

FORM  
15  
Rev 6/99

State of Colorado  
Oil and Gas Conservation Commission



1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax: (303)894-2109

DOCUMENT  
#2216415

FOR OGCC USE ONLY

RECEIVED  
9/14/2011

EARTHEN PIT REPORT/PERMIT

This form is to be used for both reporting and permitting pits. Rule 903 describes when a Permit with prior approval, or a Report within 30 days, is required for pits. Submit required attachments and forms.

Complete the  
Attachment Checklist

FORM SUBMITTED FOR:

Pit Report  Pit Permit

	Oper	OGCC
Detailed Site Plan	✓	
Topo Map w/ Pit Location	✓	
Water Analysis (Form 25)		
Source Wells (Form 26)	✓	
Pit Design/Plan & Cross Sec		
Design Calculations		
Sensitive Area Determ.		
Mud Program		
Form 2A	✓	

OGCC Operator Number: 100185  
Name of Operator: EnCana Oil & Gas (USA) Inc.  
Address: 370 17th Street Suite 1700  
City: Denver State: CO Zip: 80202

Contact Name and Telephone:  
Chris Hines  
No: 970-285-2653  
Fax:

API Number (of associated well): ~~335649~~ (Location ID) OGCC Facility ID (of other associated facility):  
Pit Location (QtrQtr, Sec, Twp, Rng, Meridian): NESW Sec 22 T5S-R96W, 6th PM - WF K22 596  
Latitude: 39.599451 Longitude: 108.159357 County: Garfield  
Pit Use:  Production  Drilling (Attach mud program)  Special Purpose (Describe Use):  
Pit Type:  Lined  Unlined Surface Discharge Permit:  Yes  No  
Offsite disposal of pit contents:  Injection  Commercial Pit/Facility Name: WF K22 Pit/Facility No: 596  
Attach Form 28 to identify Source Wells and Form 25 to provide Produced Water Analysis results.

Existing Site Conditions

Is the location in a "Sensitive Area?"  Yes  No Attach data used for determination.  
Distance (in feet) to nearest surface water: 262' ground water: 10' bgs water wells: 11879'  
LAND USE (or attach copy of Form 2A if previously submitted for associated well) Select one which best describes land use:  
Crop Land:  Irrigated  Dry Land  Improved Pasture  Hay Meadow  CRP  
Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe): Shrub and Grassland  
Subdivided:  Industrial  Commercial  Residential  
SOILS (or attach copy of Form 2A if previously submitted for associated well)  
Soil map units from USNRCS survey: Sheet No: \_\_\_\_\_ Soil Complex/Series No: 62  
Soils Series Name: Rock Outcrop-Torriorthents Complex Horizon thickness (in inches): A: \_\_\_\_\_ ; B: \_\_\_\_\_ ; C: \_\_\_\_\_  
Soils Series Name: \_\_\_\_\_ Horizon thickness (in inches): A: \_\_\_\_\_ ; B: \_\_\_\_\_ ; C: \_\_\_\_\_  
Attach detailed site plan and topo map with pit location.

Pit Design and Construction

Size of pit (feet): Length: 248' Width: 40' Depth: 12'  
Calculated pit volume (bbbls): 17657 bbbls Daily inflow rate (bbbls/day): \_\_\_\_\_  
Daily disposal rates (attach calculations): Evaporation: na bbbls/day Percolation: na bbbls/day  
Type of liner material: HDPE Thickness: 24 mils - double lined  
Attach description of proposed design and construction (include sketches and calculations).  
Method of treatment of produced water prior to discharge into pit (separator, heater treater, other): Separator  
Is pit fenced?  Yes  No Is pit netted?  Yes  No

