



NWT OFFICE OF THE REGULATOR OF OIL AND GAS OPERATIONS

Office of the Regulator of Oil and Gas Operations

P.O. Box 1320, Yellowknife, NT X1A 2L9

Tel: 867-767-9097 • Fax: 867-920-0798 • Web: www.oroogo.gov.nt.ca

Courier Address: 4th floor, 5201 – 50th Avenue, Yellowknife, NT X1A 3S9

Ken Nikiforuk, Operations Consultant
Strategic Oil & Gas Ltd.
C/O Alvarez & Marsal Canada ULC
SUITE 1100, 250 – 6 AVE SW
CALGARY AB T2P 3H7

July 18, 2022

Dear Ken Nikiforuk:

Information Request No. 1:
Application to Abandon the Cameron L-44 Well (ACW-2022-SOG-L-44-WID1743)

On July 4, 2022, the Office of the Regulator of Oil and Gas Operations (OROGO) received a well abandonment program from Strategic Oil & Gas Ltd. (Strategic) for the Cameron L-44 well.

OROGO has reviewed the information provided by Strategic and requires additional information to complete its review of Strategic's application, as set out in the attached Information Request No. 1.

Please send your written responses and any associated correspondence to OROGO at oroogo@gov.nt.ca or through OROGO's secure file transfer site, on or before 4:00 p.m. on August 2, 2022.

If you are unable to respond within this timeframe or have any questions, please contact OROGO at (867) 767-9097 or by email at oroogo@gov.nt.ca.

Sincerely,

Pauline de Jong
Regulator

Encl. Information Request No. 1

c. Duncan MacRae, Director, Alvarez & Marsal Canada ULC

Strategic Oil & Gas Ltd.

Application for an Authorization to Alter the Condition of a Well

Cameron L-44 Well (ACW-2022-SOG-L-44-WID1743)

Information Request No. 1

1.1 Conversion to Disposal Well

Preamble:

On November 29, 1990, the Canada Oil and Gas Lands Administration approved an application from Paramount Resources Ltd. to convert the Cameron L-44 well to a disposal well (attached). The well history information submitted on July 4, 2022 does not reference this application or the conversion.

Request:

Submit updated well history information that clarifies whether the Cameron L-44 was converted to a disposal well as approved on November 29, 1990.

If the well was converted to a disposal well, provide additional information on the type of fluid disposed and whether the zone is over pressured.

1.2 Previous Zonal Abandonments

Preamble:

There are four perforated zones in the Cameron L-44 well: Keg River, Muskeg, Sulphur Point and Slave Point. Permanent bridge plugs have been set above the Keg River, Muskeg and Sulphur Point zones, but the March 16, 1990 wellbore diagram submitted on July 4, 2022 does not show any cement caps above these bridge plugs.

The well abandonment program submitted on July 4, 2022 proposes removing the retrievable plug set above the Slave Point zone (the highest zone) and replacing it with a permanent bridge plug and a cement cap. The program does not propose any changes to the permanent bridge plugs set above the lower three zones.

On January 24, 2011, the National Energy Board (NEB) approved an application to alter the condition of a well for the Cameron L-44 well (attached). In its application, Paramount Resources Ltd. (Paramount), then operator of the well, indicated that the current well status was "suspended" and that the anticipated well status was "abandoned". The proposed program was to abandon each of the four perforated zones "with a bridge plug and cement". This application suggests that both the operator and the NEB considered the zones to be suspended, not

abandoned, and recognized that a bridge plug with cement was required to properly abandon each zone.

The materials submitted on July 4, 2022 reference the *Well Suspension and Abandonment Guidelines and Interpretation Notes* (Guidelines), which state that zones abandoned prior to the coming into force of the Guidelines are not required to be re-abandoned to the standards contained in these Guidelines. In combination with the proposed well abandonment program, this suggests that Strategic Oil & Gas Ltd. considers the Keg River, Muskeg and Sulphur Point zones to be abandoned in a manner approved by the regulator at the time.

There is a discrepancy between Strategic's assertion that these zones are abandoned and the information provided by Paramount in the application to alter the condition of a well approved on January 2, 2011.

