

# State of Colorado Oil and Gas Conservation Commission

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|                                      |    |    |    |
|--------------------------------------|----|----|----|
| DE                                   | ET | OE | ES |
| Document Number:<br><b>400691841</b> |    |    |    |
| Date Received:<br><b>09/19/2014</b>  |    |    |    |

## SUNDRY NOTICE

Submit a signed original. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full in Comments or provide as an attachment. Identify Well by API Number; identify Oil and Gas Location by Location ID Number; identify other Facility by Facility ID Number.

|   |  |
|---|--|
| OGCC Operator Number: <b>57667</b>                      | Contact Name: <b>Derek Petrie</b>                |
| Name of Operator: <b>MINERAL RESOURCES INC</b>          | Phone: <b>(720) 420-5700</b>                     |
| Address: <b>PO BOX 328</b>                              | Fax: <b>(720) 420-5800</b>                       |
| City: <b>GREELEY</b> State: <b>CO</b> Zip: <b>80632</b> | Email: <b>derek.petrie@iptenergyservices.com</b> |

Complete the Attachment  
Checklist

OP OGCC

|  |  |
|--|--|
| API Number : <b>05- 123 00</b>   | OGCC Facility ID Number: <b>332837</b> |
| Well/Facility Name: <b>Greeley Directional</b>   | Well/Facility Number: <b></b>          |
| Location QtrQtr: <b>NENE</b> Section: <b>20</b> Township: <b>5N</b> Range: <b>65W</b> Meridian: <b>6</b> |  |
| County: <b>WELD</b> Field Name: <b>WATTENBERG</b>  |  |
| Federal, Indian or State Lease Number: <b></b>   |  |

|                     |  |  |
|---------------------|--|--|
| Survey Plat         |  |  |
| Directional Survey  |  |  |
| Srvc Eqpmt Diagram  |  |  |
| Technical Info Page |  |  |
| Other               |  |  |

## CHANGE OF LOCATION OR AS BUILT GPS REPORT

☐ Change of Location \* ☐ As-Built GPS Location Report ☐ As-Built GPS Location Report with Survey

\* Well location change requires new plat. A substantive surface location change may require new Form 2A.

**SURFACE LOCATION GPS DATA** Data must be provided for Change of Surface Location and As Built Reports.

Latitude  PDOP Reading  Date of Measurement   
Longitude  GPS Instrument Operator's Name

### LOCATION CHANGE (all measurements in Feet)

Well will be:  (Vertical, Directional, Horizontal)

Change of **Surface** Footage **From** Exterior Section Lines:

Change of **Surface** Footage **To** Exterior Section Lines:

Current **Surface** Location **From** QtrQtr **NENE** Sec **20**

New **Surface** Location **To** QtrQtr  Sec

Change of **Top of Productive Zone** Footage **From** Exterior Section Lines:

Change of **Top of Productive Zone** Footage **To** Exterior Section Lines:

Current **Top of Productive Zone** Location **From** Sec

New **Top of Productive Zone** Location **To** Sec

Change of **Bottomhole** Footage **From** Exterior Section Lines:

Change of **Bottomhole** Footage **To** Exterior Section Lines:

Current **Bottomhole** Location Sec  Twp

New **Bottomhole** Location Sec  Twp

Is location in High Density Area?

Distance, in feet, to nearest building , public road: , above ground utility: , railroad: ,

property line: , lease line: , well in same formation:

Ground Elevation  feet Surface owner consultation date

| FNL/FSL |           | FEL/FWL    |                                  |
|---------|-----------|------------|----------------------------------|
| 381     | FNL       | 1281       | FEL                              |
|         |           |            |                                  |
| Twp 5N  | Range 65W | Meridian 6 |                                  |
| Twp     | Range     | Meridian   |                                  |
|         |           |            |                                  |
|         |           |            | **                               |
| Twp     | Range     |            |                                  |
| Twp     | Range     |            |                                  |
|         |           |            |                                  |
|         |           |            | **                               |
|         |           |            |                                  |
|         |           |            | ** attach deviated drilling plan |
|         |           |            |                                  |

**OTHER CHANGES**

☐ **REMOVE FROM SURFACE BOND**      Signed surface use agreement is a required attachment

☐ **CHANGE OF WELL, FACILITY OR OIL & GAS LOCATION NAME OR NUMBER**

From:      Name    GREELEY DIRECTIONAL      Number    \_\_\_\_\_      Effective Date: \_\_\_\_\_

To:      Name    \_\_\_\_\_      Number    \_\_\_\_\_

☐ **ABANDON PERMIT: Permit can only be abandoned if the permitted operation has NOT been conducted. Field inspection will be conducted to verify site status.**

☐ WELL: Abandon Application for Permit-to-Drill (Form2) – Well API Number \_\_\_\_\_ has not been drilled.

