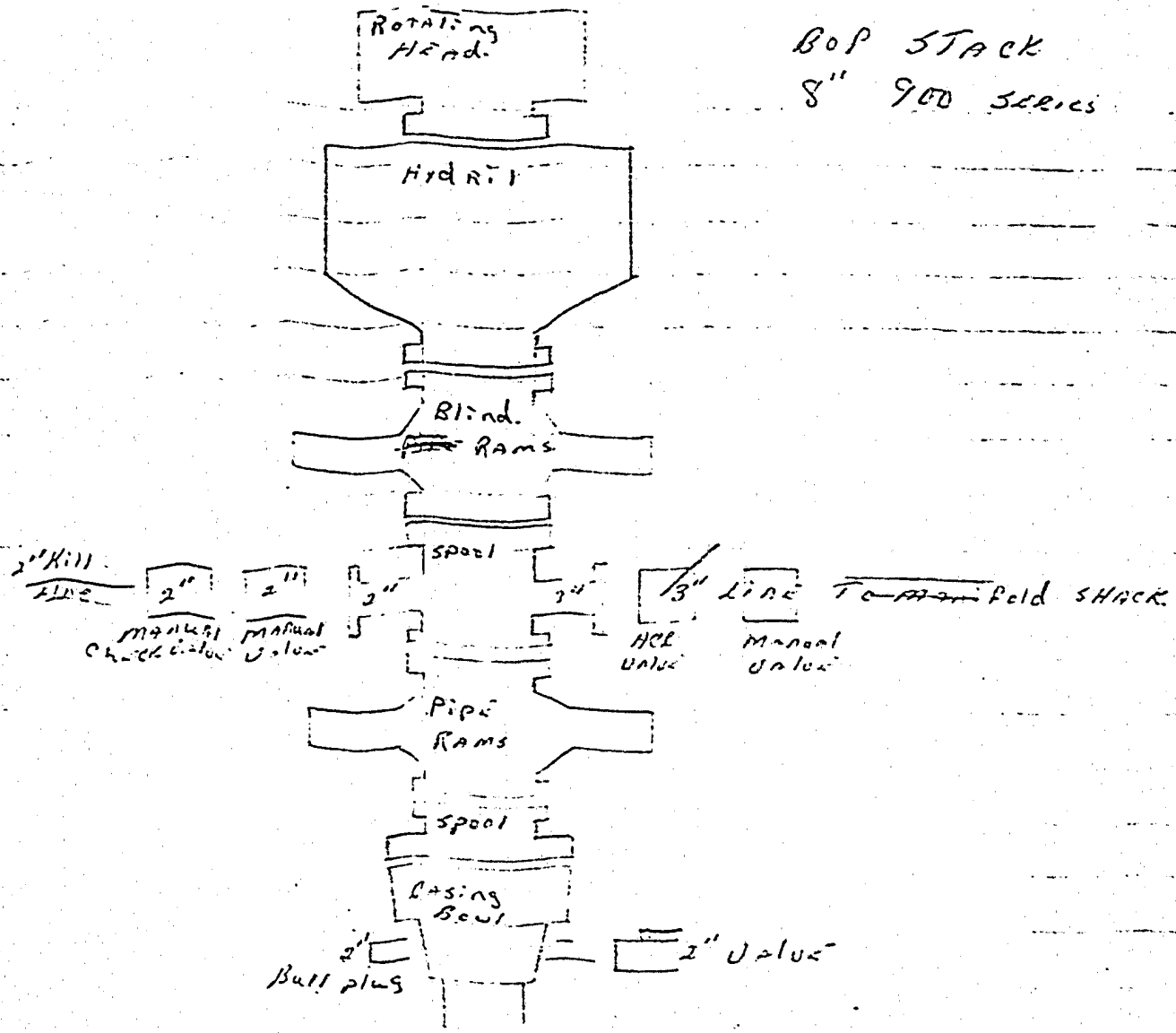
LAND 52-90-5 (7-71)

Forms to be submitted in triplicate to District Conservation Engineer, Department of Indian Affairs and Northern Development.

