



Harambe 2920

304.c. (16): Interim Reclamation Plan

An interim reclamation plan consistent with the requirements of Rule 1003.

Introduction and Site Description:

The Harambe 2920 is located in the center of the S2N2 of Sec 32 T2N R64W Pad is a Verdad Resources oil and gas production facility that will have 9 horizontal oil and gas wells.

Surface Land Description: Fee

Maximum Disturbance Acreage: 10 Acres

Working Pad Surface Acreage: 6.37 Acres

Post Drilling/Completion Acreage: 5.14 Acres

Site Elevation: 4965'

Proposed Timeframe for Interim Reclamation: Interim reclamation will take place on disturbed areas affected by drilling and subsequent operations no later than 6 months after they are no longer in use.

Soils Description and Protection: The primary soils on this location are NRCS 15, Colby Loam, 1 to 3 percent slopes and NRCS 16, Colby Loam, 3-5 percent slopes. The drainage class is well drained, water capacity of the most liming layer is 0.57 to 2.0 in/hr and the depth to restrictive feature is 80 inches for both soil types. At least 6 inches of topsoil will be salvaged from the well pad surface prior to construction. Topsoil will be stockpiled onsite adjacent to the well pad for interim and final reclamation. Stockpiles should be constructed with no greater than 3:1 side slope and with a height of nine feet max. The topsoil stockpiles will be seeded immediately after placement with a quick-germination grass seed mix, specified by the County, or other means shall be employed so that the topsoil is protected from erosion. Additionally, a continuous berm will be placed around any down slope sides of the topsoil stockpile to prevent runoff and erosion. Placement of topsoil stockpiles should incorporate stormwater/runoff BMPs.

Oil and Gas Location Pre-Disturbance Vegetation Composition: The dominant vegetation is disturbed grassland. Noxious weeds were present at the time of field inspection. The vegetative cover at the time of onsite was approximately 20% containing Field Bindweed and Kochia, the remaining 80% was bare ground.

Identification of Reference Area and Vegetation Composition (Non-Crop Land): This location is on Irrigated Crop land.

Known Weed Infestations: Noxious weeds were observed (Colorado List C).



Gathering Lines: The pipeline and utility corridors are owned, operated and handled by a 3rd party, but will remain through the life of the wells.

Access Road: The access road will be extended from an existing location approximately 1.766 acres of additional disturbance will be added and will remain in use and will not be reclaimed until the wells on the pad and surrounding pads are plugged and the entire pad reclaimed.

Removal of Drilling, Re-entry, Completion Equipment and all Associated Debris and Waste Materials (1003.a.): Debris and non-exploration and production (E&P) waste materials (concrete, sack bentonite and other drilling mud additives, sand, plastic, pipe and cable) will be removed when no longer needed and cellars, rat holes, and other boreholes unnecessary for further lease operations will be backfilled. Removal of all drilling, completion equipment and all associated debris and waste materials will be confirmed at the facility Prestart-up Safety Review.

Management of Waste Material: Drill cuttings will be disposed offsite in adherence to the 900-Series. Drilling pits will not be used. All waste materials will be properly disposed of offsite at permitted commercial waste disposal facilities approved to receive E&P Waste by CDPHE and the Relevant Local Government. No waste materials will be left onsite.

Identification of Interim Reclamation Areas no Longer in Use (1003.b.): Approximately 2.0 acres of the pad will be reclaimed within 6 months after disturbed areas affected by drilling and subsequent operations are no longer in use. Approximately 5.14 acres of the working pad surface will remain. The topsoil stockpile area will be reduced when the pad is interim reclaimed. The area around the well heads, tanks and other equipment will not be reclaimed until the wells are plugged and abandoned. The retention area and the stormwater controls on the edge of the pad will remain for the life of the well. Area to be reclaimed is shown on the drawing below.

Compaction alleviation, Recontouring, establishing plant community, seeding and Management of invasive plants.

Upon completion of flowback operations, removal of drilling and completions equipment and removal of debris and waste materials, areas of the site not used for production will be restored as nearly as practicable to their original condition. The unused pad surface will have road base surface excavated and hauled from site. The unused pad surface will then be re-graded and contoured to blend into the adjoining landscape. The segregated topsoil horizons temporarily stockpiled during construction and will be replaced to their original relative positions on the project area. The interim reclamation area will be cross-rippled at 90° to a depth of 18 inches to alleviate soil compaction during construction activities. Cross-ripping should be oriented 45° to topographic contours. Crossripping shall only occur when soil moisture is below 35% of field capacity. The interim reclamation area will have compost added and then be disced adequately in order to establish a proper seedbed. Compost will be mixed into the seedbed at 15 ton/acre.



Disturbed areas will be returned to the landowner for use as irrigated cropland. Verdad will work with the landowner to ensure the disturbed surface is returned to pre-disturbance condition.

Fencing: The maximum disturbance area will be fenced with 4 strand barbwire livestock fencing. It will remain onsite during interim reclaim so it will not get grazed during establishment of the plant community.

