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

Oil and Gas Location Assessment

Document Number: 400647197

Date Received: 07/23/2014

☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 326624

Location ID: **326624**

Expiration Date: **09/14/2017**

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.

☒ 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.com

RECLAMATION FINANCIAL ASSURANCE

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

☐ Waste Management Surety ID:

LOCATION IDENTIFICATION

Name: IGS Number: 146

County: LA PLATA

QuarterQuarter: NWSE Section: 21 Township: 33N Range: 8W Meridian: N Ground Elevation: 6876

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: 2124 feet FSL from North or South section line

1693 feet FEL from East or West section line

Latitude: 37.088110 Longitude: -107.719560

PDOP Reading: 2.2 Date of Measurement: 01/10/2014

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	2	Oil Tanks		Condensate Tanks		Water Tanks	3	Buried Produced Water Vaults	
Drilling Pits		Production Pits		Special Purpose Pits		Multi-Well Pits		Temporary Large Volume Above Ground Tanks	
Pump Jacks	1	Separators	2	Injection Pumps		Cavity Pumps			
Gas or Diesel Motors	2	Electric Motors		Electric Generators		Fuel Tanks		Gas Compressors	
Dehydrator Units		Vapor Recovery Unit		VOC Combustor		Flare		LACT Unit	
								Pigging Station	

OTHER FACILITIES

Other Facility Type	Number
Meter House	2
Meter Run	2

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

CONSTRUCTION

Date planned to commence construction: 09/01/2014 Size of disturbed area during construction in acres: 1.30

Estimated date that interim reclamation will begin: 10/01/2014 Size of location after interim reclamation in acres: 0.94

Estimated post-construction ground elevation: 6876

DRILLING PROGRAM

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

Is H_2S 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: Bob and Dixie Cherry Phone: 970-563-4139

Address: 363 Trilobite Trail #12 Fax: N/A

Address: Email: dixie1224@centurylink.net

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 04/11/2014

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:	525	Feet
Building Unit:	555	Feet
High Occupancy Building Unit:	5280	Feet
Designated Outside Activity Area:	5280	Feet
Public Road:	3140	Feet
Above Ground Utility:	3100	Feet
Railroad:	5280	Feet
Property Line:	365	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:

- [x] 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: 06/10/2014

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: 82-Zyme-Rock outcrop complex, 12 to 65% slopes.

NRCS Map Unit Name: 5 - Arboles clay, 3 to 12% slopes.

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 [x]

Plant species from: [x] NRCS or, [ ] field observation Date of observation:

List individual species: Indian ricegrass, western wheatgrass, needleandthread, blue grama, pinyon, Rocky Mountain juniper, mountainmahogany, Gambel oak, bitterbrush, serviceberry, and big sagebrush.

Check all plant communities that exist in the disturbed area.

- [x] 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: [x] No [ ] Yes

Distance to nearest

downgradient surface water feature: 116 Feet

water well: 1000 Feet

Estimated depth to ground water at Oil and Gas Location 136 Feet

Basis for depth to groundwater and sensitive area determination:

Information for estimated depth to ground water derived by averaging static water levels of closest proximate producing water wells.
Welker Tract-Permit #251672-Static water level 140'
Hale Tract-Permit #191548- -Static water level 140'
Mach Tract-Permit # 160245-Static water level 130'

Please see Hydrology Map which shows location of closest proximate producing water wells and also istance to nearest downgradient water feature.

Is the location in a riparian area: [x] No [ ] Yes

Was an Army Corps of Engineers Section 404 permit filed [x] No [ ] Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer zone: 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: _____

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: Surface owner does not have a fax number.

Please copy me on any/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: 07/23/2014 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: _____ **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
	Operator shall comply with Buffer Zone Move-In, Rig-Up Notice Policy dated 12-16-2013.
	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.
	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).
	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. 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. The location is in an area of moderate run-on/run-off potential; therefore standard stormwater BMPs must be implemented at this location to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and /or stormwater run-off, especially toward the drainage located to the northeast of the well pad location. 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.
	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. 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. Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated as to not impact nearby residences.

