

DIRECTOR'S RECOMMENDATION

Docket Number 210600095

Verdad Resources, LLC (Verdad) Operator Number 10651

Harambe 2920 OGD

Pursuant to Rule 306, the Director submits to the Commission this recommendation for APPROVAL of this Verdad Oil and Gas Development Plan located in Weld County.

The underlying permit documents in support of this Recommendation may be found through the Colorado Oil and Gas Conservation Commission (COGCC) website under "[Permits](#)".

Harambe 2920 OGD

Form 2C #402966326

Form 2A #402966326

Form 2B #402966316

All supporting hearing documents, including Verdad's Harambe 2920 hearing application, may be found in COGCC's eFilings System under Docket No. 210600095.

BACKGROUND

On May 25, 2022, Verdad filed an application for their Harambe 2920 Oil and Gas Development Plan (OGDP) with the Colorado Oil and Gas Conservation Commission (COGCC). Staff returned the Form 2A to "Draft" status one time for the applicant to make corrections prior to the Director determining the application was complete on August 9, 2022. Multiple additional revisions were coordinated between Staff and the applicant throughout the technical review process. This Recommendation is based on information finalized in the Form 2A, Form 2B, and hearing application as of November 8, 2022. No additional revisions will be made to the application prior to the Commission Hearing scheduled for November 16, 2022.

PROPOSED DEVELOPMENT

The proposed 1930-acre Harambe 2920 OGD includes application lands in Township 2 North, Range 64 West, portions of Sections 20, 28, 29, 32, and 33. Two surface locations are included in the OGD: Verdad's existing built Georgene 2828-2833 Oil and Gas Location (Location ID# 473534) located in Section 28, which is not seeking any surface revisions, and the newly proposed Harambe 2920 Oil and Gas Location in Section 32. The proposed surface Location for

the Harambe 2920 Location lies within a rural agricultural area within unincorporated Weld County, approximately ¾ mile south of Interstate 76 and ½ mile east of the Town of Hudson.

The proposed Harambe 2920 Location will have nine wells. Production equipment will total 2 oil tanks, 4 separators, and other associated equipment. Verdad has indicated that gas infrastructure will be available for the wells when flowback produces salable quantities of gas. In addition, Verdad indicated it is working with a 3rd party to obtain rights-of-way for construction of oil pipelines; however, Verdad has communicated that they plan to have the pipeline in service prior to production. Verdad also indicated it is working with a 3rd party to obtain rights-of-way for construction of produced water pipelines.

Verdad estimates construction of the Oil and Gas Location will commence in late 2022, drilling will commence in May 2023, and completions will commence in September 2023. Production is anticipated to commence October 2023.

The proposed new Location lies on FEE surface and is outside the boundaries of the mineral development area. The proposed development of the Location will result in surface disturbance as follows:

- Oil and Gas Location disturbance - total 10.00 acres of new disturbance; approximately 7.63 acres of which will be the Working Pad Surface (WPS); interim reclamation will reduce the operational pad down to 5.14 acres;
- Verdad will be utilizing a portion of an existing access road and is proposing approximately 1.766 acres (approximately 0.00275 square miles) of new access road disturbance;
- Verdad does not have the total miles of proposed pipeline at this time as the pipelines will be constructed by a third party.

Verdad has obtained a signed Surface Use Agreement (SUA) with the surface owner.

DRILLING AND SPACING CONSIDERATIONS

Mineral Development:

Verdad is requesting the development of FEE minerals covering approximately 1,920 total acres from the Niobrara, Fort Hays, Codell, and Carlile formations as follows:

- Establish a new Drilling and Spacing Unit (DSU)
 - Verdad proposes the establishment of a DSU of 1,920 acres for oil and gas development and up to seventeen (17) horizontal wells: nine (9) wells from the proposed Harambe 2920 Location and eight (8) refile wells from the existing Georgene 2828-2833 Location (Loc ID# 473534);
 - Verdad is currently drilling surface casing for the eight Georgene wells using previously approved Form 2s, but will submit Refile APDs to revise the wellbore trajectories and lengths to accommodate the Georgene wells as depicted in the Harambe Form 2A Directional Well Plat. The Refile APDs will also change the wells' spacing from the originally-permitted

Rule 318A “GWA Wellbore Spacing” to the proposed new 1920-acre DSU;

- Verdad is seeking the following setbacks for the proposed DSU:
 - All wells: 460 foot unit boundary setback and an interwell setback of 150 feet.

There are multiple vertical and directional wells producing or permitted to produce the Niobrara, Fort Hays, Codell and Carlile formations, or portions thereof, within the application lands and within the proposed DSU boundaries; those wells will remain subject to their originally permitted spacing, and will not be included in this OGDG.

This spacing, as outlined in Verdad’s second amended Hearing Application, complies with applicable COGCC rules and Staff appreciates the utilization of a single large DSU for these application lands, eliminating the need for multiple individual wellbore spacing units.

FINANCIAL ASSURANCE

Staff confirmed that Verdad has a valid blanket plugging bond on record consistent with Rule 702.

PUBLIC COMMENTS

As the proposed new development for the Harambe 2920 Oil and Gas Location is not sited within 2,000 feet of an RBU within a Disproportionately Impacted Community, the public comment period was open for 30 days per Rule 303.d.(1).A.ii. From August 9, 2022 through September 7, 2022. The proposed new development for the Harambe 2920 Oil and Gas Location did not receive any public comments.

LOCAL GOVERNMENT PERMITTING AND PRE-APPLICATION CONSULTATIONS

Relevant Local and Proximate Governments:

Weld County is the Relevant Local Government for the Harambe 2920 Location. There are no Proximate Local Governments within 2,000 feet of the WPS.

Local Permit and Pre-Application Consultation with Weld County:

Weld County requires operators to comply with the Weld Oil and Gas Location Assessment (WOGLA) process which requires operators to attend a pre-application meeting. Verdad attended the Weld County pre-application meeting on September 1, 2021 and subsequently submitted the WOGLA application on May 23, 2022. The WOGLA application, 1041WOGLA22-0012, was approved on 10/15/2022.

At the time of the meeting, Verdad presented the initially proposed Harambe 2920 Oil and Gas location along with three alternative locations of which two were located closer to RBUs and the third would be located in a floodplain. The proposed Harambe 2920 Oil and Gas Location was

further discussed at this meeting where the access road was renegotiated with the county and subsequently revised. The revised access route was cleared with Weld County and their planning department via email on February 11, 2022 prior to sending out the WOLGLA Notice. The access route lies within the floodplain and is subject to the floodplain permit as required by Weld County.

In addition, the proposed Harambe Oil and Gas Location was discussed with CPW (in attendance at the meeting). This location, as planned and reviewed by Weld County during the meeting, was originally sited to be outside of the 2,000-foot buffer of the nearby RBUs as well as outside of the 1202.c.(1).R High Priority Habitat (HPH) to the south. However, during the meeting, CPW requested that Verdad survey the Ordinary High Water Mark (OHWM) of the HPH to the south and confirm that the proposed Oil and Gas Location was greater than 500 feet from the OHWM.

A Field survey conducted after the pre-application meeting verified that the proposed Harambe 2920 Oil and Gas Location, as originally sited, was within 500 feet of the OHWM, requiring it to be moved further north to maintain adequate distance from the OHWM of the HPH. Relocation of the original Harambe 2920 Oil and Gas Location moved it outside of the OHWM; however, moved the location's Working Pad Surface (WPS) into the 2,000-foot buffer of one RBU located 1,769 feet to the northeast of the location. Although the WPS is located within the 2,000-foot buffer of a RBU, Verdad purposefully designed the Location to place the wells and facilities greater than 2,000 feet from the RBU.

ADMINISTRATIVE CONSIDERATIONS

Applied Condition of Approval:

The proposed Harambe 2920 Oil and Gas Location's WPS is sited within 2,000 feet of a Residential Building Unit (RBU). However, pursuant to Rule 604.b.(3), Verdad plans to site all wells, tanks, separation equipment, and compressors greater than 2,000 feet from the RBU. To ensure the accuracy of facility placement on the WPS, staff placed the following Condition of Approval on the Form 2A:

Operator will submit an as-built survey via Form 4 Sundry Notice verifying the distance from the wells and production facilities from the RBU within 30 days after construction.

COGCC STAFF'S TECHNICAL REVIEW HIGHLIGHTS

This section addresses issues related to siting, public health, safety, welfare, the environment, and wildlife resources, within the context of § 34-60-106(2.5)(a).

