

National Energy
Board



Office national
de l'énergie

File: WID# 2047 & 2033
2 February 2007

Mr. D. Block
Drilling Consultant
Paramount Resources Ltd.
4700 Bankers Hall West
888 - 3rd Street SW
Calgary, AB T2P 5C5
Facsimilie 403-266-6032

Dear Mr. Block:

**Approval to Drill a Well for Para et al Cameron A-03 (WID# 2047) and
Para et al Cameron L-73 (WID# 2033)**

Thank you for your applications to drill the Keg River injection well, Para et al Cameron A-03 and the Sulphur Point oil well, Para et al Cameron L-73. Paramount Resources Ltd. is hereby given approval to drill the wells, A-03 and L-73 in accordance with section 83 of the *Canada Oil and Gas Drilling Regulations*. Attached are signed ADW forms which are to be posted in a conspicuous place at each well site. Any changes or deviation from the approved programs will require the additional specific approval of the Chief Conservation Officer.

Please be reminded that all oil and gas activities are, at minimum, to meet the requirements of the *Canada Oil and Gas Drilling Regulations*, the *Oil and Gas Occupational Safety and Health Regulations* and the *Canada Labour Code, Part II*.

Paramount is reminded that it must comply with the requirements of the Chief Conservation Officer's 24 May 2005 direction regarding operating conditions and air quality (letter attached).

Yours truly,

Bharat C. Dixit
Chief Conservation Officer

Attachment

cc: G. Green (INAC)

444 Seventh Avenue SW
Calgary, Alberta T2P 0X8

444, Septième Avenue S.-O.
Calgary (Alberta) T2P 0X8

Canada

Telephone/Téléphone : (403) 292-4800
Facsimile/Télécopieur : (403) 292-5503
<http://www.neb-one.gc.ca>
Telephone/Téléphone : 1-800-899-1265
Facsimile/Télécopieur : 1-877-288-8803

Attachment
Approval to Drill a Well for
Para et al Cameron A-03 (WID# 2047) and
Para et al Cameron L-73 (WID# 2033)

1. The Approval to Drill a Well form is to be displayed at a prominent place on the drill site as per section 103 of the *Canada Oil and Gas Drilling Regulations*. Also, copies of the *Canada Oil and Gas Drilling Regulations* as well as the *Oil and Gas Occupational Safety and Health Regulations* are to be kept at the drill site and available on request by any person on the drill site (section 102 of the *Canada Oil and Gas Drilling Regulations* and paragraph 125.(1)(e) of the *Canada Labour Code, Part II*, respectively).
2. Drill Cuttings Sampling Requirements:
 - a) 5 metre samples: (See specific ADW for intervals): 2 vial sets, 1 bagged set (500 gm) dried. No geochem samples.
 - a) All samples must be delivered to the Geological Survey in Calgary at 3303 33rd Street NW to the attention of the Head, Core and Sample Repository. A copy of the core and sample transmittal letter must be forwarded to the Chief Conservation Officer at the National Energy Board.
3. Well suspension or abandonment operations are required to meet the requirements of the *Canada Oil and Gas Drilling Regulations*. Upon program termination a "Well Termination Record" is required to be submitted complete with a wellbore schematic.
4. Geological reports (including descriptions, strip logs and gas detection readings) and drilling reports are to be emailed to dailyreports@neb-one.gc.ca daily by 8:30 am. Please contact Lori-Ann Sharp (403-299-1994) should there be any difficulty in delivery of the daily drilling reports.
5. Please submit two paper copies and 1 PDF version of all final well report data; in addition, please submit one LAS copy of final log prints. Please ensure compact discs are maximized and submitted with the final well report.
6. Please include a final well survey signed by a Canada Land Surveyor in the final well report.
7. Additional information to be filed with the Chief Conservation Officer includes a description of drill chip samples, core, fluid samples and DST results. Analyses performed on any and all core, pressure data and temperature data must be submitted.
8. Unless otherwise directed by the Chief Conservation Officer, Paramount shall implement or cause to be implemented all of the policies, practices, mitigative measures, recommendations and procedures for the protection of the environment included in or referred to in the operator's application, Environmental Protection Plan, Air Emissions Mitigation Plan, and subsequent submissions.

