

July 9, 2007

Mrs. Diana Mason  
State of Utah  
Division of Oil Gas and Mining  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

RE: Application for Permit to Drill - Petro-Canada Resources (USA), Inc.  
**State #16-41**- 2,310' FSL, 587' FEL, NE/4 SE/4,  
Section 16, T23S, R15E, SLB&M, Emery County, Utah

Dear Mrs. Mason:

On behalf of Petro-Canada Resources (USA), Inc. (Petro-Canada), Buys & Associates, Inc. respectfully submits the enclosed original and one copy of the Application for Permit to Drill (APD) for the above referenced SITLA surface and SITLA mineral vertical well. A request for exception to spacing (R649-3-2) is hereby requested based on topography since the new well location is located less than 460' of the drilling unit boundary. Petro-Canada is the only owner and operator within 460' of the proposed well. Included with the APD is the following supplemental information:

- Exhibit "A" - Survey plats, layouts and photos of the proposed well site;
- Exhibit "B" - Proposed location maps with access corridor;
- Exhibit "C" - Drilling Plan;
- Exhibit "D" - Surface Use Plan;
- Exhibit "E" - Paleontological Clearance;
- Exhibit "E" - Typical BOP and Choke Manifold diagram.

Please accept this letter as Petro-Canada's written request for confidential treatment of all information contained in and pertaining to this application.

Thank you very much for your timely consideration of this application. Please feel free to contact myself or Carla Konopka of Petro-Canada at 303-297-2100 if you have any questions or need additional information.

Sincerely,

*Don Hamilton*  
Don Hamilton  
Agent for Petro-Canada

cc: Alan Vrooman, Petro-Canada  
Carla Konopka, Petro-Canada  
Ed Bonner, SITLA  
Bart Kettle, Division of Oil, Gas and Mining

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**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT   
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>			5. MINERAL LEASE NO: <b>ML-50655</b>	6. SURFACE: State
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>			7. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A	
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>			8. UNIT or CA AGREEMENT NAME: N/A	
2. NAME OF OPERATOR: <b>Petro-Canada Resources (USA), Inc.</b>			9. WELL NAME and NUMBER: State 16-41	
3. ADDRESS OF OPERATOR: <b>1099-18th St, Suite 400</b> CITY <b>Denver</b> STATE <b>CO</b> ZIP <b>80202</b>			PHONE NUMBER: <b>(303) 297-2100</b>	10. FIELD AND POOL, OR WILDCAT: <del>Undesignated</del> <b>Wildcat</b>
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: <b>2,310' FSL, 587' FEL,</b>			11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NESE 16 23S 15E S</b>	
AT PROPOSED PRODUCING ZONE: <b>563645X 38.809780</b> <b>42957164 -110.266980</b>				
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>14.06 miles southwest of Green River, Utah</b>			12. COUNTY: <b>Emery</b>	13. STATE: <b>UTAH</b>
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>587'</b>	16. NUMBER OF ACRES IN LEASE: <b>640</b>	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40</b>		
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) <b>None</b>	19. PROPOSED DEPTH: <b>7,515</b>	20. BOND DESCRIPTION: <b>Fidelity Bond # 4127699</b>		
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>4,565' GR</b>	22. APPROXIMATE DATE WORK WILL START: <b>8/15/2007</b>	23. ESTIMATED DURATION: <b>30 days drilling, 40 days comp.</b>		

**PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
12-1/4"	9-5/8"	N-80 LT	43.5#	1,100	see Drilling Plan
8-1/2"	5-1/2"	P-110 LT	20#	7,515	see Drilling Plan

**ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER | <input checked="" type="checkbox"/> COMPLETE DRILLING PLAN                                   |
| <input type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER        | <input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER |

NAME (PLEASE PRINT) Don Hamilton TITLE Agent for Petro-Canada Resources (USA), Inc.  
SIGNATURE Don Hamilton DATE 7/9/2007

(This space for State use only)

API NUMBER ASSIGNED: 43-015-30721

APPROVAL:

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**DIV. OF OIL, GAS & MINING**



2007-08 Petro Canada State 16-41

Casing Schematic

BHP  $0.052(7331)12.5 = 4765 \text{ psi}$   
anticipate 4770 psi

Gas  $.12(7331) = 880$   
 $4765 - 880 = 3885 \text{ psi, MASP}$

BOPE 5M

Burst 3130  
70% 2191 psi

Max P @ surf. shoe  
 $.22(4431) = 975$   
 $4765 - 975 = 3790 \text{ psi}$

Test to 2191 psi

Stop prod cont.  
higher grade surf csg?

10-3/4"  
MW 8.6  
Frac 19.3

7"  
MW 12.5

Surface 12.5 18.2

TOC @ Brushy Basin of Morrison

726' Entrada  
869' Carmel  
1069' Navajo

1528' Kayenta  
1792' Wingate

2113' Chinle

2425' Shinarump  
2460' Moenkopi

2773' TOC w/ 4' w/o  
2926' Surface Sinbad  
2900. MD  
3138' White Rim

3591' Organ Rock

TOC @ 3832' Honaker Trail  
3820.

4715' Paradox

5965' Paradox Salt

7331' Leadville  
Production  
7331. MD 7381' Mississippian

Well name:

**2007-08 Petro Canada State 16-41**

Operator: **Petro-Canada Resources (USA) Inc.**

String type: **Surface**

Project ID:

**43-015-30721**

Location: **Emery County**

**Design parameters:**

**Collapse**

Mud weight: 8.600 ppg  
Design is based on evacuated pipe.

**Burst**

Max anticipated surface pressure: 2,790 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 3,138 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

Tension is based on buoyed weight.  
Neutral point: 2,534 ft

**Environment:**

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 116 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 290 ft

Cement top: Surface

**Non-directional string.**

**Re subsequent strings:**

Next setting depth: 7,465 ft  
Next mud weight: 12.500 ppg  
Next setting BHP: 4,847 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 3,170 ft  
Injection pressure: 3,170 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2900	10.75	40.50	J-55	ST&C	2900	2900	9.925	1597.6
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	1296	1580	1.220	3138	3130	1.00	103	420	4.09 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & Minerals

Phone: 801-538-5357  
FAX: 801-359-3940

Date: October 24, 2007  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 2900 ft, a mud weight of 8.6 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name:

**2007-08 Petro Canada State 16-41**Operator: **Petro-Canada Resources (USA) Inc.**

String type: Production

Project ID:

43-015-30721

Location: Emery County

**Design parameters:****Collapse**Mud weight: 12.500 ppg  
Design is based on evacuated pipe.**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 178 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,500 ft

Cement top: 3,820 ft

**Burst**Max anticipated surface  
pressure: 3,148 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP 4,760 psi

No backup mud specified.

**Tension:**8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)**Non-directional string.**

Tension is based on buoyed weight.

Neutral point: 5,944 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft <sup>3</sup> )
1	7331	7	29.00	P-110	LT&C	7331	7331	6.059	1529.1
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	4760	8530	1.792	4760	11220	2.36	172	797	4.62 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & MineralsPhone: 801-538-5357  
FAX: 801-359-3940Date: October 24, 2007  
Salt Lake City, Utah

## Remarks:

Collapse is based on a vertical depth of 7331 ft, a mud weight of 12.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop &amp; Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

# DRILLING PLAN

## Attachment for Permit to Drill

**Name of Operator:** Petro-Canada Resources (USA)  
**Address:** Suite 400  
1099-18 St  
Denver, Colorado 80202  
**Well Location:** State 16-41  
2,310' FSL, 587' FEL, NE/4 SE/4,  
Section 16, T23S, R15E  
Emery County, UT

1. GEOLOGIC SURFACE FORMATION Morrison

2 & 3. ESTIMATED DEPTHS OF IMPORTANT GEOLOGIC MARKERS AND FORMATIONS EXPECTED TO CONTAIN WATER, OIL AND GAS OR MINERALS

<u>Formation</u>	<u>Depth</u>
Morrison	Surface
Entrada	726 ft
Carmel	869 ft
Navajo	1,069 ft*
Kayenta	1,528 ft
Wingate	1,792 ft*
Chinle	2,113ft
Shinarump	2,425 ft
Moenkope	2,460 ft
Sinbad	2,926 ft
White Rim	3,138 ft*
Organ Rock	3,591 ft
Honaker Trail	3,832 ft*
Paradox	4,715 ft
Paradox Salt	5,965 ft*
Leadville	7,331 ft
Mississippian	7,381 ft*
TD	7,515 ft

