

**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:

400272379

Date Received:

01/09/2014

Oil and Gas Location Assessment☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 312009

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:

312009

Expiration Date:

☒ 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 CO 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: IGE Number: 134

County: LA PLATA

QuarterQuarter: SESW Section: 11 Township: 33N Range: 8W Meridian: N Ground Elevation: 6646

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: 1103 feet FSL from North or South section line

1465 feet FWL from East or West section line

Latitude: 37.114350 Longitude: -107.690430

PDOP Reading: 2.1 Date of Measurement: 11/12/2007

Instrument Operator's Name: Nelson Ross

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	<u>2</u>	Oil Tanks	<u>0</u>	Condensate Tanks	<u>0</u>	Water Tanks	<u>2</u>	Buried Produced Water Vaults	<u>0</u>
Drilling Pits	<u>0</u>	Production Pits	<u>0</u>	Special Purpose Pits	<u>0</u>	Multi-Well Pits	<u>0</u>	Temporary Large Volume Above Ground Tanks	<u>0</u>
Pump Jacks	<u>1</u>	Separators	<u>1</u>	Injection Pumps	<u>0</u>	Cavity Pumps	<u>0</u>		
Gas or Diesel Motors	<u>1</u>	Electric Motors	<u>0</u>	Electric Generators	<u>0</u>	Fuel Tanks	<u>1</u>	Gas Compressors	<u>0</u>
Dehydrator Units	<u>0</u>	Vapor Recovery Unit	<u>0</u>	VOC Combustor	<u>0</u>	Flare	<u>0</u>	LACT Unit	<u>0</u>
								Pigging Station	<u>0</u>

OTHER FACILITIES

Other Facility Type

Number

Meter house	<u>2</u>
Meter run	<u>2</u>

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

All pipelines will be within the existing pad area.

CONSTRUCTION

Date planned to commence construction: 05/01/2014 Size of disturbed area during construction in acres: 1.49
Estimated date that interim reclamation will begin: 09/01/2014 Size of location after interim reclamation in acres: 1.20
Estimated post-construction ground elevation: 6646

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:

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: Klusman Ranches Co.

Phone: _____

Address: 869 CR 313

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: 20100131

Date of Rule 306 surface owner consultation 01/10/2007

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

Distance to nearest:

Building: 5280 Feet
Building Unit: 5280 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 5280 Feet
Above Ground Utility: 5280 Feet
Railroad: 5280 Feet
Property Line: 186 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.

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: _____

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: 14. Bodot clay, 3 to 10 percent 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: Western wheatgrass, Big sagebrush, Indian ricegrass, Prairie Junegrass, Rabbitbrush, Bottlebrush squirreltail, Rocky Mountain juniper, Rubber rabbitbrush, Twoneedle pinyon

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: 380 Feet

water well: 3000 Feet

Estimated depth to ground water at Oil and Gas Location 38 Feet

Basis for depth to groundwater and sensitive area determination:

Proximate water wells-See Expanded Hydrology map (attached)
DWR permit # 46826-Static Water table 12' (see attachment)
DWR permit # 149606-Static Water Table -58'(see attachment)
DWR permit # 206293-Static Water Table-23' (see attachment)
DWR permit # 234461-Static Water Table-60' (see attachment)

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
zone:

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

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

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

Signed: _____ Date: 01/09/2014 Email: jlr@animas.net

Print Name: Robert 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: _____ Director of COGCC Date: _____

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
Planning	Notify the COGCC 48 hours prior to start of pad reconstruction/regrading (if necessary), rig mobilization, spud, and start of hydraulic stimulation operations using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).
Material Handling and Spill Prevention	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. Operator shall notify the COGCC Oil and Gas Location Assessment (OGLA) Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) and the COGCC Field Inspection Supervisor for Southwest Colorado (Steve Labowskie; email steve.labowskie@state.co.us) 48 hours prior to testing surface poly/steel or buried poly/steel pipelines.
Construction	<p>Operator must implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via temporary surface pipelines or buried permanent pipelines.</p> <p>Operator must ensure secondary containment for any volume of fluids contained at well site during drilling and completion operations; 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), and maintained in good condition.</p> <p>The access road will be maintained as to not allow any sediment to migrate from the access road to nearby surface water or any drainages leading to surface water.</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 (preferably corrugated steel with poly liner) to contain any spilled or released material around crude oil, condensate, and produced water storage tanks.</p>
Drilling/Completion Operations	<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. At the time of closure, if the drill cuttings are to be left onsite, they must also meet the applicable standards of table 910-1.</p> <p>Flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline, storage vessel, or lined pit (only if an amended Form 2A has been submitted/approved and a Form 15 Earthen Pit Permitted has been submitted/approved) 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 with additional downgradient perimeter berming. The area where flowback fluids will be stored/reused must be constructed to be sufficiently impervious to contain any spilled or released material.</p>

