

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:

400629760

Date Received:

07/17/2014

Oil and Gas Location Assessment

New Location     Refile     Amend Existing Location    Location#: 311913

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:

**311913**

Expiration Date:

**09/14/2017**

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) 632-3496

Fax: (505) -632-8151

email: tlindeman@elmridge.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20100130

Gas Facility Surety ID: \_\_\_\_\_

Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: IGS

Number: 419

County: LA PLATA

Quarter: NENW    Section: 21    Township: 33N    Range: 8W    Meridian: N    Ground Elevation: 6776

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: 1080 feet FNL from North or South section line

1605 feet FWL from East or West section line

Latitude: 37.093790    Longitude: -107.726330

PDOP Reading: 2.2    Date of Measurement: 03/20/2014

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	<u>4</u>	Oil Tanks	<u>      </u>	Condensate Tanks	<u>      </u>	Water Tanks	<u>3</u>	Buried Produced Water Vaults	<u>      </u>
Drilling Pits	<u>      </u>	Production Pits	<u>      </u>	Special Purpose Pits	<u>      </u>	Multi-Well Pits	<u>      </u>	Temporary Large Volume Above Ground Tanks	<u>      </u>
Pump Jacks	<u>1</u>	Separators	<u>3</u>	Injection Pumps	<u>      </u>	Cavity Pumps	<u>      </u>		
Gas or Diesel Motors	<u>      </u>	Electric Motors	<u>      </u>	Electric Generators	<u>      </u>	Fuel Tanks	<u>      </u>	Gas Compressors	<u>      </u>
Dehydrator Units	<u>1</u>	Vapor Recovery Unit	<u>      </u>	VOC Combustor	<u>      </u>	Flare	<u>      </u>	LACT Unit	<u>      </u>
								Pigging Station	<u>      </u>

## OTHER FACILITIES

Other Facility Type

Number

Meter house	<u>3</u>
Meter run	<u>3</u>

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

Flowlines from wellheads to separators will be 2" steel. Gas flowline from separator will be 4" to 6" steel to existing tie-in on the pad. Produced water flowlines from separators to water tanks will be 2" steel.

## CONSTRUCTION

Date planned to commence construction: 08/15/2014 Size of disturbed area during construction in acres: 2.05  
Estimated date that interim reclamation will begin: 04/01/2015 Size of location after interim reclamation in acres: 1.44  
Estimated post-construction ground elevation: 6776

## DRILLING PROGRAM

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

Is H<sub>2</sub>S 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?       

Reuse Facility ID:        or Document Number:       

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

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: L. Randy Kirkpatrick

Phone: 970-563-3608

Address: P.O. Box 247

Fax: 505-564-3322

Address: \_\_\_\_\_

Email: randysjwc@swjwc.org

City: Flora Vista State: NM Zip: 87415-0247

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 03/28/2014

### 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: 515 Feet  
Building Unit: 660 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 1080 Feet  
Above Ground Utility: 868 Feet  
Railroad: 5280 Feet  
Property Line: 317 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: 03/28/2014

### 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 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: 5 Arboles Clay 3-12% 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, junegrass, western wheatgrass, big sagebrush Gambel Oak, squaw apple, bitterbrush, pinion, Rocky Mountain juniper

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: 196 Feet

water well: 256 Feet

Estimated depth to ground water at Oil and Gas Location 54 Feet

Basis for depth to groundwater and sensitive area determination:

Data derived from averaging static water levels of proximate wells on lands owned by landowners Kirkpatrick, Taskada, Gustaveson and Mach. Please note that the Mach well is not shown by GIS to be in the actual location where it exists. The permit coordinates show it to be located where it is spotted by GIS. It appears that the permit itself is incorrect. I have onsite this well and it lies to the South of the proposed IGS 419 well. I have attached an aerial photo of the approximate location of the well and also a copy of Mr. Mach's permit. The actual well location is approximately 900' to the Northwest of this point.

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 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: 07/17/2014 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: 9/15/2014**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**

	<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>
	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 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>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 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. Operator must ensure that any run-off protection along the northeast edge of the well pad be sufficient to protect the drainage adjacent to this location.</p>
	Notify the COGCC 48 hours prior to start of pad reconstruction/regrading (if necessary), rig mobilization, spud, pipeline testing, start of hydraulic stimulation operations, and start of flowback operations using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).
	Operator shall comply with Buffer Zone Move-In, Rig-Up Notice Policy dated 12-16-2013.