Request:

Submit updated well history information that demonstrates the Keg River, Muskeg and Sulphur Point zones were abandoned in a manner approved by the regulator at the time.

If such information is not available, submit an updated well abandonment program that addresses the proper zonal abandonment of the Keg River, Muskeg and Sulphur Point zones.

1.3 Placement of Permanent Bridge Plug

Preamble:

Step 25 of the proposed well abandonment program indicates that the permanent bridge plug must not be set within 2 meters of a casing collar.

Section 6A of the *Well Suspension and Abandonment Guidelines and Interpretation Notes* (Guidelines), revised in May 2022, indicates that plugs must not be set within 5 meters of a casing collar.

Request:

Submit an updated abandonment program that reflects the requirements in section 6A of the May 2022 Guidelines for the placement of bridge plugs.

1.4 Wellbore Fluid

Preamble:

Step 9 of the March 5, 2019, Abandonment Cement Plug Procedure submitted on July 4, 2022 indicates that an inhibitor is to be added to the fresh water used to fill the wellbore. This is noncompliant with section 6A of the Guidelines, which requires the wellbore above the uppermost bridge plug to be filled with non-saline water containing no inhibitors.

Request:

Submit an updated abandonment program that meets the requirements of section 6A of the Guidelines for wellbore fluid.

1.5 Abandoned Well Marker

Preamble:

The abandoned well marker diagram included with the proposed well abandonment program does not reflect the changes made in the revised Guidelines, issued in May 2022.

Request:

Submit an updated abandonment program that includes the abandoned well marker requirements found in section 6E of the May 2022 Guidelines.



			Well Status		
Nova Scotia	<input type="checkbox"/>	West Coast	<input type="checkbox"/>	Suspended	<input checked="" type="checkbox"/>
Newfoundland	<input type="checkbox"/>	Northern	<input checked="" type="checkbox"/>	Completed	<input type="checkbox"/>
Gulf of St. Lawrence	<input type="checkbox"/>	Hudson Bay	<input type="checkbox"/>	Abandoned	<input type="checkbox"/>

APPLICATION TO ALTER CONDITION OF A WELL

This application form is to be submitted in triplicate to the District Conservation Engineer at least 45 days before commencement of operations.

Well Name: Paramount et al. Cameron L-44 Area: Cameron Hills, N.W.T.
 Coordinates: Lat: 60° 03' 31.86" N Long: 117° 39' 02.97" W
 Operator: Paramount Resources Ltd. Contractor: Flint Rig (Calgary) Ltd.
 Drilling Rig or Unit: #771 Depth: 1609 m. PBD
 Date ATDW Issued: 1989-12-11 Date of Last Operation: 1990-03-16

UWI: 300L446010117300

TYPE OF OPERATION

Conversion to disposal well.

SUMMARY OF PROPOSED OPERATIONS

See attached program.

Signed: [Signature] Title: Assistant Drilling Manager
 Date: November 15, 1990 Company: Paramount Resources Ltd.

APPROVAL

An approved copy of this notice should be posted at each wellsite.

Signed: [Signature]
 Conservation Engineer
 Date: 90-11-29
 ATDW No: 1403 File: 9211-P33-4-3

m/f



November 13, 1990

WORKOVER PROGRAM

PARAMOUNT et al CAMERON
L - 44
60° 10' 117° 30'

Prepared by : *P. G. Besler*
P. G. Besler
Assistant Drilling Manager

Approved by : *L. Jeffries*
L. Jeffries
Drilling Manager

Distribution :
Besler 1 Field + 1 Office
Well File Original

WORKOVER PROGRAM

PARAMOUNT et al CAMERON L - 44

A. SAFETY

All operations are to be carried out in accordance with government regulations and recognized safety procedures. Operations are to be conducted in a manner that results in the greatest degree of protection possible for the public, on-site personnel and the environment.