\* PROSPECTIVE PAY

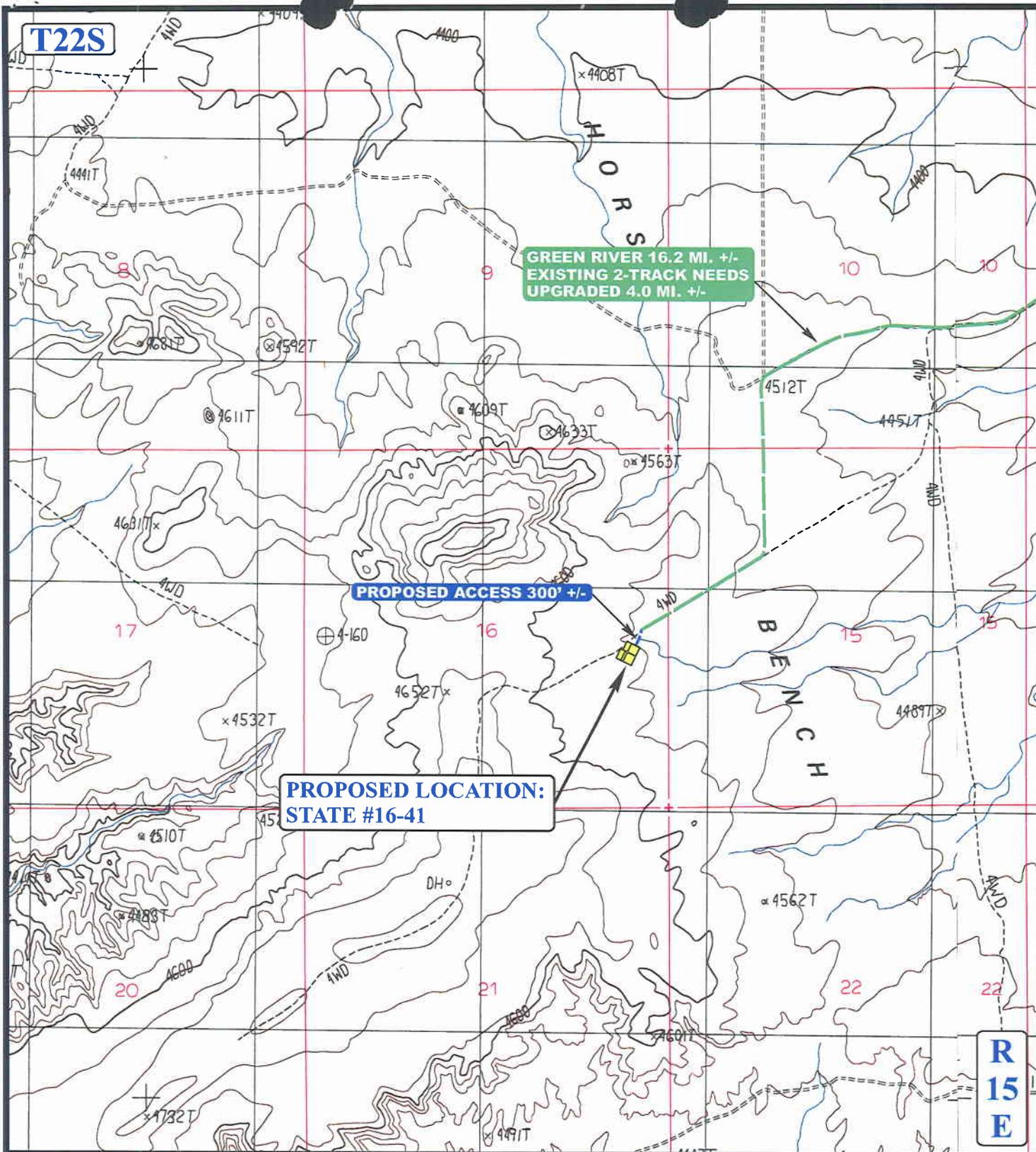
Surface elevation – 4565 feet ASL

4. PROPOSED CASING PROGRAM

All casing used to drill this well will be new casing.

<u>Type</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Conn.</u>	<u>Top</u>	<u>Bottom</u>	<u>Hole</u>
Surface	9.625"	43.5 ppf	N-80	L&TC	0'	1,100'	12-1/4"
Production	5.500"	20.0 ppf	P-110	L&TC	0'	7,515'	8 1/2"

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**LEGEND:**

-  EXISTING ROAD
-  PROPOSED ACCESS ROAD



**Petro-Canada (USA), Inc.**

**STATE #16-41**  
**SECTION 16, T23S, R15E, S.L.B.&M.**  
**2310' FSL 587' FEL**



**Uintah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAG (435) 789-1813

**TOPOGRAPHIC** 06 12 07  
**MAP** MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: L.K. REVISED: 06-20-07



## DRILLING PLAN

### APPROVAL OF OPERATIONS

#### 5. OPERATOR'S MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL

Surface hole: No BOPE will be utilized.

Production hole: Prior to drilling out the surface casing shoe, 5,000 psi BOP equipment will be installed. The pipe rams will be operated at least once per day from surface casing depth to total depth. The blind rams will be tested once per day from surface casing depth to total depth if operations permit.

A diagram of the planned BOP equipment for normal drilling operations in this area is attached. As denoted there will be two valves and one check valve on the kill line, two valves on the choke line, and two adjustable chokes on the manifold system. The BOP "stack" will consist of two BOP rams (1 pipe, 1 blind) and one annular type preventer, all rated to a minimum of 5,000 psi working pressure.

The BOP equipment will be pressure tested prior to drilling below the surface casing shoe. All test pressures will be maintained for fifteen (15) minutes without any significant pressure decrease. Clear water will be circulated into the BOP stack and lines prior to pressure testing. The BLM and the state of Utah Division of Oil, Gas and Mining will be notified 24 hours in advance of all BOP pressure tests.

#### 6. MUD SYSTEMS

Sufficient mud materials to maintain mud properties, control lost circulation and to contain "kick" will be available at the well site.

<u>Interval</u>	<u>Mud Weight (ppg)</u>	<u>Viscosity</u>	<u>Fluid Loss</u>	<u>Remarks</u>
0 – 40'	8.3 – 8.6	27-40	--	Native Spud Mud
40' – 1,100'	8.3 – 8.6	27-40	15 cc or less	Native/Gel/Lime
1,100' – 4500'	8.6 – 9.3	35-45	15 cc or less	Freshwater/KCl/Polymer
4500'-TD	9.3 – 12.5	45-55	15 cc or less	Freshwater/KCl/CaCl/ Salt Gel/Barite/Polymer

#### 7. BLOOIE LINE

- An automatic igniter will not be installed on blooie line. The blooie will have a constant ignition source.
- A "target tee" connection will be installed on blooie line for 90° change of directions for abrasion resistance.
- "Target tee" connections will be a minimum of 50 feet from wellhead.
- The blooie line discharge will be a minimum of 100 feet from the wellhead.

#### 8. AUXILIARY EQUIPMENT TO BE USED

- Upper Kelly cock; lower Kelly cock will be installed while drilling
- Inside BOP or stab-in valve (available on the rig floor)
- Safety valve(s) and subs to fit all string connections in use
- Mud monitoring will be visually observed

#### 9. TESTING, LOGGING AND CORING PROGRAMS TO BE FOLLOWED

Cores	None anticipated.
Testing	None anticipated.
Sampling	30' samples; surface casing to TD Preserve samples all show intervals
Surveys	Run every 1,000' and on trips
Logging	DLL-GR-SP, FDC-CNL-GR-Caliper-Pe-Microlog, Sonic-GR, all TD to base of surface casing, GR through surface casing.

#### 10. ANTICIPATED ABNORMAL PRESSURES OR TEMPERATURES EXPECTED

- No abnormal temperatures are anticipated.
- Based on offset well information, bottom Hole Pressure is expected at 5491 psi – 12.5 lb/gal. Barite will be on location to enable higher mud weights if needed.
- The formations to be penetrated do not contain known H<sub>2</sub>S gas.

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## DRILLING PLAN

### APPROVAL OF OPERATIONS

#### 11. WATER SUPPLY

- The water supply for construction, drilling and operations will be provided by the city of Green River, a local source of municipal water, through a direct water purchase.
- No water pipelines will be laid for this well.
- No water well will be drilled for this well.
- Drilling water for this will be hauled on the road(s) shown in Exhibit B.
- Should additional water sources be pursued they will be properly permitted through the State of Utah – Division of Water Rights.

#### 12. CEMENT SYSTEMS

- Surface Casing: Lead: 155 sacks Rockies LT + 0.125lbm/sack Poly-E-Flake + 0.25 lbm/sack Kwik Seal + 17.3 gal/sack Fresh Water  
Weight: 11.5 ppg  
Yield: 2.94 cu.ft./sack  
Interval 700 feet to surface.  
Tail: 180 sacks Rockies LT + 0.125lbm/sack Poly-E-Flake + 0.25 lbm/sack Kwik Seal; + 9.33 gal/sack Fresh Water  
Weight: 13.5 ppg  
Yield: 1.80 cu.ft./sack  
Interval 1200 feet to 700 Feet.  
Cement will be circulated to surface with 100% excess
- Production Casing: 1960 sacks Premium Cement + 0.6% Halad R-413 + 12% Salt +0.2% CFR-3 + 0.2% HR-5 + 0.125 lbm/sack Poly-E-Flake+ 4.23 gal/sack Fresh Water;  
Weight: 16.5 ppg  
Yield: 1.09 cu.ft./sack  
Cement will be placed in two stages through the use of a stage tool. Depth determined based on potential pay sections, estimated at 4000 ft.  
Top of cement - 1000 feet.  
Volume will be log caliper +10% (volumes shown are for 25% over hole size)

#### 13. ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS

Starting Date: August 15, 2007  
Duration: 30 days, drilling and 40 days completion

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## **SURFACE USE PLAN**

Attachment for Permit to Drill

**Name of Operator:** Petro-Canada Resources (USA)  
**Address:** Suite 400  
1099-18 St  
Denver, Colorado 80202  
**Well Location:** State 16-41  
2,310' FSL, 587' FEL, NE/4 SE/4,  
Section 16, T23S, R15E  
Emery County, UT

The dirt contractor will be provided with an approved copy of this document prior to initiating construction. The well site is located on SITLA surface and SITLA mineral.

### **1. Existing Roads**

- a. Proposed access road will utilize a 3.1 mile segment of the existing pavement surface Green River airport access road under Emery County maintenance from Green River town to the Flint Trail (See Exhibit "B").
- b. From the pavement surfaced Green River airport access road the existing gravel surface Flint Trail road under Emery County maintenance will be utilized for approximately 8.9 miles.
- c. From the gravel surfaced Flint Trail the existing bladed native surface road under Emery County maintenance will be utilized for approximately 4.0 miles to the proposed well site. The road will not be widened beyond the existing disturbed width but will be re-shaped, graveled and have drainage structures installed consistent with Emery County Road specifications. The existing road will be upgraded and an encroachment permit from Emery County will be secured prior to utilizing the road and constructing the proposed encroachment.
- d. We do not plan to change, alter or improve upon any other existing state or county roads.
- e. All existing roads will be maintained and kept in good repair during all phases of operation.
- f. Vehicle operators will obey posted speed restrictions and observe safe speeds commensurate with road and weather conditions.
- g. A federal right-of-way is not anticipated at this time.

## **2. Planned Access Roads**

- a. From the existing native surfaced access road an access is proposed trending southwest approximately 300' to the proposed well site. The access consists of entirely new disturbance and crosses no significant drainages.
- b. A road design plan is not anticipated at this time.
- c. The proposed access road will consist of a 24' travel surface within a 30' disturbed area across SITLA surface.
- d. SITLA approval to construct and utilize the proposed access road is requested with this application.
- e. A maximum grade of 10% will be maintained throughout the project with no major cuts and fills anticipated.
- f. No turnouts are proposed since the access road is only 300' long and adequate site distance exists in all directions.
- g. No low water crossings and one 18" culvert is anticipated. Adequate drainage structures will be incorporated into the remainder of the road.
- h. No surfacing material will come from federal or State lands.
- i. No gates or cattle guards are anticipated at this time.
- j. Surface disturbance and vehicular travel will be limited to the approved location access road.
- k. The operator will be responsible for all maintenance of the access road including drainage structures.

## **3. Location of Existing Wells**

- a. See Exhibit "B". There are no proposed and no existing wells within a one mile radius of the proposed location.

#### **4. Location of Existing and/or Proposed Facilities**

- a. If the well is deemed productive a sundry notice reflecting the production site layout will be submitted for approval.
- b. Rehabilitation of all pad areas not used for production facilities will be made in accordance with SITLA stipulations.

#### **5. Location and Type of Water Supply**

- a. The location and type of water supply has been addressed as #11 within Exhibit "D". (Drilling Plan).