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Heather Mitchell

Signed: Heather Mitchell

Title: Regulatory Analyst

Date: 09/20/2011

OGCC Approved: Greg Deranleau

Title: For Greg Deranleau

Date: 10/05/2011

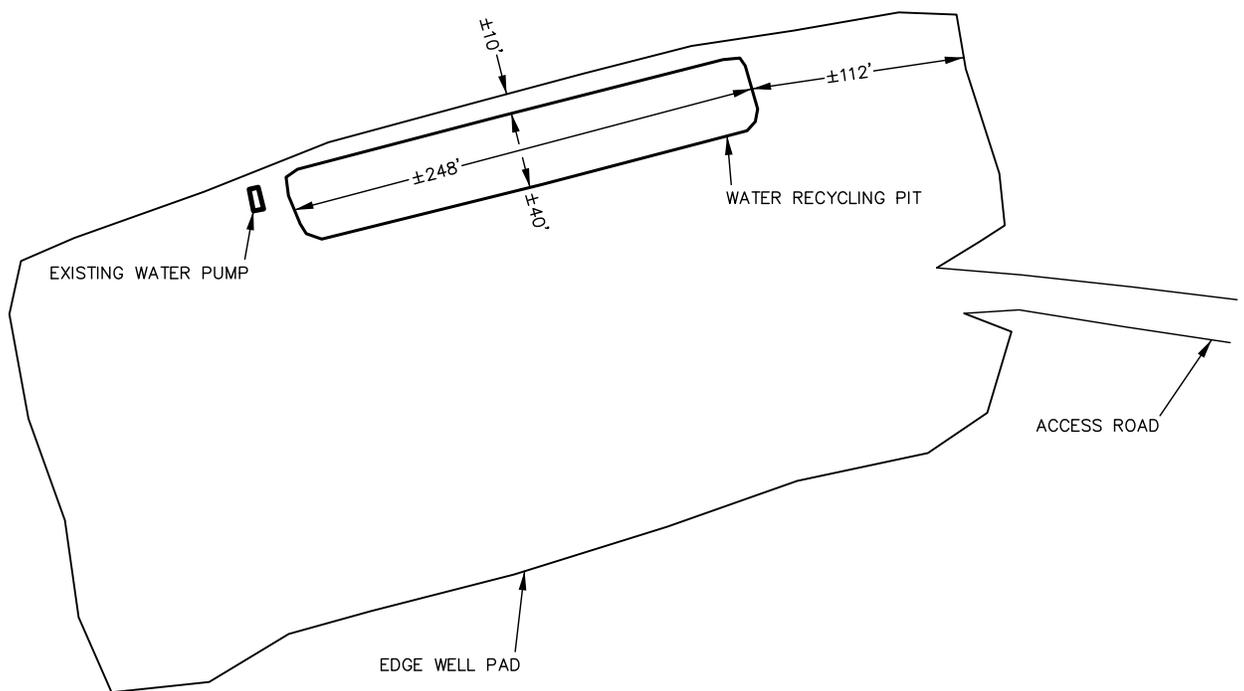
CONDITIONS OF APPROVAL, IF ANY:

FACILITY NUMBER: 425754

Pit report submitted retroactively to establish pit facility ID # for closure purposes. Form 27 pit closure work plan to be submitted shortly.

OGCA Supervisor

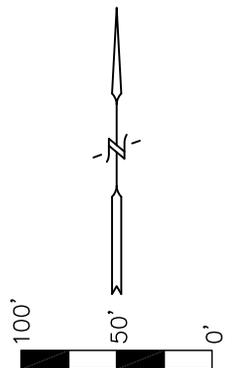
ENCANA OIL & GAS (USA) INC.  
NORTH PARACHUTE RANCH RECYCLING WATER PROGRAM  
K22 WELL PAD  
S22 T5S R96W