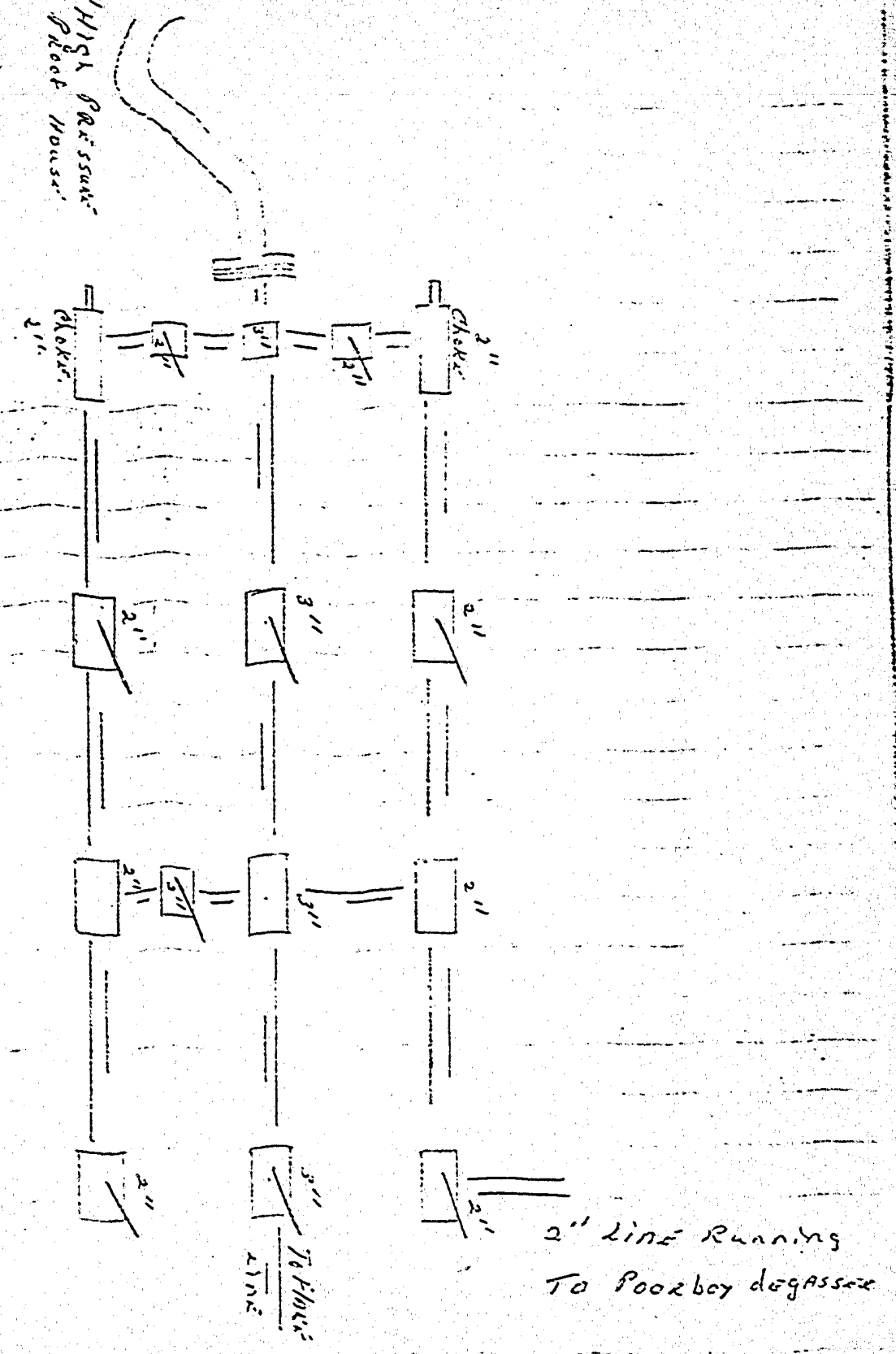
Voir au verso

PARAMOUNT HB et al CAMERON B-13 - D.A. 959

ATTACHMENT 1



ATTACHMENT 1



Chief Petroleum Engineer

Attention: M.K. El-Defrawy

Re:

Well Name: Paramount HB et al Cameron B-13-60-10-117-15

References: Canso et al Cameron Hills H-34
HB Cameron River J-12
Paramount HB et al Cameron Hills M-31
Volocities used were from HB Cameron J-12
Report # 38-6-4-10 line 207

Samples: To be collected every 5 m below the 244.5 casing shoe
Company to submit two washead samples packaged in vials

1 set to Yellowknife c/o M. Thomas
1 set to ISPG - Calgary

Coring Program:

Logging Program: As per company "Application for Drilling Authority" dated 80-01-11.

Testing Program: All prospective intervals to be adequately tested.

Comments:

1. The Paramount HB et al Cameron B-13 is located approx. 6.5 Km east of Paramount Cameron Hill M-31. appox. 1.6 Km north of HB Cameron River J-12 and approx. 11.3 Km west of Canso et al N. Cameron Hills H-34.
2. Drilling problems are anticipated in the Hay River Sh (Fort Simpson) (390-764)
3. Loss of circulation could be expected in the Devonian Carbonates which are the main hydrocarbon zones.

District Evaluation Geophysicist
Mainland District

District Evaluation Geologist
Mainland District

DINA Prognosis and Comments

WELL NAME: Paramount HB et al Cameron B-13-60-10-117-00

Horizon	Co. Tops m	DINA Tops m	Lithology	Comments
Water Depth				
Top Permafrost (s)				
Base Permafrost (s)				
Top Hydrate				
Base Hydrate				
Geological Markers:				
Hay River Sh. (Fort Simpson)	373	390		
Beaver Hill Ck	683			
Muskwa	741	744		
Slave Pt.	762	764		
Watt Mount	813	815		
Bistcho (Sulphur Pt.)	816	820		
Muskeg	826	850		
Keg River	948	951		
Chinchaga	1 031	1 040		
Pre Dev. Quarzite (Gran.Wash.)	1 048	1 050		
Pre Cambrian	1 061	1060		
FID	1 070			
Lost Circulation Zones				
Devonian Carbonates	764-1040			
High Pressure Shale				
Base H.P.S.				
Hay River Sh	390-764			
Hydrocarbon Zones				
Slave Pt.	764-815			
Sulphur Pt.	820-850			
Keg River	951-1040			