#### **6. Source of Construction Materials**

- a. Any necessary construction materials needed will be obtained locally from a private source and hauled to the location on existing roads.

#### **7. Methods for handling waste disposal**

- a. A small reserve pit will be constructed with a minimum of one-half the total depth below the original ground surface on the lowest point within the pit. The pit will be lined with a synthetic liner. Three sides of the reserve pit will be fenced within 24 hours after completion of construction and the fourth side within 24 hours after drilling operations cease with four strands of barbed wire, or woven wire topped with barbed wire to a height of not less than four feet. The fence will be kept in good repair while the pit is drying.
- b. Following drilling, the liquid waste will be evaporated from the pit and the pit backfilled and returned to natural grade. No liquid hydrocarbons will be discharged to the reserve pit or location.
- c. In the event fluids are produced, any oil will be retained in tanks until sold and any water produced will be retained until its quality can be determined. The quality and quantity of the water will determine the method of disposal.
- d. Trash will be contained in a portable metal container and will be hauled from location periodically and disposed of at an approved disposal site. Chemical toilets will be placed on location and sewage will be disposed of at an appropriate disposal site.

## **8. Ancillary Facilities**

- a. We anticipate no need for ancillary facilities with the exception of trailers to be located on the drill site.

## **9. Well-site Layout**

- a. Available topsoil will be removed from the location and stockpiled. The location of the rig, reserve and blooie pits, and drilling support equipment will be located as shown on Exhibit "A", Figure 1 (Location Layout).
- b. A blooie pit will be located 100' from the drill hole. A line will be placed on the surface from the center hole to the blooie pit. The blooie pit will not be lined, but will be fenced on four sides to protect livestock/wildlife.
- c. Access to the well pad will be as shown on the location layout.
- d. Natural runoff will be diverted around the well pad as shown on the location layout.

## **10. Plans for Restoration of Surface**

- a. All surface areas not required for producing operations will be graded to as near original condition as possible and contoured to maintain possible erosion to a minimum.
- b. Available topsoil will be stockpiled and will be evenly distributed over the disturbed areas and the area will be reseeded as prescribed by the SITLA.
- c. Pits and any other area that would present a hazard to wildlife or livestock will be fenced off when the rig is released and removed.
- d. Any oil accumulation on the pit will be removed or overhead flagged as dictated by then existing conditions.
- e. Rehabilitation will commence following completion of the well. Holes will be filled immediately upon release of the drilling rig from the location. If the well-site is to be abandoned, all disturbed areas will be re-contoured to the natural contour as is possible.

## **11. Surface Ownership**

- a. Surface Ownership – State of Utah – under the management of the SITLA - State Office, 675 East 500 South, Suite 500, Salt Lake, City, Utah 84102-2818; 801-538-5100.
- b. Mineral Ownership – State of Utah – under the management of the SITLA - State Office, 675 East 500 South, Suite 500, Salt Lake, City, Utah 84102-2818; 801-538-5100.
- c. The operator shall contact the surface representative and the Division of Oil, Gas and Mining 48 hours prior to beginning construction activities.

## **12. Other Information:**

- a. The primary surface use is wildlife habitat and grazing. The nearest dwelling is near Green River approximately 10 miles northeast of the proposed location. The nearest live water is Horse Bench Reservoir 3.9 miles northeast.
- b. If there is snow on the ground when construction begins, it will be removed before the soil is disturbed, and piled downhill from the topsoil stockpile location.
- c. The back-slope and fore-slope will be constructed no steeper than 3:1.
- d. All equipment and vehicles will be confined to the access road and well pad.
- e. A complete copy of the approved Application for Permit to Drill (APD) including conditions and stipulations and the surface use agreement shall be on the well-site during construction and drilling operations.
- f. There will be no deviation from the proposed drilling and/or workover program without prior approval from the Division of Oil, Gas & Mining.

13. **Company Representative**

Alan Vrooman  
Petro-Canada Resources (USA) Inc.  
1099 18th Street, Suite 400, Denver, Colorado 80202  
(303) 297-2100

**Company Agent**

Don Hamilton  
Buys & Associates, Inc  
2580 Creekview Road; Moab, Utah 84532  
435-718-2018

14. **Certification**

I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct, and that the work associated with the operations proposed herein will be performed by Petro-Canada Resources (USA) Inc. and its subcontractors in conformity with this plan and the terms and conditions under which it is approved.

7-9-07  
Date

Don Hamilton  
Don Hamilton  
Agent for Petro-Canada Resources (USA) Inc.

# PALEONTOLOGY EVALUATION SHEET

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**PROJECT:** Petro-Canada Resources (USA), INC. **State #16-41**

**LOCATION:** Fifteen miles southwest of Green River, Utah. Section 16, 2310 FSL, 587' FEL, T23S, R15E, Grand County, Utah.

**OWNERSHIP:** PRIV[  ] STATE[  ] BLM[  ] USFS[  ] NPS[  ] IND[  ] MIL[  ] OTHER[  ]

**DATE:** June 13, 2007

**GEOLOGY/TOPOGRAPHY:** A fairly flat area of sandy alluvium and occasional rocks (north and south sides) on an east slope. There is a drainage running east on the north side and another one on the south side. Rock below sand is Morrison Formation, Salt Wash Member. The road comes in from the northeast from the Flint Trail road. Much or most of it is on sandy alluvium with occasional Morrison exposures.

**PALEONTOLOGY SURVEY:** YES [  ] NO Survey [  ] PARTIAL Survey [  ]  
The well pad is on sandy alluvium. Morrison Formation exposures along the road were surveyed for fossils.

**SURVEY RESULTS:** Invertebrate [  ] Plant [  ] Vertebrate [  ] Trace [  ] No Fossils Found [  ]

**PALEONTOLOGY SENSITIVITY:** HIGH [  ] MEDIUM [  ] LOW [  ] (PROJECT SPECIFIC)

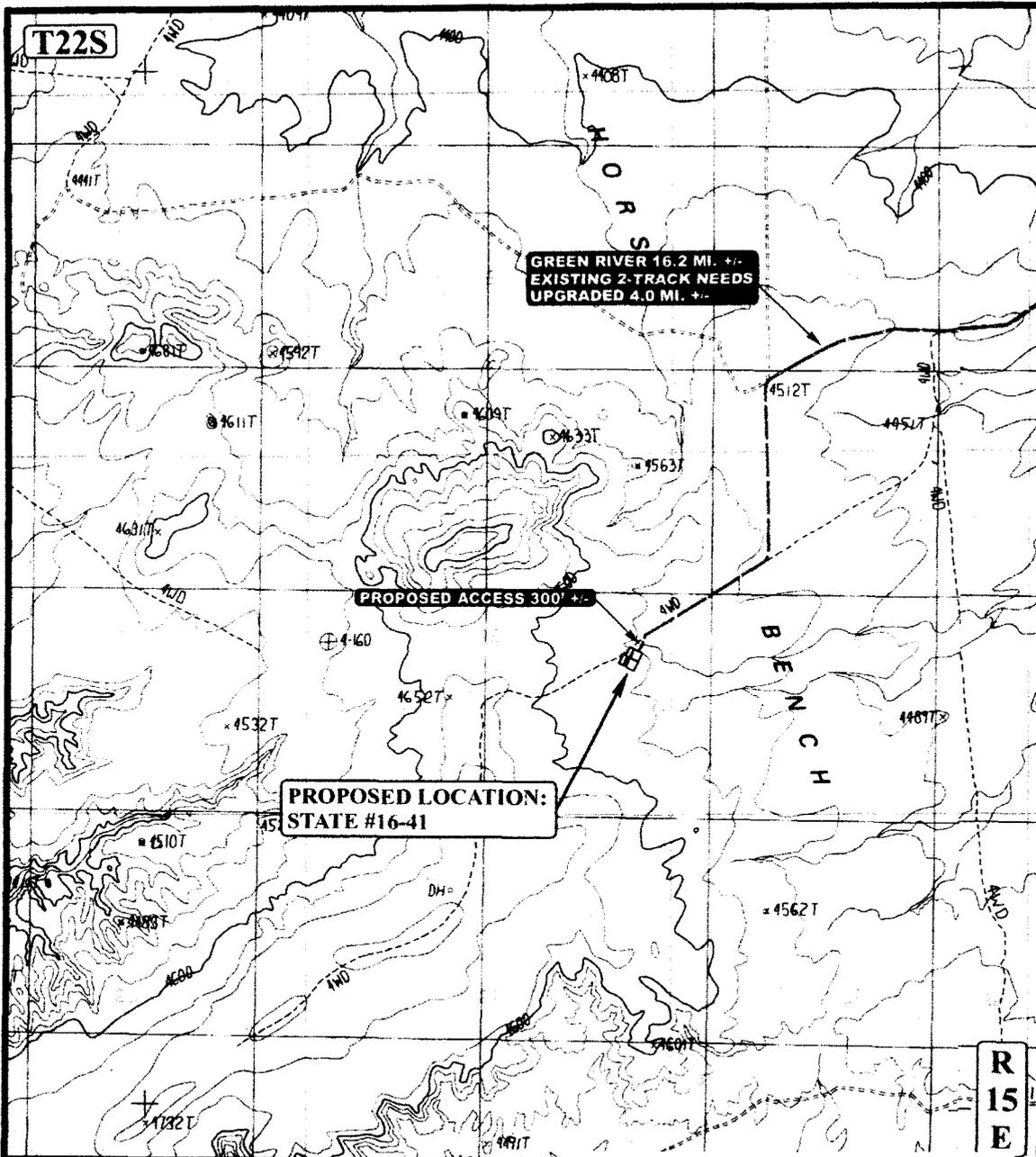
**MITIGATION RECOMMENDATIONS:** NONE [  ] OTHER [  ] (SEE BELOW)

It is recommended is that if well pad or pit construction goes down into the Morrison Formation, that pit and spoil pile be examined by a paleontologist after construction. At this time spoil material from the pad could also be examined if it went down into the Morrison Formation.

There is always some potential for discovery of significant paleontological resources in the Morrison Formation. If significant vertebrate fossils (Dinosaurs and other reptiles) are encountered during construction, work should stop in that area and a paleontologist should be contacted to evaluate the material discovered.

**PALEONTOLOGIST:** Alden H. Hamblin

*A.H. Hamblin Paleontological Consulting, 3793 N. Minersville Highway, Cedar City, Utah 84720 (435) 867-8355*  
Utah State Paleontological Permit # 07-355, BLM paleontological Resources Permit # UT-S-05-02,  
Utah Professional Geologist License – 5223011-2250.



