

FORM INSP
Rev 05/11

**State of Colorado
Oil and Gas Conservation Commission**

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



Inspection Date:
02/23/2016
Document Number:
681900660
Overall Inspection:
SATISFACTORY

FIELD INSPECTION FORM

| | | | | | |
|---------------------|-------------|--------|-----------------|--------------------------|-------------|
| Location Identifier | Facility ID | Loc ID | Inspector Name: | On-Site Inspection | 2A Doc Num: |
| | 442324 | 442316 | HELGELAND, GARY | <input type="checkbox"/> | |

Operator Information:

OGCC Operator Number: 10459
 Name of Operator: EXTRACTION OIL & GAS LLC
 Address: 370 17TH STREET SUITE 5300
 City: DENVER State: CO Zip: 80202

- THIS IS A FOLLOW UP INSPECTION
- FOLLOW UP INSPECTION REQUIRED
- NO FOLLOW UP INSPECTION REQUIRED
- INSPECTOR REQUESTS FORM 42 WHEN CORRECTIVE ACTIONS ARE COMPLETED

Contact Information:

Compliance Summary:

QtrQtr: NESE Sec: 14 Twp: 2N Range: 68W

Inspector Comment:

Responded to Notice of Spud #400989834. Paterson Rig 346 in process of MIRU.

Related Facilities:

| Facility ID | Type | Status | Status Date | Well Class | API Num | Facility Name | Insp Status | |
|-------------|------|--------|-------------|------------|-----------|---------------|-------------|-------------------------------------|
| 442319 | WELL | XX | 07/02/2015 | LO | 123-41797 | Bybee 6 | XX | <input type="checkbox"/> |
| 442321 | WELL | XX | 07/02/2015 | LO | 123-41798 | Bybee 2 | XX | <input type="checkbox"/> |
| 442323 | WELL | XX | 07/02/2015 | LO | 123-41799 | Bybee 7 | XX | <input type="checkbox"/> |
| 442324 | WELL | XX | 07/02/2015 | LO | 123-41800 | Bybee 1 | XX | <input checked="" type="checkbox"/> |
| 442325 | WELL | XX | 07/02/2015 | LO | 123-41801 | Bybee 4 | XX | <input type="checkbox"/> |
| 442326 | WELL | XX | 07/02/2015 | LO | 123-41802 | Bybee 3 | XX | <input type="checkbox"/> |
| 442327 | WELL | XX | 07/02/2015 | LO | 123-41803 | Bybee 5 | XX | <input type="checkbox"/> |

Equipment:

Location Inventory

| | | | |
|------------------------------|------------------------|----------------------|-------------------------|
| Special Purpose Pits: _____ | Drilling Pits: _____ | Wells: <u>8</u> | Production Pits: _____ |
| Condensate Tanks: _____ | Water Tanks: <u>2</u> | Separators: <u>8</u> | Electric Motors: _____ |
| Gas or Diesel Mortors: _____ | Cavity Pumps: _____ | LACT Unit: _____ | Pump Jacks: _____ |
| Electric Generators: _____ | Gas Pipeline: _____ | Oil Pipeline: _____ | Water Pipeline: _____ |
| Gas Compressors: _____ | VOC Combustor: _____ | Oil Tanks: <u>16</u> | Dehydrator Units: _____ |
| Multi-Well Pits: _____ | Pigging Station: _____ | Flare: _____ | Fuel Tanks: _____ |

Location

| Lease Road: | | | | |
|--------------------|------------------------------|---------|-------------------|------|
| Type | Satisfactory/Action Required | comment | Corrective Action | Date |
| | | | | |

| Signs/Marker: | | | | |
|----------------------|------------------------------|---------|-------------------|---------|
| Type | Satisfactory/Action Required | Comment | Corrective Action | CA Date |
| | | | | |

Emergency Contact Number (S/AR): _____ Corrective Date: _____

Comment: _____

Corrective Action: _____

| Good Housekeeping: | | | | |
|---------------------------|------------------------------|---------|-------------------|---------|
| Type | Satisfactory/Action Required | Comment | Corrective Action | CA Date |
| | | | | |

| Spills: | | | | |
|----------------|------|--------|-------------------|---------|
| Type | Area | Volume | Corrective action | CA Date |
| | | | | |

Multiple Spills and Releases?