## Best Management Practices

No	BMP/COA Type	Description
1	Community Outreach and Notification	Preapplication notice sent to surface owner on 3-28-2014 by registered mail/return receipt. Receipt was returned.
2	Pre-Construction	Rule 604.c.(2)W-Pre-construction consultation occurred at the time the Surface Damage Agreement was negotiated with surface owner. Also, met twice with surface owner in March 2014.
3	Traffic control	Rule 604.c.(2)D- Access is CR 318. Access gate is on the South side of of the highway. Access is granted by existing Surface Damage Agreement (attached). 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. See attached SWMP.
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. 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.
7	Construction	Rule 604.c.(2)V.- the IGS 419 well will be located in the immediate vicinity of and within the footprint of the existing IGS 115 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 perimeter fenced with an entrance to well access on the existing well access road. Rule 604.c.(2)V-The existing well pad for the IGS 115 well is being used for this location.
8	Noise mitigation	Rule 604.c.(2)ADrilling 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	604.c.(2)K.- Pit level indicators will be used. 604.c.(2)L- Drill stem tests are not typically done and none are anticipated. Rule 604.c.(2)O- Load lines will be bullplugged Rule 604.c.(2)Q- Guy line anchors will be identified per COGCC rules and are tested before each use. Rule 604.c.(2)S. – Existing well access road will be used and maintained for all weather use and will meet any safety requirements.

Total: 9 comment(s)

## Attachment Check List

<b>Att Doc Num</b>	<b>Name</b>
2107094	RULE 306.e. OPERATOR CERTIFICATION
2107095	PROPOSED CPW SEED MIX
2107097	CORRESPONDENCE
2519231	HYDROLOGY MAP
2519232	LOCATION DRAWING
2519233	LOCATION PICTURES
2519234	REFERENCE AREA PICTURES
2519235	OTHER
400629760	FORM 2A SUBMITTED
400629809	NRCS MAP UNIT DESC
400645236	PROPOSED BMPS
400645237	ACCESS ROAD MAP
400645240	OTHER
400645243	WASTE MANAGEMENT PLAN
400645244	OTHER
400645247	MULTI-WELL PLAN
400645249	REFERENCE AREA MAP
400645250	WELL LOCATION PLAT
400646040	FACILITY LAYOUT DRAWING
400646042	LOCATION PICTURES
400646048	HYDROLOGY MAP B, AERIAL

Total Attach: 21 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review completed; no LGD or public comment received.	9/15/2014 7:12:00 AM
Permit	Operator provided pre-app notification proof that building unit owner received notification 30 days prior to submitting APD. Operator also revised location drawing and hydrology maps.	7/23/2014 11:53:36 AM
Permit	The reference area map and pictures are not attached. The facility list should include 4 wells. The location drawing does not indicate improvements or lack of improvements Hydrology map does not indicate that it meets the 1000 feet distance requirement from the well location. Does not give distance to surface waters. A comment/letter regarding water well testing is attached. This information should be added to comments even though it came in before completeness was passed. Operator has not provided pre-app notice proof that the surface owner received the notice 30 days in advance of the permit submittal. Or provide a waiver.	7/22/2014 9:30:08 AM
OGLA	Initiated/Completed OGLA Form 2A review on 08-05-14 by Dave Kubeczko, requested acknowledgement of notification, fluid containment, spill/release BMPs, odor control, access road sediment/dust control, cuttings, pipeline testing, tank berming, and flowback to tanks COAs from operator on 08-07-14; received concurrence of COAs from operator on 08-27-14; corrected distance to nearest downgradient SW from 490' to 196' based on 08-06-14 onsite and 2013 aerial map; corrected number of wells from 3 to 4 based on multi-well plan; corrected distance to nearest water from 320' to 256' based COGCC Online GIS map; corrected depth to GW from 78' bgs to 54' bgs based on COGCC Online GIS map and water well database; corrected to sensitive area based on close water well (256'), close SW (196'), and potentially shallow GW (54' bgs); CPW conducted a pre-consultation onsite in May 2014; conducted operator/COGCC onsite on 06-19-14; conducted operator/COGCC/CPW/La Plata County onsite on 08-06-14; waived by CPW on 08-27-14 with no comment, operator/surface owner may use recommended seed mix for grasses only; passed OGLA Form 2A review on 09-12-14 by Dave Kubeczko; notification, fluid containment, spill/release BMPs, odor control, access road sediment/dust control, cuttings, pipeline testing, and flowback to tanks COAs.	7/21/2014 6:58:14 AM
Permit	Passed Completeness	7/17/2014 2:33:35 PM

Total: 5 comment(s)