**LEGEND:**

- EXISTING ROAD
- - - - - PROPOSED ACCESS ROAD

Petro-Canada Resources (USA), Inc

STATE #16-41  
SECTION 16, T23S, R15E, S.L.B.&M.  
2310' FSL 587' FEL

**U&Ls**  
**Uintah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 • FAX (435) 789-1813



TOPOGRAPHIC MAP  
 MONTH 06 DAY 12 YEAR 2007  
 SCALE: 1" = 2000' DRAWN BY: L.K. REVISED: 00-00-00

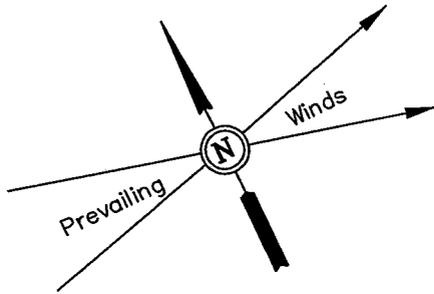
**B**  
TOPO

Petro-Canada (USA), Inc.

FIGURE #1

LOCATION LAYOUT FOR

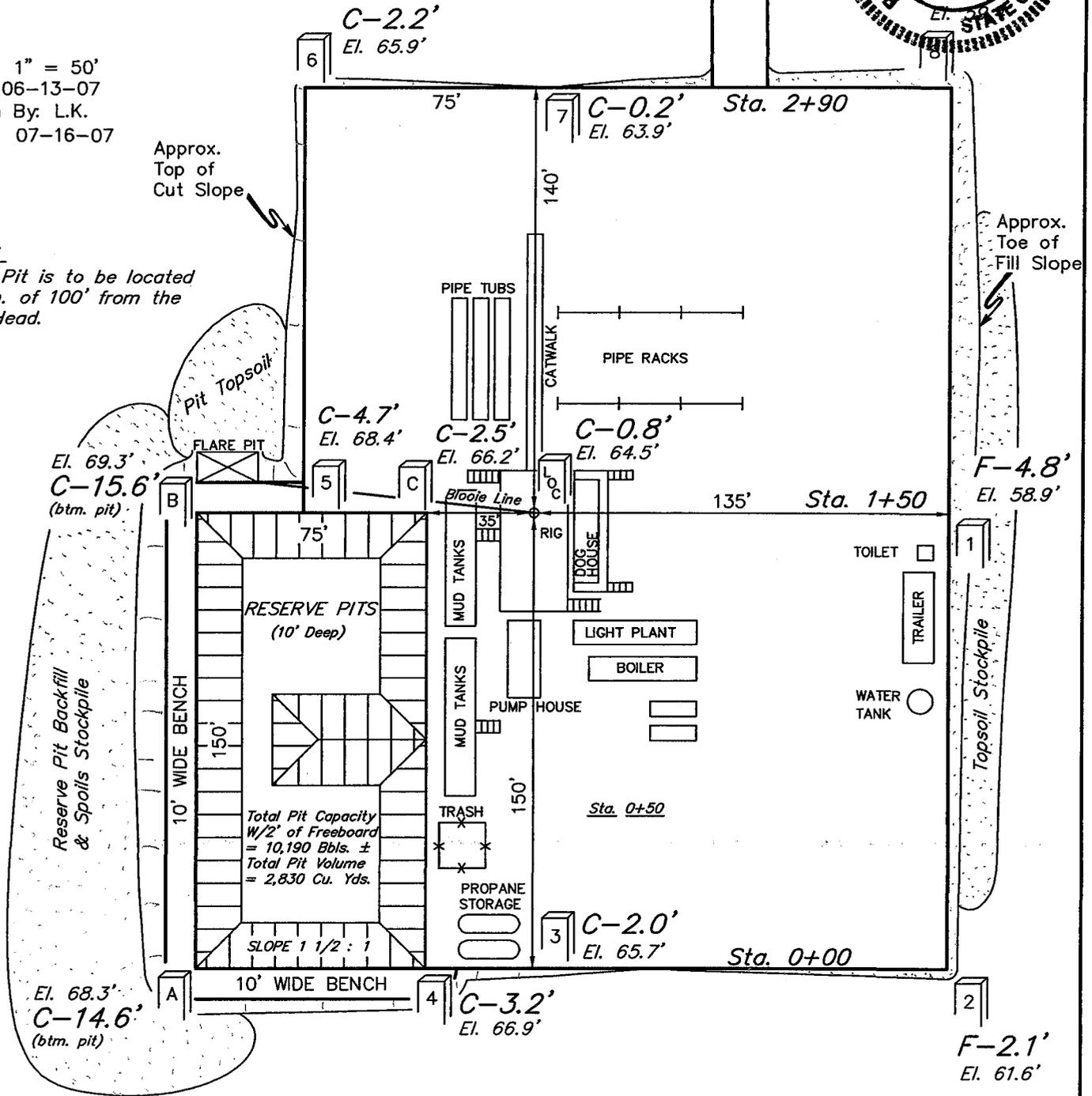
STATE #16-41  
SECTION 16, T23S, R15E, S.L.B.&M.  
2310' FSL 587' FEL



SCALE: 1" = 50'  
DATE: 06-13-07  
Drawn By: L.K.  
REVISED: 07-16-07

NOTE:

Flare Pit is to be located a min. of 100' from the Well Head.



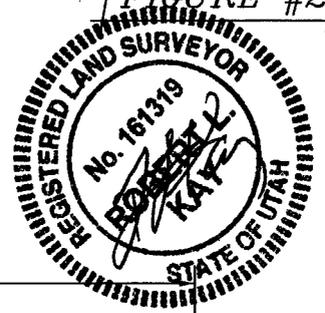
NOTES:

Elev. Ungraded Ground At Loc. Stake = 4564.5'  
FINISHED GRADE ELEV. AT LOC. STAKE = 4563.7'

Petro-Canada (USA), Inc.

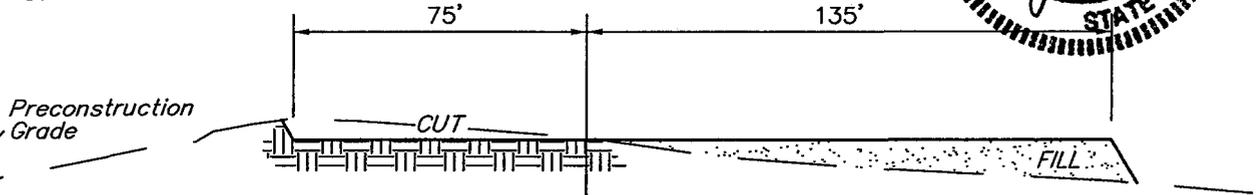
FIGURE #2

TYPICAL CROSS SECTIONS FOR  
STATE #16-41  
SECTION 16, T23S, R15E, S.L.B.&M.  
2310' FSL 587' FEL

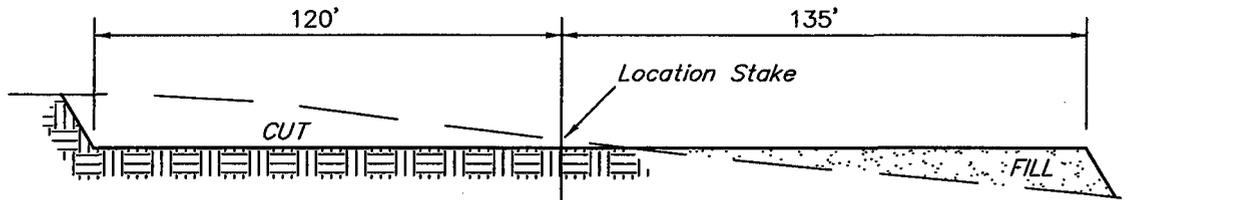


1" = 20'  
X-Section  
Scale  
1" = 50'

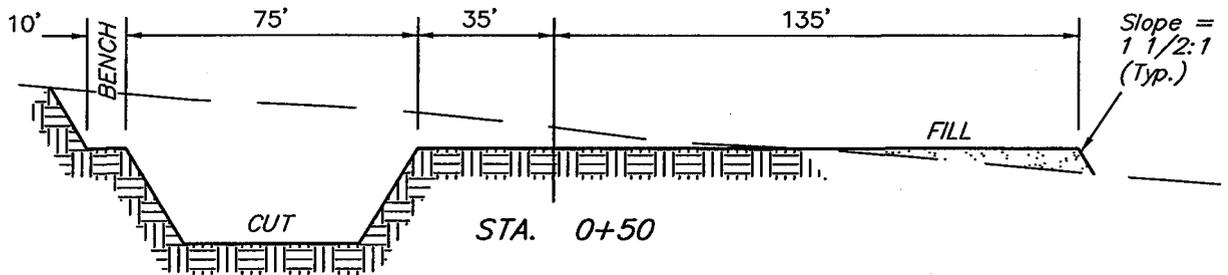
DATE: 06-13-07  
Drawn By: L.K.  
REVISED: 07-16-07



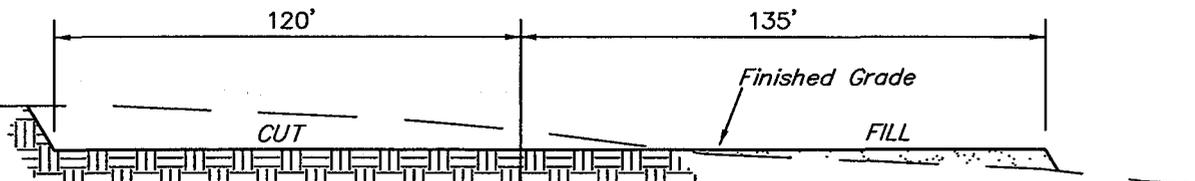
STA. 2+90



STA. 1+50



STA. 0+50



STA. 0+00

NOTE:

Topsoil should not be Stripped Below Finished Grade on Substructure Area.

\* NOTE:

FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

CUT	
(6") Topsoil Stripping	= 1,430 Cu. Yds.
Remaining Location	= 6,380 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 7,810 CU.YDS.</b>
<b>FILL</b>	<b>= 3,780 CU.YDS.</b>

EXCESS MATERIAL	= 4,030 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 2,850 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	= 1,180 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

# Petro-Canada (USA), Inc.

## STATE #16-41

LOCATED IN EMERY COUNTY, UTAH  
SECTION 16, T23S, R15E, S.L.B.&M.