| Fencing/: | | | | |
|------------------|------------------------------|---------|-------------------|---------|
| Type | Satisfactory/Action Required | Comment | Corrective Action | CA Date |
| | | | | |

| Equipment: | | | | |
|-------------------|---|-------------------------------|--|-------------|
| Type: | # | Satisfactory/Action Required: | | |
| Comment | | | | |
| Corrective Action | | | | Date: _____ |

| Venting: | |
|-----------------|--|
| Yes/No | |
| Comment | |

| Flaring: | | | |
|--------------------|--|------------------------------|----------------------------|
| Type | | Satisfactory/Action Required | |
| Comment: | | | |
| Corrective Action: | | | Correct Action Date: _____ |

| Predrill | | | |
|--------------------------|---------------------------------------|---------------------------|-------------------------------------|
| Location ID: | 442324 | | |
| Site Preparation: | Lease Road Adeq.: <u>SATISFACTORY</u> | Pads: <u>SATISFACTORY</u> | Soil Stockpile: <u>SATISFACTORY</u> |
| S/AR: | <u>SATISFACTORY</u> | | |
| Corrective Action: | | Date: _____ | CDP Num.: _____ |
| Form 2A COAs: | | | |

| Group | User | Comment | Date |
|-------|---------|--|------------|
| OGLA | HouseyM | Operator shall provide notice to COGCC 48 hours prior to commencing construction of this Oil and Gas Location via Form 42. | 07/01/2015 |

S/AR: _____ **Comment:** _____

CA: _____ **Date:** _____

Wildlife BMPs:

| BMP Type | Comment |
|-----------------------------|--|
| Dust control | Operator shall employ practices for control of fugitive dust caused by their operations. Such practices shall include but are not limited to the use of speed restrictions, regular road maintenance, restriction of construction activity during high- wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. Additional management practices such as road surfacing, wind breaks and barriers, or automation of wells to reduce truck traffic may also be required if technologically feasible and economically reasonable to minimize fugitive dust emissions. |
| Construction | <p>Guy line anchors: All guy line anchors shall be brightly marked pursuant to Rule 604.c.(2)Q.</p> <p>Berm Construction- Tanks berms shall be constructed of steel rings with a synthetic or engineered liner and designed to contain 150% of the capacity of the largest tank. All berms will be visually checked periodically to ensure proper working condition.</p> <p>Containment berms shall be constructed and designed to prevent leakage and resist degradation from erosion or routine operation. Tertiary containment, such as an earthen berm, will be installed as required for Production Facilities within 500 feet of a downgradient surface water feature. All berms will be visually checked periodically to ensure proper working condition.</p> |
| Storm Water/Erosion Control | Use water bars, and other measures to prevent erosion and non-source pollution. Implement and maintain BMPs to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation. Co-locate gas and water gathering lines whenever feasible, and mitigate any erosion problems that arise due to the construction of any pipeline(s). |
| Final Reclamation | Within 90 days subsequent to the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site. The Operator shall restore the surface of the Land affected by such terminated operations as near as possible to the previous state that existed prior to operations. |
| General Housekeeping | <p>Visual Impacts: Equipment, regardless of construction date, which are observable from any public highway shall be painted with uniform, non-contrasting, non-reflective color tones (similar to the Munsell Soil Color Coding System), and with colors matched to, but slightly darker than, the surrounding landscape.</p> <p>Maintain appearance with garbage clean-up; a trash bin will be located on site to accumulate waste by the personnel drilling the wells. Site will have unused equipment, trash and junk removed immediately. Operator shall keep the Surface Use Area as well as any roads or other areas used by Operator safe and in good order, including control of noxious weeds litter and debris.</p> |