☐ PIT: Abandon Earthen Pit Permit (Form 15) – COGCC Pit Facility ID Number \_\_\_\_\_ has not been constructed (Permitted and constructed pit requires closure per Rule 905)

☐ CENTRALIZED E&P WASTE MANAGEMENT FACILITY: Abandon Centralized E&P Waste Management Facility Permit (Form 28) – Facility ID Number \_\_\_\_\_ has not been constructed (Constructed facility requires closure per Rule 908)

OIL & GAS LOCATION ID Number: \_\_\_\_\_

☐ Abandon Oil & Gas Location Assessment (Form 2A) – Location has not been constructed and site will not be used in the future.

☐ Keep Oil & Gas Location Assessment (Form 2A) active until expiration date. This site will be used in the future.

**Surface disturbance from Oil and Gas Operations must be reclaimed per Rule 1003 and Rule 1004.**

☐ **REQUEST FOR CONFIDENTIAL STATUS**

☐ **DIGITAL WELL LOG UPLOAD**

☐ **DOCUMENTS SUBMITTED**      Purpose of Submission: \_\_\_\_\_

**RECLAMATION**

**INTERIM RECLAMATION**

☐ Interim Reclamation will commence approximately \_\_\_\_\_  
 Per Rule 1003.e.(3) operator shall submit Sundry Notice reporting interim reclamation is complete and site is ready for inspection when vegetation reaches 80% coverage.

☐ Interim reclamation complete, site ready for inspection.  
 Per Rule 1003.e(3) describe interim reclamation procedure in Comments below or provide as an attachment and attach required location photographs.

**Field inspection will be conducted to document Rule 1003.e. compliance**

**FINAL RECLAMATION**

☐ Final Reclamation will commence approximately \_\_\_\_\_  
 Per Rule 1004.c.(4) operator shall submit Sundry Notice reporting final reclamation is complete and site is ready for inspection when vegetation reaches 80% coverage.

☐ Final reclamation complete, site ready for inspection. Per Rule 1004.c(4) describe final reclamation procedure in Comments below or provide as an attachment.

**Field inspection will be conducted to document Rule 1004.c. compliance**

Comments:

## ENGINEERING AND ENVIRONMENTAL WORK

### ☐ NOTICE OF CONTINUED TEMPORARILY ABANDONED STATUS

Indicate why the well is temporarily abandoned and describe future plans for utilization in the COMMENTS box below or provide as an attachment, as required by Rule 319.b.(3).

Date well temporarily abandoned \_\_\_\_\_ Has Production Equipment been removed from site? \_\_\_\_\_

Mechanical Integrity Test (MIT) required if shut in longer than 2 years. Date of last MIT \_\_\_\_\_

☐ SPUD DATE: \_\_\_\_\_

## TECHNICAL ENGINEERING AND ENVIRONMENTAL WORK

Details of work must be described in full in the COMMENTS below or provided as an attachment.

☒ NOTICE OF INTENT Approximate Start Date 09/22/2014

☐ REPORT OF WORK DONE Date Work Completed \_\_\_\_\_

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Intent to Recomplete (Form 2 also required)  | <input type="checkbox"/> Request to Vent or Flare   | <input type="checkbox"/> E&P Waste Mangement Plan      |
| <input type="checkbox"/> Change Drilling Plan                         | <input type="checkbox"/> Repair Well  | <input type="checkbox"/> Beneficial Reuse of E&P Waste |
| <input type="checkbox"/> Gross Interval Change                        | <input type="checkbox"/> Rule 502 variance requested. Must provide detailed info regarding request. |  |
| <input checked="" type="checkbox"/> Other <u>Additon of MLVT Tank</u> | <input type="checkbox"/> Status Update/Change of Remediation Plans for Spills and Releases          |  |

## COMMENTS:

This already producing location referenced above passed prior to the updated MLVT Policy dated 06/13/2014. Operator will comply with all elements of the policy during Construction and use on location.

See attachments tabs for updated BMP's.