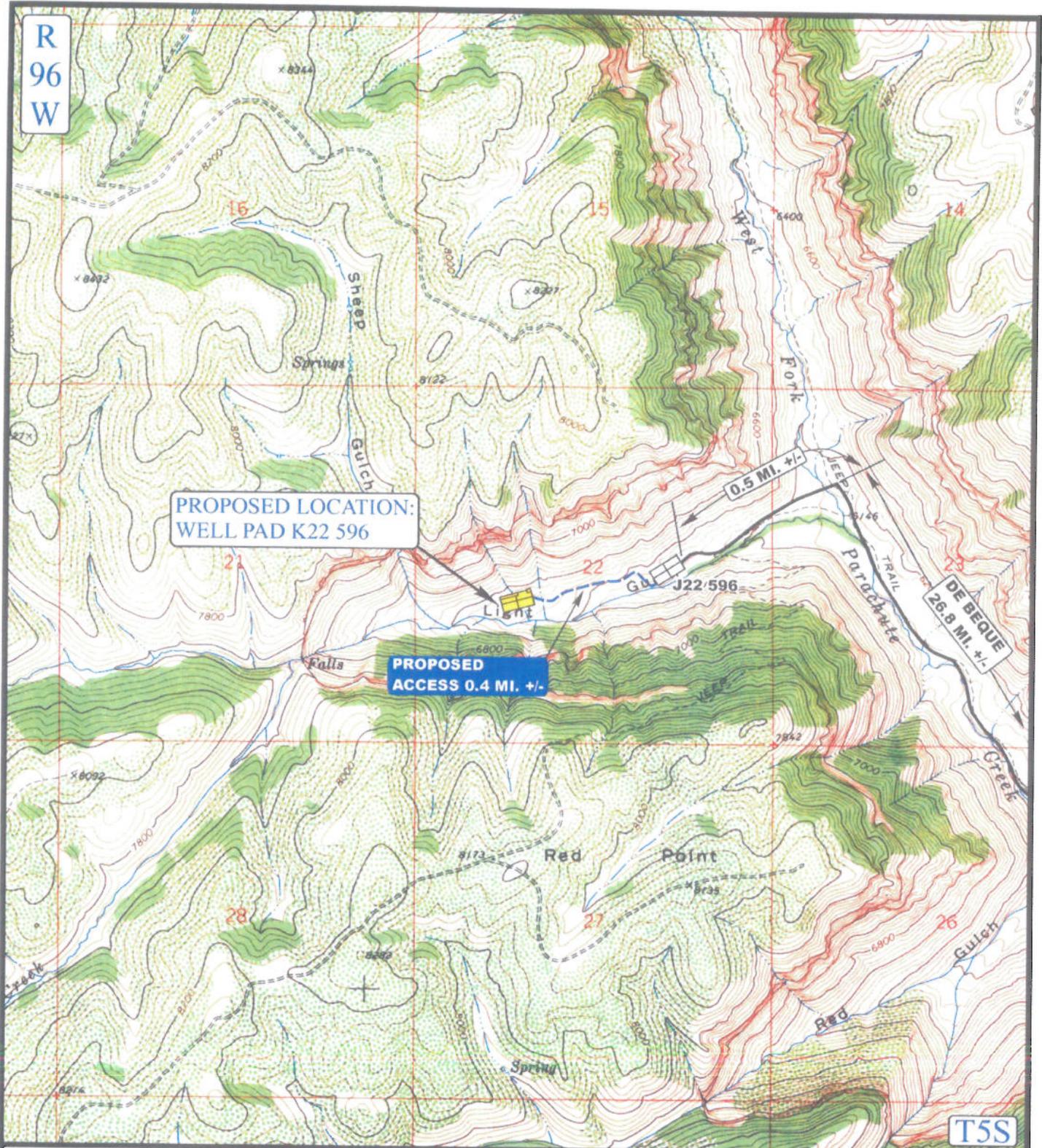
GENERAL NOTES:  
THE WELLS WERE NOT SURVEYED DUE TO CONSTRUCTION, DRILLING OR COMPLETION OPERATIONS.  
PUMP LOCATIONS (IF INDICATED) ARE NOT PERMANENT OR FINAL LOCATIONS. ALL WATER HANDLING PUMPS USED IN RECYCLING OPERATIONS ARE MOBILE TRAILER-MOUNTED UNITS WHICH MAY BE LOCATED ANYWHERE ALONG THE PERIMETER OF THE PIT IN QUESTION, AT A DISTANCE NO GREATER THAN 20 FEET FROM THE PIT BANK, AS OPERATIONS NECESSITATE.