Alternative Location Analysis

The proposed Location meets the following Rule 304.b.(2).B criteria:

- 304.b.(2).B.ii. The proposed Working Pad Surface is located less than 2,000 feet from a RBU

Due to the issues identified during the Weld County pre-application meeting and the subsequent revision of the siting of the Oil and Gas Location to greater than 500 feet from the HPH OHWM, the proposed Harambe 2920 Oil and Gas Location lies within 2,000 feet of a RBU, located 1,769 feet to the northeast of the WPS; thus, triggering a Rule-based ALA. Verdad submitted the ALA with the application materials which included seven alternative locations. Staff review of the ALA identified one additional location that should be reviewed. Verdad included the additional location in the ALA for further review of the viability of the location. Staff's review of the revised ALA indicated that the proposed Harambe 2920 Oil and Gas Location was the most appropriate for the development of the minerals while being protective of public health, safety, welfare, and environment and wildlife resources.

COGCC Staff Analysis of Alternative Location Analysis:

Staff's analysis of the permit application focused on compliance with applicable Rules and the planned mitigation measures for the proposed OGDG.

Verdad submitted a Rule-based ALA with the application materials. Staff's review of the ALA resulted in the request for analysis of one additional alternative location. Upon review of the revised ALA, Staff concluded that the proposed Harambe 2920 Oil and Gas Location was the most appropriate for the development of the minerals while being protective of public health, safety, welfare, and environment and wildlife resources..

Based on Staff's technical and desktop review, staff has determined that the application complies with COGCC Rules and impacts will be minimized by successful implementation of the listed BMPs. This OGDG application is appropriate for Commission approval pursuant to Rule 604.b.(3).

Public Health, Safety, and Welfare Considerations

The proposed development is proximate to the following cultural features/receptors:

- The proposed Location lies within 2,000 feet of one RBU

During technical review, staff identified one RBU within 2,000 feet of the WPS. The RBU is not owned by the Surface Owner of the parcel that the proposed Harambe 2920 Oil and Gas Location is planned on. The nearest RBU is located approximately 1,769 feet northeast of the proposed WPS. There are no High Density Building Units, School Facilities, or Child Care Centers within one mile of the proposed WPS. There are no dense residential neighborhoods within 2,000 feet of the proposed location. The proposed Oil and Gas Location does not lie within a Disproportionately Impacted Community.

In an effort to mitigate impacts to the RBU to the north, Verdad placed the wells and associated production facilities outside of the 2,000-foot buffer of the RBU and agreed to install sound walls on all four sides of the location and situate the wellheads and permanent production equipment greater than 2,000 feet from the RBU pursuant to Rule 604.b.(3).

COGCC Staff Analysis of Public Health, Safety, and Welfare Considerations:

Staff's analysis of the permit application focused on compliance with applicable Rules and the planned mitigation measures for the proposed OGD.

Although the proposed Harambe 2920 WPS lies within the 2,000-foot buffer of one RBU, Verdad plans to place the wells and production facilities outside of the 2,000-foot buffer. Furthermore, Verdad has proposed BMPs to minimize and/or mitigate the potential adverse impacts to public health, safety, and welfare. The BMPs and plans address nuisance conditions (e.g. emissions, noise, lighting, odors, and dust).

These BMPs minimize impacts and demonstrate that the dialogue established between Verdad, Weld County, and the COGCC shows substantial engagement and the commitment to minimize impacts to public health, safety, and welfare and wildlife resources.

Based on Staff's technical and desktop review, staff has determined that the application complies with COGCC Rules and impacts will be minimized by successful implementation of the listed BMPs. This OGD application is appropriate for Commission approval pursuant to Rule 604.b.(3).

Wildlife Resources Considerations

As part of the WOGLA process, Verdad attended a pre-application meeting on September 1, 2021. The pre-application meeting was attended by Verdad, Weld County, COGCC, and CPW. The original Oil and Gas Location, as planned and reviewed during the meeting, was sited outside of the 2,000-foot buffer from the nearby RBUs as well as outside of the 1202.c.(1).R High Priority Habitat (HPH) to the south. However, during the meeting, CPW requested that Verdad survey the Ordinary High Water Mark (OHWM) of the HPH to the south and confirm that the proposed Oil and Gas Location was greater than 500 feet from the OHWM. Field surveys verified that the proposed Oil and Gas Location was within 500 feet of the OHWM, requiring it to be moved further north to maintain adequate distance from the HPH. Relocation of the original proposed Oil and Gas Location moved it further from the OHWM; however, it resulted in it being within 2,000 feet of one RBU located 1,769 feet to the northeast of the location.

Although no longer located within HPH, Verdad agreed to install sound walls on all four sides of the location and in an effort to further mitigate potential impacts to the HPH to the south from noise and light.

COGCC Staff Analysis of Wildlife Resources:

Staff's analysis of the permit application focused on compliance with applicable Rules and the planned mitigation measures for the proposed OGDG.

During the pre-application meeting with Weld County, it was identified that the original siting of the Harambe 2920 Oil and Gas Locations placed it within 500 feet of the OHWM for HPH. Verdad voluntarily relocated the location to the north to remain outside of the OHWM. In addition, to further mitigate potential impacts to HPH, Verdad has agreed to place sound walls along all four sides of the location.

These BMPs minimize impacts and demonstrate that the dialogue established between Verdad, Weld County, CPW and the COGCC shows substantial engagement and the commitment to minimize impacts to wildlife resources.

Based on Staff's technical and desktop review, staff has determined that the application complies with COGCC Rules and impacts will be minimized by successful implementation of the listed BMPs. This OGDG application is appropriate for Commission approval pursuant to Rule 604.b.(1).

DIRECTOR'S RECOMMENDATION:

The Director has obtained and fully reviewed all required and supplemental information necessary to evaluate the OGDG's proposed operations and its potential impacts to public health, safety, welfare, the environment and wildlife resources. Through this review, the Director has determined that this OGDG complies with all applicable requirements of the Commission's Rules and recommends approval by the Commission.

FORM
2A

Rev
01/21

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:

402966313

Date Received:

05/25/2022

Oil and Gas Location Assessment

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 <https://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

OGDP ID:

Expiration Date:

☒ New Location ☐ Refile ☐ Amend Existing Location # _____

If this Location assessment is a component of an Oil and Gas Development Plan (OGDP) application, enter the OGDP docket number(s).

Docket Number	OGDP ID	OGDP Name
220500103		

If this Location assessment is part of an approved Oil and Gas Development Plan, enter the OGDP ID number(s).

<No existing OGDP number provided>

CONSULTATION

- ☐ This location is included in a Comprehensive Area Plan (CAP). CAP ID # _____
- ☐ This Location or its associated new access road, utility, or Pipeline corridor meets Rule 309.e.(2).A, B, or C.
- ☐ This Location is within 2,640 feet of a GUDI or Type III Well per Rule 411.b.(4).
- ☐ This Location includes a Rule 309.e.(2).E variance request.
- ☐ This location includes a Rule 309.f.(1).A.ii. variance request.

Operator

Operator Number: 10651
Name: VERDAD RESOURCES LLC
Address: 1125 17TH STREET SUITE 550
City: DENVER State: CO Zip: 80202

Contact Information

Name: Heather Mitchell
Phone: (720) 845-6917
Fax: ()
email: regulatory@verdadresources.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: <u>Harambe</u>	Number: <u>2920</u>
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Provide the location description and the latitude and longitude of a single point near the center of the Working Pad Surface as a reference for this Location.

Quarter: <u>SWNE</u>	Section: <u>32</u>	Township: <u>2N</u>	Range: <u>64W</u>	Meridian: <u>6</u>	Ground Elevation: <u>4964</u>
Latitude: <u>40.096932</u>		Longitude: <u>-104.574728</u>			
GPS Quality Value: <u>1.4</u>	Type of GPS Quality Value: <u>PDOP</u>	Date of Measurement: <u>07/16/2021</u>			

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:	<u>LOCATION ID #</u>	<u>FORM 2A DOC #</u>
Production Facilities Location serves Well(s)	<u>473534</u>	

RELEVANT LOCAL GOVERNMENT SITING INFORMATION

County: WELD Municipality: N/A

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "Relevant Local Government approval of the siting of the proposed oil and gas location."