PHOTO: VIEW OF LOCATION STAKE

CAMERA ANGLE: SOUTHEASTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

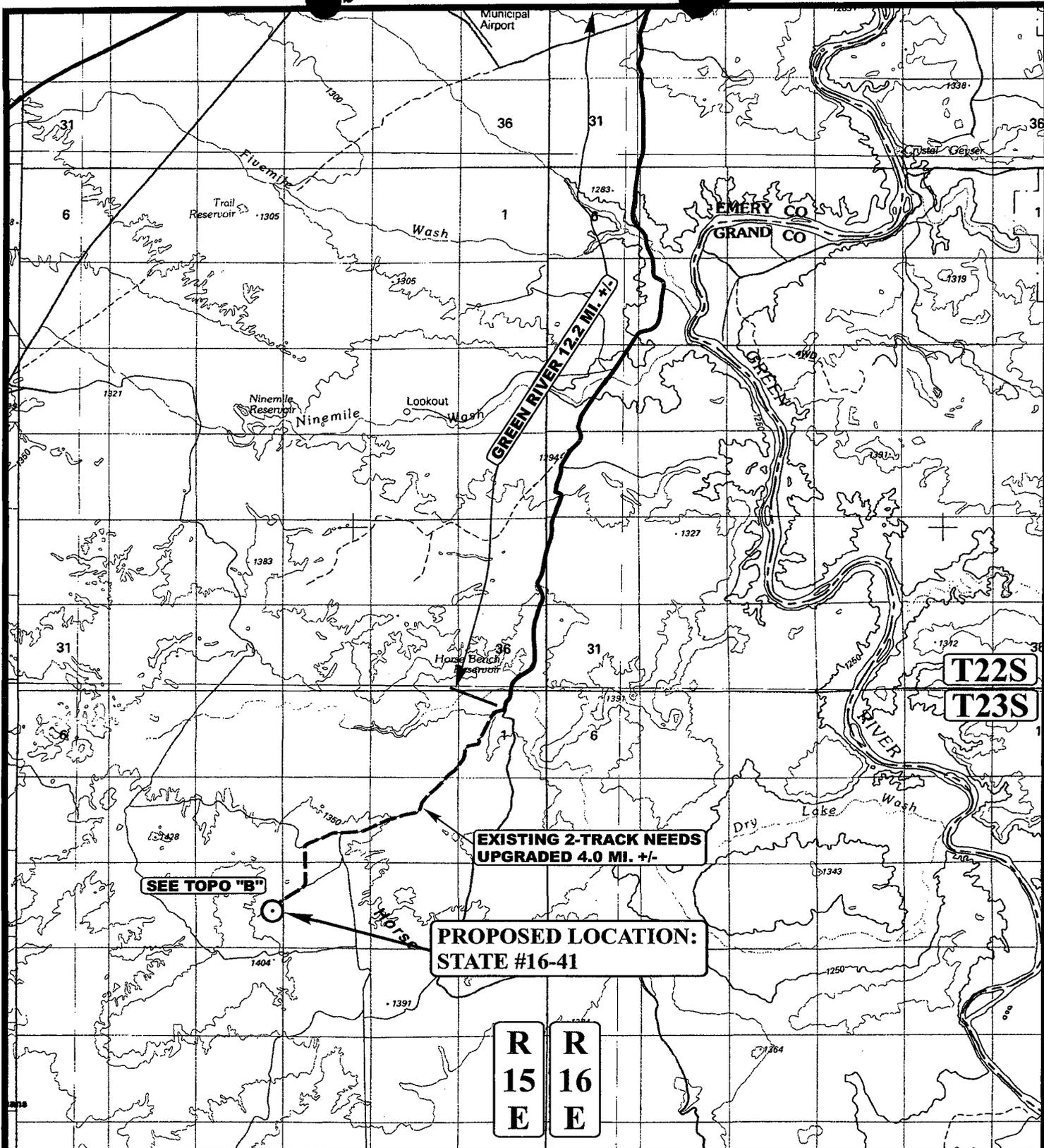
CAMERA ANGLE: SOUTHWESTERLY



- Since 1964 -

**U** **E** **L** **S** Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
435-789-1017 uels@uelsinc.com

<b>LOCATION PHOTOS</b>	<b>06</b>	<b>12</b>	<b>07</b>	<b>PHOTO</b>
	MONTH	DAY	YEAR	
TAKEN BY: L.K.	DRAWN BY: L.K.		REVISED: 06-20-07	



**LEGEND:**

○ PROPOSED LOCATION

R 15 E  
R 16 E

T22S  
T23S

**U&Ls**  
**Uintah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAG (435) 789-1813



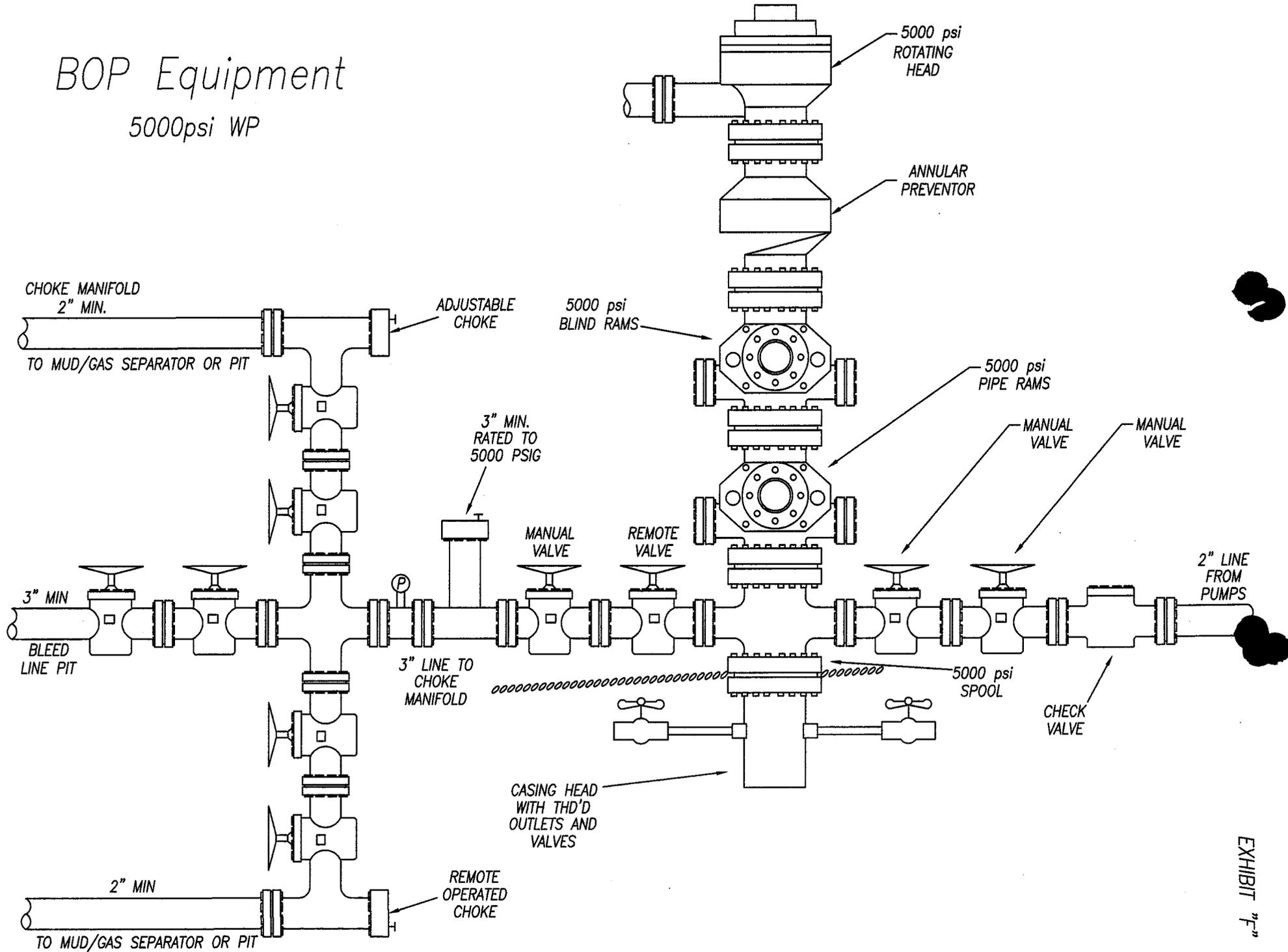
**Petro-Canada (USA), Inc.**  
 STATE #16-41  
 SECTION 16, T23S, R15E, S.L.B.&M.  
 2310' FSL 587' FEL

**TOPOGRAPHIC** 06 12 07  
**MAP** MONTH DAY YEAR  
 SCALE: 1:100,000 DRAWN BY: L.K. REVISED: 06-20-07



# BOP Equipment

5000psi WP



**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 07/11/2007

API NO. ASSIGNED: 43-015-30721

WELL NAME: STATE 16-41  
 OPERATOR: PETRO-CANADA RESOURCES ( N2705 )  
 CONTACT: DON HAMILTON

PHONE NUMBER: 303-297-2100

PROPOSED LOCATION:

NESE 16 230S 150E  
 SURFACE: 2310 FSL 0587 FEL  
 BOTTOM: 2310 FSL 0587 FEL  
 COUNTY: EMERY  
 LATITUDE: 38.80978 LONGITUDE: -110.2670  
 UTM SURF EASTINGS: 563645 NORTHINGS: 4295716  
 FIELD NAME: WILDCAT ( 1 )

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering	DKD	11/11/07
Geology		
Surface		

LEASE TYPE: 3 - State  
 LEASE NUMBER: ML-50655  
 SURFACE OWNER: 3 - State

PROPOSED FORMATION: MSSP  
 COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Fed[] Ind[] Sta[] Fee[]  
(No. 04127699 )
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit  
(No. MUNICIPAL )
- RDCC Review (Y/N)  
(Date: 08/15/2007 )
- Fee Surf Agreement (Y/N)
- Intent to Commingle (Y/N)

LOCATION AND SITING:

- R649-2-3.
- Unit: \_\_\_\_\_
- R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells
- R649-3-3. Exception
- Drilling Unit  
Board Cause No: \_\_\_\_\_  
Eff Date: \_\_\_\_\_  
Siting: \_\_\_\_\_
- R649-3-11. Directional Drill

COMMENTS:

*Needs Presite (Recd 7-27-07)*

STIPULATIONS:

*1- Spacing Strip  
 2- Cement strip # 3 (7" production, 2800' max)  
 Statement of Basis*

T23S R15E

17

16

15

STATE 16-41  
⊙

CHAFFIN UNIT 1  
◇

OPERATOR: PETRO-CANADA (N2705)

SEC: 16 T.23S R. 15E

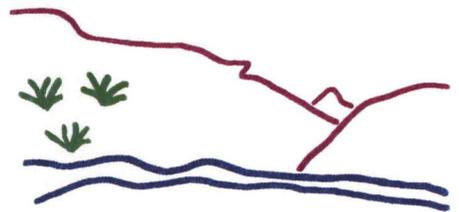
FIELD: WILDCAT (001)

