FORM 2A Rev 08/19

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: 402010466

Date Received: 06/03/2019

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

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: **469568**

Expiration Date: **12/05/2022**

☒ 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: 10651
Name: VERDAD RESOURCES LLC
Address: 5950 CEDAR SPRINGS ROAD
City: DALLAS State: TX Zip: 75235

Contact Information

Name: Heather Mitchell
Phone: (720) 845-6917
Fax: ( )
email: regulatory@verdadoil.com

FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID (Rule 706): 20170009 ☐ Gas Facility Surety ID (Rule 711): _____
☐ Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: Safi Number: 1224
County: WELD

QuarterQuarter: NWSE Section: 12 Township: 1N Range: 65W Meridian: 6 Ground Elevation: 4970

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: 2215 feet FSL from North or South section line
2251 feet FEL from East or West section line

Latitude: 40.064786 Longitude: -104.610733

PDOP Reading: 1.2 Date of Measurement: 03/25/2019

Instrument Operator's Name: Brent Garcia

LOCAL GOVERNMENT INFORMATION

County: WELD Municipality: N/A

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "local government with jurisdiction to approve the siting of the proposed oil and gas location."

The local government with jurisdiction is: County

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this location? If the local government does regulate the siting, but has waived its right to precede the COGCC in siting determination, indicate by selecting "YES" here and selecting "Waived" for the disposition below. ☒ Yes ☐ No

If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location. ☒

The local government siting permit type is: WOGLA

The local government siting permit was filed on: 06/28/2019

The disposition of the application filed with the local government is: Approved

Additional explanation of local process:

WOGLA19-1056 was approved 10/11/2019.

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	14	Oil Tanks*	20	Condensate Tanks*		Water Tanks*	10	Buried Produced Water Vaults*	
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	1
Pump Jacks		Separators*	14	Injection Pumps*		Cavity Pumps*		Gas Compressors*	1
Gas or Diesel Motors*		Electric Motors		Electric Generators*		Fuel Tanks*		LACT Unit*	
Dehydrator Units*		Vapor Recovery Unit*	3	VOC Combustor*		Flare*		Pigging Station*	

OTHER FACILITIES*

Other Facility Type	Number
VRT	3
Meter Building	1
ECD	4
Heater Treater	3

*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:

The majority of flowlines will be Schedule 80 FBE welded steel including: (14) 3" flowlines from the wellheads to the separators (14) 3" gas injection lines from the compressor to the wellheads, (14) 2" dump lines from the separators to the tanks, and (14) 1" gas supply lines from the wellheads to the separators. Poly will be utilized to supply gas to the tubing motor valves, including (14) 1" lines from the separators to the motor valves on the wellheads.

Gas gatherers are near the proposed pad and Verdad will work with the appropriate parties to ensure timely gas gathering connections.

CONSTRUCTION

Date planned to commence construction: 02/01/2020 Size of disturbed area during construction in acres: 14.10

Estimated date that interim reclamation will begin: 08/01/2020 Size of location after interim reclamation in acres: 9.50

Estimated post-construction ground elevation: 4970

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? 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? No

Reuse Facility ID: or Document Number:

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

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Verdad Resources LLC Phone:

Address: 5950 Cedar Springs Rd. Fax:

Address: Email: regulatory@verdadoil.com

City: Dallas State: TX Zip: 75235

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: No

The right to construct this Oil and Gas Location is granted by: applicant is owner

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

Date of Rule 306 surface owner consultation

If this Form 2A is associated with Drilling and Spacing Unit applications, list docket number(s):

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:	1793 Feet	2203 Feet
Building Unit:	1799 Feet	2205 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	2050 Feet	1929 Feet
Above Ground Utility:	765 Feet	351 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	392 Feet	104 Feet
School Facility::	5280 Feet	5280 Feet
School Property Line:	5280 Feet	5280 Feet
Child Care Center:	5280 Feet	5280 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, Designated Outside Activity Area, School Facility, and Child Care Center – as defined in 100 Series Rules.
-For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

SCHOOL SETBACK INFORMATION

Was Notice required under Rule 305.a.(4)? ☐ Yes ☒ No

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.
- Large UMA Facility – 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: _____

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

☐ Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on 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.

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: Colombo clay loam, 0 to 1 percent slopes

NRCS Map Unit Name: Nunn loam, 0 to 1 percent 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 ☒

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: 29 Feet

water well: 9 Feet

Estimated depth to ground water at Oil and Gas Location 23 Feet

Basis for depth to groundwater and sensitive area determination:

The closest well shown on the COGCC interactive map and hydrology maps is Permit# 12389R at a distance of 9 feet from the proposed pad with a static groundwater depth of 32 feet. The overall well depth is 60'.
Per discussion with operator, depth to ground water reduced to 23 ft per water well #12386R 37' NE of pad.
Per discussion with operator, nearest surface water changed to irrigation ditch, 29 ft NW of location.