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|---|---|
| <p>Storm Water/Erosion Control</p> | <p>STOCKPILE/SWMP BMPS</p> <ul style="list-style-type: none"> • Stockpile management includes measures to minimize erosion and sediment transport from soil stockpiles. Erosion and Sediment Control Plans for Drilling Pad and Production Facility Pad, and Grading Plan are attached to this Form 4 Sundry. • BMPs for sediment and erosion control will be accomplished through a combination of construction techniques, vegetation and re-vegetation, and structural features. • During pre-construction, drilling, and other active construction processes, the focus will be primarily on containment-type BMPs and on-flow diversion BMPs. An example would be a continuous berm to contain storm water pollutants on site. • Erosion reduction and control will be accomplished by using several methods, which include but are not limited to diversion and control of run-on water, diversion and control of runoff water, vegetation planting and maintenance, and application and maintenance of mulches, blankets, tackifiers, tracking, and/or contouring. • Runoff control procedures will be used to mitigate and reduce the erosive transport forces of storm water during and after construction of the well site, e.g., earth berms, culvert protection, diversion ditches, swales, or other methods. • Existing vegetation cover and topsoil are removed only where necessary for the operation of equipment and construction of the pad. Trees and large shrubs that are not cleared from the pad area will be protected from damage during construction by avoiding them with equipment. • To prevent tracking of sediment onto public roads, portions of access roads shall be graveled, as appropriate. Other means such as track pads may be utilized. • Where conditions warrant, erosion control structures such as berms, culverts, and swales will be constructed to divert water away from the project area. These controls will also reduce soil erosion. • Stockpile surfaces will be stabilized with surface roughening, temporary seeding and mulching, erosion control blankets, and/or soil binders. Where seeding, mulch and/or soil binders are used, reseeded or reapplication of soil binder may be necessary. • Perimeter controls will be installed in accordance with their respective design details. • Maintenance of stockpiles will consist of inspecting perimeter controls and inlet protection. • When the stockpile is no longer needed, proper disposal of excess materials and re-vegetation will be done to stabilize the ground surface where it was located. • During the reclamation of the site, all cut and fill slopes in steep terrain will be graded and contoured to blend into the adjoining landscape. When possible, cut and fill slopes will be constructed so they are no steeper than a 3:1 ratio. • Keep well site location and road free of noxious weeds, litter and debris. Spray for noxious weeds, and implement dust control, as needed. • At all times, the property shall be maintained and/or watered to prevent wind-caused erosion. • Topsoil shall be stockpiled to the extent practicable on the site for use on areas to be re-vegetated. Any and all stockpiles shall be located and protected from erosive elements. |
| <p>Material Handling and Spill Prevention</p> | <p>Leak Detention Plan: Pumper will visit the location daily and visually inspect all wellheads, tanks and fittings for leaks. Additionally, monthly documented SPCCP inspections are conducted pursuant to 40 CFR 112.</p> <p>Control of fire hazards: All material that is considered a fire hazard shall be a minimum of 25' from the wellheads, tanks or separators. Electrical equipment shall comply with API IRP 500 and will comply with the current national electrical code.</p> <p>Operator shall comply with state and federal laws, rules and regulations governing the presence of any petroleum products, toxic or hazardous chemicals or wastes on the Subject lands.</p> |
| <p>Traffic control</p> | <p>Access Roads: The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access at all times. Traffic will be routed to minimize local interruption.</p> |

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|---------------------------------------|--|
| <p>Drilling/Completion Operations</p> | <p>A closed –loop system will be used for drilling operations.</p> <p>Blowout Prevention Equipment (“BOPE”): A double ram and annular preventer will be used during drilling. Stabbing valves shall be installed in the event of reverse circulation and shall be prior tested with low and high pressure fluid.</p> <p>Lighting: Site lighting shall be directed downward and inward and shielded so as to avoid glare on public roads and Building Units within one thousand (1000) feet where possible. Once the drilling and completion rigs leave the site, there will be no permanently installed lighting on site.</p> <p>Bradenhead Monitoring: Operator acknowledges and will comply with COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012.</p> <p>Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire well bore and to adequately verify the setting depth of surface casing and aquifer coverage. On a multi-well pad, these open hole logs are only required on one of the first wells drilled on the pad and the Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.</p> |
| <p>Interim Reclamation</p> | <p>Operator shall be responsible for segregating the topsoil, backfilling, repacking, reseeding, and recontouring the surface of any disturbed area so as not to interfere with Owner’s operations and shall reclaim such area to be returned to pre-existing conditions as best as possible with control of all noxious weeds.</p> |
| <p>Construction</p> | <p>COGCC MLVT BMPs</p> <ul style="list-style-type: none"> • Operator has an MLVT Design Package, certified and sealed by a licensed professional engineer, which is on file in their office and available upon request. • The MLVT will be at least 75 feet from a wellhead, fired vessel, heater-treater, or a compressor with a rating of 200 horsepower or more. It will be placed at least 50 feet from a separator, well test unit, or other non-fired equipment. • All liner seams will be welded and tested in accordance with applicable ASTM International standards. • Operator will be present during initial filling of the MLVT and the contractor will supervise and inspect the MLVT for leaks during filling. • Operator will comply with the testing and reinspection requirements and associated written standard operating procedures (SOP) listed on the design package. • Signs will be posted on the MLVT indicating that the contents are freshwater. • The MLVT will be operated with a minimum of 1 foot of freeboard at all times. • Access to the MLVT will be limited to operational personnel and authorized regulatory agency personnel. • Operator or contractor will conduct daily visual inspections of the exterior wall and surrounding area for integrity deficiencies. • Operator has developed a contingency plan/emergency response plan associated with the MLVT and it is on file at their office. • Dust: Operator shall employ practices for control of fugitive dust caused by their operations. Such practices shall include but are not limited to the use of speed restrictions, regular road maintenance, restriction of construction activity during high wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. Additional management practices such as road surfacing, wind breaks and barriers, or automation of wells to reduce truck traffic may also be required if technologically feasible and economically reasonable to minimize fugitive dust emissions. • Construction: Operator acknowledges and will comply with the Colorado Oil & Gas Conservation Commission Policy on the Use of Modular Large Volume Tanks in Colorado dated June 13, 2014. • Noise: Operator will stay under the maximum permissible noise levels stated in COGCC Rule 604.c.(2)A. If necessary, operator will use appropriately sized sound walls that will be installed around compressors to dampen noise. |