## H2S REPORTING

**Data Fields in this section are intended to document Sample and Location Data associated with the collection of a Gas Sample that is submitted for Laboratory Analysis.**

**Gas Analysis Report must be attached.**

H2S Concentration: \_\_\_\_\_ in ppm (parts per million) Date of Measurement or Sample Collection \_\_\_\_\_

Description of Sample Point:

Absolute Open Flow Potential \_\_\_\_\_ in CFPD (cubic feet per day)

Description of Release Potential and Duration (If flow is not open to the atmosphere, identify the duration in which the container or pipeline would likely be opened for servicing operations.):

Distance to nearest occupied residence, school, church, park, school bus stop, place of business, or other areas where the public could reasonably be expected to frequent: \_\_\_\_\_

Distance to nearest Federal, State, County, or municipal road or highway owned and principally maintained for public use: \_\_\_\_\_

### **Best Management Practices**

| <b><u>No</u></b> | <b><u>BMP/COA Type</u></b>     | <b><u>Description</u></b>  |
|------------------|--------------------------------|--|
| 1                | Planning                       | 5. Security cameras will be installed allowing Mineral Resources to monitor the facility.  |
| 2                | Planning                       | Secondary containment will be provided around the tank battery and separators per COGCC Rules and regulations. Secondary containment around the tank battery will include a steel containment system, 30-44 inches tall; with either a geomembrane top mounted or sprays on liner.   |
| 3                | Planning                       | To minimize impacts from lighting used during the drilling phase, lighting shield devices will be installed on all of the more conspicuous lights and the rig floor will be shrouded.  |
| 4                | Planning                       | 13. The operator shall identify the location of plugged and abandoned wells with a permanent monument which shall include the well number and date of plugging inscribed on the monument.  |
| 5                | Planning                       | Exhaust from all engines, motors, coolers, and other mechanized equipment shall be vented away from all occupied buildings.  |
| 5                | Noise mitigation               | The Noise Study conducted by consultants Behrens and Associates, Inc. for Greeley Directional is in compliance with COGCC Section 802 "Noise Abatement". The site is bordered by industrial zoned property and residential to the northwest and west. No additional mitigation is required for this site of using sound mufflers or sound walls. The Unmitigated noise impact models representing drilling and fracing operations at the site were constructed and the results compared to the COGCC Standard. |
| 5                | Dust control                   | Fugitive Dust Control<br>1A - Watering shall be completed as needed to control dust on unpaved roads.<br>1B - Speed limits to prevent dust on unpaved roads.   |
| 5                | Drilling/Completion Operations | Mineral Resources is responsible for the design and implementation of MLVTs on the Greeley Directional location. Compliance with MLVT policy dated 06/13/2014 will be sole responsibility of Mineral Resources.  |
| 6                | Planning                       | Adequate blowout prevention equipment shall be provided for drilling operations and well serving operations.   |
| 7                | Planning                       | When feasible, electric compressors shall be utilized.   |
| 8                | Planning                       | 3. Access to the property will be controlled by an existing motorized gate operated by a knox box key pad.   |
| 9                | Planning                       | To reduce impacts to air quality gas gathering lines will be constructed and installed prior to completion of the wells. Therefore flaring of gas during the flowback process will be limited, if not eliminated.  |
| 10               | Planning                       | 2. Signage providing company information and a 24 hour contact information will be provided. Refer to landscape plan for location.   |
| 11               | Planning                       | The following Best Management Practices will be implemented during MLVT installation:<br>The site shall be prepared in accordance with tank manufacturers specification prior to tank installation; including ensuring that proper compaction requirements have been met.<br>A 36-MIL fabric reinforced liner will be utilized. In the event that a tank breach were to occur, the fabric reinforced liner will prevent a "zippering" failure from occurring.  |
| 12               | Planning                       | Temporary above ground water tanks shall be installed on-site to be used for water storage during the completion phase. Tanks will be filled from the city of Greeley's water system. By filling the tank in this manner, water hauling trucks will not back up to the tank to offload water. This process significantly reduces the change of a collision with the tank. In addition, this process also significantly reduces truck traffic associated with water hauling.                                    |

