

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:

401445598

Date Received:

12/07/2017

Oil and Gas Location Assessment

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:

**454529**

Expiration Date:

**03/23/2021**

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: KENNY TRUEAX

Phone: (720) 651-8409

Fax: ( )

email: REGULATORY@VERDADOIL.COM

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20170009     Gas Facility Surety ID: \_\_\_\_\_

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

LOCATION IDENTIFICATION

Name: ARNOLD

Number: 02N-64W-24

County: WELD

Quarter: SESW    Section: 24    Township: 2N    Range: 64W    Meridian: 6    Ground Elevation: 4924

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: 1241 feet FSL from North or South section line

2192 feet FWL from East or West section line

Latitude: 40.120054    Longitude: -104.501293

PDOP Reading: 1.9    Date of Measurement: 09/29/2017

Instrument Operator's Name: KUNTSEN

## 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>20</u>	Oil Tanks*	<u>30</u>	Condensate Tanks*	<u>      </u>	Water Tanks*	<u>15</u>	Buried Produced Water Vaults*	<u>2</u>
Drilling Pits	<u>      </u>	Production Pits*	<u>      </u>	Special Purpose Pits	<u>      </u>	Multi-Well Pits*	<u>      </u>	Modular Large Volume Tanks	<u>1</u>
Pump Jacks	<u>      </u>	Separators*	<u>28</u>	Injection Pumps*	<u>      </u>	Cavity Pumps*	<u>      </u>	Gas Compressors*	<u>1</u>
Gas or Diesel Motors*	<u>      </u>	Electric Motors	<u>      </u>	Electric Generators*	<u>      </u>	Fuel Tanks*	<u>      </u>	LACT Unit*	<u>      </u>
Dehydrator Units*	<u>      </u>	Vapor Recovery Unit*	<u>1</u>	VOC Combustor*	<u>4</u>	Flare*	<u>      </u>	Pigging Station*	<u>      </u>

## OTHER FACILITIES\*

Other Facility Type

Number

Heater Treaters	<u>2</u>
Meter building	<u>1</u>

\*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:

Flowlines are 2" schedule 80 welded FBE, (20) 3" schedule 80 FBE flowline from wellhead to separator. (20) 1" steel schedule 80 FBE gas supply lines off casing side to separators in case pilot at separator needs supply; (20) 2" steel schedule 80 FBE line gas lift lines from compressor back to wellhead; and (20) 1" poly lines back to wellhead for gas supply to solenoid for tubing motor valve control, gas supplied from scrubber at separators.

## CONSTRUCTION

Date planned to commence construction: 04/01/2018 Size of disturbed area during construction in acres: 9.99

Estimated date that interim reclamation will begin: 09/01/2018 Size of location after interim reclamation in acres: 6.79

Estimated post-construction ground elevation: 4925

## 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? 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: Boyd & Helen Arnold

Phone: \_\_\_\_\_

Address: 28667 CR 20

Fax: \_\_\_\_\_

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

Email: \_\_\_\_\_

City: Keenesburg State: CO Zip: 80543

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: oil and gas lease

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

Date of Rule 306 surface owner consultation \_\_\_\_\_

## 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:	511 Feet	638 Feet
Building Unit:	752 Feet	925 Feet
High Occupancy Building Unit:	3799 Feet	4127 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	294 Feet	140 Feet
Above Ground Utility:	1062 Feet	1236 Feet
Railroad:	1260 Feet	1435 Feet
Property Line:	227 Feet	57 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.  
- For measurement purposes only, Production Facilities should only include those items with an asterisk(\*) on the Facilities Tab.

## DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- Buffer Zone  
 Exception Zone  
 Urban Mitigation Area

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: 11/01/2017

- 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.

## FOR MULTI-WELL PADS AND PRODUCTION FACILITIES 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.

This proposed multi-well pad will allow development of minerals beneath the pad that we could not otherwise access from alternative locations. It is located in a manner which allows for the greatest distances possible from building units. The pad and associated facilities were placed as far north as possible (toward I-76) to get facility equipment away from the building unit approximately 910' SE (measured from facility pad edge). The location will have separate all-weather access from adjacent properties and is planned to meet all applicable 604.c. mitigation measures.

