



File: WID# 2067  
18 February 2010

Mr. D. Heenan  
Drilling Consultant  
Paramount Resources Ltd.  
4700 Bankers Hall West  
888 – 3<sup>rd</sup> Street SW  
Calgary, AB T2P 5C5

Dear Mr. Heenan:

**Approval to Drill a Well for Para et al Cameron N-06 (WID#2067)**

Thank you for your application to drill **Para et al Cameron N-06**. Paramount Resources Ltd. (Paramount) is hereby given approval to drill a well in accordance with paragraph 5(1)(b) of the *Canada Oil and Gas Operations Act*. Attached please find a signed "Approval to Drill a Well" form for N-06 and to which one copy is to be posted in a conspicuous place at each well site.

Please be reminded that all oil and gas activities are, at minimum, to meet the requirements of the *Canada Oil and Gas Drilling and Production Regulations*, the *Oil and Gas Occupational Safety and Health Regulations* and the *Canada Labour Code, Part II*. Any deviation from the approved programs will require the additional specific approval of the Chief Conservation Officer.

In addition, 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 (attached).

Should you have any questions with regards to these approvals or the new regulations, please do not hesitate to contact Abul Kabir at 403-292-5048 ([abul.kabir@neb-one.gc.ca](mailto:abul.kabir@neb-one.gc.ca)).

Yours truly,

John McCarthy  
Chief Conservation Officer

**Attachments**

444 Seventh Avenue SW  
Calgary, Alberta T2P 0X8

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

**Canada**

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



JAN 12 2010

## APPROVAL TO DRILL A WELL

## APPLICATION

Well Name Para et al Cameron N-06 Operator Paramount Resources Ltd  
Well Type Development Well If Other Type, please specify \_\_\_\_\_  
NEB Operating Licence No. 1221 Operations Authorization No. \_\_\_\_\_  
Drilling Rig or Unit 245 Contractor Precision Drilling  
Licence No. Production Licence 19 Estimated Well Cost \$51,800,000.00  
Station Keeping Not Applicable Land Structure Conventional Land  
Land Use Permit No. MV2009A0050 Issued by: Mackenzie Valley Land and Water Board  
Water Licence No. MV2009L1-0026 Issued by: Mackenzie Valley Land and Water Board  
Location Unit N Section 06 Grid 60 10 117 30  
Coordinates (NAD 27) Surface Lat 60 ° 5 ' 49.2 " Long 117 ° 31 ' 13.5 "  
Bottom Hole Lat 60 ° 5 ' 49.2 " Long 117 ° 31 ' 13.5 "  
Region NWT Mainland  
Target Formation Sulphur Point Field/Pool Cameron Hills /  
Well Path Vertical Discovery Well A-05  
Elevation KB/RT 717.8 m Ground Level / Seafloor 713.2 m  
Approximate Spud Date Feb 18 2010 Est. Days on Location 12 days  
Anticipated Total Depth 1438 m KB

## EVALUATION PROGRAM

Sample Type	Top to Bottom Interval (m KB)	Sample Interval (m)	Comments
Drill Cuttings	1280-1438	5.0	
Logs and Tests	360-1438	Other	Induction, density, neutron, GR, micro res. (TD to Slave Pt), sonic
Select	-	Select	
Select	-	Select	
Select	-	Select	

## CASING PROGRAM

O.D. (mm)	Weight (kg/m)	Grade	Setting Depth (m KB)
219	35.7	J-55	360
139	20.8	J-55	1438

Additional Information \_\_\_\_\_

"I certify that the information provided on this form is true and correct"

Name Andre Poitras Telephone \_\_\_\_\_  
Job Designation Drilling Manager E-Mail andre.poitras@paramontres.com  
Operator Paramount Resources Ltd  
Signature [Signature] Date 2010-02-11  
Responsible Officer of Company

## NATIONAL ENERGY BOARD APPROVAL

(Board Use Only)

An approved copy of this notice is to be posted at each drill site. 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.

Job Designation Chief Conservation Officer Well Identifier 2067 Unique Well Identifier 300N066010117300  
Signature [Signature] Date 18 Feb 2010  
NEB Authority

**Attachment**

**Approval to Drill a Well for Para et al Cameron N-06**

1. For Para et al Cameron N-06 it is requested that the 5 meter interval sampling begin as applied for
  - 2 sets of vials and 1 bagged set of samples is to be delivered to the Geological Survey in Calgary at 3303 33<sup>rd</sup> Street NW to the attention of the Head, Core and Sample Repository. A copy of all core and sample transmittal letters are to be forwarded to the Team Leader, Exploration and Production at the National Energy Board.
2. Well drilling, suspension or abandonment operations are required to meet the requirements of the *Canada Oil and Gas Drilling and Production Regulations*.
3. 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 [dailyreports@neb-one.gc.ca](mailto:dailyreports@neb-one.gc.ca) daily by 8:30 am. Please contact Data Coordinator at 403-299-2773 should there be any difficulty in delivery of the daily drilling reports.
5. Please submit two paper copies and one 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 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 any 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, subsequent submissions and committed to by Paramount in the Mackenzie Valley Environmental Impact Review Board Environmental Assessment process (EA03-005) including the Cameron Hills Environmental protection Plan (EPP) Manual.
9. Paramount shall, in the event that a flow rate occurs greater than the authorized 1.1 mmscfd or that gas with an H<sub>2</sub>S content greater than 3.4% is flared, report the event as a pollution incident as per section 75 of the Canada Oil and Gas Drilling and Production Regulations. The investigation report to be submitted to the NEB no later than 21 days after the day on which the incident occurred shall include, in addition to the section 75 requirements:
  - a) a post-flaring report that provides the maximum 1 hour and 24 hour SO<sub>2</sub> concentrations at ground level and canopy height, resulting from the event flow rates and H<sub>2</sub>S concentrations using coincident local meteorology, and
  - b) a specific remediation plan where required for any areas impacted by elevated SO<sub>2</sub> concentrations.





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](mailto: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 SO<sub>2</sub>, NO<sub>x</sub> and H<sub>2</sub>S 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.

- 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 SO<sub>2</sub>, NO<sub>x</sub> and H<sub>2</sub>S 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 SO<sub>2</sub>, NO<sub>x</sub> and H<sub>2</sub>S 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 1.a. 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 SO<sub>2</sub>, NO<sub>x</sub> and H<sub>2</sub>S 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 SO<sub>2</sub>, NO<sub>x</sub> and H<sub>2</sub>S 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](mailto:Shirley.maaskant@paramountres.com)  
Mr. Vern Christensen, MVEIRB, email: [vchristensen@mveirb.nt.ca](mailto: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](mailto:gavin_more@gov.nt.ca)  
Mr. Bruce Hanna, Fisheries and Oceans Canada, email: [HannaB@DFO-MPO.GC.CA](mailto:HannaB@DFO-MPO.GC.CA)  
Mr. Fraser Fairman, Indian Northern Affairs Canada, email: [fairmanf@inac-ainc.gc.ca](mailto:fairmanf@inac-ainc.gc.ca)  
Mr. Wade Romanko, Environment Canada, email: [wade.romanko@ec.gc.ca](mailto:wade.romanko@ec.gc.ca)  
Mr. Stephen Mathyk, Mackenzie Valley Land and Water Board, fax: 867-873-6610