This proposed Oil and Gas Location is in an area designated as one of State interest and subject to the requirements of § 24-65.1-108, C.R.S. Yes

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this location? Yes

A siting permit application has been submitted to the Relevant Local Government for this proposed Oil and Gas Location: Yes

Date Relevant Local Government permit application submitted: 05/23/2022

Current status or disposition of the Relevant Local Government permit application for this proposed Oil and Gas Location: Approved

Status/disposition date: 10/15/2022

If Relevant Local Government permit has been approved or denied, attach final decision document(s).
Provide the contact information for the Relevant Local Government point of contact for the local permit associated with this proposed Oil and Gas Location:

Contact Name: <u>Jennifer Teeters</u>	Contact Phone: <u>(970) 400-3539</u>
Contact Email: <u>jteeters@weldgov.com</u>	

PROXIMATE LOCAL GOVERNMENT INFORMATION

For every Proximate Local Government (PLG) associated with this proposed Oil and Gas Location, provide the PLG's point of contact and their contact information.

< No row provided >

FEDERAL PERMIT INFORMATION

A Federal drilling permit (or related siting application) has been submitted for this proposed Oil and Gas Location: No

Date submitted: _____

Current status or disposition of the Federal drilling permit (or related siting application) for this proposed Oil and Gas Location: _____

Status/disposition Date: _____

If Federal agency permit has been approved or denied, attach the final decision document(s).

Provide the contact information of the Federal point of contact for the Federal permit associated with this proposed Oil and Gas Location.

Contact Name: _____

Contact Phone: _____

Contact Email: _____

Field Office: _____

Additional explanation of local and/or federal process:

Federal permit not required. WOGLA is in process with Weld County

RELEVANT LOCAL GOVERNMENT OR FEDERAL PRE-APPLICATION CONSULTATION

Complete this section for any pre-application consultation related to this proposed Oil and Gas Location that occurred prior to the submission of this Form 2A. If a pre-application Formal Consultation Process occurred, attach a Consultation Summary.

Did a pre-application Formal Consultation Process occur with the Relevant Local Government per Rule 301.f.(3)? Yes

Date of local government consultation: 09/01/2021

Did a pre-application Formal Consultation Process occur with the Federal land manager per Rule 301.f.(3)? No

Date of federal consultation: _____

Was an ALA that satisfies Rule 304.b.(2).C (or substantially equivalent information per Rule 304.e) developed during a federal or local government permit application process? If yes, attach the ALA to the Form 2A. Yes

ALA APPLICABILITY AND CRITERIA

Complete this section for any pre-application consultation related to this proposed Oil and Gas Location that occurred prior to the submission of this Form 2A. If a pre-application Formal Consultation Process occurred, attach a Consultation Summary.

Does the proposed Oil and Gas Location meet any of the criteria listed in Rule 304.b.(2)B? Yes

If YES, indicate by checking the box for every Rule 304.b.(2).B criterion met by this proposed Location, and attach an ALA. See Rule 304.b.(2).B.i-x for full text of criteria.

☒ i. WPS < 2,000 feet from RBU/HOBU

☐ vi.aa. WPS within a surface water supply area

☐ ii. WPS < 2,000 feet from School/Child Care Center

☐ vi.bb. WPS < 2,640 feet from Type III or GUDI well

☐ iii. WPS < 1,500 feet from DOAA

☐ vii. WPS within/immediately upgradient of wetland/riparian corridor

☐ iv. WPS < 2,000 feet from jurisdictional boundary and PLG objects/requests ALA

☐ viii. WPS within HPH and CPW did not waive

☐ v. WPS within a Floodplain

☐ ix. Operator using Surface bond

☐ x. WPS < 2,000 feet from RBU/HOBUS/School within a DIC

Is the proposed Oil and Gas Location within the exterior boundaries of the Southern Ute Indian Reservation, and the Tribe objects to the Location or requests an ALA? If YES, attach an ALA to the Form 2A.

No

Operator requests the Director waive the ALA requirement per Rule 304.b.(2).A.i: ☐

Provide an explanation for the waiver request, and attach supporting information (if necessary).

ALTERNATIVE LOCATIONS DASHBOARD

List every alternative location reviewed and included in the ALA. Provide a latitude and longitude for the approximate center of the alternative location, all Rule 304.b.(2).B Criteria met, if a variance would be required to permit the location, and a brief comment on the key points of the alternative location.

304.b.(2).B.i-x Criteria Met:

#	latitude	longitude	i	ii	iii	iv	v	vi	vii	viii	ix	x	Variance Required?	Comments
	40.100727	-104.585599	x				x							ALT A. Closer to RBU, in a floodplain, in the town of Hudson
	40.104277	-104.576237	x											ALT B Closer to RBU
	40.101629	-104.561891	x											ALT C Closer to RBU
	40.095564	-104.573128	x							x				ALT D In NSO Buffer
	40.108482	-104.588173	x				x							ALT E Closer to RBU, in a floodplain
	40.117634	-104.571321	x											ALT F Closer to RBU
	40.130174	-104.587191	x											ALT G Closer to RBU
	40.110749	-104.578349	x						x					ALT H Closer to an RBU, closer to surface water

SURFACE & MINERAL OWNERSHIP

Surface Owner Info:

Name: Newnam, LLC

Phone: 303-548-4913

Address: 4 Garden Center

Fax: _____

Address: Suite 200

Email: Jackie.newnam@juno.com

City: Broomfield State: CO Zip: 80020

Surface Owner at this Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Check only one: ☐ The Operator/Applicant is the surface owner.

- ☒ The Operator has a signed Surface Use Agreement for this Location – attach SUA.
- ☐ All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the surface owner owns the minerals beneath this Location and is committed to an oil and gas lease – attach lease map or provide lease description.
- ☐ All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the Operator intends to use a surface bond per Rule 703 to secure access to this Location – attach lease map or provide lease description.

Surface Owner protection Financial Assurance type: N/A Surety ID Number: _____

Mineral Owner beneath this Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: No

Lease description if necessary: _____

SITE EQUIPMENT LIST

Indicate the number and type of major equipment components planned for use on this Oil and Gas Location:

Wells	<u>9</u>	Oil Tanks	<u>2</u>	Condensate Tanks	<u>0</u>	Water Tanks	<u>8</u>	Buried Produced Water Vaults	<u>0</u>
Drilling Pits	<u>0</u>	Production Pits	<u>0</u>	Special Purpose Pits	<u>0</u>	Multi-Well Pits	<u>0</u>	Modular Large Volume Tank	<u>1</u>
Pump Jacks	<u>0</u>	Separators	<u>4</u>	Injection Pumps	<u>0</u>	Heater-Treaters	<u>2</u>	Gas Compressors	<u>2</u>
Gas or Diesel Motors	<u>0</u>	Electric Motors	<u>0</u>	Electric Generators	<u>0</u>	Fuel Tanks	<u>0</u>	LACT Unit	<u>3</u>
Dehydrator Units	<u>0</u>	Vapor Recovery Unit	<u>6</u>	VOC Combustor	<u>0</u>	Flare	<u>0</u>	Enclosed Combustion Devices	<u>1</u>
Meter/Sales Building	<u>0</u>	Pigging Station	<u>0</u>			Vapor Recovery Towers	<u>0</u>		

OTHER PERMANENT EQUIPMENT

Permanent Equipment Type	Number
Surge tanks	<u>2</u>
Knock Out	<u>2</u>

OTHER TEMPORARY EQUIPMENT

Temporary Equipment Type	Number
Frac Tanks	<u>12</u>
Upright Tanks	<u>8</u>

GAS GATHERING COMMITMENT

Operator commits to connecting to a gathering system by the Commencement of Production Operations? Yes

If the answer is NO, a Gas Capture Plan consistent with the requirements of Rule 903.e MUST be attached on the Plans tab.

FLOWLINE DESCRIPTION

Per Rule 304.b.(6), provide a description of all onsite and off-location oil, gas, and/or water flowlines.

The majority of flowlines will be Schedule 80 FBE welded steel including: (1) 4" Bulk Line

(2) 3" Test Line

(1) 2" Bypass Line

(1) 4" Gas Lift Trunk Line

(1) 4" Gas Sales Line

(2) 4" dump line bulk to tanks

(2) 3" dump lines test to tanks

(2) 4" dump lines bulk to HT

(2) 3" dump lines test to HT

(2) 4" dump HT to surge

(2) 4" dump HT to tanks

(1) 4" Surge to LACT

(4) 2" Air lines to wellheads, separator bank, VRUs and heater treaters

Cureton will be the Gas gatherer for the proposed pad and Verdad will work with the appropriate parties to ensure a timely gas gathering connections.