COUNTY: EMERY

SPACING: R649-3-3 / DIRECTIONAL DRILLING

**Wells Status**

- ⊙ GAS INJECTION
- ⊙ GAS STORAGE
- ⊙ LOCATION ABANDONED
- ⊙ NEW LOCATION
- ⊙ PLUGGED & ABANDONED
- ⊙ PRODUCING GAS
- ⊙ PRODUCING OIL
- ⊙ SHUT-IN GAS
- ⊙ SHUT-IN OIL
- ⊙ TEMP. ABANDONED
- ⊙ TEST WELL
- ⊙ WATER INJECTION
- ⊙ WATER SUPPLY
- ⊙ WATER DISPOSAL
- ⊙ DRILLING



*Utah Oil Gas and Mining*



PREPARED BY: DIANA MASON  
DATE: 31-JULY-2007

**Field Status**

- ⊙ ABANDONED
- ⊙ ACTIVE
- ⊙ COMBINED
- ⊙ INACTIVE
- ⊙ PROPOSED
- ⊙ STORAGE
- ⊙ TERMINATED

**Unit Status**

- ⊙ EXPLORATORY
- ⊙ GAS STORAGE
- ⊙ NF PP OIL
- ⊙ NF SECONDARY
- ⊙ PENDING
- ⊙ PI OIL
- ⊙ PP GAS
- ⊙ PP GEOTHERML
- ⊙ PP OIL
- ⊙ SECONDARY
- ⊙ TERMINATED

# Application for Permit to Drill

## Statement of Basis

8/6/2007

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Ownr	CBM
423	43-015-30722-00-00		GW	S	No
<b>Operator</b>	PETRO-CANADA RESOURCES (USA), INC		<b>Surface Owner-APD</b>		
<b>Well Name</b>	STATE 32-44		<b>Unit</b>		
<b>Field</b>	UNDESIGNATED		<b>Type of Work</b>		
<b>Location</b>	SESE 32 22S 15E S 623 FSL 484 FEL GPS Coord (UTM) 562040E 4300043N				

### Geologic Statement of Basis

Significant volumes of high quality ground water are unlikely to be encountered in the bedrock at this location. A poorly permeable soil is likely to be developed on the Jurassic-age Brushy Basin Member of the Morrison Formation. A small but locally important quality ground water resource may be encountered in several permeable Mesozoic aquifers in this area. The proposed casing and cementing program should adequately isolate any zones of fresh water that may be penetrated. The proposed mud system to be used below surface casing calls for the use of KCl. I recommend that the operator refrain from using KCl until the top of the Chinle Formation is encountered because the Jurassic and Glen Canyon Group strata below Surface Casing are mostly sandstone and contain a minor high quality ground water resource that is important locally. The sandstones don't require inhibition and will not swell. No underground water rights have been filed on any area within a mile of the proposed well site.

Chris Kierst  
APD Evaluator

8/3/2007  
Date / Time

### Surface Statement of Basis

On-site evaluation conducted on July 27, 2007. In attendance: Bart Kettle-Division of Oil, Gas and Mining (DOGM), Don Hamilton-Agent for Petro-Canada (USA) Inc, Ray Peterson-Emery County, Mike McCandless-Emery County, Andrue Floyd-Uintah Surveying. Invited and choosing not to attend: Kyle Beagly-Division of Wildlife Resources (DWR), Jim Davis-Trust Lands Administration (SITLA) and Ed Bonner-Trust Lands Administration (SITLA).

Emery County requesting that Petro-Canda Resources (USA), Inc. become bonded with the county prior to commencing work on the well. Emery County suggested that Petro-Canada Resources (USA), Inc. be prepared to water access roads at the time of drilling to prevent them from beating out.

DOGM request that Petro-Canada Resources (USA), Inc. take steps to assure all activities remain within the permitted well pad and access road areas.

Bart Kettle  
Onsite Evaluator

7/27/2007  
Date / Time

### Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 12 mils shall be properly installed and maintained in the reserve pit.

# ON-SITE PREDRILL EVALUATION

## Utah Division of Oil, Gas and Mining

**Operator** PETRO-CANADA RESOURCES (USA), INC  
**Well Name** STATE 32-44  
**API Number** 43-015-30722-0      **APD No** 423      **Field/Unit** UNDESIGNATED  
**Location:** 1/4,1/4 SESE      **Sec** 32      **Tw** 22S      **Rng** 15E      623 FSL 484 FEL  
**GPS Coord (UTM)** 562048      4300056      **Surface Owner**

### Participants

Bart Kettle-Division of Oil, Gas and Mining (DOG M), Don Hamilton-Agent for Petro-Canada (USA) Inc, Ray Peterson-Emery County, Mike McCandless-Emery County, Andrué Floyd-Uintah Surveying, and Wills-Uintah Surveying

### Regional/Local Setting & Topography

Proposed project site is located ~12 miles southwest of the town of Green River, in Emery County Utah. Annual precipitation is 6-8", and vegetation would be described as salt scrub rangelands. Topography immediately adjacent to the well is a series of dry sandy washes and alternating sand dunes. Drainage is to the east entering the Green River within five miles. Drainages in the immediate area are ephemeral in nature, being dry throughout a majority of the year.

### Surface Use Plan

#### **Current Surface Use**

Grazing  
Wildlife Habitat

#### **New Road**

Miles	Well Pad	Length	Src Const Material	Surface Formation
0.3	Width 255	290	Onsite	ENRD

**Ancillary Facilities** N

### Waste Management Plan Adequate? Y

### Environmental Parameters

**Affected Floodplains and/or Wetland** N

#### **Flora / Fauna**

Flora:

Grass: Indian Rice grass, curly galleta.  
Forbs: Aster spp., desert plantain, annual wire lettuce, globe mallow, halogeton.  
Shrubs: Nuttles saltbush  
Trees: None

Fauna: Small reptile and mammal habitat. Incidental use by pronghorn antelope, coyote and kit fox.

#### **Soil Type and Characteristics**

Alternating red and white clays covered by pee gravel. Very little vegetative cover over proposed project area.

**Erosion Issues** Y

Soils highly erosive when disturbed.

**Sedimentation Issues** N

Site Stability Issues N

Drainage Diversion Required N

Berm Required? N

Erosion Sedimentation Control Required? N

Watering down road and well pad while drilling will help minimize erosion, but is cost imperative.

Paleo Survey Run? Y    Paleo Potential Observed? Y    Cultural Survey Run? Y    Cultural Resources? N

**Reserve Pit**

Site-Specific Factors		Site Ranking	
Distance to Groundwater (feet)	>200	0	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)	>1320	0	
Native Soil Type	Low permeability	0	
Fluid Type	TDS>5000 and <10000	10	
Drill Cuttings	Salt or Detrimental	10	
Annual Precipitation (inches)	<10	0	
Affected Populations	<10	0	
Presence Nearby Utility Conduits	Not Present	0	
	<b>Final Score</b>	20	<b>1 Sensitivity Level</b>

**Characteristics / Requirements**

Closed Loop Mud Required? N    Liner Required? Y    Liner Thickness 12    Pit Underlayment Required? N

**Other Observations / Comments**

As proposed in APD access road crosses the Dry Lake ACEC on BLM administered lands. Petro Canada has choose to wait for the ROW on this route to drill well knowing that it may be a prolonged process. Petro-Canada would like Emery County to adopt the ROW once acquired provided they are interested.

Emery County expressed some interest in adopting the ROW as they are considering pursuing further jurisdiction on the existing road with the BLM.

Bart Kettle  
Evaluator

7/27/2007  
Date / Time

# Utah Division of Water Rights



**There are no features in the query area.**

**Click on the back button to try again**

Please direct questions and comments regarding the map server to: [leeschler@utah.gov](mailto:leeschler@utah.gov).

[Natural Resources](#) | [Contact](#) | [Disclaimer](#) | [Privacy Policy](#) | [Accessibility Policy](#)

**STATE ACTIONS**  
**Resource Development Coordinating Committee**  
**Public Lands Policy Coordination Office**  
**5110 State Office Building**  
**SLC, UT 84114**  
**Phone No. 537-9230**

<b>1. State Agency</b> Oil, Gas and Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801	<b>2. Approximate date project will start:</b>  Upon Approval or August 14, 2007
<b>3. Title of proposed action:</b> Application for Permit to Drill	
<b>4. Description of Project:</b>  Petro-Canada Resources (USA), Inc. proposes to drill the State 16-41 well (wildcat) on State lease ML-50655, Emery County, Utah. This action is being presented to the RDCC for consideration of resource issues affecting state interests. The Division of Oil, Gas and Mining is the primary administrative agency in this action and must issue approval before operations commence.	
<b>5. Location and detailed map of land affected (site location map required, electronic GIS map preferred)</b> (include UTM coordinates where possible) <b>(indicate county)</b> 2310' FSL 587' FEL, NE/4 SE/4, Section 16, Township 23 South, Range 15 East, Emery County, Utah	
<b>6. Possible significant impacts likely to occur:</b> Surface impacts include up to five acres of surface disturbance during the drilling and completion phase (estimated for five weeks duration). If oil and gas in commercial quantities is discovered, the location will be reclaimed back to a net disturbance of between one and two acres – not including road, pipeline, or utility infrastructure. If no oil or gas is discovered, the location will be completely reclaimed.	
<b>7. Identify local government affected</b> a. <b>Has the government been contacted?</b> No. b. <b>When?</b> c. <b>What was the response?</b> d. <b>If no response, how is the local government(s) likely to be impacted?</b>	
<b>8. For acquisitions of land or interests in land by DWR or State Parks please identify state representative and state senator for the project area. Name and phone number of state representative, state senator near project site, if applicable:</b> a. <b>Has the representative and senator been contacted?</b> N/A	
<b>9. Areawide clearinghouse(s) receiving state action:</b> (to be sent out by agency in block 1) Southeastern Utah Association of Governments	
<b>10. For further information, contact:</b>   Diana Mason <b>Phone:</b> (801) 538-5312	<b>11. Signature and title of authorized officer</b>   Gil Hunt, Associate Director <b>Date:</b> July 31, 2007

**From:** Robert Clark  
**To:** Mason, Diana  
**Date:** 8/6/2007 2:35 PM  
**Subject:** RDCC short turn-around comments

**CC:** Anderson, Tad; Mcneill, Dave; Wright, Carolyn

The following comments are in response to short turn-around item **RDCC #8257**.

**RDCC #8257, Comments begin:** Petro-Canada Resources (USA), Inc's proposal to drill the State 16-41 wildcat well, in Emery County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board. If any compressor or pump stations are constructed at the site, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. A copy of the rules is found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm).