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|----------------------|---|
| Pre-Construction | <p>Anti-Collision: Prior to drilling operations, Operator will perform an anti-collision scan of existing offset wells that have the potential of being within close proximity of the proposed wells. The anti-collision scan may include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument, and compared against the proposed well path with its respective error of uncertainty. If current surveys do not exist for the offset wells, operators may have gyro surveys conducted to verify bottom hole location. The proposed well may only be drilled if the anti-collision review results indicate that the risk of collision is sufficiently low as defined by the anti-collision plan, with separation factors greater than 1.5, or if the risk of collision has been mitigated through other means including shutting in wells, plugging wells, increased drilling fluid in the event of lost returns or as is appropriate for the specific situation. In the event of an increased risk of collision, that risk will be mitigated to prevent harm to people, the environment or property. For the proposed well, upon conclusion of drilling operations, an as-constructed directional survey will be submitted to the COGCC with the Form 5.</p> <p>Identification of plugged and abandoned wells will be identified pursuant to 319.a.(5)</p> |
| Planning | <p>Multi-well Pads are located in a manner which allows for resource extraction while maintaining the highest distances possible from the offsetting residential areas and complies with the wishes of the surface owner.</p> <p>A meeting with the surface owner will determine the fencing plan.</p> <p>Tanks will be designed, constructed and maintained in accordance with NFPA Code 30. The tanks are visually inspected once a day for issues, and recorded inspections are conducted once a month.</p> |
| Emissions mitigation | <p>Green Completions - Emission Control System: Test separators and associated flow lines and sand traps shall be installed to accommodate green completions techniques pursuant to COGCC Rules. In the anticipated absence of a viable gas sales line, the flowback gas shall be thermally oxidized in an emissions control device (ECD), which will be installed and kept in operable condition for at least the first 90-days of production pursuant to CDPHE rules. This ECD shall have an adequate capacity for 1.5 times the largest flowback within a 10 mile radius, will be flanged to route gas to other or permanent oxidizing equipment and shall be provided with the equipment needed to maintain combustions where non-combustible gases are present.</p> |
| Noise mitigation | <p>Sound walls and/or hay bales will be used to surround the well site during drilling operations to shield sensitive areas.</p> <p>Sound walls will be used to surround the vapor recovery units and/or combustion motors during production operations to shield sensitive areas.</p> <p>Baseline noise monitoring and testing will be conducted prior to commencement of construction and dirt work.</p> <p>Operator will investigate the possibility of using electricity to power the facilities in order to decrease the amount of noise from combustion generators and/or engines.</p> |
| Odor mitigation | <p>Equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare.</p> <p>Oil and gas operations shall be in compliance with the Department of Public Health and Environment, Air Quality Control Commission, Regulation No. 2 Odor Emission, 5 C.C.R. 1001-4, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII.</p> |

S/AR: _____ **Comment:**

CA: **Date:** _____

Comment:

Staking:

On Site Inspection (305):

Surface Owner Contact Information:

Name: _____ Address: _____

Phone Number: _____ Cell Phone: _____

Operator Rep. Contact Information:

