

FORM
2A

Rev
08/13

State of Colorado
Oil and Gas Conservation Commission

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



Document Number:

400800627

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Date Received:

03/17/2015

Oil and Gas Location Assessment

☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 333415

Submit signed original form. This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location 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. Please see the COGCC website at <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

333415

Expiration Date:

07/12/2018

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

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.

Operator

Operator Number: 26625
Name: ELM RIDGE EXPLORATION COMPANY LLC
Address: 12225 GREENVILLE AVE STE 950
City: DALLAS State: TX Zip: 75243-9362

Contact Information

Name: Terry Lindeman
Phone: (505) 632-3476
Fax: (505) 632-8151
email: tlindeman@elmridge.net

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20100130 ☐ Gas Facility Surety ID: _____
☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: IGS Number: 156
County: LA PLATA
QuarterQuarter: NWNW Section: 26 Township: 33N Range: 9W Meridian: N Ground Elevation: 6846
Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.
Footage at surface: 1209 feet FNL from North or South section line
1088 feet FWL from East or West section line
Latitude: 37.078710 Longitude: -107.800860
PDOP Reading: 2.2 Date of Measurement: 12/01/2007
Instrument Operator's Name: Scott Weibe

RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:

LOCATION ID # FORM 2A DOC #

FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	3	Oil Tanks*		Condensate Tanks*		Water Tanks*	2	Buried Produced Water Vaults*	
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	
Pump Jacks	3	Separators*	2	Injection Pumps*		Cavity Pumps*		Gas Compressors*	
Gas or Diesel Motors*		Electric Motors		Electric Generators*		Fuel Tanks*		LACT Unit*	
Dehydrator Units*		Vapor Recovery Unit*		VOC Combustor*		Flare*		Pigging Station*	

OTHER FACILITIES*

Other Facility Type

Number

Meter Run	2
Meter House	2

Those facilities indicated by an asterisk () shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

Underground gas line (2" steel) for this well will be entirely on location, buried to a depth of at least 36".

CONSTRUCTION

Date planned to commence construction: 05/11/2015 Size of disturbed area during construction in acres: 1.82

Estimated date that interim reclamation will begin: 09/01/2015 Size of location after interim reclamation in acres: 1.52

Estimated post-construction ground elevation: 6846

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H₂S anticipated? No

Will salt sections be encountered during drilling: No

Will salt based mud (>15,000 ppm Cl) be used? No

Will oil based drilling fluids be used? No

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE

Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: OFFSITE

Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Please see waste management plan attached.

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: or Document Number:

Centralized E&P Waste Management Facility ID, if applicable:

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: James P. Owens

Phone: 970-563-4589

Address: 230 CR 318

Fax:

Address:

Email:

City: Ignacio State: CO Zip: 81137

Surface Owner: ☒ Fee ☐ State ☐ Federal ☐ Indian

Check all that apply. The Surface Owner: ☐ is the mineral owner

☐ is committed to an oil and Gas Lease

☐ has signed the Oil and Gas Lease

☐ is the applicant

The Mineral Owner beneath this Oil and Gas Location is: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: Surface Use Agreement

Surface damage assurance if no agreement is in place: Surface Surety ID:

Date of Rule 306 surface owner consultation

CURRENT AND FUTURE LAND USE

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):

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

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):

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	565 Feet	490 Feet
Building Unit:	565 Feet	490 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	1025 Feet	900 Feet
Above Ground Utility:	565 Feet	501 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	119 Feet	150 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.
- Enter 5280 for distance greater than 1 mile.
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.
- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a: ☒ Buffer Zone
☒ Exception Zone
☐ Urban Mitigation Area

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: 02/15/2015

FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

- ☒ Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (onll or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*
- ☒ By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

The location is sited on top of a hill and cannot be moved to the East as that would place it closer to an adjacent tract with a building unit appx. 560 feet from the well. It cannot be moved to the West or North due to topography. Grade is approximately 60%. The SUA specifies that the well be located on the existing well pad for the Elm Ridge Davis #1 well.

SOIL

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.org/> 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: 82-Zyme Rock outcrop complex 12-65% slopes

NRCS Map Unit Name: _____

NRCS Map Unit Name: _____

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: _____

List individual species: Indian ricegrass, western wheatgrass, needle and thread, blue grama, pinyon, Rocky Mountain juniper, mountain mahogany, Gambel Oak, bitterbrush, serviceberry, big sagebrush

Check all plant communities that exist in the disturbed area.

- ☒ Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- ☐ Native Grassland (Bluestem, 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): _____

WATER RESOURCES

Is this a sensitive area: ☒ No ☐ Yes

Distance to nearest

downgradient surface water feature: 1192 Feet

water well: 1657 Feet

Estimated depth to ground water at Oil and Gas Location 89 Feet

Basis for depth to groundwater and sensitive area determination:

Depth to groundwater determined by static water level to nearest producing domestic water well. Permit #190812 NENW Sec. 26, T33N, R9W NMPM.