B. WORKOVER PROCEDURE

1. MISR c/w pump and clean tank. Extra "slop" tank required. Spot tubing trailer with approximately 1650 m (170 joints) of 73.0 mm tubing and 350 m (36 joints) of 60.3 mm tubing. There is no tubing in the well at the present time.
2. Check for pressure. Remove tubing bonnet and install BOP's. Function test.
3. Pick up 139.7 mm x 73.0 mm EUE Cardium Washover Retrieving tool. Run in on 73.0 mm OD., 9.67 kg/m, J-55, 8rd EUE tubing. Measure, drift and clean on way in the hole. Run in hole to PBD (approx. 1365 mKB.). Circulate well clean to fresh water. Lower WRT onto retrievable bridge plug, unset and allow time for pressure to stabilize if necessary. Circulate. Pull tubing and lay down bridge plug and retrieving tool.
4. Pick up HOMCO 120.7 mm washover mill, X/O, 1 - 79.3 mm drill collars, X/O and run in hole. Tag bridge plug at 1402 mKB. Outside cut bridge plug to remove upper slips. Pull out and run back in with overshot. Latch onto bridge plug and pull out. Repeat operation for each plug. If this method does not work, bridge plugs will need to be drilled/milled out. Ensure several mill and drill bits are stocked on location.
5. Pull out of hole with tubing. Lay down fishing tools.
6. Pick up 120 mm bit and 139.7 mm casing scraper. Run in hole and scrape casing interval 1315 to 1285 m. Continue in and tag PBD at approx. 1609 m. Circulate hole clean.
7. Pull tubing and lay down bit and scraper.
8. Pick up the following equipment:

1	- 101.6 mm Cardium SFS Spaded Float Shoe w/ FJAT,
1 jt.	- 101.6 mm OD, 16.37 kg/m, J-55, SMLS casing w/ FJAT,
1	- 101.6 mm Cardium LFC Latch Landing Float Collar w/ FJAT,
x jts.	- 101.6 mm casing (approximately 300 m),
1	- 139.7 mm x 101.6 mm FJAT Cardium MS-LA mechanical single cone liner hanger with setting sleeve and 1.8 m PBR.
9. Run in hole and tag PBD. Reciprocate liner and circulate hole clean.
10. Rig up CA unit. Batch mix 2.33 m³ slurry from 3.0 tonnes of 0:1:0 'G' + 0.75% FRC-3 + 0.15% FLC-60X + 0.10% FLC-2 + 0.10 % Defoamer-3. Cement liner in place. Reciprocate liner very slowly and hang off just before bumping wiper plug. Release from liner and pull tubing to approx. 100 m above liner top. Perform slight hesitation squeeze on cement above liner top to ensure annulus and perforations are cemented off. Backwash tubing clean of cement. Rig out cementers.

11. Pull tubing and lay down liner running tools. Pick up 120.7 mm bit and 1 - 79 mm drill collar. Run in hole. WOC at least 12 hrs. Drill out cement to top of liner.
12. Pull tubing. Lay down bit and drill collar. Pressure test casing to 10 MPa for 10 mins.
13. Pick up 79.4 mm (3-1/8") bit and run in hole on approx. 350 m of 60.3 mm OD, 6.99 kg/m, J-55, ERW tubing and the remainder with 73.0 mm tubing.
14. Clean out liner to float collar. Circulate hole clean.
15. Pull tubing and lay down bit.
16. Rig up Computalog conductor wireline. Run CBL - VDL - GR - CCL from PBTB to top of liner. Pick up perforating gun, 69.9 mm HSC with 12 gram charges at 90° phasing and 13 spm. Run in and perforate the Keg River interval 1572.0 to 1578.0 mKB.
17. Pick up 101.6 mm x 60.3 mm Cardium Husky M-1 Double Grip Retrievable packer with one joint of tubing for tail pipe and a 60.3 mm Cardium VR nipple one tubing joint above and run in hole to approx. 1570 m. Set packer with tail pipe at approx. 1579 mKB. Pressure test packer and annulus to 14 MPa for ten minutes.
18. Rig to and swab well in. Swab until well flows or a steady inflow is established.
19. Fill tubing and unset packer.
20. RU Fracmaster CA unit.