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 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: No

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 318A

WILDLIFE

- ☐ This location is included in a Wildlife Mitigation Plan
- ☐ This location was subject to a pre-consultation meeting with CPW held on

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500’ of a Building Unit) and is in an Urban Mitigation Area
- ☐ 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: The Safi 1224-01H is the reference well used for the location identification. The distances for the cultural setbacks were provided from the nearest proposed well and production facility on the pad.

Verdad is the Surface Owner of this area so no SUA is attached.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.
Signed: _____ Date: 06/03/2019 Email: regulatory@verdadoil.com

Print Name: Heather Mitchell Title: Regulatory Manager

Based on the information provided herein, this Oil and Gas Location Assessment complies with COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved: _____ **Director of COGCC** Date: 12/6/2019

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	Operator shall post a copy of the approved Form 2A on the location during all construction, drilling, and well completion activities.

Best Management Practices

No	BMP/COA Type	Description
1	Planning	Verdad has submitted a WOGLA application with Weld county that addresses site safety and contains an emergency action and tactical response plan. Each location is assigned a physical address for emergency responders to locate the site in the event of an emergency.
2	General Housekeeping	Cleanup of trash, scrap, and discarded materials will be conducted at the end of each workday.
3	General Housekeeping	Mud control: Operator will implement effective, temporary vehicle tracking control at the location egress to prevent transport of sediment offsite and onto the public road during construction, drilling, completions, stimulation, and flowback operations. Appropriate vehicle tracking control, such as a properly sized cattle guard or 2-inch to 4-inch stone, will still be required during production operations.

4	Storm Water/Erosion Control	Control measures for stormwater will be implemented around the perimeter of the pad prior to construction. The control measures will include: a large volume detention ditch and diversion berm around the perimeter of the pad disturbance, to prevent stormwater from flowing off the pad and to direct stormwater flows to the sediment traps; two sediment traps with armored inlets and outlets at the north side and southeast corner of the pad to detain stormwater runoff from the pad and allow sediment to settle from the stormwater; and wattles at the sediment trap outlets to slow the departure of the water from the sediment trap and further remove any remaining sediment from the stormwater. These control measures will remain in place and maintained throughout operations until final reclamation and be modified as appropriate to observations during Stormwater inspections. The control measures described will manage stormwater flow to prevent erosion and sediment transport to the centerline ditch to the East of the pad. Inspections on storm water controls will be conducted every 14 days during construction, drilling and completions. Once per month after that, until interim reclamation is completely established (approximately 2 years). Once per year after that until facility abandoned.
5	Material Handling and Spill Prevention	To minimize potential impacts to soil or groundwater, the operator shall construct the secondary containment areas for the tanks with a steel berm with a capacity of greater than 150% of the volume of the largest tank and an impervious poly or spray in liner. Separators are surrounded by steel berms and built on top of road base that is approximately 1-2 feet thick and compacted so that it is sufficiently impervious to greatly minimize impact to the soil or groundwater from any potential leak or drip from the separators. Sites are visited daily so a spill would be detected and cleaned up before any significant infiltration could occur. The berms would contain a spill from leaving the area around the separators.
6	Material Handling and Spill Prevention	Drip pans will be used during fueling of equipment to contain spills and leaks. AVO (Audio, Visual, Olfactory) inspections of pipe and connections will be performed daily on production equipment to detect leaks which will be immediately corrected, repaired and reported to COGCC as required. Spill prevention Control Countermeasure (SPCC) will be in place to address any possible spill associated with oil and gas operations.
7	Material Handling and Spill Prevention	Wells shall have remote shut-in capabilities to mitigate spills and safety issues. Remote shut-in will allow operator to immediately shut a well in, in the event of a reported problem on location or in the event of a potential threat such as a grass fire or flood.
8	Dust control	To prevent dust from becoming a nuisance to the public, water trucks will be utilized to spread water across any dust problem areas.
9	Construction	MLVT Size is 120’DX14’H and the volume is 25,000 BBLS. Vendor/Manufacture will be Select Energy Services. It will be on location for 45 days during completion operations. Operator will follow the COGCC guidance policy dated June 13, 2014 on the use of MLVTs. The MLVT will be on site for approximately 30 days during completion operations.
10	Construction	Operator will install a steel fence/corral panels around the water well west of the disturbance to keep construction operations from any potential impact to the well.
11	Noise mitigation	Operator will consult with owners of residences and occupied structures and other stakeholders to reduce impact of noise and light during drilling and completion operations. The direction of prevailing winds is considered when planning the location in order to mitigate odor and noise from being a nuisance to the surrounding residents and occupied structures. In order to minimize sound levels during drilling operations at nearby residences, rig generators will be located as far as possible from the residence, on the north side of the pad. Rig lighting will also be directed away from residential units. Operator will install sound walls to the south and west. Operator commits to quiet frac fleets.
12	Emissions mitigation	Operator will employ automated tank gauges to allow for the gauging of liquids without opening the thief hatch. This will minimize the number of times a thief hatch will be opened and further reduce the vapor emissions from tank.