CULTURAL DISTANCE AND DIRECTION

Provide the distance and direction to the nearest cultural feature as measured from the edge of the Working Pad Surface.

	Distance		Direction	Rule 604.b Conditions Satisfied (check all that apply):			Details of Condition(s)	604.b. (4)
				604.b. (1)	604.b. (2)	604.b. (3)		
Building:	1819	Feet	NW					
Residential Building Unit (RBU):	1769	Feet	N	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Placed wells and equipment greater than 2000 from RBU	<input checked="" type="checkbox"/>
High Occupancy Building Unit(HOBU)	5280	Feet	NE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Designated Outside Activity Area:	5280	Feet	SW					
Public Road:	1649	Feet	NW					
Above Ground Utility:	1708	Feet	NW					
Railroad:	3798	Feet	NW					
Property Line:	553	Feet	SE					
School Facility:	5280	Feet	NE					
Child Care Center:	5280	Feet	NE					
Disproportionately Impacted (DI) Community:	5280	Feet	SW					
RBU, HOBU, or School Facility within a DI Community.	5280	Feet	SW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

RULE 604.a.(2). EXCEPTION LOCATION REQUEST

☐ Operator requests an Exception Location Request from Rule 604.a.(2) [well is less than 150 feet from a property line]. Exception Location Request Letter and Waiver signed by offset Surface Owner(s) must be attached.

CULTURAL FEATURE INFORMATION REQUIRED BY RULE 304.b.(3).B.

Provide the number of each Cultural feature identified within the following distances, as measured from the Working Pad Surface:

	0-500 feet	501-1,000 feet	1,001-2,000 feet
Building Units	<u>0</u>	<u>0</u>	<u>1</u>
Residential Building Units	<u>0</u>	<u>0</u>	<u>1</u>
High Occupancy Building Units	<u>0</u>	<u>0</u>	<u>0</u>
School Properties	<u>0</u>	<u>0</u>	<u>0</u>
School Facilities	<u>0</u>	<u>0</u>	<u>0</u>
Designated Outside Activity Areas	<u>0</u>	<u>0</u>	<u>0</u>

CONSTRUCTION

Size of disturbed area during construction in acres: 10.00

Size of location after interim reclamation in acres: 5.14

Estimated post-construction ground elevation: 4965

DRILLING PROGRAM

Will a closed-loop drilling system be used? Yes

Is H2S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No If YES, attach H2S Drilling Operations Plan.

Will salt sections be encountered during drilling: No

Will salt based (>15,000 ppm Cl) drilling fluids 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?

Reuse Facility ID: or Document Number:

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

CURRENT LAND USE

Current Land Use: check all that apply per Rule 304.b.(9).

Crop Land: ☒ Irrigated ☐ Non-Irrigated ☐ Conservation Reserve Program (CRP)
Non-Crop Land: ☐ Rangeland ☐ Forestry ☐ Recreation ☐ Other
Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

Describe the current land use:

Irrigated cropland

Describe the Relevant Local Government's land use or zoning designation:

Agricultural

Describe any applicable Federal land use designation:

n/a

FINAL LAND USE

Final Land Use: check all that apply per Rule 304.b.(9).

Crop Land: ☒ Irrigated ☐ Non-Irrigated ☐ Conservation Reserve Program (CRP)
Non-Crop Land: ☐ Rangeland ☐ Forestry ☐ Recreation ☐ Other
Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

REFERENCE AREA INFORMATION

If Final Land Use includes Non-Crop Land (as checked above), the following information is required:

Describe landowner's designated final land use(s):

Reference Area Latitude: _____ Reference Area Latitude: _____

Provide a list of plant communities and dominant vegetation found in the Reference Area.

< No row provided >

Noxious weeds present: _____ Yes

SOILS

List all soil map units that occur within the maximum extent of the proposed Oil and Gas Location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" listing the typical vertical soil profile(s). This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS website at <https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/> or from the COGCC website GIS Online map page. Instructions are provided within the COGCC website help section.

NRCS Map Unit Name: NRCS-15, Colby Loam, 1-3 % slopes

NRCS Map Unit Name: NRCS- 16, Colby Loam, 3-5 % slopes

NRCS Map Unit Name: _____

GROUNDWATER AND WATER WELL INFORMATION

Provide the distance and direction, as measured from the Working Pad Surface, to the nearest:

water well: 1886 Feet NE

Spring or Seep: 5280 Feet SW

Estimated depth to shallowest groundwater that can be encountered at this Oil and Gas Location: 343 Feet

Basis for estimated depth to and description of shallowest groundwater occurrence:

Static water level of two wells closest to the WPS with recorded measurements:

- Permit 32760-F: 343'; 0.36 mile northeast of the WPS.

SURFACE WATER AND WETLANDS

Provide the distance and direction to the nearest downgradient surface Waters of the State, as defined 610 Feet S

in the 100-Series Rules, measured from the Working Pad Surface:

If less than 2,640 feet, is the Waters of the State identified above within 15 stream miles upstream of a Public Water

System intake? No

Provide the distance and direction to the nearest downgradient wetland, measured from the Working

Pad Surface: 610 Feet S

Provide a description of the nearest downgradient surface Waters of the State:

Northernmost De Remer Lake of the Banner Lakes State Wildlife Area 610' south of the WPS, measured along the contaminate migration pathway. The lake had standing water with sandy banks at the time of assessment. The predominant vegetation surrounding the lake include cattails (Typha spp.), Russian olives (Elaeagnus angustifolia), Cottonwood trees (Populus deltoides), Canada thistle (Cirsium arvense), and Kochia (Bassia scoparia).

If the proposed Oil and Gas Location is within a Rule 411.a Surface Water Supply Area buffer zone, select the buffer zone type: _____

Public Water System Administrator - Contact Name _____ Email _____

If the proposed Oil and Gas Location is within a Rule 411.b GUDI/Type III buffer zone, select the buffer zone type: _____

Public Water System Administrator - Contact Name _____ Email _____

Is a U.S. Army Corps of Engineers Section 404 permit required for the proposed Oil and Gas Location, access road, or associated pipeline corridor? No

If a U.S. Army Corps of Engineers Section 404 permit is required, provide the permit status, and permit number if available:

Is the Location within a Floodplain? No Floodplain Data Sources Reviewed (check all that apply):

☒ Federal (FEMA) ☐ State ☐ County ☐ Local

☐ Other

Does this proposed Oil and Gas Location lie within a Sensitive Area for water resources, as defined in the 100-Series Rules? Yes

CONSULTATION, WAIVERS, AND EXCEPTIONS

When Rule 309.e.(2) Consultation must occur, check all that apply:

- ☐ This location is included in a Wildlife Mitigation Plan
- ☐ This Oil and Gas Location or associated new access road, utility, or pipeline corridor falls within federally designated critical habitat or an area with a known occurrence for a federal or Colorado threatened or endangered species. Provide description in Comments section of Submit tab.
- ☐ This Oil and Gas Location or associated new access road, utility, or pipeline corridor falls within an existing conservation easement established wholly or partly for wildlife habitat. Provide description in Comments section of Submit tab.

When Rule 309.e.(3) Consultation is not required, check all that apply:

- ☐ This Oil and Gas Location has been included in a previously approved, applicable Wildlife Protection Plan.
- ☐ This Oil and Gas Location has been included in a previously approved, applicable Wildlife Mitigation Plan.
- ☐ This Oil and Gas Location has been included in a previously approved, applicable conservation plan.

Pre-application Consultation:

- ☐ A pre-application consultation with CPW, regarding this Oil and Gas Location, occurred 09/01/2021 on:

CPW Waivers and Exceptions (check all that apply and attach all CPW waivers to this Form 2A):

- ☐ The applicant has obtained a Rule 304.b.(2).B.viii CPW waiver for the requirement to complete an ALA.
- ☐ The applicant has obtained a Rule 309.e.(2).G CPW waiver and consultation is not required.
- ☐ The applicant has obtained a Rule 309.e.(5).D.i CPW waiver and is requesting an exception from Rule 1202.c.(1).R.
- ☐ The applicant has obtained a Rule 309.e.(5).D.ii CPW waiver and is requesting an exception from Rule 1202.c.(1).S.
- ☐ The applicant has obtained a Rule 309.e.(5).D.iii CPW waiver of Rule 1202.c.(1).T.
- ☐ The applicant has obtained a Rule 309.e.(5).D.iv CPW waiver and is requesting an exception from Rule 1202.c.(1) in accordance with an approved CAP.
- ☐ The applicant has obtained a Rule 1202.a CPW waiver.