Establish feed rate at 10 MPa. Acidize perforations with 6 m³ of 15 % HCl acid blend. Slowly wash 5 -50 litre stages by the perms then squeeze the remaining 5.75 m³ into formation at low pressure. Overdisplace. Do not exceed 10 MPa while squeezing. Reverse circulate acid from well bore. Establish feed rate at 10 MPa. Circulate annulus to inhibited fresh water topped with diesel. Set packer. Establish feed rates at various pressures.

RO CA unit.

21. Kill well down tubing. Remove BOP and install wellhead.
22. Release service rig. Ensure wellsite is clean of any garbage and material spills. Chain and lock wellhead.
23. Set up facilities for disposal purposes.

C. BOP EQUIPMENT

Use 179.4 mm 20.7 MPa BOP's complete with blind rams, tubing rams, and annular to meet COGLA requirements. Function test and pressure test BOP's to 14 MPa.

Service Rig Manager and Wellsite Supervisor are to have valid PITS "Well Service Blowout Prevention" and "H2S Alert" certificate on site.

D. REPORTING

Wellsite Supervisor will report previous 24 hours operations ending at 0800 hours to Calgary Office at designated time.

E. GENERAL

1. All invoices are to be sent to the following address :

Paramount Resources Ltd.
4000, 350 - 7th Avenue S. W.,
CALGARY, ALBERTA,
T2P 3W5
2. P. O. Numbers are not used by Paramount. All field tickets must be signed by the Wellsite Supervisor and clearly marked with the well location as well as the AFE Number and Sub Item Number (ie : Stimulation is 21780-324).
3. All operations must be duly and accurately recorded on Daily Well Completion and Servicing Report.
4. Only authorized personnel directly involved with the operations are to be allowed on the wellsite.
5. Safety meetings to discuss program are to be held prior to commencing well completion, perforating, stimulation and testing.
6. Full co-operation by field personnel is to be maintained with the COGLA and other government agencies.
7. Under no circumstances will the possession and use of alcoholic beverages or illegal drugs be permitted on the wellsite or campsite.
8. Report movement of all tangible materials such as tubing, on the daily report when movement occurs. Tallies should be with "threads on" for inventory purposes.

F. PERSONNEL CONTACTS

	<u>Office</u>	<u>Home</u>	<u>Mobile</u>
Phil Besler (Completions)	266-2047	948-5367	
Lloyd Jeffries (Completions Alt.)	266-2047	269-2475	560-0631
COGLA		Yellowknife	920-8175
R.C.M.P.	Hay River		874-6555
Emergency Support	Ambulance	Hay River High Level	874-6512 926-2545
	Hospital	Hay River High Level	874-6512 926-3791

G. CONTRACT SERVICES

<u>SERVICE</u>	<u>COMPANY</u>	<u>CONTACT</u>	<u>LOCATION</u>	<u>TELEPHONE</u>
Service Rig	Flint #771	J. Suffern D. Gerow	Calgary High Level	263-6910 926-2234
Tubing	Wilson (Ipsco)	D. Butler	Calgary Edmonton	253-8881
Wellhead			Calgary	
Bond Log / Perforating	Computalog	K. Tipper D. Knops	Calgary High Level	265-6060 926-4481
Slickline	Northland	R. Linder	Calgary Gr. Prairie	255-9700 539-3257
Stimulation	Fracmaster	C. Schesnuik	Calgary Gr. Prairie	262-2222 539-6060
Tools	Cardium	K. Stewart	Calgary High Level	262-9586 926-4046
Fishing Tools	Homco		High Level	926-3711

WELL INFORMATION**PARAMOUNT et al CAMERON****L - 44****60°10' 117°30'**

G. L. E. :	745.40 m	SPUD :	1989-12-29 @ 0415 hrs
K. B. E. :	749.10 m	R. R. :	1990-01-20 @ 1615 hrs
Tbg. Dist. "h" :	m	DAYS :	22.5
T. F. E. :	m		
Dist. "H" :	4.00 m	ADW :	1403
C. F. E. :	666.70 m	CLASSIFICATION :	Exploratory
		UWI :	300L446010117300
P. B. T. D.:	1402.00 m	FIELD :	n/a
T. D. :	1634.00 m		