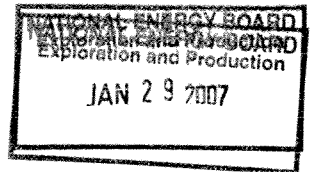
Attachment
Approval to Drill a Well for
Para et al Cameron A-03 (WID# 2047) and
Para et al Cameron L-73 (WID# 2033)

9. Paramount shall ensure that the Environmental Protection Plan required under section 60 of the *Canada Oil and Gas Production and Conservation Regulations* includes:
 - a. current mitigation, monitoring and remediation commitments with respect to environmental protection for all construction and operation activities to be carried out in the Cameron Hills field; and
 - b. a plan for notification of government agencies and other affected parties in the event of an unforeseen construction or operational incident that affects components of the environment.
10. Paramount shall ensure that in the event its activity is cause for any deposit of sediment into a water body/watercourse, it immediately implement mitigation or remediation measures and notify the Chief Conservation Officer, Fisheries and Oceans Canada, Environment Canada and the Ka'a'Gee Tu First Nation.
11. Paramount shall meet the Guideline for Ambient Air Quality Standards in the Northwest Territories when conducting any flaring associated with the A-03 and L-73 well drilling program.
12. Paramount shall ensure that the annual environmental report required under section 88 of the *Canada Oil and Gas Production and Conservation Regulations* includes:
 - a. confirmation in plain language, by an officer of the company, that the approved well drilling program was completed in compliance with all applicable conditions in this approval. If compliance with any of these conditions cannot be confirmed, the officer of the company shall file with the Chief Conservation Officer details in plain language as to why compliance cannot be confirmed or a plan for achieving compliance; and
 - b. a description of all environmental mitigation and remediation measures taken by Paramount in response to sediment deposits into a waterbody/watercourse and areas of erosion in the Cameron Hills field.
13. Paramount shall ensure that the components of the annual environment report are made readily available to the Parties to the Environmental Assessment (EA03-005) and the public in a manner approved by the Chief Conservation Officer.
14. Paramount shall submit all components of the Annual Environmental Report for the Cameron Hills field required under section 88 of the *Canada Oil and Gas Production and Conservation Regulations* to the Chief Conservation Officer by July 1, 2007.

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Exploratory ☐
Development ☒

Other (N/A)

Delineation ☐
Service ☐

APPROVAL TO DRILL A WELL

This application is submitted under Section 82.(1) of the *Canada Oil and Gas Drilling Regulations* (SOR/79-82). When approved under Section 83 of the Regulations it is the requisite approval for the commencement of drilling operations.

Well Name:	Para Et Al Cameron A-03		
Operator:	Paramount Resources Ltd.		
Operating License No.:	1159	Drilling Program No.:	
Contractor:	Precision Drilling Ltd.	Interest Identifier:	Production Licence 17
Drilling Rig or Unit:	220	Estimated Well Cost:	\$1500000.00
Land Use Permit No.:	MV2006A0033	Water Licence No.:	MV2006L1-0010
Location:	Unit: A Section: 03	Grid:	60-10-117-30
Coordinates:	Surface: Lat.: 60°2'12.3"	Long.:	117°30'0.9"
(NAD 27)	Bottom Hole: Lat.: 60°2'12.3"	Long.:	117°30'0.9"
Region:	Nwt	Field / Pool:	Cameron Hills
Elevation KB/RT:	773.8m	GL / Seafloor:	669.9m
Approximate Spud Date:	12/Feb/2007	Est. Days on Location:	14
Anticipated Total Depth:	1589.0m	Target Formation:	Keg River

EVALUATION PROGRAM

	Interval (m KB)	Comments
Ten-metre samples:
Five-metre samples:	1300.0 - 1589.0	2 sets of washed samples in 11 ml vials 1 set of 500 gram size, dried, in moisture proof bags
Canned sample intervals:
Conventional cores at:
Logs and Tests:	425.0 - 1589.0	STI-SP-GR, SPED-CNT-GR-DAC, BCS-GR-SAC, MICROLOG

CASING AND CEMENTING PROGRAM

O.D. (mm)	Weight (kg/m)	Grade	Setting Depth (m KB)	Cementing (m³)
406.0	70.2	A-53	12.2	0.5
219.0	35.7	J-55	425.0	24.5
139.0	23.0	J-55	1589.0	30.8

B.O.P. Equipment: Sour service 279 mm X 21 MPa with double rams and annular

Other Information:

Signed: <u>Dave Block</u>	Title: Drilling Consultant
Responsible Officer	
Name: Dave Block	Operator: Paramount Resources Ltd.
Date: Jan 26, 2007	Phone: (403)206-3834

NEB USE ONLY

An approved copy of this notice is to be posted at each drillsite. This operation is authorized under Section 5.(1)(b) of the *Canada Oil and Gas Operations Act* (O-7) and is subject to the terms and conditions attached to this authorization.