Rev.: 7-31-08  
Date: 7-9-08  
Drawn By: JEV

UINTAH ENGINEERING & LAND SURVEYING  
832 North Crest Drive, Unit B Grand Junction, Colorado



R  
96  
W



T5S

**LEGEND:**

- PROPOSED ACCESS ROAD
- EXISTING ROAD



EnCana OIL & GAS (USA) INC.

WELL PAD K22 596  
 SECTION 22, T5S, R96W, 6th P.M.  
 NE 1/4 SW 1/4



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

**TOPOGRAPHIC**  
**MAP**

**11 29 05**  
 MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: J.L.G. REVISED: 00-00-00



FORM  
2A  
Rev  
04/01

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109



DE ET OE ES

Document Number:  
400004624

Oil and Gas Location Assessment

New Location  Amend Existing Location Location#: 335648

Submit original plus one copy. This form is to be submitted to the COGCC prior to any ground disturbance activity associated with oil and gas development operations. This Assessment may be approved as a stand alone application or submitted as an informational report accompanying an Application for Permit-To-Drill, Form 2. Approval of this Assessment will allow for the construction of the below specified location; however, it does not supersede any land use rules applied by the local land use authority. This form may serve as notice to land owners and other interested parties, please see the COGCC web site at <http://colorado.gov/cogcc/> for all accompanying information pertinent to this Oil and Gas Location Assessment.

Location ID:  
**335648**  
Expiration Date:  
**11/16/2012**

This location assessment is included as part of a permit application.

1. CONSULTATION

- This location is included in a Comprehensive Drilling Plan. CDP # \_\_\_\_\_
- This location is in a sensitive wildlife habitat area.
- This location is in a wildlife restricted surface occupancy area.
- This location includes a Rule 306.d.(1)A.ii. variance request.

2. Operator

Operator Number: 100185  
 Name: ENCANA OIL & GAS (USA) INC  
 Address: 370 17TH ST STE 1700  
 City: DENVER State: CO Zip: 80202-5632

3. Contact Information

Name: Julia Carter  
 Phone: (720) 876.5240  
 Fax: (720) 876.6240  
 email: julia.carter@encana.com

4. Location Identification:

Name: N. Parachute Number: WF K22 596  
 County: GARFIELD  
 QuarterQuarter: NESW Section: 22 Township: 5S Range: 96W Meridian: 6 Ground Elevation: 6526

Define a single point as a location reference for the facility location. This point should be used as the point of measurement in the drawings to be submitted with this application. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 2117 feet, from North or South section line: FSL and 1575 feet, from East or West section line: FWL  
 Latitude: 39.599194 Longitude: -108.159181 PDOP Reading: 2.1 Date of Measurement: 10/31/2008

5. Facilities (Indicate the number of each type of oil and gas facility planned on location):

Special Purpose Pits: <input type="text" value="0"/>	Drilling Pits: <input type="text" value="2"/>	Wells: <input type="text" value="52"/>	Production Pits: <input type="text" value="0"/>	Dehydrator Units: <input type="text" value="0"/>
Condensate Tanks: <input type="text" value="0"/>	Water Tanks: <input type="text" value="4"/>	Separators: <input type="text" value="26"/>	Electric Motors: <input type="text" value="4"/>	Multi-Well Pits: <input type="text" value="0"/>
Gas or Diesel Motors: <input type="text" value="3"/>	Cavity Pumps: <input type="text" value="0"/>	LACT Unit: <input type="text" value="0"/>	Pump Jacks: <input type="text" value="0"/>	Pigging Station: <input type="text" value="1"/>
Electric Generators: <input type="text" value="3"/>	Gas Pipeline: <input type="text" value="1"/>	Oil Pipeline: <input type="text" value="0"/>	Water Pipeline: <input type="text" value="2"/>	Flare: <input type="text" value="0"/>
Gas Compressors: <input type="text" value="0"/>	VOC Combustor: <input type="text" value="0"/>	Oil Tanks: <input type="text" value="0"/>	Fuel Tanks: <input type="text" value="1"/>	

