

State of Colorado
Oil and Gas Conservation Commission

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Document Number: <u>402106046</u> Date Received:			

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: 10459		Contact Name	Bonnie Lamond	Complete the Attachment Checklist	OP	OGCC
Name of Operator: EXTRACTION OIL & GAS INC		Phone:	(720) 354-4619			
Address: 370 17TH STREET SUITE 5300		Fax:	()			
City: DENVER	State: CO	Zip: 80202	Email: blamond@extractionog.com			
API Number : 05- 123 00 OGCC Facility ID Number: 332837				Survey Plat		
Well/Facility Name: Greeley Directional Well/Facility Number:				Directional Survey		
Location QtrQtr: NENE Section: 20 Township: 5N Range: 65W Meridian: 6				Srfc Eqpmt Diagram		
County: WELD Field Name: WATTENBERG				Technical Info Page		
Federal, Indian or State Lease Number:				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
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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	
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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		
			**
Range		** attach deviated drilling plan	
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 _____

☐ 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 type="checkbox"/> Other _____ | <input type="checkbox"/> Status Update/Change of Remediation Plans for Spills and Releases | |

COMMENTS:

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

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
5	Planning	(604.c.(4)C.iii) An extensive landscape and screening plan was approved by the City of Greeley as part of the Use by Special Review process for the Greeley Directional pad. Screening shall consist of planting and maintenance of a combination of shade trees, evergreen trees, shrubs, and deciduous trees and shrubs. The landscaping plan requires the installation, irrigation, and maintenance of 141 trees and 229 shrubs. Additionally, the pad will be fenced, and a decorative wall has already been installed along 29th Street to further screen the well pad from view of pedestrians and vehicles.
5	Construction	604.c.(3).B.iv No more than two (2) crude oil or condensate storage tanks shall be located within a single berm.
5	Construction	(604.c.(3).B. and (604.c.(2).G.) Tank berms will 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 weekly at a minimum to a maximum of daily to ensure proper working condition. No potential ignition sources shall be installed inside the secondary containment area unless the containment area encloses a fired vessel. Secondary containment devices shall be sufficiently impervious to contain any spilled or released material. Inspection and record retention of berm inspections will be in accordance per SPCC regulation. All records will be made available to the COGCC upon request.
5	Community Outreach and Notification	Extraction will notify residents within ½ mile prior to the initiation of (drilling) operations. The notification includes details on what to expect during development and has our Community Response Line and email contact information for questions, concerns, and comments. A Move-In-Rig-Up (MIRU) Notice will be filed at least 30 days prior to the move-in of the drilling rig.
5	Interim Reclamation	Operator will be responsible for segregating the topsoil, backfilling, re-compacting, reseeding, and re-contouring 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.
5	Drilling/Completion Operations	(604.c.(2).K.) Pit level Indicators shall be used on location.
5	Dust control	(604.c.(4)B.vi. and 805) Extraction will employ practices for control of fugitive dust caused by operations. Such practices shall include, but are not limited to, the use of regular road maintenance, silica dust controls, and non-potable water sprayed on roads.
5	Material Handling and Spill Prevention	(604.c.(2).R) Tanks will be designed, constructed and maintained in accordance with NFPA Code 30 (2008 version). All tanks are visually inspected by the operator weekly at a minimum to a maximum of daily and annual SPCC inspections will be conducted and documented. Inspection and record retention of tank inspections will be in accordance per SPCC regulation. All records will be made available to the COGCC upon request.
5	Emissions mitigation	(604.c.(2)C.ii.) Uncontrolled venting will be prohibited during normal operations, except for activities related to startup, shut-down, malfunction (SSM), and maintenance.
5	General Housekeeping	(604.c.(2)P.) All surface trash, debris and material not intrinsic to the operation of the oil and gas facility shall be removed and legally disposed of as applicable.
5	Emissions mitigation	(604.c.(2)C.iii) All gas encountered during post-separation flowback will be routed to a sales line or combusted with a minimum of 98% destruction efficiency.
5	Planning	(604.c.(2).H.) 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.