Is the location in a riparian area: ☒ No ☐ Yes

Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer _____ No

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: _____

Is the Location within a Floodplain? ☐ No ☐ Yes Floodplain Data Sources Reviewed (check all that apply)

☐ Federal (FEMA)

☐ State

☐ County

☐ Local

☐ Other _____

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 608 _____

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- ☒ Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- ☐ Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- ☒ Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- ☐ Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

RULE 502.b VARIANCE REQUEST

- ☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments Per Rule 303.b.(3).G.bb., Elm Ridge will provide four color photographs of the reference area during growing season within 12 months of the approval of Form 2A

Please copy me on all correspondence with operator.

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

Signed: _____ Date: 03/17/2015 Email: jlr@animas.net

Print Name: Robert D. Joyce Title: Agent

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

COGCC Approved: Matthew Lee Director of COGCC Date: 7/13/2015

Conditions Of Approval

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

COA Type	Description
	Operator shall pressure test pipelines in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network.
	<p>The moisture content of any cuttings in a cuttings pit, trench, or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts.</p> <p>If the well is to be hydraulically stimulated, flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline or storage vessel located on the well pad; or into tanker trucks for offsite disposal. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area constructed to be sufficiently impervious to contain any spilled or released material.</p> <p>Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated as to not impact nearby residences.</p>
	<p>Operator must ensure secondary containment for any volume of fluids contained at well site during drilling and completion operations (as shown on the Proposed BMPs attachments); including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals (at least every 14 days per CDPHE requirements and after significant precipitation events), and maintained in good condition.</p> <p>Strategically apply fugitive dust control measures, including enforcing established speed limits on private roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.</p> <p>Berms or other containment devices shall be constructed to be sufficiently impervious (corrugated steel with poly liner) to contain any spilled or released material around permanent crude oil, condensate, and produced water storage tanks.</p>
	Notify the COGCC 48 hours prior to start of pad reconstruction/regrading, rig mobilization, spud, pipeline testing, start of hydraulic stimulation operations, and start of flowback operations (if different than start of hydraulic stimulation operations) using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).

Best Management Practices

No	BMP/COA Type	Description
1	Community Outreach and Notification	Surface owner, James Owens was contacted by phone and by personal visit on December 15, 2014. Party within 1000' of well location was also contacted by personal visit to request permission to survey distance between her home and the proposed well location on December 15, 2014. Both parties were sent preapplications notices by registered mail on February 15, 2015. Both were received and signed for on February 24, 2015.
2	Pre-Construction	Rule 604.c.(2)W-Pre-construction consultation occurred at the time the Surface Damage Agreement was negotiated with surface owner. There was further consultation on February 17 at onsite with La Plata County.
3	Pre-Construction	Rule 604.c.(2)D- Access is off La Plata CR 318, approximately 9.4 miles West of it's intersection with State Hwy 172. Access is granted by Surface Damage Agreement. Elm Ridge agrees to comply with any La Plata County traffic control measures required for this well.
4	General Housekeeping	Rule 604.c.(2)P- Trash containers will be maintained on site. Trash will be hauled to and disposed at a commercial landfill.

5	Storm Water/Erosion Control	<p>Elm Ridge will comply with stormwater plan prepared for this location by Ecosphere Environmental Services (attached).</p> <p>Rule 604.c.(2)F- Wells are monitored daily by the pumpers. Pressure monitoring is not necessary. Maximum reservoir pressure is approximately 1200 psig. These are low pressure gathering lines. All gathering lines are checked yearly for leaks.</p> <p>Per Rule 604.c.(2)G.- Berms will be constructed with corrugated metal sides and will be sufficient in height and area to contain 150% of the volume of the largest single tank. Synthetic liners are being and will be used under tanks on location.</p> <p>Rule 604.c.(2)N-Any materials not in use that might constitute a fire hazard will be removed a minimum distance of twenty five feet from the wellhead, tanks and separator. No electrical equipment installations are planned inside the bermed area.the beginning of construction. The size and quantity of the wattles used will vary according to the location</p>
6	Material Handling and Spill Prevention	<p>Rule 604.c.(2)F- Wells are monitored daily by the pumpers. Pressure monitoring is not necessary. Maximum reservoir pressure is approximately 1200 psig. These are low pressure gathering lines. All gathering lines are checked yearly for leaks.</p> <p>Per Rule 604.c.(2)G.- Berms will be constructed with corrugated metal sides and will be sufficient in height and area to contain 150% of the volume of the largest single tank. Synthetic liners are being and will be used under tanks on location.</p> <p>Rule 604.c.(2)N-Any materials not in use that might constitute a fire hazard will be removed a minimum distance of twenty five feet from the wellhead, tanks and separator. No electrical equipment installations are planned inside the bermed area.</p>
7	Construction	<p>Rule 604.c.(2)V.- the IGS 156 well will be located in the immediate vicinity of and partially within the footprint of the existingDavis #1 well pad.</p> <p>Rule 604.c.(2)B.- no fresh water pits are planned.</p> <p>Rule 604.c.(2)E- The existing well access road will be used. No new disturbance is anticipated. Standard specifications for this access road include a driving surface constructed with with 6 inches of 3" minus gravel over a driving surface approximately 12 feet in width, crowned, with ditches and culverts where necessary for drainage.</p> <p>Rule 604.c.(2)M.- The tract of land where the well pad is located is not a designated setback location.</p> <p>Rule 604.c.(2)V-The existing well pad for the Elm Ridge Davis #1 well is being used for this location.</p> <p>8 Noise mitigation (Rule 604.c.(2)A Drilling and Completion</p>
8	Noise mitigation	<p>(Rule 604.c.(2)A Drilling and Completion:</p> <p>Noise levels will be monitored by operator and if exceeds acceptable levels operator agrees to install sound walls or, if necessary, provide reasonable motel accommodations for the affected party.</p> <p>Post-production:</p> <p>No necessity for engines or motorized equipment is anticipated.</p> <p>If such equipment becomes necessary, Elm Ridge will first try to electrify the location if it is practical and feasible. If not, they will orient exhaust away from the affected party and will use hospital grade mufflers, buried, in series.</p> <p>Elm Ridge will install sound walls if necessary</p>