- ☐ The applicant has obtained a Rule 1202.b CPW waiver.
- ☐ In accordance with Rule 1203.a.(3), the applicant requests an exception from compensatory mitigation Rule(s): _____

HIGH PRIORITY HABITAT AND COMPENSATORY MITIGATION

This Oil and Gas Location, associated access roads, utility, or Pipeline corridor falls wholly or partially within the following High Priority Habitats (Note: dropdown options are abbreviated - see Rule 1202 for full rule text):

< No row provided >

The following questions are for Oil and Gas Locations that cause the density to exceed one Oil and Gas Location per square mile in Rule 1202.d High Priority Habitat:

Direct Impacts:

Is Compensatory Mitigation required per Rule 1203.a for this Oil and Gas Location? No

Is a Compensatory Mitigation Plan proposed to address direct impacts for this Oil and Gas Location? No

Have all Compensatory Mitigation Plans been approved for this No Location?

If not, what is the current status of each Plan?

Not required

Is a Compensatory Mitigation Fee proposed for this Oil and Gas Location? No

Direct impact habitat mitigation fee amount: \$ 0

Indirect Impacts:

Is Compensatory Mitigation required per Rule 1203.d for this Oil and Gas Location? No

Is a Compensatory Mitigation Plan proposed to address indirect impacts for this Oil and Gas Location? No

Have all Compensatory Mitigation Plans been approved for this No Location?

If not, what is the current status of each Plan?

Not required

Is a Compensatory Mitigation Fee proposed for this Oil and Gas Location? No

Indirect impact habitat mitigation fee amount: \$ 0

Operator Proposed Wildlife BMPs

No BMP

CPW Proposed Wildlife BMPs

No BMP

AIR QUALITY MONITORING PROGRAM

Will the Operator install and administer an air quality monitoring program at this Location? Yes

Operator Proposed BMPs

No BMP

CDPHE Proposed COAs OR BMPs

No BMP

PLANS

Total Plans Uploaded: 16

- ☐ (1) Emergency Spill Response Program consistent with the requirements of Rules 411.a.(4).B, 411.b.(5).B, & 602.j
- ☒ (2) Noise Mitigation Plan consistent with the requirements of Rule 423.a
- ☒ (3) Light Mitigation Plan consistent with the requirements of Rule 424.a
- ☒ (4) Odor Mitigation Plan consistent with the requirements of Rule 426.a
- ☒ (5) Dust Mitigation Plan consistent with the requirements of Rule 427.a
- ☒ (6) Transportation Plan
- ☒ (7) Operations Safety Management Program consistent with the requirements of Rule 602.d
- ☒ (8) Emergency Response Plan consistent with the requirements of Rule 602.j
- ☐ (9) Flood Shut-In Plan consistent with the requirements of Rule 421.b.(1)
- ☐ (10) Hydrogen Sulfide Drilling Operations Plan consistent with the requirements of Rule 612.d
- ☒ (11) Waste Management Plan consistent with the requirements of Rule 905.a.(4)
- ☒ (12) Gas Capture Plan consistent with the requirements of Rule 903.e
- ☒ (13) Fluid Leak Detection Plan
- ☒ (14) Topsoil Protection Plan consistent with the requirements of Rule 1002.c
- ☒ (15) Stormwater Management Plan consistent with the requirements of Rule 1002.f
- ☒ (16) Interim Reclamation Plan consistent with the requirements of Rule 1003

- ☒ (17) Wildlife Plan consistent with the requirements of Rule 1201
- ☒ (18) Water Plan
- ☒ (19) Cumulative Impacts Plan
- ☐ (20) Community Outreach Plan
- ☐ (21) Geologic Hazard Plan

VARIANCE REQUESTS

Check all that apply:

- ☐ This proposed Oil and Gas Location requires the approval of a Rule 502.a variance from COGCC Rule or Commission
- Order number: _____

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

RULE 304.d LESSER IMPACT AREA EXEMPTION REQUESTS

Check the boxes below for all Exemptions being requested. Lesser Impact Area Exemption Request must be attached, and will include all requested exemptions.

- | | |
|--|--|
| <input type="checkbox"/> 304.b.(1). Local Government Siting Information | <input type="checkbox"/> 304.c.(1). Emergency Spill Response Program |
| <input type="checkbox"/> 304.b.(2). Alternative Location Analysis | <input type="checkbox"/> 304.c.(2). Noise Mitigation Plan |
| <input type="checkbox"/> 304.b.(3). Cultural Distances | <input type="checkbox"/> 304.c.(3). Light Mitigation Plan |
| <input type="checkbox"/> 304.b.(4). Location Pictures | <input type="checkbox"/> 304.c.(4). Odor Mitigation Plan |
| <input type="checkbox"/> 304.b.(5). Site Equipment List | <input type="checkbox"/> 304.c.(5). Dust Mitigation Plan |
| <input type="checkbox"/> 304.b.(6). Flowline Descriptions | <input type="checkbox"/> 304.c.(6). Transportation Plan |
| <input type="checkbox"/> 304.b.(7). Drawings | <input type="checkbox"/> 304.c.(7). Operations Safety Management Program |
| <input type="checkbox"/> 304.b.(8). Geographic Information System (GIS) Data | <input type="checkbox"/> 304.c.(8). Emergency Response Plan |
| <input type="checkbox"/> 304.b.(9). Land Use Description | <input type="checkbox"/> 304.c.(9). Flood Shut-In Plan |
| <input type="checkbox"/> 304.b.(10). NRCS Map Unit Description | <input type="checkbox"/> 304.c.(10). Hydrogen Sulfide Drilling Operations Plan |
| <input type="checkbox"/> 304.b.(11). Best Management Practices | <input type="checkbox"/> 304.c.(11). Waste Management Plan |
| <input type="checkbox"/> 304.b.(12). Surface Owner Information | <input type="checkbox"/> 304.c.(12). Gas Capture Plan |
| <input type="checkbox"/> 304.b.(13). Proximate Local Government | <input type="checkbox"/> 304.c.(13). Fluid Leak Detection Plan |
| <input type="checkbox"/> 304.b.(14). Wetlands | <input type="checkbox"/> 304.c.(14). Topsoil Protection Plan |
| <input type="checkbox"/> 304.b.(15). Schools and Child Care Centers | <input type="checkbox"/> 304.c.(15). Stormwater Management Plan |
| | <input type="checkbox"/> 304.c.(16). Interim Reclamation Plan |
| | <input type="checkbox"/> 304.c.(17). Wildlife Plan |
| | <input type="checkbox"/> 304.c.(18). Water Plan |
| | <input type="checkbox"/> 304.c.(19). Cumulative Impacts Plan |
| | <input type="checkbox"/> 304.c.(20). Community Outreach Plan |
| | <input type="checkbox"/> 304.c.(21). Geologic Hazard Plan |

OPERATOR COMMENTS AND SUBMITTAL

Comments	<p>It is a tank-lite design and the two oil tanks are to be used for maintenance not storage.</p> <p>At this time we are planning to store produced water on location and truck it away. We are working on an agreement that would pipe the water, but it is not finalized or signed, so we will stick with trucking it away for now.</p>
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I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: _____ Date: 05/25/2022 Email: regulatory@verdadresources.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: _____

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

Construction	Operator will submit an as-built survey via Form 4 Sundry Notice verifying the distance from the wells and production facilities from the RBU within 30 days after construction.
1 COA	

Best Management Practices

No BMP/COA Type

Description

1 Planning	Upon surface owner authorization and per COGCC Rule 615, Verdad will collect baseline water quality samples from an appropriate set of water wells within the vicinity of the oil and gas location. Baseline samples will be collected prior to drilling (setting of conductor casing) operations for the initial site well.
2 General Housekeeping	Operator will not bury or burn trash or other waste materials at an oil and gas location. Trash receptacles will be designed, maintained, and operated to exclude wildlife, and to protect public safety, the environment, and wildlife from exposure to overflowing, leak prone, or insecure trash receptacles. When wastes are handled on site from generation, to storage, to transportation and disposal, practices (solidification of liquids and placement of storage) and equipment (secondary containment and liners) are used maintain full control of the waste and to prevent waste from impacting the working surface.