5	Planning	(604.c.(4)) An Emergency Response Plan is in place with the Greeley Fire Department. This plan addresses how Extraction and Greeley Fire Department plan to handle unforeseen incidents that may occur on-site, including fire, explosion, chemical, and emission hazards, and lightning strike hazards. A copy will be made available per COGCC request.
5	Drilling/Completion Operations	(604.c.(2).L.) Closed chamber drill stem tests shall be allowed. All other drill stem tests shall require approval by the Director. None planned for this well.
5	Final Reclamation	(604.c.(2).U.) The operator shall identify the location of the wellbore with a permanent monument as specified in Rule 319.a.(5). The operator shall also inscribe or imbed the well number and date of plugging upon the permanent monument.
5	Dust control	(604.c.(4)B.vi. and 805) Proppant dust control. Silica dust from sand used during hydraulic fracturing will be minimized through use of a gravity fed enclosed "Sandbox or PropX" proppant delivery process, or equivalent. If necessary, silica dust will be contained using a dust suppression vacuum system.
5	Planning	(604.c.(2).N.) Control of fire hazards: All material that is considered a fire hazard shall be a minimum of 25' from the wellhead tanks or separators. Electrical equipment shall comply with API IRP 500 and will comply with the current national electrical code. Flammable liquids shall not be stored within fifty (50) feet of the wellbore, except for the fuel in the tanks of operating equipment or supply for injection pumps. Where terrain and location configuration do not permit maintaining this distance, equivalent safety measures should be taken.
5	Planning	This location has an approved Use by Special Review (USR) permit from the City of Greeley. A copy of the approved USR is available for the COGCC upon request.
5	Emissions mitigation	(604.c.(2)F. & 604.c(4)B.ii.) Extraction will perform Audio Visual and Olfactory (AVO) inspections at a minimum frequency of minimum to identify fluid leaks, including, but not limited to, visually inspecting all wellheads, tanks and fittings. As part of Extraction's Leak Detection and Repair (LDAR) program, all facilities including above ground flowlines and piping will be inspected monthly with an infra-red camera. This frequency may be reduced as production declines in accordance to Colorado Department of Health and Environment - Regulation 7 Section XVII. Additionally, inspections will be completed monthly, if not more frequently, as part of Extraction's internal Audio, Visual, and Olfactory (AVO) Monitoring Program. Records of the AVO inspections will be maintained through Extraction's field data capture software. In the event that a leak is identified, reporting and repair will be initiated through Extraction's internal process.
5	Planning	(604.c.(2).M.) The location will be adequately fenced to restrict access by unauthorized persons. A 6-foot chain-link fence will be installed around the location. A manned guard shack will be utilized during drilling and completion operations and a KNOX box will be installed for the emergency personnel.
5	Construction	(604.c.(2).Q.) All guy line anchors left buried for future use shall be identified by a marker of bright color not less than four (4) feet in height and not greater than one (1) foot east of the guy line anchor. Base beam units will be used during drilling operations.
5	Final Reclamation	(604.c.(2).T.) Within 90 days after the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site. Identification of plugged and abandoned wells will be identified pursuant to 319.a.(5).
5	Construction	(604.c.(4)B.iii) Operational system will be automated to allow remote shut in, remote monitoring, and off-site response to emergencies.
5	Drilling/Completion Operations	(604.c.(2)B.i.) Operator will be utilizing a closed loop system.
5	Emissions mitigation	(604.c.(2)C.i) Test separators, associated flow lines and sand traps shall be installed on-site to accommodate green completions techniques pursuant to COGCC Rules.
5	Emissions mitigation	Operator will send salable quality gas immediately down the sales line. If a sales line is unavailable or other conditions prevent placing the gas into a sales line, operator will not produce the wells without an approved variance per Rule 805.b..
5	Material Handling and Spill Prevention	((604.c.(2)F. & 604.c(4)B.ii.) Additionally, annual SPCC inspections will be conducted by a third party and documented. Annual flowline testing will also occur according to COGCC rules 1101 and 1102. Inspection and record retention of flowline testing will be in accordance per COGCC regulation. All records will be made available to the COGCC upon to request.