Working Interest Owners :	(OP)	Paramount	74.0%
		Tarragon	25.0%
		Camreco	1.0%

SURFACE CASING : Drilled 311.2 mm to 391 m.
Set 30 jts of 244.5 mm OD., 53.6 kg/m, J-55, 8-rd LT&C, ERW., (IPSCO) at 389.2 mKB.
Cement with 30 tonnes 0:1:0 Class "G" + 2% CaCl₂ (100% excess).
FLOT @ 394 m = 22 kPa/m

MAIN HOLE : Drilled 222.2 mm to 1634 m.
Mud system : 391-1262 m, air & foam
1262-1234 m, gel-chem

CORES : n/a

LOGS : 1990-01-17 Schlumberger
Phasor - SFL - GR
CNL - LDT - DAC - GR
Array Sonic - GR
ML - GR - XY
VSP - SAT

D. S. T. 's : DST #1 : KEG RIVER - 1525 to 1560 mKB
Times : 15 / 30 / 45 / 90
PF : WAB incr to SAB in 2 min, steady. NGTS.
VO : WAB incr to SAB, decr to weak in 20 min. Dead in 23 min. NGTS.
Rec. : 135 m gassy H₂S cut mud,
857 m gassy H₂S cut salt water.
IHP : 16983 kPa PFP : 4741 kPa ISIP : 10690 kPa
FFP : 8448 kPa
IFP : 8000 kPa
FHP : 10667 kPa FFP : 10672 kPa FSIP : 10707 kPa

PRODUCTION CSG. : 1634.0 m to Surface - 139.7 mm OD., 23.1 kg/m, IK-55, 8rd LT&C, ERW (Ipsco)

Stage #1 Cement - 1634 - 1353.7 m
13.2 t 0:1:0 "G" + 0.8% NFL-3 + 0.1% SPC12000

Stage #2 Cement - 1353.7 - 390 m
77.5 t 0:1:8 "G" + 0.75% T-10

Stage tool @ 1353.75 mKB; ECP @ 1354.38 mKB.

WELLHEAD :

CROWN/TUNDRA

244.5 mm SOW x 279.46mm 20.7 MPa Type "?" casinghead with LPSO's (S/N ???)

279.4 mm 20.7 MPa x 179.4 mm 20.7 MPa Type "?" tubing head with 2 - 52.4 mm SSO (S/N 25313-17). Valves ?

179.4 mm x 73.0 mm EUE Type "CT" tubing hanger

179.4 mm 20.7 MPa x 65.1 mm 34.5 MPa tubing bonnet w/ 73.0 mm EUE

1 - 65.1 mm 34.5 MPa WKM gate valve w/RTJ & T-21 trim

65.1 mm 34.5 MPa x 52.4 mm 34.5 MPa x 73.0 mm EUE flow tee

52.4 mm 20.7 MPa McEvoy gate valve w/RTJ & T-21 trim

PRODUCING ZONE : none

PERFORATIONS : Correlated to Schlumberger CNL - LDT - GR - DAC Main Pass of 1990-01-17 :

KEG RIVER	(1529.0 - 1531.0 mKB)
MUSKEG	(1499.0 - 1501.0 mKB)
SULPHUR POINT	(1425.5 - 1429.5
	+1430.5 - 1433.0 mKB)
SLAVE POINT	(1385.0 - 1386.0 mKB)
	(1371.5 - 1374.0
	+1386.0 - 1390 mKB)

CASED HOLE LOGS :	Computalog	1990-02-24	CBL-VDL-GR-CCL, 1604-1333 m
		1990-02-26,27	CCL-Perf, 1529-1531 m CCL-B.P., 1520 m CCL-B.P., 1515 m
Phoenix	1990-03-01		CCL-Perf, 1499-1501 m
			CCL-B.P., 1450 m
			CCL-Perf, 1425.5-1429.5 + 1430.5-1433 m
	1990-03-04		CCL-B.P., 1402 m
			CCL-Perf, 1385-1386 m
	1990-03-05		CCL-Perf, 1371.5-1374 + 1386-1390 m
		Computalog	1990-03-15

WORKOVERS : n/a

PRODUCTION TUBING :

- no tubing in hole.
- 1 - 139.7 mm X 73.0 mm Cardium WRP bridge @ 1365 mKB.