Re-establish and Stabilize Drainage Features: After the wells are brought on to production, the working pad surface will be reduced to 5.14 acres. Approximately 2 acres of the construction disturbance will be reclaimed. The stormwater retention area has to remain in place for the life of wells per Weld County regulations. These drainage features will be moved in to the new edge of the interim reclamation pad. Berms, ditch, sediment traps and rocks socks will also remain at the edge of the interim reclamation disturbance.

Reclamation Monitoring, Inspection, Maintenance, and Reporting:

Reclamation Monitoring will be inspected at the following frequencies:

- Once per month until interim reclamation is completely established (next crop growing season).
- Once per year after interim reclamation completion until facility is decommissioned for final reclamation.
- There are no annual reclamation reports required

Operator will focus to further stabilize soils, preventing erosion and site degradation, and to monitor for and treat invasive species. Locations will remain in the interim reclamation phase until the well is plugged and abandoned, at which time final reclamation will take place.

Interim Reclamation Completion Notice, Form 4 (1003.e.[3]): Verdad will submit a Form 4 Sundry Notice once the revegetation reaches 80% pre-disturbance growth. The form will describe reclamation procedures, associated mitigation measures, changes to final land use, and the total cover of live perennial vegetation to evaluate the success of interim reclamation. See the form below.



Page 1
FORM 4
Rev 12/05

[Click here to reset form](#)

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)894-2100 Fax: (303)894-2109



SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: _____	4. Contact Name _____	Complete the Attachment Checklist OP OGCC
2. Name of Operator: _____	Phone: _____	
3. Address: _____ City: _____ State: _____ Zip: _____	Fax: _____	
5. API Number 05- _____	OGCC Facility ID Number _____	Survey Plat
6. Well/Facility Name: _____	7. Well/Facility Number _____	Directional Survey
8. Location (Qtr/Qt, Sec, Twp, Rng, Meridian): _____		Surface Eqmpt Diagram
9. County: _____	10. Field Name: _____	Technical Info Page
11. Federal, Indian or State Lease Number: _____		Other

General Notice

CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)

Change of Surface Footage from Exterior Section Lines:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Change of Surface Footage to Exterior Section Lines:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Change of Bottomhole Footage from Exterior Section Lines:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Change of Bottomhole Footage to Exterior Section Lines:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> attach directional survey

Bottomhole location Qtr/Qt, Sec, Twp, Rng, Mer _____
 Latitude _____ Distance to nearest property line _____ Distance to nearest bldg, public rd, utility or RR _____
 Longitude _____ Distance to nearest lease line _____ Is location in a High Density Area (rule 603b)? Yes/No
 Ground Elevation _____ Distance to nearest well same formation _____ Surface owner consultation date: _____

GPS DATA:
 Date of Measurement _____ PDOP Reading _____ Instrument Operator's Name _____

CHANGE SPACING UNIT

Formation	Formation Code	Spacing order number	Unit Acreage	Unit configuration
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Remove from surface bond
 Signed surface use agreement attached

CHANGE OF OPERATOR (prior to drilling):
 Effective Date: _____
 Plugging Bond: Blanket Individual

CHANGE WELL NAME NUMBER
 From: _____
 To: _____
 Effective Date: _____

ABANDONED LOCATION:
 Was location ever built? Yes No
 Is site ready for inspection? Yes No
 Date Ready for Inspection: _____

NOTICE OF CONTINUED SHUT IN STATUS
 Date well shut in or temporarily abandoned: _____
 Has Production Equipment been removed from site? Yes No
 MIT required if shut in longer than two years. Date of last MIT: _____

SPUD DATE: _____ **REQUEST FOR CONFIDENTIAL STATUS** (6 mos from date casing set)

SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK *submit cbl and cement job summaries

Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.
 Final reclamation will commence on approximately _____ Final reclamation is completed and site is ready for inspection.

Technical Engineering/Environmental Notice

Notice of Intent Approximate Start Date: _____ **Report of Work Done** Date Work Completed: _____

Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

<input type="checkbox"/> Intent to Recomplete (submit form 2)	<input type="checkbox"/> Request to Vent or Flare	<input type="checkbox"/> E&P Waste Disposal
<input type="checkbox"/> Change Drilling Plans	<input type="checkbox"/> Repair Well	<input type="checkbox"/> Beneficial Reuse of E&P Waste
<input type="checkbox"/> Gross Interval Changed?	<input type="checkbox"/> Rule 502 variance requested	<input type="checkbox"/> Status Update/Change of Remediation Plans
<input type="checkbox"/> Casing/Cementing Program Change	<input type="checkbox"/> Other: _____	for Spills and Releases

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



Site-Specific Interim Reclamation BMPs:

-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.

- 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.

-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.

-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.