The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm). **Comments end.**

Robert Clark  
Division of Air Quality  
801-536-4435

**From:** Brad Hill  
**To:** Mason, Diana  
**Date:** 8/6/2007 2:41 PM  
**Subject:** Fwd: UGS comment on RDCC #8257

>>> Gil Hunt 8/6/2007 2:36 PM >>>

>>> Kimm Harty 8/6/2007 2:35 PM >>>

Pam and Gil: Below are comments on RDCC Short-Turn-Around item 8257. Please contact us if you have any questions on the comments. Kimm

UGS Comment, RDCC ITEM:

8257. Division of Oil, Gas and Mining

Short Turn Around Drilling Permit

Sec. 16, T23S, R15E, Emery County

Application for Permit to Drill - Petro-Canada Resources (USA), Inc. proposal to drill a wildcat well the State 16-41 on State lease ML-50655.

Although there are no paleontological localities recorded in our files for this project area, the Jurassic Morrison Formation that is exposed here has the potential for yielding significant vertebrate fossil localities. The office of the State Paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements by a paleontologist with a valid permit.

# SOUTHEASTERN UTAH ASSOCIATION OF LOCAL GOVERNMENTS

**DOUG ALLEN**  
CHAIRMAN

**WILLIAM D. HOWELL**  
EXECUTIVE DIRECTOR



375 SOUTH CARBON AVE.  
P.O. DRAWER 1106  
PRICE, UTAH 84501  
(435) 637-5444  
FAX (435) 637-5448

*Petro*

*43-015-30721*

## AREA WIDE CLEARINGHOUSE REVIEW

Federal Action \_\_\_\_\_ State Action \_\_\_\_\_ Approved (x) Yes ( ) No  
Other (indicate) \_\_\_\_\_

### Applicant Address:

Oil, Gas and Mining

1594 West North Temple Suite 1210

SLC, UT 841114-5801

Name Diana Mason

Phone 801-538-55312

Title/Project Description: Application for Permit to Drill - State 16-41 well State Lease

Wildcat well on state turst lease - Emery County. South and west of Horse Bench Reservoir.

[ ] No Comment

[ ] See comment below

Comments: Favorable comment recommended.

Lorraine Benfield  
SEUALG

September 28, 2007  
DATE

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>ML-50655</b>
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>N/A</b>
1. TYPE OF WELL <b>OIL WELL</b> <input type="checkbox"/> <b>GAS WELL</b> <input checked="" type="checkbox"/> <b>OTHER</b> _____		7. UNIT or CA AGREEMENT NAME: <b>undesignated</b>
2. NAME OF OPERATOR: <b>Petro-Canada Resources (USA) Inc</b>		8. WELL NAME and NUMBER: <b>STATE 16-41</b>
3. ADDRESS OF OPERATOR: <b>1099 18th St., Ste. 400</b> CITY <b>Denver</b> STATE <b>CO</b> ZIP <b>59101</b>		9. API NUMBER: <b>4301530721</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>2310' FSL, 587' FEL</b>		10. FIELD AND POOL, OR WILDCAT: <b>undesignated</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NESE 16 23S 15E SLB&amp;M</b>		COUNTY: <b>Emery</b>
		STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> (Submit in Duplicate)  Approximate date work will start: <b>March 2008</b>  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

**Present Permitted Design**

Hole Size: 12-1/4"

Depth	Size	Weight	Grade	Conn.	Cement
1100'	9-5/8"	43.5 PPF	N-80	LT	See attached REVISED Drilling Plan

Hole Size: 8-1/2"

7515'	5-1/2"	20.0 ppf	P-110	LT
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**Proposed Design**

Hole Size: 14-3/4"

Depth	Size	Weight	Grade	Conn.	Cement
2900'	10.75"	40.5 ppf	J55	STC	See attached REVISED Drilling Plan

Hole Size: 9-7/8"

7331'	7"	29.0 ppf	P-110	LTC
-------	----	----------	-------	-----

NAME (PLEASE PRINT) <u>Susan Miller</u>	TITLE <u>Regulatory Analyst</u>
SIGNATURE	DATE <u>10/5/2007</u>

(This space for State use only)

**RECEIVED**

**OCT 03 2007**

DIV. OF OIL, GAS & MINING

**DRILLING PLAN REVISED**

**Attachment for Permit to Drill**

**Name of Operator:** Petro-Canada Resources (USA)  
**Address:** Suite 400  
1099-18 St  
Denver, Colorado 80202  
**Well Location:** State 16-41  
2,310' FSL, 587' FEL, NE/4 SE/4,  
Section 16, T23S, R15E  
Emery County, UT

1. GEOLOGIC SURFACE FORMATION Morrison

2 & 3. ESTIMATED DEPTHS OF IMPORTANT GEOLOGIC MARKERS AND FORMATIONS EXPECTED TO CONTAIN WATER, OIL AND GAS OR MINERALS

<u>Formation</u>	<u>Depth</u>
Morrison	Surface
Entrada	726 ft
Carmel	869 ft
Navajo	1,069 ft*
Kayenta	1,528 ft
Wingate	1,792 ft*
Chinle	2,113ft
Shinarump	2,425 ft
Moenkope	2,460 ft
Sinbad	2,926 ft
White Rim	3,138 ft*
Organ Rock	3,591 ft
Honaker Trail	3,832 ft*
Paradox	4,715 ft
Paradox Salt	5,965 ft*
Leadville	7,331 ft
Mississippian	7,381 ft*
TD	7331 ft

\* PROSPECTIVE PAY

Surface elevation – 4565 feet ASL

4. PROPOSED CASING PROGRAM

All casing used to drill this well will be new casing.

<u>Type</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Conn.</u>	<u>Top</u>	<u>Bottom</u>	<u>Hole</u>
Surface	10.75"	40.5 ppf	J55	STC	0'	2900'	14-3/4"
Production	7"	29 ppf	HCP-110	LTC	0'	7331'	9-7/8"

~~2773 w/470~~  
2773 w/470

## DRILLING PLAN

### APPROVAL OF OPERATIONS

5. OPERATOR'S MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL

Surface hole: No BOPE will be utilized.

Production hole: Prior to drilling out the surface casing shoe, 5,000 psi BOP equipment will be installed. The pipe rams will be operated at least once per day from surface casing depth to total depth. The blind rams will be tested once per day from surface casing depth to total depth if operations permit.

A diagram of the planned BOP equipment for normal drilling operations in this area is attached. As denoted there will be two valves and one check valve on the kill line, two valves on the choke line, and two adjustable chokes on the manifold system. The BOP "stack" will consist of two BOP rams (1 pipe, 1 blind) and one annular type preventer, all rated to a minimum of 5,000 psi working pressure.

The BOP equipment will be pressure tested prior to drilling below the surface casing shoe. All test pressures will be maintained for fifteen (15) minutes without any significant pressure decrease. Clear water will be circulated into the BOP stack and lines prior to pressure testing. The BLM and the state of Utah Division of Oil, Gas and Mining will be notified 24 hours in advance of all BOP pressure tests.

6. MUD SYSTEMS

Sufficient mud materials to maintain mud properties, control lost circulation and to contain "kick" will be available at the well site.

<u>Interval</u>	<u>Mud Weight (ppg)</u>	<u>Viscosity</u>	<u>Fluid Loss</u>	<u>Remarks</u>
0 – 40'	8.3 – 8.6	N/A	--	N/A
40' – 2900'	8.3 – 8.6	27-30	NC	Water
2900' – 5900'	8.4 - 8.6	27-30	NC	Freshwater
5900' -TD	9.3 – 12.5	45-55	15 cc or less	Salt Gel/Barite/Polymer/Sat.SaltWtr

7. BLOOIE LINE

- An automatic igniter will not be installed on blooie line. The blooie will have a constant ignition source.
- A "target tee" connection will be installed on blooie line for 90° change of directions for abrasion resistance.
- "Target tee" connections will be a minimum of 50 feet from wellhead.
- The blooie line discharge will be a minimum of 100 feet from the wellhead.

8. AUXILIARY EQUIPMENT TO BE USED

- Upper Kelly cock; lower Kelly cock will be installed while drilling
- Inside BOP or stab-in valve (available on the rig floor)
- Safety valve(s) and subs to fit all string connections in use
- Mud monitoring will be visually observed

9. TESTING, LOGGING AND CORING PROGRAMS TO BE FOLLOWED

Cores       None anticipated.  
Testing      None anticipated.  
Sampling    30' samples; surface casing to TD  
              Preserve samples all show intervals  
Surveys     Run every 1,000' and on trips  
Logging     DLL-GR-SP, FDC-CNL-GR-Caliper-Pe-Microlog, Sonic-GR, all TD to base of surface casing, GR through surface casing.

10. ANTICIPATED ABNORMAL PRESSURES OR TEMPERATURES EXPECTED

- No abnormal temperatures are anticipated.
- Based on offset well information, bottom Hole Pressure is expected at 4770 psi – 12.5 lb/gal. Barite will be on location to enable higher mud weights if needed.
- The formations to be penetrated do not contain known H<sub>2</sub>S gas.

## DRILLING PLAN

### APPROVAL OF OPERATIONS

#### 11. WATER SUPPLY

- The water supply for construction, drilling and operations will be provided by the city of Green River, a local source of municipal water, through a direct water purchase.
- No water pipelines will be laid for this well.
- No water well will be drilled for this well.
- Drilling water for this will be hauled on the road(s) shown in Exhibit B.
- Should additional water sources be pursued they will be properly permitted through the State of Utah – Division of Water Rights.