PARAMOUNT et al CAMERON

1990-11-12
Rev. 0.0

L - 44

60° 10' 117° 30'

WELL COMPLETION SCHEMATIC

KBE : 749.10 m
GLE : 745.40 m

Tbg. "h" : ? m
Csg. "H" : 4.00 m

TFE : ? m
CFE : 666.70 m

311.2 mm hole to 391 m

Set 244.5 mm, 53.6 kg/m,
K-55, LT&C ERW casing
@ 389.2 m.

Cemented to surface with
30 t Class A + 2% CaCl₂

Tubing as follows from top: - none in hole

Cardium WRP Tubing Retrieveable B.P. @ 1365 m

1371.5 - 1374.0 mKB Slave Point
1385.0 - 1390.0 mKB perforations

B.P. @ 1402 m

1425.5 - 1429.5 mKB Sulphur Point
1430.5 - 1433.0 mKB perforations

B.P. @ 1450 m

1499.0 mKB Muskeg perforations
1501.0 mKB

B.P. @ 1520 & 1515 m

1529.0 mKB Keg River perforations
1531.0 mKB

PBTD 1609 mKB

Set 139.7 mm, 23.1 kg/m,
IK-55, LT&C, ERW casing
@ 1636.0 m.

Cemented with

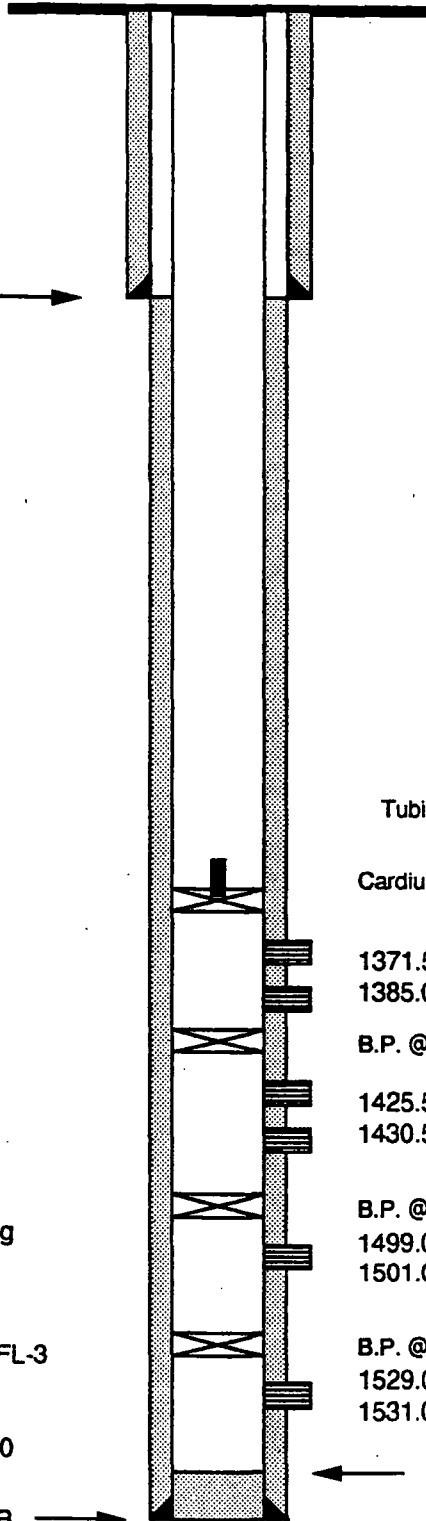
Stage # 1: 1634 - 1354 m

13.2 t 0:1:0 'G' + 0.8% NFL-3
+ 0.1% SPC12000

Stage # 2: 1354 - 390 m

77.5 t 0:1:8 + 0.75% T-10

222.2 mm hole to 1634 mKB



LABORATORY RESULTS

All Tests Performed According to API Spec 10.