5 Storm Water/Erosion Control	Stormwater runoff will be controlled in a manner that minimizes erosion, transport of sediment offsite, and site degradation. Extraction will co-locate all flowlines and minimize any erosion problems that arise due to the construction of the flowlines. This location will be covered under Extraction Oil & Gas's field wide permit, permit number COR03M013. Stormwater mitigation methods at the Greeley Directional pad will include a diversion ditch, berms, and installation of wattles to capture and control erosion and sedimentation.
5 Noise mitigation	(604.c.(2)A. and 802) Noise levels will be assessed to maintain compliance with COGCC Rules 604.c.(2).A. and 802 during drilling and completion operations. Construction activity will take place during daylight hours only. Should noise levels exceed the maximum permissible levels for Industrial Zones, as measured at the nearest Building Unit per COGCC Rules 604.c.(2).A. & 802, additional mitigation measures will be considered and implemented to maintain compliance. A 32-foot sound wall will be installed on all sides of the pad during the drilling and completions phases, while allowing for ingress and egress. An electric rig will be utilized for the drilling phase and quiet fleet for the completions phase. Extraction is currently working with the local power company to supply high-line power to the facility. The use of utility power to operate at the site provides reduced noise at the location.
5 Emissions mitigation	(803) Permanent lighting will be installed around the facility to allow both the operator and haulers to conduct safe operations at night. All light sources during all phases of operations will be directed downwards and away from occupied structures. Temporary sound walls will be installed on all sides of the pad during drilling and completion operations and the rig floor will be shrouded to further reduce light emissions. Additionally, lighting shield devices will be installed on all lights.
5 Construction	(604.c.(2).E.) This location will be a multi-well pad, located in a manner which allows for the greatest distances possible from building units, the installation and removal of noise mitigation, and construction of all-weather access roads. In order to minimize potential impacts to the surrounding lands, the facilities will be located on north side of the pad. The City of Greeley has approved the location of the wells and production equipment. Extraction will be using electricity to power the site to further reduce noise emissions. Per the City of Greeley code, fencing and landscaping will be installed around the location for visual mitigation.
5 Traffic control	(604.c.(2)D) The traffic plan was coordinated with and approved by the City of Greeley. Any subsequent modification to the traffic plan will be coordinated with the City of Greeley. Oil and gas pipeline takeaway will be available at this location and a lay-flat hose will be used during the completion phase, which will dramatically reduce truck traffic in and out of the site and on city streets.
5 Dust control	(604.c.(2).S.) 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. Operator will employ practices for control of fugitive dust caused by operations. Oil and gas pipeline takeaway will be available at this location and a lay-flat hose
5 General Housekeeping	(804) All long-term facility structures will be painted a color that enables the facilities to blend in with the natural background color of the landscape, as seen from a viewing distance and location typically used by the public.
5 Odor mitigation	(805) Oil and gas facilities and equipment will be operated in such a manner that odors do not constitute a nuisance or hazard to public welfare. Operator will utilize advanced oil-based mud systems, which target the reduction of aromatics. The site will be utility-powered, which will help towards lowering emissions. Oil and gas pipeline takeaway will be available at the Greeley Directional pad, which will reduce truck loading.
5 Emissions mitigation	(604.c.(2)C.iii) During flowback, production will be sent through a temporary high-pressure separator and into separate controlled oil and water tanks, which means the tanks will have a dedicated vapor control system (VCS) line to capture any vapors. VCS lines are routed at a minimum of 75' away from the tanks to a combustor to burn. Any gas from the temporary separator will be routed at a minimum of 75' away to an enclosed combustor to burn. This is only until the well cleans up to the point that it can go down the flowline to the production facility.
5 Noise mitigation	Extraction will comply with all applicable air quality requirements that regulate upstream production facilities. These include: Colorado Oil and Gas Conservation Commission 800 Series Rules, Air Quality Control Commission 5 CCR 1001-5 Regulation 3, Air Quality Control Commission 5 CCR 1001-9 Regulation 7, NSPS 40 CFR Subpart OOOOa, 40 CFR Part 98 Subpart W for Greenhouse Gas Reporting.

5	Planning	(604.c.(2).J.i. & ii.) Backup stabbing valves will be used on well servicing operations during reverse circulation. Valves shall be pressure tested before each well servicing operation using both low-pressure air and high-pressure fluid.
5	Drilling/Completion Operations	(604.c.(2).I.) BOPE testing for drilling operations. Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections shall be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing shall be conducted, and the documented results shall be retained by the operator for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing shall be conducted daily when practicable.
5	Drilling/Completion Operations	(604.c.(2).O.) All load lines shall be bull plugged or capped.

Total: 40 comment(s)

Operator Comments:

Extraction Oil and Gas, Inc. respectfully requests to make the following updates to the Greeley Directional pad:

The 2A on file has the incorrect acreage listed for size of disturbed area. The size should match the location drawing on file--13.6 acres for construction and 7 acres for interim reclamation.

The oil and water tanks are significantly lower than what is reported on the 2A -- there will be 8 oil tanks and 2 water tanks on site.

The BMPs have been updated.

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

Signed: _____ Print Name: Bonnie Lamond
 Title: Regulatory Analyst Email: blamond@extractionog.com Date: _____

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

COGCC Approved: _____ Date: _____

CONDITIONS OF APPROVAL, IF ANY:

<u>COA Type</u>	<u>Description</u>

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>

Total Attach: 0 Files