3	Wildlife	<p>Inform and educate employees and contractors on wildlife conservation practices, including no harassment or feeding of wildlife;</p> <p>Adequately size infrastructure and facilities to accommodate both current and future gas production;</p> <p>Protect culvert inlets from erosion and sedimentation and install energy dissipation structures at outfalls;</p> <p>Implement fugitive dust control measures;</p> <p>Install screening or other devices on the stacks and on other openings of heater treaters or fired vessels to prevent entry by migratory birds;</p> <p>Minimize rig mobilization and demobilization by completing or re-completing all wells from a given well pad before moving rigs to a new location;</p> <p>Post speed limits and caution signs to the extent allowed by surface owners, Federal and state regulations, local government, and land use policies;</p> <p>Install automated emergency response systems (e.g., high tank alarms, emergency shutdown systems).</p> <p>Operator will install screening or other devices on the stacks and on other openings of heater treaters or fired vessels to prevent entry by migratory birds.</p> <p>Operator will install screening or other devices portable tank secondary containment.</p>	
4	Storm Water/Erosion Control	<p>This location will use a diversion ditch and berm to surround the entire disturbance area. The ditch and berm will divert water from running on to the pad and manage water that precipitates onto the disturbance area.</p> <p>Sediment traps will be placed at the southwest and northwest corners of the disturbance area. Outlet structure and outlet protection will also be placed in the northwest corner of the pad.</p> <p>All stormwater runoff from the disturbance area will be directed to the sediment traps to allow any sediment transported in the water to settle out.</p> <p>Erosion control measures will include rock socks in the ditch around the disturbance area to control the speed of water moving through the ditch and filtering sediment in the water as it passes.</p> <p>Seeding and crimping straw mulch into cut/fill slopes and the topsoil pile will prevent erosion on those slopes.</p> <p>Prior to seeding, soil roughening will be used to control the speed of water on slopes.</p> <p>During interim reclamation the north border of the disturbance will be moved south to the new edge of the pad and the stormwater controls will be moved to the new edge of disturbance.</p>	

		<p>Operator shall install stormwater controls, constructed in a manner that is consistent with good engineering practices, that will prevent offsite migration of sediment/contaminant. Stormwater controls shall be installed prior to construction activities.</p> <p>Gas, oil, and water flowlines will be co-located to minimize potential of erosion associated with construction of any flowline.</p> <p>Operator will grade the topsoil stockpile to ensure that all surfaces can be stabilized safely and effectively.</p> <p>Operator will stabilize and maintain areas needed for production operations or for subsequent drilling operations to minimize dust and erosion to the extent possible.</p> <p>Vehicle tracking pads will be placed at the access road to prevent sediment transport from the facility by vehicles leaving the site.</p> <p>Storage tanks and production equipment will be inside of containment to prevent any produced fluids from leaving the site with stormwater.</p> <p>All chemicals on site will be in containment and/or protected from precipitation to prevent any chemical pollution from leaving the site with stormwater.</p> <p>All Stormwater control measures will be inspected at the following frequencies:</p> <ul style="list-style-type: none"> o Storm water controls are inspected every 14 days during construction, drilling, and completions. o Once per month after that, until interim reclamation is completely established (approximately 2 years). o Once per year after that until facility abandoned. <p>Operator will manage potential pollutants located onsite by sealing, wrapping, covering, or having containment/protection while not actively being used in order to eliminate/minimize contact with stormwater runoff, and prevent discharges of chemicals or other materials from the site.</p> <p>Operator will practice proper storage, safe-handling, good housekeeping and spill prevention practices and procedures to prevent pollutants or contaminants from leaving the site.</p> <p>Energy dissipaters such as coconut blankets, straw mulch, rock socks, or straw waddles will be installed during construction and will be left in place and maintained for the life of the project or until disturbed slopes have been revegetated and stabilized. Locations for these BMPs will be dictated by the Site Specific SWMP for the Harambe Pad.</p>	
5	Material Handling and Spill Prevention	<p>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. AVO inspections will include all production equipment, wellheads and flowlines on site.</p> <p>Separators are encompassed by steel berms lined with an impervious poly or spray in liner and on top of road base that is approximately 1-2 feet to greatly minimize impact to the soil from any potential leak or drip from the separators. Sites are visited and</p>	

	<p>inspected 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.</p> <p>Tank secondary containment will be lined with an impervious poly or spray in liner. Steel berms are able to contain spills with capacity > 150% volume of the largest tank. Pad will also have tertiary containment of ditch and berm to prevent any spills from leaving site. Any spills will be immediately cleaned up and reported if volume exceeds reporting limit.</p> <p>Operator's wells have remote monitoring and shut-in capabilities to mitigate spills and safety issues. Remote shut-in will allow Operator to immediately shut a well in the event of a reported problem on location or in the event of a potential threat such as a grass fire or flood.</p> <p>Operator's wells have remote monitoring and shut-in capabilities to mitigate spills and safety issues. Remote shut-in will allow Operator to immediately shut a well in the event of a reported problem on location or in the event of a potential threat such as a grass fire or flood.</p> <p>All pressure piping and facilities are pressure tested and inspected according to Verdad's Flowline Installation, Inspection and Repair SOP and in compliance with flowline integrity testing per 1100 Series Rules.</p> <p>Annual SPCC inspections ensure fluid storage, processing, transport and handling equipment and containment integrity and operation.</p> <p>All fluid handling employees are trained annually on spill prevention and response.</p> <p>Verdad has developed a robust Leak Detection and Repair (LDAR) program, which utilizes Infrared cameras to identify and fix leaks. The infrared gas detection camera is an Approved Instrument Monitoring Method (AIMM). These inspections will begin during the drilling phase and continue throughout the life of the Oil & Gas Location. These AIMM inspections will be conducted on a monthly frequency.</p> <p>To minimize potential impacts to soil, containment will be used during fueling of equipment to contain spills and leaks during all phases of operations.</p> <p>The fluid transfer system used during completion operations is monitored from the on-site mobile command center for changes in pressure, volume, or rate which are used as indicators for leak detection.</p> <p>Operator utilizes polyethylene liners beneath the areas where completions equipment (including pump trucks and other heavy equipment) is placed on the pad to ensure there is an impermeable layer between the equipment and the ground.</p> <p>A polyethylene liner beneath the drilling rig during drilling operations to ensure there is an impermeable layer between the rig and the ground to detect and capture leaking fluids.</p>	
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6	Dust control	<p>Operator will reduce traffic and dust associated with transporting completions water and produced liquids through the use of pipelines, large tanks, and other measures.</p> <p>Operator will stabilize the topsoil stockpiles utilizing vehicle tracking perpendicular to slope angle for short term stabilization and drill seed/crimped straw mulch application for longer term stabilization measures to suppress fugitive dust caused by wind.</p> <p>The access road will be covered with a minimum of 2" of road base material for stabilization and to mitigate dust. Per the approved 1041WOGLA, water or magnesium chloride will be used to mitigate dust impacts during initial construction of the drill site and may be restricted or limited during high-wind days. To control dust, we will reduce speed on unpaved public roads. If there is any additional dust after the above measures have been taken, we will employ water trucks to mitigate dust. Dust control on unpaved county roads will be conducted in coordination with Public Works.</p> <p>Restriction of construction activity during high-wind days. On windy days or days when dust becomes fugitive (leaves or threatens to leave the site) construction or activities will be halted until either fresh water can suppress dust or dust is no longer visible.</p> <p>Use of a gravity fed box proppant delivery system that meets OSHA standards, rather than the historic pneumatic trailer proppant transfer system that blows sand out of the trailer into frac sand silos on the location; a method that required supplemental dust control to meet OSHA requirements. With a gravity fed proppant delivery system, the delivery container is also a well pad storage container, eliminating the need for frac sand silos on location. Storing frac sand in containers reduces sand dust during fracing operations by dropping sand directly from the container into the blender sand hopper.</p> <p>To prevent dust from becoming a nuisance to the public, Mag Chloride will be utilized before construction on access road. To control dust, we will reduce speed on unpaved public roads. If there is any additional dust after the above measures have been taken, we will employ water trucks to mitigate dust. Dust control on unpaved county roads will be conducted in coordination with Public Works</p> <p>Operator will be utilizing centralized storage facilities for fresh water, allowing us to limit the number of truck trips on and off location. During drilling operations all continuous operations personnel live on location. During completions operations a Operator supervisor lives on location, a majority of the frac crews travel via bus. All of the above will substantially reduce truck traffic. In addition, logistical traffic management will be conducted in a manner that loads will be minimized as the opportunity allows.</p> <p>Maximum speed on all roads constructed and maintained by the operator will not exceed 25 mph.</p>	
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7	Noise mitigation	<p>1. Operator will comply with the maximum permissible noise levels specified in Rule 423.b.(1).</p> <p>2. Operator will install temporary sound walls to comply with COGCC and Relevant Local Government requirements. Sound walls will be installed for the duration of drilling and completion activities and will be placed on all sides of the perimeter on the pad as indicated below to reduce impacts to nearby receptors.</p> <p>3. The utilization and placement of these sound walls is driven by a forecasted Noise Impact Assessment that incorporates the applicable drilling rig and frac fleet noise signatures which are placed on to the topography of the site location. The sound model and assessment will provide mitigation methods that can be applied to bring an operation into compliance if needed. Verdad plans to utilize a "quiet" frac fleet.</p> <p>4. 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.</p> <p>5. A topsoil pile will be located on the North side of the proposed location. This soil pile will further help to reduce impacts of noise to the nearest Building Unit Owner located to the North of the location.</p>	
8	Emissions mitigation	<p>Operator will not flare produced gas during normal operations.</p> <p>Flowback fluid emissions will be captured in vapor tight tanks with emissions controlled at the combustor.</p> <p>Operator will use supervisory control and data acquisition (SCADA) systems to monitor well operations, which will reduce emissions from vehicle traffic due to the reduced number of vehicle trips to the site.</p> <p>Operator has a 24/7 SCADA System Monitoring that allows for continuous monitoring operating conditions when personnel are not on-site in order to identify and correct any improper operations as soon as possible.</p> <p>Operator has a sophisticated Directed Inspection/Preventative Maintenance (DI/PM) program that contributes to the decrease in fugitive emissions and spills related to non-functioning or aging equipment. Operator completes daily audio/visual/olfactory observations at every active location which provides early detection of equipment malfunctions thereby minimizing emissions from leaks.</p> <p>Operator will capture produced water storage tank emissions and route them to an emission control device with at least 95 percent design destruction efficiency.</p> <p>Operator will use non-emitting pneumatic controllers at both the well heads and the production facilities.</p> <p>Operator will utilize Lease Automatic Custody Transfer (LACT) to transfer the condensate product directly into a pipeline, eliminating truck traffic for condensate oil transport.</p> <p>Operator will have a gathering line for gas transmission. Operator is working on an agreement with Taproot and plan to also have a crude gathering line by the time we are on location.</p>	

