

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:

400615185

Date Received:

05/28/2014

Oil and Gas Location Assessment

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

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:

438580

Expiration Date:

08/15/2017

☒ 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: 10396

Name: SOUTHWESTERN ENERGY PRODUCTION COMPANY

Address: 2350 N SAM HOUSTON PKWY EAST #125

City: HOUSTON State: TX Zip: 77032

Contact Information

Name: KYLA HOWL

Phone: (505) 635.5669

Fax: ()

email: KHOWL@LTENV.COM

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20110201 ☐ Gas Facility Surety ID: _____

☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: WELKER 6-92 Number: 1-2H11

County: MOFFAT

QuarterQuarter: SESE Section: 2 Township: 6N Range: 92W Meridian: 6 Ground Elevation: 6504

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: 660 feet FSL from North or South section line

785 feet FEL from East or West section line

Latitude: 40.494361 Longitude: -107.680228

PDOP Reading: 1.3 Date of Measurement: 03/24/2014

Instrument Operator's Name: LOREN K SHANKS

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>1</u> | Oil Tanks | <u>1</u> | Condensate Tanks | <u> </u> | Water Tanks | <u>1</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>1</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> </u> | Vapor Recovery Unit | <u> </u> | VOC Combustor | <u> </u> | Flare | <u>1</u> | LACT Unit | <u> </u> |
| | | | | | | | | Pigging Station | <u> </u> |

OTHER FACILITIES

Other Facility Type

Number

| | |
|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> |
|----------------------|----------------------|

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

150' OF 2.5" SCH 80 FROM THE WELLHEAD TO THE SEPARATOR
100' OF 2" SCH 80 FROM THE SEPARATOR TO THE TANK BATTERY FOR THE WATER AND OIL DUMPS
150' OF 2" SCH 80 FROM THE SEPARATOR TO THE FLARE STACK

CONSTRUCTION

Date planned to commence construction: 06/30/2014 Size of disturbed area during construction in acres: 2.74
Estimated date that interim reclamation will begin: 09/30/2014 Size of location after interim reclamation in acres: 1.10
Estimated post-construction ground elevation: 6504

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? Yes

Will oil based drilling fluids be used? Yes

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?

Reuse Facility ID: or Document Number:

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

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Phone: _____

Fax:

Email: _____

City: GORDONVILLE State: MO Zip: 63752

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 04/25/2014

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: 2926 Feet
Building Unit: 5280 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 4825 Feet
Above Ground Utility: 3520 Feet
Railroad: 5280 Feet
Property Line: 624 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: 23. BULKLEY SILT CLAY, 12 TO 15 PERCENT SLOPE

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: _____

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: 600 Feet

water well: 2675 Feet

Estimated depth to ground water at Oil and Gas Location 112 Feet

Basis for depth to groundwater and sensitive area determination:

THERE ARE NO KNOWN WATER WELLS (WW) IN SECTION 2 OR SECTION 11. NEAREST WW'S ARE IN SEC 12 & 13 AND ALL ARE GREATER THAN 1/2 MILE AWAY. SEVERAL WW WERE REVIEWED IN SECTION 12, 13 AND 14 AS WELL AS TOPOGRAPHY, GRADIENT AND ELEVATION OF WELLS TO DETERMINE ESTIMATED DTW.

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 609

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: 05/28/2014

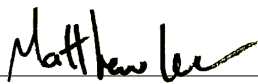
Email: KHOWL@LTENV.COM

Print Name: KYLA HOWL

Title: AGENT FOR SOUTHWESTERN

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: 8/16/2014

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>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> <p>Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing pipelines. This will reduce surface disturbance.</p> |
| | <p>If the well(s) is(are) 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.</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. Since this location is at the high point of a hill, and salt-based and oil-based drilling muds are being used, run-off stormwater BMPs need to be sufficient to keep all fluids onsite.</p> <p>A closed loop system must be implemented during drilling. All cuttings generated during drilling with oil based muds or high chloride/TDS mud must be contained prior to commercial disposal. The moisture content of any drill cuttings managed onsite shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. All liners associated with drilling mud and cuttings management must be disposed of offsite per CDPHE rules and regulations.</p> <p>The access road will be constructed and 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>Notify the COGCC 48 hours prior to start of pad construction, rig mobilization, spud, pipeline testing, start of hydraulic stimulation operations, and start of flowback operations (if different than hydraulic stimulation operations) using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).</p> |

Best Management Practices

| <u>No</u> | <u>BMP/COA Type</u> | <u>Description</u> |
|------------------|-----------------------------|--|
| 1 | Planning | When feasible develop multiple well sites by using directional drilling to reduce cumulative impacts and adverse impacts on wildlife resources. |
| 2 | General Housekeeping | Fence the well site after drilling to restrict public and wildlife access. Keep well site location, the road, and the pipeline easement free of noxious weeds, litter and debris. Spray for noxious weeds, and implement dust control, as needed. Southwestern Energy Production Company (SWEPC) will not permit the release or discharge of any toxic or hazardous chemicals or wastes on Owner's Land. Construct and maintain gates where any roads used by SWEPC cross through fences on the leased premises. |
| 3 | Storm Water/Erosion Control | Use water bars, and other measures to prevent erosion and non-source pollution. Implement and maintain BMP's to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation. Co-locate gas and water gathering lines whenever feasible, and mitigate any erosion problems that arise due to the construction of any pipeline (s). |
| 4 | Construction | Remove only the minimum amount of vegetation necessary for the construction of roads and facilities. Conserve topsoil during excavation and reuse as cover on disturbed areas to facilitate regrowth of vegetation. No construction or routine maintenance activities will be performed during periods when the soil is too wet to equipment. |
| 5 | Interim Reclamation | Utilize only such area around each producing well as is reasonably necessary. Restore the remainder of the well site location to its original condition within a reasonable time after the completion of operations. All reseeding shall be done with grasses consistent with the Rocky Mountain native mix or other grasses reasonably requested by surface owner and during planting period suggested by Owner. |
| 6 | Final Reclamation | All surface restoration shall be accomplished to the satisfaction of Owner. All reseeding shall be done with grasses consistent with the Rocky Mountain native mix or other grasses reasonably requested by surface owner and during planting period suggested by Owner. Final reclamation shall be completed to the reasonable satisfaction of the Owner as soon as practical after installation (weather permitting) and in accordance with regulatory agency standards. |