Other: 1 Flare Stack, 9 meter houses - Please see attached Facilities List

**6. Construction:**

Date planned to commence construction: 12/01/2009 Size of disturbed area during construction in acres: 8.42  
 Estimated date that interim reclamation will begin: 05/01/2011 Size of location after interim reclamation in acres: 2.56  
 Estimated post-construction ground elevation: 6525 Will a closed loop system be used for drilling fluids: Yes   
 Will salt sections be encountered during drilling: Yes  No  Is H2S anticipated? Yes  No   
 Will salt (>15,000 ppm TDS Cl) or oil based muds be used: Yes  No   
 Mud disposal: Offsite  Onsite  Method: Land Farming  Land Spreading  Disposal Facility   
 Other: Recycle and Bury

**7. Surface Owner:**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Address: \_\_\_\_\_ Email: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Date of Rule 306 surface owner consultation: \_\_\_\_\_  
 Surface Owner:  Fee  State  Federal  Indian  
 Mineral Owner:  Fee  State  Federal  Indian  
 The surface owner is:  the mineral owner  committed to an oil and gas lease  
                                    is the executor of the oil and gas lease  the applicant  
 The right to construct the location is granted by:  oil and gas lease  Surface Use Agreement  Right of Way  
    applicant is owner  
 Surface damage assurance if no agreement is in place:  \$2000  \$5000  Blanket Surety ID \_\_\_\_\_

**8. Reclamation Financial Assurance:**

Well Surety ID: 20020067  Gas Facility Surety ID: \_\_\_\_\_  Waste Mgnt. Surety ID: \_\_\_\_\_

**9. Cultural:**

Is the location in a high density area (Rule 603.b.): Yes  No   
 Distance, in feet, to nearest building: 17609, public road: 16806, above ground utilit: 15530  
 , railroad: 60192, property line: 6864

**10. Current Land Use (Check all that apply):**

Crop Land:  Irrigated  Dry land  Improved Pasture  Hay Meadow  CRP  
 Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe): Shrub and brush  
 Subdivided:  Industrial  Commercial  Residential

**11. Future Land Use (Check all that apply):**

Crop Land:  Irrigated  Dry land  Improved Pasture  Hay Meadow  CRP  
 Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe): Shrub and brush  
 Subdivided:  Industrial  Commercial  Residential

**12. Soils:**

List all soil map units that occur within the proposed location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.gov/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: Rock Outcrop - Torriorthents Complex: 62

NRCS Map Unit Name: \_\_\_\_\_

NRCS Map Unit Name: \_\_\_\_\_

### 13. Plant Community:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes  No

Plant species from:  NRCS or,  field observation Date of observation: 07/07/2009

List individual species: Wyoming sagebrush, Douglas fir, Gambel oak, Serviceberry, Yarrow, Downy brome

Check all plant communities that exist in the disturbed area.

- Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)  
 Native Grassland (Bluestern, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)  
 Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)  
 Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)  
 Mountain Riparian (Cottonwood, Willow, Blue Spruce)  
 Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)  
 Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)  
 Alpine (above timberline)  
 Other (describe): \_\_\_\_\_

### 14. Water Resources:

Rule 901.e. may require a sensitive area determination be performed. If this determination is performed the data is to be submitted with the Form 2A.