Landman Name: _____ Phone Number: _____
 Date Onsite Request Received: _____ Date of Rule 306 Consultation: _____
 Request LGD Attendance: _____
LGD Contact Information:
 Name: _____ Phone Number: _____ Agreed to Attend: _____
Summary of Landowner Issues:

Summary of Operator Response to Landowner Issues:

Onsite Inspection Memorandum Summarizing Discussions at Inspection as Attachment:

Facility

Facility ID: 442324 Type: WELL API Number: 123-41800 Status: XX Insp. Status: XX

Well Drilling

Rig: Rig Name: Paterson Rig 346 Pusher/Rig Manager: _____
 Permit Posted: _____ Access Sign: _____
Well Control Equipment:
 Pipe Ram: _____ Blind Ram: _____ Hydril Type: _____
 Pressure Test BOP: _____ Test Pressure PSI: _____ Safety Plan: _____
Drill Fluids Management:
 Lined Pit: _____ Unlined Pit: _____ Closed Loop: _____ Semi-Closed Loop: _____
 Multi-Well: _____ Disposal Location: _____
Comment:
Responded to Notice of Spud #400989834. Paterson Rig 346 in process of MIRU.

Environmental

Spills/Releases:
 Type of Spill: _____ Description: _____ Estimated Spill Volume: _____
 Comment: _____
 Corrective Action: _____ Date: _____
 Reportable: _____ GPS: Lat _____ Long _____
 Proximity to Surface Water: _____ Depth to Ground Water: _____

Water Well:
 DWR Receipt Num: _____ Owner Name: _____ GPS: _____ Lat _____ Long _____

Field Parameters:

Sample Location: _____

Emission Control Burner (ECB): _____
 Comment: _____
 Pilot: _____ Wildlife Protection Devices (fired vessels): _____

Reclamation - Storm Water - Pit

Interim Reclamation:

Date Interim Reclamation Started: _____ Date Interim Reclamation Completed: _____

Land Use: RANGELAND

Comment: _____

1003a. Waste and Debris removed? _____

CM _____

CA _____ CA Date _____

Unused or unneeded equipment onsite? _____

CM _____

CA _____ CA Date _____

Pit, cellars, rat holes and other bores closed? _____

CM _____

CA _____ CA Date _____

Guy line anchors marked? _____

CM _____

CA _____ CA Date _____

1003b. Area no longer in use? _____ Production areas stabilized ? _____

1003c. Compacted areas have been cross ripped? _____

1003d. Drilling pit closed? _____ Subsidence over on drill pit? _____

Cuttings management: _____

1003e. Areas no longer needed for drilling or subsequent operations for have been re-vegetated to 80% of pre-existing? _____

Production areas have been stabilized? _____ Segregated soils have been replaced? _____

RESTORATION AND REVEGETATION

Cropland

Top soil replaced _____ Recontoured _____ Perennial forage re-established _____

Non-Cropland

Top soil replaced _____ Recontoured _____ 80% Revegetation _____

1003 f. Weeds Noxious weeds? _____

Comment: _____

Overall Interim Reclamation _____

Final Reclamation/ Abandoned Location:

Date Final Reclamation Started: _____ Date Final Reclamation Completed: _____

Final Land Use: RANGELAND

Reminder: _____

Comment: _____

Well plugged _____ Pit mouse/rat holes, cellars backfilled _____

Debris removed _____ No disturbance /Location never built _____

Access Roads Regraded _____ Contoured _____ Culverts removed _____

Inspector Name: HELGELAND, GARY

Gravel removed _____

Location and associated production facilities reclaimed _____ Locations, facilities, roads, recontoured _____

Compaction alleviation _____ Dust and erosion control _____

Non cropland: Revegetated 80% _____ Cropland: perennial forage _____

Weeds present _____ Subsidence _____

Comment: _____

Corrective Action: _____ Date _____

Overall Final Reclamation

Well Release on Active Location

Multi-Well Location

Storm Water:

| Loc Erosion BMPs | BMP Maintenance | Lease Road Erosion BMPs | Lease BMP Maintenance | Chemical BMPs | Chemical BMP Maintenance | Comment |
|------------------|-----------------|-------------------------|-----------------------|---------------|--------------------------|---------|
| | | | | | | |

S/A/V: _____ Corrective Date: _____

Comment: _____

CA: _____

Pits: NO SURFACE INDICATION OF PIT