Total: 6 comment(s)

Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u> |
|---------------------------|-------------------------------------|
| 2107063 | CORRESPONDENCE |
| 2107064 | SURFACE OWNER WAIVER OF CPW CONSULT |
| 400615185 | FORM 2A SUBMITTED |
| 400615280 | ACCESS ROAD MAP |
| 400615286 | CONST. LAYOUT DRAWINGS |
| 400615289 | NRCS MAP UNIT DESC |
| 400615292 | HYDROLOGY MAP A, TOPO |
| 400615295 | REFERENCE AREA MAP |
| 400615298 | LOCATION DRAWING |
| 400615302 | LOCATION PICTURES |
| 400615303 | REFERENCE AREA PICTURES |
| 400615307 | OTHER |
| 400615309 | SURFACE AGRMT/SURETY |

Total Attach: 13 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|--------------------------|--|----------------------------|
| Final Review | modified COA concerning cuttings management and pits--no pits have been indicated or permitted at this Oil and Gas Location. | 8/16/2014 11:54:04 AM |

| | | |
|-----|---|---------------------------------|
| DOW | <p>Wildlife Concerns: This location is within Pronghorn Winter Concentration Area, Mule Deer Critical Winter Range, and Elk Winter Concentration Area Sensitive Wildlife Habitat (SWH). On 6/26/2014 the operator agreed to the following BMPs by email:</p> <ol style="list-style-type: none"> 1. All construction and drilling activities within big game winter range will be conducted outside the period of December 1 to April 15. 2. Conduct post-development well site visitations to between the hours of 10:00 a.m. and 3:00 p.m. and reduce well site visitations between the period of December 1 to April 15 for big game winter range. 3. Establish company guidelines to reduce wildlife-vehicle collisions on roadways. Slow speeds and increased awareness among employees and contractors will help reduce impacts. 4. If water is obtained from nearby rivers or streams, screen suction hoses to exclude fish. 5. Do not, under any circumstance, return unused water back to rivers, streams, ponds or irrigation ditches. Properly dispose of water to eliminate the risk of spreading aquatic nuisance species. 6. Sanitize water suction hoses and water transport tanks using one of the following methods. Discard and rinse water at an appropriately permitted disposal facility. <ol style="list-style-type: none"> a. Remove all mud and debris from equipment and spray/soak equipment with a 1:15 solution of disinfection solution containing the following ingredients: <ol style="list-style-type: none"> i. Dialkyl dimethyl ammonium chloride, 5-10% by weight; ii. Alkyl dimethyl benzyl ammonium chloride, 5-10% by weight; iii. Nonyl phenol ethoxylate, 5-10% by weight; iv. Sodium sesquicarbonate, 1-5%; v. Ethyl alcohol, 1-5%; and vi. Tetrasodium ethylene diaminetetraacetate, 1-5%; vii. and water, keeping the equipment moist for at least 10 minutes and managing rinsate as a solid waste in accordance with local, county, state, or federal regulations; or b. Spray/soak equipment with water greater than 140 degrees Fahrenheit for at least 10 minutes. <p>Approved: Taylor Elm, 6/27/2014, 9:44</p> | <p>6/27/2014 9:45:17 AM</p> |
|-----|---|---------------------------------|

| | | |
|--------|--|--------------------------|
| OGLA | Initiated/Completed OGLA Form 2A review on 06-17-14 by Dave Kubeczko; requested acknowledgement of notification, fluid containment, spill/release BMPs, cuttings containment, moisture content cuttings, pipeline testing, and flowback to tanks COAs from operator on 06-17-14; received acknowledgement of COAs from operator on 06-30-14; corrected distance to building from 3128'(well) to 2926'(prod equip), public road from 4970' (well) to 4825' (prod equip), above ground utility from 3525' (well) to 3520' (prod equip), and property line from 660' (well) to 624' (prod equip) based on Location Drawing survey table attachment; corrected disturbance size at construction from 4.40 acres to 2.74 acres (pad only); corrected distance to nearest surface water from 690' to 600' based on Hydrology Map; conducted CPW/COGCC onsite on 06-16-14; passed by CPW on 06-27-14 with recommended wildlife BMPs proposed to SWEPCo, however, an executed surface owner CPW consult waiver (dated prior [04-23-14] to the Form 2A permit being submitted [05-28-14]) was received by COGCC on 06-23-14, 7 days after the CPW onsite (06-16-14); passed OGLA Form 2A review on 07-23-14 by Dave Kubeczko; notification, fluid containment, spill/release BMPs, cuttings containment, moisture content cuttings, pipeline testing, and flowback to tanks COAs. | 6/17/2014 12:35:54 PM |
| Permit | Passed completeness. | 5/28/2014 4:20:16 PM |

Total: 4 comment(s)