13	Emissions mitigation	Test separators and associated flow lines, sand traps and emission control systems shall be installed on-site to accommodate green completions techniques. When commercial quantities of salable quality gas are achieved at each well, the gas shall be immediately directed to a sales line or shut in and conserved. If a sales line is unavailable or other conditions prevent placing the gas into a sales line, the operator shall not produce the wells without an approved variance per Rule 805.b.(3)C.
14	Odor mitigation	To reduce odors during drilling and completion, the rig will be washed of oily debris before moving in. D822 is our base fluid which is a distillate and has the benefits of lower BTEX levels and is recognized as having lower odor than traditional oil based mud. Operator will utilize drying shakers or vertical dryers which will minimize residual oil on cuttings prior to transport and will promptly remove 4-5 loads of cuttings per day during drilling operations which should help to reduce odors.
15	Drilling/Completion Operations	During drilling operations 12 inches of cement is placed under the rig surrounded by a compacted soil berm to prevent any soil contamination. Drilling mud is stored in large volume tanks that will be surrounded by impervious secondary containment.

Total: 15 comment(s)

Attachment Check List

Att Doc Num	Name
1010759	HYDROLOGY MAP
1010760	LOCATION DRAWING
1010761	WASTE MANAGEMENT PLAN
1010762	CORRESPONDENCE
1010763	FACILITY LAYOUT DRAWING
1010764	CORRESPONDENCE
2479170	CORRESPONDENCE
2479172	OBJECTIVE CRITERIA REVIEW MEMO
2479173	PUBLIC COMMENT CONSIDERATION MEMO
402010466	FORM 2A SUBMITTED
402010513	NRCS MAP UNIT DESC
402010516	NRCS MAP UNIT DESC
402058774	MULTI-WELL PLAN
402058775	ACCESS ROAD MAP
402058782	REFERENCE AREA MAP
402058784	REFERENCE AREA PICTURES
402058785	LOCATION PICTURES

Total Attach: 17 Files

General Comments

User Group	Comment	Comment Date
OGLA	Edits made to stormwater BMP for clarity. Inspection BMPs combined.	12/06/2019
OGLA	Per conversations with the operator, the owner of the building unit to the south is the surface tennant who farms the parcel where the Location will be built. There is no reported interaction between the operator and the landowner approximately 2,000 ft east of the Location. BMP added for surface protection of water well immediately west of Location.	12/03/2019
OGLA	The Objective Criteria Review Memo (Doc# 2479172) is attached to this Form 2A. Following additional analysis arising out of the Objective Criteria, the Director determined that this application meets the standard for the protection of public health, safety, welfare, the environment and wildlife resources set by SB 19-181.	11/06/2019
OGLA	This form has passed the OGLA technical review.	11/05/2019
OGLA	Verdad Resources is the surface owner of this location and no rule 306 consultation is needed.	11/04/2019
OGLA	BMPs updated for: Mud control, stormwater, tank secondary containment, and sound control.	11/01/2019
OGLA	Public Comments received for this Form 2A are summarized and addressed in the attached Public Comment Consideration Memo (Doc# 2479173).	10/24/2019
OGLA	Updated construction drawing and correspondence.	10/24/2019
OGLA	Odor control BMP added.	10/22/2019
OGLA	Per consultation with operator: BMP #3 updated with vehicle tracking controls, BMP #4 updated with site specific protections, BMP #8 updated with site specific protections, BMPs #10,11,12,13,14 added, updated construction start and reclamation start dates added, minerals under location question changed to no, waste management confirmed to be commerial disposal, number of tanks on location reduced, cultural setbacks updated, distance to surface water updated, and groundwater depth reduced. Wellbore Spacing Units used instead of DSU.	10/21/2019
OGLA	Updated Hydrology Map, updated Location Drawing, and new Waste Management Plan received from operator and attached.	10/21/2019
OGLA	Requested additional information from the operator: updated BMPs, addition of DSU Docket #, updated construction start and reclamation start dates, Waste Management Plan, 306 consultation language, minerals production question, depth to groundwater and sensitive area determination, distance to nearest surface water, waste management disposal, setback from property line, new hydrology map, and tank number and volume confirmation.	10/16/2019
OGLA	COGCC staff conducted its technical review of this Form 2A Oil and Gas Location Assessment within the context of SB 19-181 and the required Objective Criteria. This Form 2A met Objective Criteria # 5.c., 8.	10/16/2019
Permit	Passed Permitting. All associated APDs include proposed Wellbore Spacing Units - no DSU pending for this Form 2A.	09/26/2019
Permit	Passed completeness.	06/06/2019

Total: 15 comment(s)