#### 12. CEMENT SYSTEMS

- Surface Casing: Lead: 950 sacks Rockies LT + 0.125lbm/sack Poly-E-Flake + 0.25 lbm/sack Kwik Seal + 17.3 gal/sack Fresh Water  
Weight: 11.5 ppg  
Yield: 2.94 cu.ft./sack  
Interval 2500 feet to surface.  
Tail: 250 sacks Rockies LT + 0.125lbm/sack Poly-E-Flake + 0.25 lbm/sack Kwik Seal; + 9.33 gal/sack Fresh Water  
Weight: 13.5 ppg  
Yield: 1.80 cu.ft./sack  
Interval 2900 feet to 2500 Feet.  
Cement will be circulated to surface with 100% excess
- Production Casing: 1200 sacks Premium Cement + 0.6% Halad R-413 + .2% Halad 766 + 1.5% Zone Sealant (foamer) + 8 pps Hi-Dense 4+ 4.93 gal/sack Fresh Water,  
Weight: 13.5 ppg foamed  
Yield: 1.17 cu.ft./sack  
Cement will be foamed with Nitrogen.  
Top of cement – 2800 feet.  
Volume will be log caliper +15% (volumes shown are for 30% over hole size)

#### 13. ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS

Starting Date: March 2008  
Duration: 30 days, drilling and 40 days completion

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT   
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>			5. MINERAL LEASE NO: ML-50655	6. SURFACE: State
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>			7. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a	
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>			8. UNIT or CA AGREEMENT NAME: n/a	
2. NAME OF OPERATOR: Petro-Canada Resources (USA) Inc			9. WELL NAME and NUMBER: STATE 16-41	
3. ADDRESS OF OPERATOR: 1099 18th St., Ste. 400 CITY Denver STATE CO ZIP 80202		PHONE NUMBER: (303) 297-2300	10. FIELD AND POOL, OR WILDCAT: Wildcat	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 2310' FSL, 587' FEL 563645 X 38.809780 AT PROPOSED PRODUCING ZONE: 2310' FSL, 587' FEL 4295716 Y -110.266980			11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 16 23S 15E	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 14.06 miles southwest of Green River, Utah			12. COUNTY: Emery	13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) 587'	16. NUMBER OF ACRES IN LEASE: 640	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40		
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) None	19. PROPOSED DEPTH: 7331'	20. BOND DESCRIPTION: Fidelity Bond No. 4127699		
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 4565' GR	22. APPROXIMATE DATE WORK WILL START: March 2008	23. ESTIMATED DURATION: 30-days drilling, 40-days completion		

**24. PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT		
14-3/4"	10.75" J55 40.5 lbs	2900'	Rockie LT	Lead 950 sks 2.94 cu ft/sk	11.5 ppg
			Rockie LT	Tail 250 sks 1.80 cu ft/sk	13.5 ppg
9-7/8"	7" P-110 29.0 lbs	7331'	Premium	1200 sks 1.17 cu ft/sk	13.5 ppg

**25. ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- |   |  |
|---|--|
| <input type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER     | <input type="checkbox"/> COMPLETE DRILLING PLAN  |
| <input type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER | <input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER |
- REVISED DRILLING PLAN PREVIOUSLY SUBMITTED 10/5/2007**

NAME (PLEASE PRINT) Susan Miller TITLE Regulatory Analyst  
SIGNATURE \_\_\_\_\_ DATE 10/24/2007 - sent via e-mail and US Mail

(This space for State use only)

API NUMBER ASSIGNED: 43-015-30721

APPROVAL: \_\_\_\_\_

**RECEIVED**  
**OCT 24 2007**  
**DIV. OF OIL, GAS & MINING**

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT   
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>				5. MINERAL LEASE NO: <b>ML-50655</b>	6. SURFACE: State
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a	
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>				8. UNIT or CA AGREEMENT NAME: n/a	
2. NAME OF OPERATOR: <b>Petro-Canada Resources (USA) Inc</b>				9. WELL NAME and NUMBER: <b>STATE 16-41</b>	
3. ADDRESS OF OPERATOR: <b>1099 18th St., Ste. 400</b> CITY <b>Denver</b> STATE <b>CO</b> ZIP <b>80202</b>			PHONE NUMBER: <b>(303) 297-2300</b>	10. FIELD AND POOL, OR WILDCAT: <b>Wildcat</b>	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: <b>2310' FSL, 587' FEL</b> AT PROPOSED PRODUCING ZONE: <b>2310' FSL, 587' FEL</b>				11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NESE 16 23S 15E</b>	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>14.06 miles southwest of Green River, Utah</b>				12. COUNTY: <b>Emery</b>	13. STATE: <b>UTAH</b>
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>587'</b>		16. NUMBER OF ACRES IN LEASE: <b>640</b>		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40</b>	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) <b>None</b>		19. PROPOSED DEPTH: <b>7331'</b>		20. BOND DESCRIPTION: <b>Fidelity Bond No. 4127699</b>	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>4565' GR</b>		22. APPROXIMATE DATE WORK WILL START: <b>March 2008</b>		23. ESTIMATED DURATION: <b>30-days drilling, 40-days completion</b>	

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT			
<b>14-3/4"</b>	<b>10.75"</b>	<b>J55</b>	<b>40.5 lbs</b>	<b>2900'</b>	<b>Rockie LT</b>	<b>Lead 950 sks</b>	<b>2.94 cu ft/sk</b>	<b>11.5 ppg</b>
					<b>Rockie LT</b>	<b>Tail 250 sks</b>	<b>1.80 cu ft/sk</b>	<b>13.5 ppg</b>
<b>9-7/8"</b>	<b>7"</b>	<b>P-110</b>	<b>29.0 lbs</b>	<b>7331'</b>	<b>Premium</b>	<b>1200 sks</b>	<b>1.17 cu ft/sk</b>	<b>13.5 ppg</b>

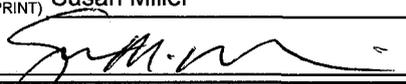
25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

<input type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

**REVISED DRILLING PLAN PREVIOUSLY SUBMITTED 10/5/2007**

NAME (PLEASE PRINT) Susan Miller TITLE Regulatory Analyst

SIGNATURE  DATE 10/24/2007

(This space for State use only)

**Approved by the**  
**Utah Division of**  
**Oil, Gas and Mining**

API NUMBER ASSIGNED: 43-015-30721

APPROVAL:  
Date: 11-01-07  
By: 

**RECEIVED**  
**OCT 26 2007**

DIV. OF OIL, GAS & MINING



JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil Gas and Mining

JOHN R. BAZA  
Division Director

November 1, 2007

Petro-Canada Resources (USA), Inc  
1099 18th St., Ste. 400  
Denver, CO 80202

Re: State 16-41 Well, 2310' FSL, 587' FEL, NE SE, Sec. 16, T. 23 South, R. 15 East,  
Emery County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann§40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-015-30721.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Emery County Assessor  
SITLA

Operator: Petro-Canada Resources (USA), Inc

Well Name & Number State 14-41

API Number: 43-015-30721

Lease: ML-50655

Location: NE SE                      Sec. 16                      T. 23 South                      R. 15 East

### Conditions of Approval

#### 1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### 2. Notification Requirements

The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment – contact Dan Jarvis
- 24 hours prior to spudding the well – contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program – contact Dustin Doucet
- Prior to commencing operations to plug and abandon the well – contact Dan Jarvis

The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

- Plugging and abandonment or significant plug back of this well – contact Dustin Doucet
- Any changes to the approved drilling plan – contact Dustin Doucet

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at:           (801) 538-5338 office           (801) 942-0873 home
- Carol Daniels at:       (801) 538-5284 office
- Dustin Doucet at:      (801) 538-5281 office           (801) 733-0983 home

#### 3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.
5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)
6. The Application for Permit to Drill has been forwarded to the Resource Development Coordinating Committee for review of this action. The operator will be required to comply with any applicable recommendations resulting from this review.
7. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.
8. Cement volume for the 7" production string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back to 2800' MD as indicated in the submitted drilling plan.

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**CONFIDENTIAL**

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-50655
2. NAME OF OPERATOR: Petro-Canada Resources (USA) Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 999 18th St, Suite 600 CITY Denver STATE CO ZIP 80202-2499		7. UNIT or CA AGREEMENT NAME: undesigned
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2,310' FSL & 587' FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 16 23S 15E S		8. WELL NAME and NUMBER: State16-41
		9. API NUMBER: 4301530721
		10. FIELD AND POOL, OR WILDCAT: undesigned
		COUNTY: Emery
		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Permit Extension</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Petro-Canada Resources (USA), Inc. hereby requests a one year extension of the state permit for the referenced well.  
This is the first extension that has been requested with the original permit being approved 11-1-07.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 09-25-07  
By: [Signature]

NAME (PLEASE PRINT) <u>Don Hamilton</u>	TITLE <u>Agent for Petro-Canada Resources (USA), Inc.</u>
SIGNATURE <u>Don Hamilton</u>	DATE <u>9/17/2008</u>

**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 4301530721  
**Well Name:** State 16-14  
**Location:** 2,310' FSL & 587' FEL, NE SE, S. 16, T23S, R15E,  
**Company Permit Issued to:** Petro-Canada Resources (USA) Inc.  
**Date Original Permit Issued:** 11/1/2007

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes  No

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes  No

Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes  No

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes  No

Has the approved source of water for drilling changed? Yes  No

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes  No

Is bonding still in place, which covers this proposed well? Yes  No

Don Hamilton  
Signature

9/17/2008  
Date

Title: Agent

Representing: Petro-Canada Resources (USA) Inc.

RECEIVED

SEP 23 2008

DIV. OF OIL, GAS & MINING

**CONFIDENTIAL**

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-50655
2. NAME OF OPERATOR: Petro-Canada Resources (USA) Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 999 18th St, Suite 600 CITY Denver STATE CO ZIP 80202-2499		7. UNIT or CA AGREEMENT NAME: undesigned
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2,310' FSL & 587' FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 16 23S 15E S		8. WELL NAME and NUMBER: State16-41
		9. API NUMBER: 4301530721
		10. FIELD AND POOL, OR WILDCAT: undesigned
		COUNTY: Emery
		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Permit Extension</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Petro-Canada Resources (USA), Inc. hereby requests a one year extension of the state permit for the referenced well.  
This is the second extension that has been requested with the original permit being approved 11-1-07.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 09-09-09  
By: [Signature]

COPY SENT TO OPERATOR  
Date: 9.10.2009  
Initials: KS

NAME (PLEASE PRINT) <u>Don Hamilton</u>	TITLE <u>Agent for Petro-Canada Resources (USA), Inc.</u>
SIGNATURE <u>Don Hamilton</u>	DATE <u>9/1/2009</u>

(This space for State use only)

RECEIVED  
SEP 03 2009

**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 4301530721  
**Well Name:** State 16-~~14~~ 41  
**Location:** 2,310' FSL & 587' FEL, NE SE, S. 16, T23S, R15E,  
**Company Permit Issued to:** Petro-Canada Resources (USA) Inc.  
**Date Original Permit Issued:** 11/1/2007

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes  No

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes  No

Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes  No

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes  No

Has the approved source of water for drilling changed? Yes  No

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes  No

Is bonding still in place, which covers this proposed well? Yes  No

Don Hamilton  
Signature

9/1/2009  
Date

Title: Agent

Representing: Petro-Canada Resources (USA) Inc.

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SEP 03 2009  
DIV. OF OIL, GAS & MINING



GARY R. HERBERT  
Governor

GREGORY S. BELL  
Lieutenant Governor

# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

November 3, 2010

Petro-Canada Resources (USA), Inc.  
1099-18<sup>th</sup> St, Suite 400  
Denver, CO 80202

Re: APD Rescinded – State 16-41, Sec. 16 T. 23S, R. 15E  
Emery County, Utah API No. 43-015-30721

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on November 1, 2007. On September 25, 2008 and September 9, 2009, the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective November 3, 2010.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason  
Environmental Scientist

cc: Well File  
SITLA, Ed Bonner