9	Drilling/Completion Operations	<p>Rule 604.c.(2)B.- A closed loop system will be used. No fresh water pits are planned. Fresh water will be stored in above ground tanks</p> <p>Per Rule 604.c.(2)C.)-i.- There are producing wells within one mile of the location of the proposed IGE 132 well. It is anticipated that this will be a producing well and, if so, Elm Ridge will comply with applicable requirements under Rule 805.</p> <p>ii- No uncontrolled venting is anticipated (based on 500 mcf)</p> <p>iii-aa., bb. cc.- Elm Ridge will use a system capable of handling 1.5 Mmcf. Anticipated flowback is 0.5 Mmcf or less. No necessity for flaring is anticipated.</p> <p>Rule 604.c.(2)H.- Elm Ridge will be using a 3M system per BLM specifications.</p> <p>Rule 604.c.(2)I.- BOPE pressure testing will be performed weekly.</p> <p>604.c.(2)K.- Pit level indicators will be used.</p> <p>604.c.(2)L- Drill stem tests are not typically done and none are anticipated.</p> <p>Rule 604.c.(2)O- Load lines will be bullplugged</p> <p>Rule 604.c.(2)Q- Guy line anchors will be identified per COGCC rules and are tested before each use.</p> <p>Rule 604.c.(2)S. – Existing well access road will be used and maintained for all weather use and will meet any safety requirements.</p>
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Total: 9 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2107328	NRCS MAP UNIT DESC
2107611	ACCESS ROAD MAP
2107612	LOCATION PICTURES
2107613	OPERATOR CORRESPONDENCE
400800627	FORM 2A SUBMITTED
400802482	EXCEPTION LOC REQUEST
400802874	PROPOSED BMPS
400802875	FACILITY LAYOUT DRAWING
400802876	CONST. LAYOUT DRAWINGS
400802879	SURFACE AGRMT/SURETY
400810589	30 DAY NOTICE LETTER
400810591	PROPOSED BMPS
400810602	HYDROLOGY MAP
400810622	WASTE MANAGEMENT PLAN
400810648	MULTI-WELL PLAN
400810659	REFERENCE AREA MAP
400810662	LOCATION DRAWING

Total Attach: 17 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed. No LGD or public comment received.	7/13/2015 1:39:44 PM
OGLA	Initiated/Completed OGLA Form 2A review on 05-04-15 by Dave Kubeczko; requested Access Road Map and Location Pictures, and acknowledgement of fluid containment, spill/release BMPs, flowback to tanks only, cuttings low moisture content, notification, sediment and dust control, odor control, and pipeline testing COAs from operator on 05-04-15; received attachments from operator on 06-10-15 and acknowledgement of COAs from operator on 05-29-15; marked Exception Location box since production facility is within 500' of Building Unit; corrected distance to SURFACE WATER (from 5280' to 1192') per COGCC's Online Map and TOPO MAP; no CPW; passed OGLA Form 2A review on 07-13-15 by Dave Kubeczko; fluid containment, spill/release BMPs, flowback to tanks only, cuttings low moisture content, notification, sediment and dust control, odor control, and pipeline testing COAs.	5/4/2015 1:53:36 PM
Permit	Per phone conversation with operator and per operator request, changed facilities tab data as follows: Wells: changed from "2" to "3" Pump Jacks: changed from "2" to "3" Note that operator stated that there are currently zero pump jacks on this location, but pump jacks may be installed at a later date, if necessary.	4/8/2015 2:39:55 PM
Permit	Checked 604.b.(1)A Exception box.	4/8/2015 11:22:48 AM
Permit	Passed completeness. OGLA will address NRCS map, #of wells, exception location for built location.	3/27/2015 5:59:24 PM
OGLA	Missing NRCS Map Unit Description and Access Road Map as Defined by Rule 303.b(3)F. PUSH back to DRAFT	3/27/2015 3:19:55 PM
OGLA	Passed Buffer Zone completeness review.	3/27/2015 2:51:26 PM
Permit	Within Buffer Zone, sent to OGLA for further review.	3/18/2015 2:30:17 PM

Total: 8 comment(s)