Cement Blend 0:1:0 Class "G" + .75% FRC-3
 + .15% FLC-60X
 + .10% FLC-2
 + .10% Defoamer-3

Depth 1600	m	Slurry Weight	1876	kg/m ³
BHST 50	°C	Slurry Yield	.777	m ³ /tonne
BHCT 30	°C	Mix Water	.46	m ³ /tonne

THICKENING TIME

5:40 (Hours:Minutes) to 100 Bc
5:27 (Hours:Minutes) to 70 Bc
5:09 (Hours:Minutes) to 40 Bc

FLUID LOSS @ 30°C

62 cm³ after 30 minutes (measured)

RHEOLOGY @ 30°C

300 rpm Dial Deflection Reading	29
200 rpm Dial Deflection Reading	19
100 rpm Dial Deflection Reading	11
6 rpm Dial Deflection Reading	1

Power Law

n' (Dimensionless)	.8526
K' (mPa.sec n ¹ /cm ²)	72.65

Power Law Model	
Critical Reynolds Number	3100
Open Hole Diameter	120 mm
Casing Diameter	101 mm
Critical Pump Rate	.45 m ³ /min
Critical Velocity	137.8 m/min

COMPRESSIVE STRENGTH

3.5 MPa after 7:26 hours
15.5 MPa after 24:00 hours

Final Temperature	50 °C
Final Pressure	20,685 kPa

FREE WATER

0 mls/250 mls



CAMERON L-44

CNL-LDT-GR-Cal

1990-01-16

KBE: 749.1

1525

Keg
River

10000

1550

Proposed

1575

C

BS

GR

DRHO

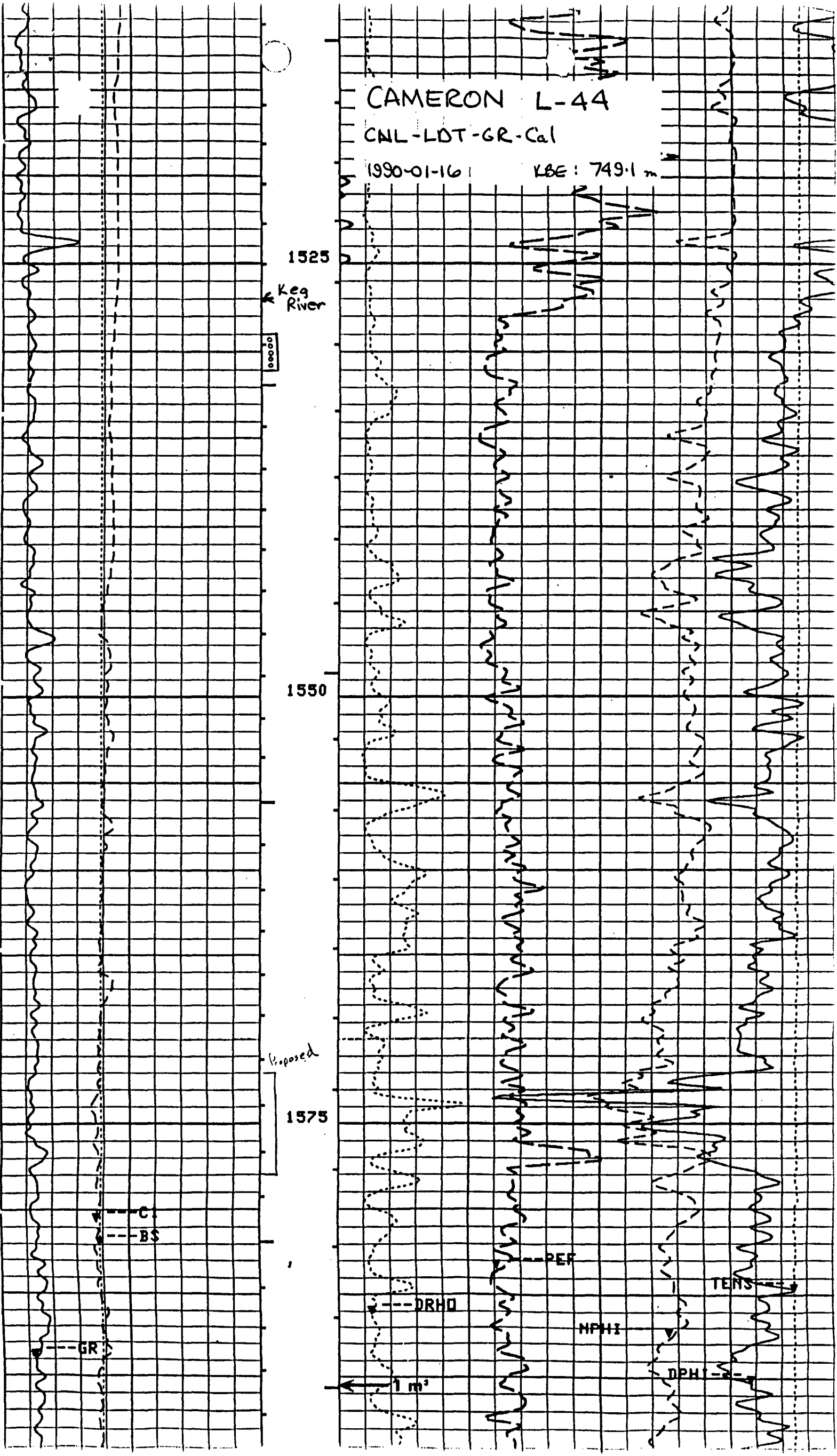
PER

NPHI

TEMP

DPHI

1 m³





Canada Oil and Gas
Lands Administration

Administration du pétrole
et du gaz des terres du Canada

P.O. Box 1500
Yellowknife, N.W.T.
X1A 2R3

C.P. 1500
Yellowknife (T.N.-O.)
X1A 2R3

Your file Votre référence

Our file Notre référence

1990-11-28

Mr. Lloyd Jeffries
Drilling Manager
Paranount Resources Ltd.
4100 First Canadian Centre
350 - 7th Avenue S.W.
Calgary, Alberta
T2P 3W5

Dear Mr. Jeffries:

Re: Paranount et al Cameron L-44 D.A. 1403

Enclosed please find an approved copy of the Application to Alter Condition of a Well for the above well.