Best Management Practices

No	BMP/COA Type	Description
1	Community Outreach and Notification	Rule 604.a (2)-there are no buildings or building units within 1000' of location.
2	Pre-Construction	Rule 604.c.(2)W-Pre-construction consultation occurred at the time the Surface Damage Agreement was negotiated. In subsequent conversations with the surface owner, Ralph Klusmann, no changes were requested and none are anticipated.

3	Traffic control	Rule 604.c.(2)D-From the intersection of State Hwy 172 & County Road 318 in Ignacio, Colorado, travel west on County Road 318 for 5.2 miles; Go right (North) on County Road 311 for 2.0 miles; Go right (East) on County Road 311 for 1.0 miles; Go right (South) for 0.8 miles; Go left (East) for 0.5 miles; Go right (South) for 0.3 miles; Go left (East) for 0.2 miles; Go left (East) for 0.2 miles; Go straight (East) for 0.4 miles; Go right (Southeast) well access for 100 feet to staked well location on existing IGE 108 well pad. 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	Wattles will be placed, where necessary, around the perimeter of the site prior to, or at the beginning of construction. The size and quantity of the wattles used will vary according to the location to insure adequate protection of drainage areas.
6	Material Handling and Spill Prevention	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. 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. 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.
7	Construction	Rule 604.c.(2)V.- the IGE 134 well will be located in the immediate vicinity of and partially within the footprint of the existing IGE 108 well pad. Rule 604.c.(2)B.- no fresh water pits are planned. 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. Rule 604.c.(2)M.- The tract of land where the well pad is located is not a designated setback location. Rule 604.c.(2)V-The existing well pad for the Elm Ridge IGE 108 well is being used for this location.
8	Noise mitigation	(Rule 604.c.(2)A Drilling and Completion: 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. Post-production: No necessity for engines or motorized equipment is anticipated. 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. Elm Ridge will install sound walls if necessary

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 134 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>
---	--------------------------------	---

Total: 9 comment(s)

Attachment Check List

Att Doc Num Name

2518876	LOCATION DRAWING
400272379	FORM 2A SUBMITTED
400272380	ACCESS ROAD MAP
400272383	LOCATION PICTURES
400272386	NRCS MAP UNIT DESC
400537072	MULTI-WELL PLAN
400537076	CONST. LAYOUT DRAWINGS
400537096	WASTE MANAGEMENT PLAN
400537097	REFERENCE AREA MAP
400537099	WELL LOCATION PLAT
400537100	SURFACE AGRMT/SURETY
400537165	OTHER
400537167	OTHER
400537168	OTHER
400537170	HYDROLOGY MAP
400537173	OTHER

Total Attach: 16 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Initiated/Completed OGLA Form 2A review on 01-16-14 by Dave Kubeczko, place notification, GW monitoring, fluid containment, sediment control access road, dust control, spill/release BMPs, tank berming, flowback to tanks, cuttings low moisture content, access road sediment control, and pipeline COAs; sent email indicating COAs to operator on 01-16-14; conducted wildlife consultation on 01-16-14; passed by CPW on (01-?-14) with operator proposed drilling schedule acceptable; passed OGLA Form 2A review on (TBD: 01-?-14) by Dave Kubeczko; notification, GW monitoring, fluid containment, sediment control access road, dust control, lined pit/closed loop, stormwater BMPs, spill/release BMPs, tank berming, flowback to tanks, cuttings low moisture content, access road sediment control, and pipeline COAs.	1/16/2014 1:15:04 PM
Permit	Attached provided location drawing. Operator revised well number, deleted surface bond number and minerals below surface location will be developed.	1/14/2014 12:11:54 PM
Permit	Location drawing uses the 400 foot buffer instead of the 500 foot.	1/14/2014 9:17:22 AM
Permit	Surface bond number should not be filled in.	1/14/2014 9:15:33 AM
Permit	Operator did not respond to question regarding whether the minerals below the location will be developed.	1/14/2014 9:11:07 AM
Permit	Operator indicated that one well would be total on the pad. It appears to be at least 2.	1/14/2014 9:07:33 AM
Permit	Passed completeness.	1/9/2014 12:35:21 PM

Total: 7 comment(s)