Date: 05 FEB 07
File: 9211
WID: 2047
UWI: 300A036010117300

Signed: [Signature]
Chief Conservation Officer

Canada

National Energy
Board



Office national
de l'énergie

NEB File: 2620-D-4-7
24 May 2005

Mr. Ed Kustan
Paramount Resources Ltd.
4700 Bankers Hall West, 888 3rd Street SW
Calgary, AB T2P 5C5
Email: ed.kustan@paramountres.com

Dear Mr. Kustan:

Subject: Paramount Resources Ltd. Cameron Hills Field - Operating Conditions

The National Energy Board (NEB) requests that Paramount Resources Ltd. (Paramount) comply with the following air quality conditions on operations in its Cameron Hills field:

1. Paramount shall, as a component of environmental protection planning required for the Cameron Hills field under section 60. of the *Canada Oil and Gas Production and Conservation Regulations*, ensure that:
 - a. a qualified air quality specialist maintains operation of,
 - i. meteorological monitoring equipment to monitor and record wind speed, wind direction, standard deviation of wind direction and temperature on an instantaneous continuous basis, and,
 - ii. instantaneous, continuous gas analysis monitoring equipment to track ambient air quality, including, at a minimum, calculation and recording of 1 hour average SO₂, NO_x and H₂S concentrations;
 - b. data collected under conditions 1.a.i. and 1.a.ii. are submitted to the Chief Conservation Officer in a manner approved by the Chief Conservation Officer;
 - c. following Chief Conservation Officer approval of sufficient collection of meteorological data under condition 1.a.i., detailed re-modeling of the various development scenarios for the Cameron Hills field is undertaken by a qualified air quality specialist and submitted to the Chief Conservation Officer in a manner approved by the Chief Conservation Officer;

.../2.

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- d. the report(s) prepared under condition 1.c. is made readily available to the parties to the Environmental Assessment (EA03-005) and the public in a manner approved by the Chief Conservation Officer;
 - e. prior to new production from the Cameron Hills field, Paramount submit to the Chief Conservation Officer for approval, and make readily available to the parties to the Environmental Assessment (EA03-005) and the public in a manner approved by the Chief Conservation Officer, a Cameron Hills field emission mitigation plan that details,
 - a strategy for demonstrating that current and future SO₂, NO_x and H₂S emissions in the Cameron Hills field will not result in exceedence of relevant air quality standards,
 - a statement describing Paramount's commitment to minimizing emissions from facilities in the Cameron Hills field,
 - a contingency plan for selection of mitigation measures to be implemented in the event that SO₂, NO_x and H₂S emissions in the Cameron Hills field result in measured or predicted exceedence of relevant air quality standards, the contingency plan will include,
 - ⇒ a comprehensive listing of all the mitigation options (e.g., pollution prevention planning, best management/environmental practices, best available technology, shutdown) currently employed and proposed for future options, along with triggers and/or timelines for implementation, and
 - ⇒ the mitigation options considered and rejected, along with rationale for rejection; and,
 - f. the air quality standards used for analysis of the data collected, modeled and reported, as per conditions 1a. to 1.e. above, are identified and justified in submissions to the Chief Conservation Officer.
2. Paramount shall, as a component of the annual environment report required under section 88. of the *Canada Oil and Gas Production and Conservation Regulations*, ensure that:
 - a. a plain language report on the status of air quality at Cameron Hills (including, at minimum, monthly summaries of SO₂, NO_x and H₂S concentrations, listing all events of exceedence of relevant air quality guidelines and re-modeled development scenarios as available) is prepared by a qualified air quality specialist and submitted to the Chief Conservation Officer;
 - b. evidence that current SO₂, NO_x and H₂S emissions in the Cameron Hills field do not result in exceedence of relevant air quality standards is submitted to the Chief Conservation Officer; and,
 - c. the report prepared under condition 2.a. is made readily available to the parties to the Environmental Assessment (EA03-005) and the public in a manner approved by the Chief Conservation Officer.
 3. Paramount shall submit all components of the annual environment report required under section 88. of the *Canada Oil and Gas Production and Conservation Regulations* for the

Cameron Hills field to the Chief Conservation Officer by June 1 2006 for the year 2005 and yearly thereafter.