Please give this office a minimum of 48 hours notice of the planned commencement of the workover operation and ensure that daily reports are submitted to our office via telecopier (403) 873-87071.

Yours truly,

Maurice D. Thomas
Manager,
Northern Region

BR/jr

Encls.

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

PROGRAM WAS

CANCELLED

SEE LETTER 91-08-02

ed



		Well Status	
Nova Scotia	<input type="checkbox"/>	West Coast	<input type="checkbox"/> Suspended
Newfoundland	<input type="checkbox"/>	Northern	<input checked="" type="checkbox"/> Completed
Gulf of St. Lawrence	<input type="checkbox"/>	Hudson Bay	<input type="checkbox"/> Abandoned

APPLICATION TO ALTER CONDITION OF A WELL

This application form is to be submitted in triplicate to the District Conservation Engineer at least 45 days before commencement of operations.

Well Name: Paramount et al. Cameron L-44 Area: Cameron Hills, N.W.T.
 Coordinates: Lat: 60° 03' 31.86" N Long: 117° 39' 02.97" W
 Operator: Paramount Resources Ltd. Contractor: Flint Rig (Calgary) Ltd.
 Drilling Rig or Unit: #771 Depth: 1609 m PBD
 Date ATDW Issued: 1989-12-11 Date of Last Operation 1990-03-16
 UWI: 300L446010117300

TYPE OF OPERATION

Conversion to disposal well.

SUMMARY OF PROPOSED OPERATIONS

See attached program.

Signed: *Bill Besler* Title: Assistant Drilling Manager
 Date: November 15, 1990 Company: Paramount Resources Ltd.

APPROVAL

An approved copy of this notice should be posted at each wellsite.

ADEQUATE !
 REVIEWED BY BK
 DATE 90-11-29

Signed: *W. Skonec*
 Conservation Engineer
 Date: 90-11-29
 ATDW No: 1403 File: 9211-P33-4-3