		<p>Operator will employ perimeter air quality equipment to continuously monitor the air around the site during pre-production and for the first six months of production.</p> <p>Tanks and Vapor Control Systems will also be designed and constructed in accordance with Air Quality Control Commission Regulation Number 7.</p> <p>Operator will implement a Leak Detection and Repair program (LDAR). The LDAR would involve monthly inspections using infrared (e.g., FLIR) cameras.</p> <p>Operator will employ perimeter air quality monitors.</p> <p>Operator will use temporary lay flat lines and an MLVT to reduce traffic associated with transporting drilling and completions water. Operator will utilize a tank-lite facility design which includes an oil line to transport oil production, reducing truck traffic and tank emissions;</p> <ul style="list-style-type: none"> • Operator will minimize vehicle and engine idling • Operator will reduce truck traffic and worker traffic • Operator will postpone the refueling of vehicles • Operator will consider postponing the initiation construction activities • Operator will reschedule non-essential operational activities such as pigging, well unloading and tank cleaning • Operator will postpone flowback if emissions cannot be adequately captured with a vapor recovery unit • Operator will eliminate use of VOC paints and solvents • Operator will suspend or delay the use of non-essential fossil fuel powered ancillary equipment 	
9	Odor mitigation	<p>Identify Sources</p> <p>Verdad will identify all potential sources of odors and emission points and conduct emission or leak monitoring for all tanks, compressors, knockout, and oil/water separation vessels. This is including any pressure relief devices or vacuum devices attached to the vessels, and keep records of any releases from such devices.</p>	

10	Odor mitigation	<p>Development Phase</p> <p>Verdad will comply with the requirements of COGCC Rule 426 during development through the mitigation methods outlined below. Verdad will make all attempts to prevent odors from emanating from the Oil and Gas</p> <p>Location by proactively addressing known sources of odor.</p> <p>Operator shall wash the rig of oily debris before moving in.</p> <p>Operator shall utilize a gas buster on the closed loop drilling system to control any gas while drilling.</p> <p>Operator shall utilize drilling fluids with low aromatic content, D822 which is a distillate, and has shown to have lower odor than a traditional oil-based mud.</p> <p>Operator shall utilize drying shakers or vertical dryers which will minimize residual oil on cuttings prior to transport.</p> <p>Operator will promptly remove 4-5 loads of drill cuttings per day during drilling operations.</p> <p>Trucks will be prohibited from idling on location when not in use to prevent accumulation of odors from exhaust.</p> <p>Operator shall utilize fully green completions with full vapor recovery and control including controlled flowback tanks, wells turned over to facility once saleable quantities are produced to eliminate prolonged flowback flaring.</p>	
11	Odor mitigation	<p>Production Phase</p> <p>This location will utilize oil tankless production to an oil pipeline, eliminating the largest source of emissions, oil tanks.</p> <p>Operator shall utilize auto gauging to eliminate thief hatch openings during produced water loadouts.</p> <p>A robust Leak Detection and Repair (LDAR) program with an audio, visual, olfactory program is planned for this location as part of an overall leak and spill detection plan.</p>	
12	Drilling/Completion Operations	<ul style="list-style-type: none"> • Most work operations will take place 7-days a week & 24-hour a day. Care will be taken to keep lighting levels at the specified levels on the lighting plans while providing safe, well-lit working areas during night-time and other low-light conditions. Care will also be taken to prevent unintended light from leaving the site and becoming a hazard or nuisance to the public or surrounding wildlife habitat. • During the Pad Construction Operations, no night-time work is anticipated. Daylight work will be performed during this work operation. • No permanent lighting is proposed for this project. All lighting shall conform to Federal, State, and Industry recognized standards for both on-site workplace safety and off-site public protection (OSHA, FAA, COGCC, IESNA, and ANSI). No direct light, except those governed by FAA standards, shall shine beyond the boundaries of the WPS, especially onto public roads, adjacent properties, and/or high priority habitats. All lighting shall conform with all COGCC, county, municipal, and any applicable governing body's standards. • Temporary lighting will be 3-head and 4-head LED flood lights on mobile 25-foot telescoping towers (BUG Rating is B3-U3-G5). All lighting will be capable of adjustment and will be directed inward and between 45-65° downward towards working areas on the WPS. No light should shine above the horizontal plane passing through the center point of the light source. Lights will be shielded with a photometric diffusion fabric or membrane tint to prevent direct or reflected direct light from leaving 	

		<p>the site.</p> <ul style="list-style-type: none"> • Wall Panels (e.g., visual/sound walls) will be placed along the edges of the WPS and will be removed following Flowback Operations. • For workplace safety, no direct or reflected direct light shall shine towards the entrance of the WPS. • Watch for and remove glare and reflection points during all work operations of the project from temporary or permanent structures, temporary lighting, vehicles, construction equipment, and clothing/PPE. • Any lighting damaged and/or improperly directed or angled will be promptly fixed and/or corrected to conform to the lighting plan. • Equipment shall be operated and/or orientated and/or shielded in such a manner that lights permanently affixed to equipment do not shine above the horizontal plane passing through the center point of the light source or shine beyond the boundary of the WPS. • For all work operations, once temporary lighting is in place, a lighting self-audit of the site will be performed to ensure that no unintended light will leave the site and become a hazard or a nuisance. • For any change to the lighting during any work operations, a lighting self-audit of the site will be performed to ensure that no unintended light will leave the site and become a hazard or a nuisance. • For non-working or shut-down days where no personnel are on-site or in working areas, non-essential temporary lighting will be turned off. If no personnel are on-site and essential temporary lighting is needed, the essential temporary lighting will be inspected every 24 hours. • All redundant, unused, or not-needed lights will be turned off. • Any additional light units used to address workplace safety concerns that are not shown on the lighting photometric plans will be verified by a lighting engineer to ensure that the modified lighting will remain within the required lighting standards stated in this report. • Where safely applicable, the following are suggestions to aid in controlling and minimizing the site's lighting levels: <ul style="list-style-type: none"> o Using automation, timers, or motion sensors o Using or changing fixtures to full cut-off lighting fixtures to shield and direct light o Using or changing to lighting colors that reduce light intensity o Using or changing low-glare or no-glare lighting o Adjusting or adding additional light shields such as photometric diffusion fabric or tinted membranes o Adjusting or adding additional temporary wall panels (e.g., visual/sound walls) 	
13	Drilling/Completion Operations	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.	
14	Drilling/Completion Operations	Operator will use temporary lay flat lines to transport water during completion operations.	