Best Management Practices

No	BMP/COA Type	Description
1	Community Outreach and Notification	No buildings or building units within 500'. Surface owner and building unit owner within 1000' notified.
2	Pre-Construction	Rule 604.c.(2)W-Pre-construction consultation occurred at the time the Surface Damage Agreement was negotiated and surface owner has been continually noticed and updated by written notice, e-mail, phone and numerous onsite meetings.
3	Traffic control	Rule 604.c.(2)D- Access is off CR 318, approximately 4.7 miles from it's intersection with Hwy 172. Access gate is on the South side of CR 318il. 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	Wildlife	Suitable cliff nesting raptor habitat is located just south of the well location. Activity at raptor nest and the construction of a new nest can occur any time of year. However, the critical nesting period for raptors that would likely use the cliffs for nesting is from February 1 to July 31. CPW recommends avoiding construction and drilling operations during this time period. If construction activities must occur during this time period, CPW recommends a pre-construction raptor survey to determine if there are any active nests with 1/2 mile of the location. If a nest is found during the survey, notify CPW immediately and use CPW raptor buffer guidelines to avoid disturbing the nest.
6	Storm Water/Erosion Control	Please see attached Storm Water Management Plan prepared by Ecosphere Environmental Services.
7	Material Handling and Spill Prevention	Per Rule 604.c.(2)G.- Berms will be constructed with corrugated metal sides around water tanks and will 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. Please see attached Storm Water Management Plan prepared by Ecosphere Environmental Services.
8	Construction	Rule 604.c.(2)V.- the IGW 146 well will be located in the immediate vicinity of and wholly within the footprint of the existing Crigler Ute FT #1 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.
9	Noise mitigation	Rule 604.c.(2)ADrilling and Completion: Noise levels will be monoitored 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 feasable. 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
10	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: 10 comment(s)

Attachment Check List

Att Doc Num	Name
2107093	PROPOSED CPW SEED MIX
2107096	CORRESPONDENCE
400647197	FORM 2A SUBMITTED
400647759	WASTE MANAGEMENT PLAN
400647760	NRCS MAP UNIT DESC
400647761	PROPOSED BMPS
400647762	SURFACE AGRMT/SURETY
400649484	HYDROLOGY MAP B, AERIAL
400649608	REFERENCE AREA PICTURES
400649610	REFERENCE AREA MAP
400649612	REFERENCE AREA MAP
400649613	LOCATION DRAWING
400649614	LOCATION DRAWING
400649616	MULTI-WELL PLAN
400649626	FACILITY LAYOUT DRAWING
400649627	WELL LOCATION PLAT
400649630	LOCATION PICTURES
400649848	ACCESS ROAD MAP
400649849	WAIVERS
400649851	30 DAY NOTICE LETTER
400649852	30 DAY NOTICE LETTER
400649856	FORM 2A SUBMITTED

Total Attach: 22 Files

General Comments

User Group	Comment	Comment Date
Agency	Changed distance to public road to coicide with COGCC GIS and Google Earth.	9/15/2014 6:57:56 AM
Permit	Final review completed; no LGD or public comment received.	9/15/2014 6:29:50 AM
DOW	CPW conducted an onsite of the proposed location on Aug 6, 2014 with the COGCC, La Plata County, and the Operator. At the onsite we asked the operator to use the attached wildlife friendly seed mix. The surface owner agreed to use the grasses in the seed mix, but did not want any of the shrubs or forbs included in the mix for reclamation. CPW recommends that the COGCC require the operator to use the grasses identified in the wildlife friendly seed mix for interim and final reclamation at this facility.	8/26/2014 2:09:00 PM
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, stormwater BMPs during construction, 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 780' to 116' based on 08-06-14 onsite and 2013 aerial map; although location is not within SWH, CPW conducted a preconsultation onsite in May 2014; conducted operator/COGCC onsite on 06-19-14; conducted operator/COGCC/CPW/La Plata County onsite on 08-06-14; no CPW, however, operator has agreed to be cognizant of potential raptor nesting in nearby cliffs; 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, stormwater BMPs during construction, cuttings, pipeline testing, tank berming, and flowback to tanks COAs.	3/5/2014 2:23:12 PM
Permit	Passed completeness. Access Road Map attached.	7/24/2014 10:05:02 AM
Permit	Return to draft. Missing Access Road Map attachment.	7/23/2014 3:54:21 PM

Total: 6 comment(s)