Is this a sensitive area:  No  Yes Was a Rule 901.e. Sensitive Areas Determination performed:  No  Yes

Distance (in feet) to nearest surface water: 165, water well: 11879, depth to ground water: 10

Is the location in a riparian area:  No  Yes Was an Army Corps of Engineers Section 404 permit filed  No  Yes

Is the location within a Rule 317B Surface Water Suppl Area buffer zone:

No  0-300 ft. zone  301-500 ft. zone  501-2640 ft. zone

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified:  No  Yes

### 15. Comments:

Please reference the attached facilities list for a more detailed account of what will be on the location. Please note that this is an existing location with approximately 4.055 acres previously disturbed. The 8.425 acres of disturbance listed above refers to the total disturbance once the pad expansion is completed.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: \_\_\_\_\_ Date: 09/17/2009 Email: julia.carter@encana.com

Print Name: Julia M. Carter Title: Regulatory Analyst

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

*David S. Neskin*

COGCC Approved: \_\_\_\_\_

Director of COGCC

Date: 11/17/2009

Land Assessment COAs Approved by Operator: COA 1 - Location is in a sensitive area because of shallow groundwater; therefore, either a lined drilling pit or closed loop system must be implemented.

Land Assessment COAs Approved by Operator: COA 2 - Location may be in a sensitive area due to shallow groundwater; therefore if drilling pits intercept groundwater the pit must be lined or a closed loop system must be used.

Land Assessment COAs Approved by Operator: COA 4 - Location is in a sensitive area because of close proximity to surface water, therefore, operator must ensure 150 percent secondary containment for any volume of fluids contained at well site during drilling and completion operations.

Land Assessment COAs Approved by Operator: COA 5 - Operator must implement best management practices to contain any unintentional release of fluids.

### **Attachment Check List**

Att Doc Num	Name	Doc Description
2032651	CORRESPONDENCE	LF@2179183 2032651
400004631	ACCESS ROAD MAP	LF@2150246 400004631
400004632	CONST. LAYOUT DRAWINGS	LF@2150247 400004632
400004634	LOCATION DRAWING	LF@2150248 400004634
400004635	LOCATION PICTURES	LF@2150250 400004635
400004636	MULTI-WELL PLAN	LF@2150222 400004636
400004637	NRCS MAP UNIT DESC	LF@2150223 400004637
400004638	PROPOSED BMPs	LF@2150224 400004638
400004639	REFERENCE AREA MAP	LF@2150225 400004639
400004640	REFERENCE AREA PICTURES	LF@2150252 400004640
400004642	OTHER	LF@2150226 400004642
400005607	HYDROLOGY MAP	LF@2150253 400005607

Total Attach: 12 Files

# FORM 15 (Earthen Pit Report/Permit) Narrative Attachment

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## **WF K22 596 Pad – 335648 (Location ID)**

Document Date – 09/20/2011

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This pit report was prepared in support of closure activities an historic and unpermitted pit on the WF K22 596 pad. Encana has limited internal documentation on the original use and construction of the pit. The intent of this submittal is not to justify continued operation of the pits, but to provide a facility ID number to reference during all correspondence associated with pit closure site investigation and remediation activities.

### **Is the location in a “Sensitive Area?”**

Yes, based on the distance to surface water and the depth to ground water, this location is found in a sensitive area.

### **Description of pit use:**

The pit on this well pad provided storage for treated water used in support of hydraulic fracturing operations in Encana’s North Parachute Ranch. The pit was constructed on the cut-slope and was supplied filtered produced water via pipeline from the Middle Fork Treatment Facility, located in the SWSW of Section 30, T5S, R95W in Garfield County or transferred from a flowback tank after mechanical settling.

The North Parachute Properties use a centralized 3-phase gathering system for the collection of produced natural gas and associated fluids. With this centralization of the fluid separation and processing, these pits are likely to contain filter produced water from every well in the North Parachute Properties.