Paramount will be required by the *Canada Oil and Gas Operations Act* to obtain authorizations from the NEB to undertake the proposed Cameron Hills field developments evaluated in the Environmental Assessment (EA03-005). Paramount has not yet applied for those authorizations. In anticipation of the receipt of applications, the NEB has drafted the following to be included in the conditions attached to any future authorizations in the Cameron Hills field:

Unless otherwise directed by the Chief Conservation Officer, Paramount shall implement or cause to be implemented all of the policies, practices, mitigative measures, recommendations and procedures for the protection of the environment included in or referred to in the operator's application, subsequent submissions and committed to by Paramount in the Mackenzie Valley Environmental Impact Review Board Environmental Assessment process (EA03-005).

Paramount shall ensure that the environmental protection plan required under section 60. of the Canada Oil and Gas Production and Conservation Regulations includes:

- current mitigation, monitoring and remediation commitments with respect to environmental protection for all construction and operation activities to be carried out in the Cameron Hills field; and,*
- a plan for notification of government agencies and other affected parties in the event of an unforeseen construction or operational incident that affects components of the environment.*

Paramount shall ensure that in the event its activity is cause for any deposit of sediment into a water body/watercourse, it immediately implement mitigation or remediation measures and notify the Chief Conservation Officer, Fisheries and Oceans Canada, Environment Canada and the Ka'a'Gee Tu First Nation.

Paramount shall ensure that the annual environment report required under section 88. of the Canada Oil and Gas Production and Conservation Regulations includes:

- confirmation in plain language, by an officer of the company, that the approved [facilities (or activities)] were [completed and constructed (or completed)] in compliance with all applicable conditions in this [authorization (or approval)]. If compliance with any of these conditions cannot be confirmed, the officer of the company shall file with the Chief Conservation Officer details in plain language as to why compliance cannot be confirmed or a plan for achieving compliance; and,*
- a description of all environmental mitigation and remediation measures taken by Paramount in response to sediment deposits into a waterbody/watercourse and areas of erosion in the Cameron Hills field.*

24 May 2005

Paramount shall ensure that the components of the annual environmental report referred to in this condition are made readily available to the Parties to the Environmental Assessment (EA03-005) and the public in a manner approved by the Chief Conservation Officer.

Paramount shall submit all components of the annual environment report for the Cameron Hills field required under section 88. of the Canada Oil and Gas Production and Conservation Regulations to the Chief Conservation Officer by June 1 2006 for the year 2005 and yearly thereafter.

The contents of this letter do not eliminate any responsibility by Paramount to comply with any previous construction or operation conditions issued for the Cameron Hills field.

The NEB appreciates Paramount's initiative in the installation and operation of the meteorological and gas analysis monitoring equipment, in advance of receiving formal direction from the NEB. We look forward to further cooperation between the NEB, Paramount and the parties to the Environmental Assessment in implementing the recommended measures associated with operations in the Cameron Hills field.

Please contact Laura Van Ham, Environmental Specialist (tel: 403-292-4931) on or before 26 May 2005 if you have any questions or concerns regarding the above. After that time, please contact John Korec, Environmental Assessment Officer (tel: 292-6614).

Yours truly,



T.M. Baker
Chief Conservation Officer

c.c.: Ms. Shirley Maaskant, Paramount, email: Shirley.maaskant@paramountres.com
Mr. Vern Christensen, MVEIRB, email: vchristensen@mveirb.nt.ca
Mr. Herb Norwegian, Grand Chief, Deh Cho First Nation, fax: 867-695-2038
Mr. Roy Fabian, Chief, K'atlodeeche First Nation, fax: 867-874-3229
Ms. Karen Felker, Chief, West Point First Nations, fax: 867-874-2486
Mr. Albert Lafferty, President, Fort Providence Metis Local 57, fax: 867-699-4319
Mr. Lloyd Chicot, Chief, Ka'a'Gee Tu First Nation, fax: 867-825-2002
Mr. Greg Nyuli, Deh Gah Got'ie First Nation, fax: 867-699-3134
Mr. Rick Sanderson, Fort Providence Resource Management Board, fax: 867-699-3133
Mr. Rob Tordiff, President, Northwest Territories Metis Nation, fax: 867-872-2772
Mr. Gavin More, Government of Northwest Territories, email: gavin_more@gov.nt.ca
Mr. Bruce Hanna, Fisheries and Oceans Canada, email: HannaB@DFO-MPO.GC.CA
Mr. Fraser Fairman, Indian Northern Affairs Canada, email: fairmanf@inac-ainc.gc.ca
Mr. Wade Romanko, Environment Canada, email: wade.romanko@ec.gc.ca
Mr. Stephen Mathyk, Mackenzie Valley Land and Water Board, fax: 867-873-6610