## 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: 79 - Weld loam, 1 to 3 percent slopes

NRCS Map Unit Name: \_\_\_\_\_

NRCS Map Unit Name: \_\_\_\_\_

### PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes  No

Plant species from:  NRCS or,  field observation Date of observation: \_\_\_\_\_

List individual species: \_\_\_\_\_

#### 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: 345 Feet

water well: 1860 Feet

Estimated depth to ground water at Oil and Gas Location 600 Feet

Basis for depth to groundwater and sensitive area determination:

Nearest existing water well have depth to groundwater of 600' (Receipt: 3653743C Permit #: 288409--). Nearest surface water feature is greater than one mile from this 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 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: \_\_\_\_\_

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 Surface Use Agreement has waivers for Rules 305, 306, 318A.a & 318A.c. See page 3, item 8 of the Memorandum of Surface Use Agreement attached.

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

Signed: \_\_\_\_\_ Date: 12/07/2017 Email: REGULATORY@VERDADOIL.COM

Print Name: KENNY TRUEAX Title: REGULATORY MANAGER

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: 3/24/2018

## 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

	The Approved Form 2A permit will be posted at the location during construction, drilling, and completions operations.
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## Best Management Practices

### No BMP/COA Type

### Description

1	Planning	604c.(2).B. Operator will use a closed loop system for drilling and fluid management. No pits will be dug.  Green Completions -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
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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. We have a midstream agreement signed with Cureton Midstream LLC. We agree that gas will be connected to sales line and not be flared from any well on this location after initial flowback testing without prior written approval from COGCC per Rule 912.

604c.(2).D. Traffic Plan: Prior to the commencement of operations, the operator will obtain access and ROW permits per Weld County Code and implement COAs or traffic control plans as required.

604.c (2).E. To reduce footprint, the pad is planned as a multiwell pad. The pad will have all-weather access and noise mitigation measures (sound walls) will be installed and removed without disturbing landscape.

604c.(2) F. Leak Detection Plan: Verdad personnel will conduct weekly Audio, Visual and Olfactory (AVO) inspections of well heads, separation equipment, tanks, valves, fittings and thief hatches to identify potential leaks and correct promptly. Once per month personnel will conduct additional inspections of facilities with a FLIR camera to ensure no leaks from well heads, separation equipment, tanks valves, fittings, thief hatches, and other potential sources of fugitive emissions.

604c.(2).G. Berm Construction: Operator will create secondary containment via construction of a berm around the crude oil and produced water storage tank battery capable of containing 150% of the volume of the largest single tank. The berm will be constructed of materials sufficiently impervious to contain any spilled or released material.

604c.(2).M. Fencing Requirements: A permeant fencing plan will be reviewed by the surface owner and applicant to ensure the well site is secured. Verdad personnel will maintain the fence and monitor the wellsite regularly upon completion of the wells.

604c.(2).N. Control of Fire Hazards: Verdad and its contractors will employ best management practices during the drilling and production of its wells and facilities and will comply with appropriate COGCC rules concerning safety and fire. Company will ensure that any material that might be deemed a fire hazard will remain no less than 25 feet from the wellhead(s), tanks and separator(s).

604c.(2).O. Load lines: All load lines shall be bullplugged or capped.

604c.(2) P Cleanup of trash, scrap, and discarded materials will be conducted at the end of each workday.

604c.(2).Q. Guy Line Anchors: Guy line anchors will not be used. Base Beams will be used to stabilize the rig and removed after drilling.

604.c.(2)R Tank Specifications: Tanks will be designed, constructed and maintained in accordance with NFPA Code 30 (2008 version). All tanks are visually inspected by the operator weekly at a minimum to a maximum of daily and annual SPCC inspections will be conducted and documented. Inspection and record retention of tank inspections will be in accordance per SPCC regulation. All records will be made available to the COGCC upon to request.

Planning

604c(2)S. Access Roads: Verdad will construct a 0.01 mile lease access road from the north off of County Road 14 for drilling, completions, and production operations. The access road will be properly constructed and maintained to accommodate local emergency vehicle access in all weather conditions.

604c.(2).T. Within 90 days after well is plugged and abandoned, the well site will be cleared of all not essential equipment, trash and debris.

604c.(2).U. Plugged wells will be marked per rule 319.A.(5) including date of plugging

604c.(2).V. Operator shall develop multiple reservoirs from this pad.