|    |                                |   |
|----|--------------------------------|---|
| 13 | Planning                       | 6. The operations of the facility will be completely automated allowing Mineral Resources to monitor all production operations remotely. In the event that the facility is not operating under normal conditions, the automation system will immediately notify Mineral Resources. The automation system also has the ability to remotely perform an emergency shut down if necessary.  |
| 14 | Planning                       | 1. The site will be fenced in accordance with city and COGCC regulations for public safety. Exterior site fencing and fencing of oil and gas equipment will be provided. Refer to this plan and the landscape plans prepared by TB group for location. At the time of initial installation, all pumps, pits, well heads and production facilities must be adequately fenced to restrict access by unauthorized persons. For security purposes, all such facilities and equipment used in the operation of a completed well must be surrounded by a fence six (6) feet in height, of noncombustible material, and which must include a gate that shall be locked.  |
| 15 | Planning                       | 4. The site will be monitored daily by mineral resources to ensure operations are functioning properly. Daily reports consist of tank measurements, gas production estimates, pressure readings, and general facility care and maintenance.   |
| 16 | Dust control                   | To improve air quality, generated dust from the silica sand used during hydraulic fracturing will be contained using a dust suppression vacuum system.  |
| 17 | Construction                   | 12. Any material not in use that might constitute a fire hazard shall be placed a minimum m of twenty-five (25) feet from the well head, tanks and separator. Within Ninety (9) days after a well is plugged and abandoned, the well site shall be cleared of all nonessential equipment.   |
| 18 | Noise mitigation               | A noise impact modeling report was prepared by Behrens and Associates, Inc. Refer to the report for specifics pertaining to anticipated noise from the proposed use.  |
| 19 | Emissions mitigation           | <p>8. Regular fugitive emissions air quality and general facility inspections will be conducted by CGRS, an Environmental compliance specialist. Inspections include</p> <ul style="list-style-type: none"> <li>• Perform general tank battery inspection to document any obvious issues based on the CDHPE-APCD oil and gas condensate spot check inspection check list.</li> <li>• Identify all potential fugitive emission sources by utilizing a forward looking infrared (flir) optical imaging camera; model Flir GF-320.</li> <li>• Document and record by means of physical documentation, video and or photo all fugitive emission sources.</li> <li>• Label tank battery, separator, emission control device (EC) well head, and other equipment that exhibit fugitive emissions with a unique numbered fugitive emissions inspection tag.</li> <li>• Mark individual leak sources with a temporary yellow marking ( as applicable) in order to facilitate improving efficiency of subsequent repairs.</li> <li>• Perform fugitive emission minor equipment repairs (as applicable) on low-pressure components using basic hand tools at the tank battery and will pad.</li> <li>• Prepare a fugitive emissions inspection and optical gas imaging report to document areas that require additional repair or maintenance.</li> </ul> |
| 20 | Emissions mitigation           | 7. Emissions control devices (ECD) and vapor recovery units (VRU) will be installed. Both units function to reduce volatile organic compound (VOC) emissions that are generated from the crude oil and condensate tanks. The ECD and VRU devices reduce VOC emissions by at least 95% through combustion and sequestration.   |
| 21 | Drilling/Completion Operations | A closed loop system will be utilized for all drilling fluids. No open pits will be used.   |

Total: 24 comment(s)

**Operator Comments:**

1. Manufacturer Name and Number: Commander Series Tanks manufactured by PCI Manufacturing. The tank vendor is Resource West (see attached operations manual for contact information).
  2. Number of tanks: 2
  3. Size and Dimensions of tanks: 175' Diameter, 50,000 BBL
- Anticipated timeframe: The anticipated timeframe that the MLVTs will be onsite will vary depending on how many wells are being completed. On average, the tanks will be onsite for a duration of 1.5 days per well.
5. Drawing where they will be located: See attached.

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

Signed: \_\_\_\_\_ Print Name: Derek Petrie  
Title: Regulatory Supervisor Email: derek.petrie@iptenergyservices.com Date: 9/19/2014

Based on the information provided herein, this Sundry Notice (Form 4) complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: ANDREWS, DOUG Date: 9/24/2014

**CONDITIONS OF APPROVAL, IF ANY:****COA Type****Description**

|  |  |
|--|--|
|  |  |
|--|--|

**General Comments**

| <b><u>User Group</u></b> | <b><u>Comment</u></b>   | <b><u>Comment Date</u></b> |
|--------------------------|---|----------------------------|
| OGLA                     | Operator provided a certification BMP on the use of MLVTs, a more specific noise mitigation BMP and additional dust control BMPs for unpaved roads.   | 9/24/2014<br>8:39:03 AM    |
| OGLA                     | Requested required Operator Certification on compliance with MLVT Policy, more specific noise mitigation measure, and addition of dust control BMPs for unpaved roads.  | 9/23/2014<br>8:41:26 AM    |
| OGLA                     | Return to DRAFT - BMPs to be listed on the BMP tab not just as an Attachment. For the MLVTs, need the following additional information: the number of MLVTs, vendor/maufactoror of the MLVT, size/volume of the MLVTs, the anticipated timeframe they will be onsite, and a Location Drawing showing where the MLVTs will be placed onsite. | 9/22/2014<br>10:54:57 AM   |
| Routing Review           | Routed to Doug Andrews for review again.  | 9/22/2014<br>8:12:59 AM    |

Total: 4 comment(s)

**Attachment Check List**

| <b><u>Att Doc Num</u></b> | <b><u>Name</u></b> |
|---------------------------|--------------------|
| 1668549                   | CORRESPONDENCE     |
| 400691841                 | FORM 4 SUBMITTED   |
| 400693160                 | OTHER              |
| 400693161                 | OTHER              |
| 400693162                 | OTHER              |
| 400693171                 | FORM 4 SUBMITTED   |

Total Attach: 6 Files