15	Interim Reclamation	<p>During initial pad construction, the topsoil will be stripped from the disturbance area and stored onsite for future use during pad pull-back and interim reclamation. All stockpiled topsoil will be protected from degradation due to contamination, compaction, and, to the extent practicable, from wind and water erosion. This will be achieved initially by applying cat-tracking/soil roughening to the topsoil pile and employing additional BMPs if and when needed (e.g., the addition of organic matter).</p> <p>Verdad maintains a weed mitigation maintenance program to prevent the establishment of weeds on the topsoil pile and location.</p> <p>The site will be inspected bi-weekly for BMP integrity and current installation. Any deficiencies noted will be addressed in a timely manner.</p> <p>Verdad will grade the topsoil stockpile no steeper than 3:1 to ensure that all surfaces can be stabilized safely and effectively.</p> <p>Verdad will stabilize and maintain areas needed for production operations or for subsequent drilling operations to minimize dust and erosion to the extent possible.</p> <p>Verdad will implement a Spill Prevention, Control, and Countermeasure plan to protect soil from potential spills.</p>	
16	Interim Reclamation	<p>The Harambe location has shallow topsoil. The top 6 inches will be removed from the pad disturbance area surface and located on the north side of the pad. Any subsoil removed will be placed to the north of the topsoil pile and will be replaced underneath the topsoil when replaced during interim and final reclamation.</p> <p>Erosion will be controlled by covering the pad surface with compacted road base, placing rock socks into drainage ditches, seeding disturbed areas not covered in road base and keeping slopes at 3:1 or less.</p> <p>Weeds will be controlled with bare ground spraying, mowing and a local weed control company may be contracted for the removal of any weed infestations that cannot be controlled by mowing.</p> <p>Interim reclamation will take place on disturbed areas affected by drilling and subsequent operations no later than 3 months after they are no longer in use.</p> <p>The surrounding landscape is cropland. The downgradient direction is to the south. De Remer Lake of Banner Lakes is 610' south of the location. The lake will be protected by the stormwater and drainage structures.</p>	

Total: 16 comment(s)

Attachment List

<u>Att Doc Num</u>	<u>Name</u>
2101247	HYDROLOGY MAP
2101248	LOCATION DRAWING
2101249	CULTURAL FEATURES MAP
2101250	LAYOUT DRAWINGS
2101251	ALA DATASHEET
2101252	ALA NARRATIVE SUMMARY
2101253	CORRESPONDENCE
402966313	FORM 2A SUBMITTED
403044236	LOCATION PICTURES
403044267	WILDLIFE HABITAT DRAWING
403044278	PRELIMINARY PROCESS FLOW DIAGRAMS
403044289	ACCESS ROAD MAP
403044298	DIRECTIONAL WELL PLAT
403044299	GEOLOGIC HAZARD MAP
403044305	NRCS MAP UNIT DESC
403045021	WORKING PAD SURFACE GIS SHP
403045023	OIL AND GAS LOCATION GIS SHP
403045025	LOCATION AND WORKING PAD GIS SHP
403050815	LGD CONSULTATION
403089934	SURFACE AGRMT/SURETY
403092024	RELATED LOCATION AND FLOWLINE MAP

Total Attach: 21 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	The Director has determined that the OGD application that this Form is a component of conditionally meets all requirements of Rule 306.a. The Director's Recommendation has been attached to the Form 2A.	11/08/2022

OGLA	<p>Per Operator Request: Replaced - Reduce traffic associated with transporting drilling water and produced liquids through the use of pipelines, large tanks, or other measures; With - Verdad will use temporary lay flat lines and an MLVT to reduce traffic associated with transporting drilling and completions water Verdad will utilize a tank-lite facility design which includes an oil line to transport oil production, reducing truck traffic and tank emissions.</p> <p>Per Operator Request Added the following BMPs: 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.</p> <p>Operator will use temporary lay flat lines to transport water during completion operations.</p> <p>Per Operator Request Added the following comments to the Submit Tab: It is a tank-lite design and the two oil tanks are to be used for maintenance not storage.</p> <p>At this time we are planning to store produced water on location and truck it away. We are working on an agreement that would pipe the water, but it is not finalized or signed, so we will stick with trucking it away for now.</p>	11/02/2022
OGLA	<p>Per Operator Updated ALA (Datasheet and Narrative) to be submitted by operator by 11/02/2022 Additional ALA Alternative Location added - OGLA to add the additional Location to the form ALA Narrative will include the Alternative Location Letter - Received 11/02/2022</p> <p>Per the Location Drawing, the nearest not abandoned water well is located at 1823 feet from the WPS. The Hydrology Map needs to be changed and the form updated. Operator will be submitting an updated Hydrology Map by 11/01/2022 - Operator provided updated information indicating that the water well in question is further than previously reported and lies outside of the 2,000-foot radius. Updated Hydrology Map and Location Drawing received 11/02/2022</p> <p>Facility Layout Drawing has a typo "Gas Life Compressors" Operator will be submitting an updated Layout Plat by 11/01/2022 - Received 11/02/2022</p> <p>Distances to wetland and surface waters reported on the Cultural Features Map do not match with the Hydrology Map. Updated Cultural Features or Hydrology Map is required. - Received 11/02/2022</p> <p>The Location Drawing is missing the Floodplain in the Legend. - Received Updated Location Drawing 11/02/2022</p> <p>Provide an update of the Local Government Permit - Updated the status and date of the Local Government Permit based on the Weld County e-permit website</p>	10/31/2022

	<p>With Operator Concurrence: Changed the depth to ground water to 343 feet as provided on DWR permit #32760-F</p> <p>Removed • Permit 271914-: 500' depth; 0.45 mile east of the WPS as this depth was not reported on the DWR Permit</p> <p>Added 1 ECD, removed 1 VOC, added 2 knock outs based on the Facility Layout Drawing.</p>		
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LGD	<p>The Weld County Oil & Gas Energy Department has the following comments relating to this proposed location:</p> <ol style="list-style-type: none"> 1.The Harambe 2920 Pad application was reviewed and processed under Weld County Code, ORD2021-17. 2.A pre-application meeting was held on August 16, 2021. Attendees of this meeting were Oil and Gas Energy Department (OGED) staff, Verdad staff, COGCC staff and CPW staff. 3.The OGED received the 1041 WOGLA Notice on February 15, 2022. 4.The OGED received the 1041 WOGLA Application on May 23, 2022 and deemed the application complete. 5.Case number 1041WOGLA22-0012 has been assigned to this location. All files associated with the processing and review of this permit are accessible through the Weld County E-Permit center. If there are any questions relating to the ability to access these files, please call the OGED office at 970-400-3580 or visit www.weldgov.com. 6.The application submitted is compliant with all requirements of Section 21-5-320 of the Weld County Code. 7.Weld County sent referral requests on July 19, 2022. The COGCC participated with advisory comments on July 29, 2022. The Colorado Parks and Wildlife responded on August 10, 2022 indicating no additional comments beyond what was discussed at the pre-application meeting. 8.A 1041WOGLA hearing was held on September 1, 2022 for this location and has been continued to September 29th. The continuance was requested in order for the applicant to finalize Weld County drainage plans. 9.OGED did not receive any questions from the public regarding this application, and no Applications for Intervention were received. 10.Once the Weld County 1041 WOGLA Permit is approved, Verdad's commitment to best management practices outlined in the application and final order will protect the health, safety, security and general welfare of the present and future residents of Weld County, while also protecting both the environment and wildlife. 11.The Weld County Clerk Recorder will record the final order upon approval with a reception number and OGED will notice the final order in the Greeley Tribune. Approval and publication of Verdad's application creates a vested property right pursuant to Article 68 of Title 24, C.R.S. 12.Once recorded and legally noticed, the permit is valid for three (3) years – construction must commence within the timeframe, or an extension must be requested and approved, or the permit will expire. 13.Weld County has no additional concerns with the pending COGCC permit, and would recommend approval. 	09/22/2022
OGLA	The Director has determined this OGD application is complete. Form pushed to IN PROCESS.	08/09/2022

OGLA	This Form 2A is being sent back to Draft due to completeness issues.	06/24/2022
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Total: 6 comment(s)

Public Comments

No public comments were received on this application during the comment period.