2	General Housekeeping	Mud control: when conditions exist that roads are excessively muddy, additional fill material will be added in order to dehydrate the environment and reduce the amount of material that is transported from the wells roads and location to off-site areas.
3	Material Handling and Spill Prevention	During drilling operations, we anticipate 4-5 loads, @ 20 yards per load, of cuttings per day will be transported off-site to an approved disposal facility in accordance with Operator's waste management plan. All loads leaving the location will have a manifest and will be documented. Water-based and Oil-based cuttings will be disposed of offsite and at a licensed, commercial disposal site. No cuttings will be stored on location.
4	Material Handling and Spill Prevention	Drip pans will be used during fueling of equipment to contain spills and leaks. Visual inspections of pipe and connections will be performed frequently 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.
5	Material Handling and Spill Prevention	Storm Water Stormwater management plans (SWMP) will be in place to address construction, drilling, and operations associated with CDPHE permits. BMPs for stormwater will be implemented around the perimeter of the pad prior to or during construction and will vary according to the location. These BMPs will remain in place and maintained throughout operations until final reclamation. A diversion ditch and berm will be constructed around the entire perimeter of the pad to prevent stormwater run-on to enter the pad and control stormwater that falls on the pad. A culvert will be placed at the access road to allow water in the ditch to move freely. Sediment catch basins will be placed at the northeast corner, southeast corner and mid-length of the east side of the pad to capture sediment and allow it to settle out of the water, and allow the water to infiltrate or evaporate. In the event of heavy precipitation/runoff, the outlets of the sediment basins will be armored with rip rap, to filter water and protect the embankment, and surrounded with wattles to filter out any sediment that has not settled out in the basin. The pad area is on a gradual slope so high water velocity is not expected. Additional BMPs may be added if actual conditions require more control.
6	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.
7	Noise mitigation	Operator will consult with owners of residents 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 by rig orientation. Rig lighting will also be directed away from residential units.
8	Noise mitigation	Verdad will construct a sound wall to dampen equipment noise toward the east and southeast.
9	Drilling/Completion Operations	Verdad plans to use a Modular Large Volume Tank (MLVT). The planned tank is a 36K BBL tank approximately 148' in diameter. The MLVT is manufactured by Big Holdings and will be supplied and set up by a third-party vendor. Verdad 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.

Total: 9 comment(s)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2316272	HYDROLOGY MAP
2316278	RULE 306.E. CERTIFICATION
401445598	FORM 2A SUBMITTED
401450934	ACCESS ROAD MAP
401450936	LOCATION DRAWING
401450937	OTHER
401450939	LOCATION PICTURES
401450941	FACILITY LAYOUT DRAWING
401450942	FACILITY LAYOUT DRAWING
401450944	LOCATION PICTURES
401450945	LOCATION PICTURES
401453084	NRCS MAP UNIT DESC
401453519	MULTI-WELL PLAN
401472801	PRE-APPLICATION NOTIFICATION CERTIFICATION
401479912	SURFACE AGRMT/SURETY
401479920	WASTE MANAGEMENT PLAN

Total Attach: 16 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Permitting Review Complete.  Final Review Completed.	03/19/2018
OGLA	Updated Green Completions BMP. Supervisor review complete. Based on the information provided by the Operator, COGCC has determined that this proposed Oil and Gas Location meets the requirements for conditional approval based on compliance with COGCC Rules, including, but not limited to; Rule 604 Series Setback and Mitigation Measures. The Operator has presented a siting rationale for the Production Facilities in the Buffer Zone and Best Management Practices addressing site specific environmental, health, safety and welfare concerns. OGLA review complete and task passed.	03/01/2018
OGLA	OGLA supervisor review: inconsistency for the green completions, confirm there will be a sales line and no flaring of gas.	02/28/2018
OGLA	Operator responded on 1/26/2018 – provided hydrology map with updated distance – attached. Provided BMPs for C, M, A, and K, and stormwater for surface water. Operator stated other wells will be going to this production in the future – so has maximum amount of equipment on the Facility Layout – updated facility list to match drawing. Updated cultural distances for equipment and not from edge of production area. Pre-application letter is actually 306.e. certification letter – request 305.a certification letter.	02/02/2018
OGLA	OGLA review: Emailed operator on 1/4/2018 regarding facility layout and facility list do not match, cultural distances from the edge of disturbance and not equipment, water resources does not match hydrology map, missing BMPs 604.c.(2). C, M, A, and K. Need protection of surface water BMP.	01/17/2018
Permit	Passed Completeness.	12/18/2017
OGLA	Passed Buffer Zone completeness review	12/15/2017
Permit	Referred to OGLA Supervisor for buffer zone review.	12/08/2017

Total: 8 comment(s)