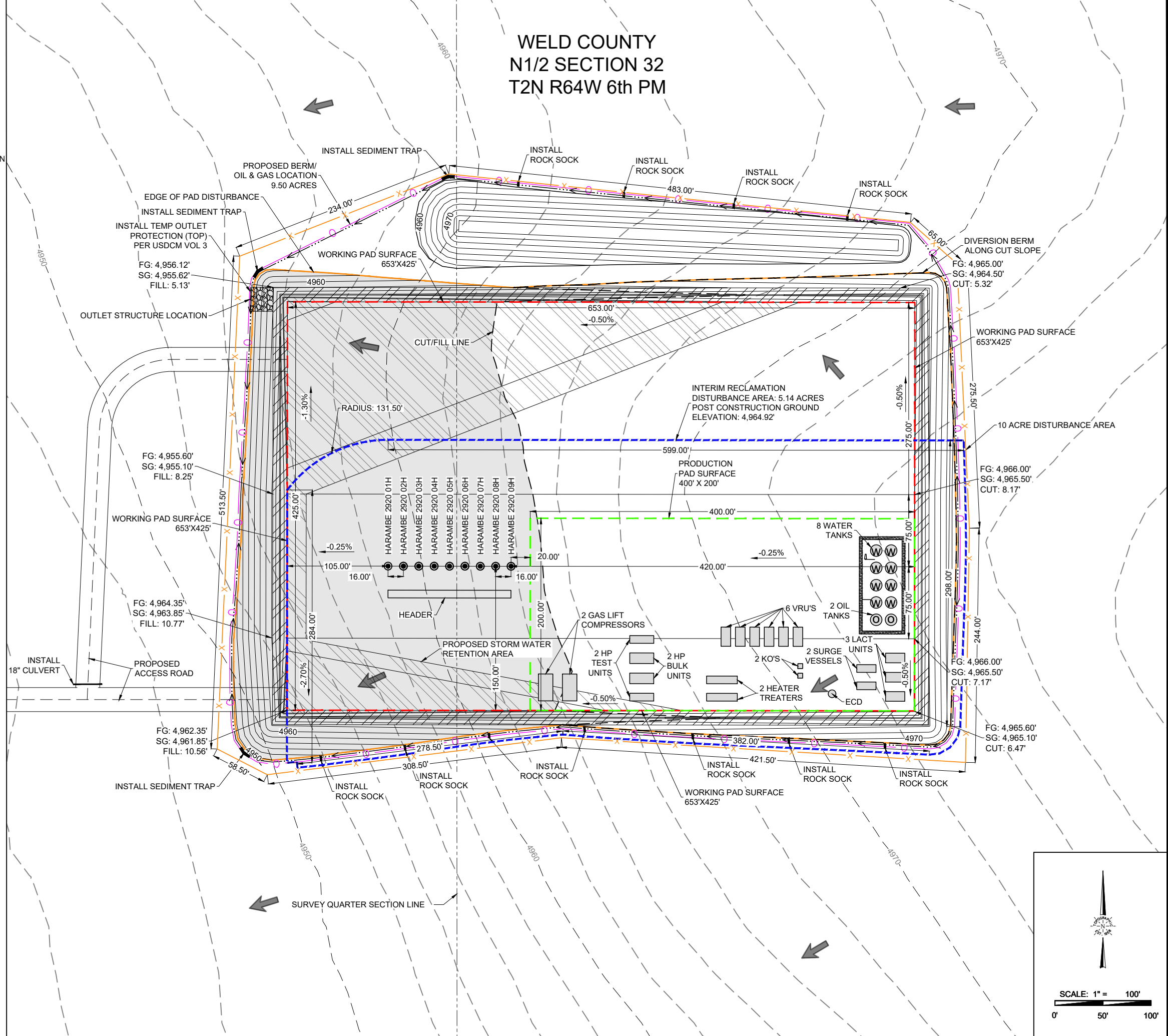
-The surrounding landscape is cropland. The downgradient direction is to the south. De Remer Lake of Banner Lakes is 610' south of the location. The lake will be protected by the stormwater and drainage structures.

- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- X- PROPOSED FENCE LINE/ MAX DISTURBANCE
- - - ACCESS ROAD
- PROPOSED BERM/ PROPOSED OIL AND GAS LOCATION
- - - PROPOSED DIVERSION DITCH
- - - WORKING PAD SURFACE
- - - PRODUCTION PAD SURFACE
- - - INTERIM RECLAMATION
- - - SURVEY QUARTER SECTION LINE
- EDGE OF DISTURBANCE
- █ CUT/FILL AREA
- ▨ PROPOSED DETENTION BERM
- ▨ PROPOSED RETENTION AREA
- ➔ PROPOSED DRAINAGE

WELL HEAD DISTANCES FROM FEATURES	
FEATURES	DISTANCE
NORTH EDGE OF WPS	275.00'
SOUTH EDGE OF WPS	150.00'
EAST EDGE OF WPS	420.00'
WEST EDGE OF WPS	105.00'
ECD/VOC	355.00'
HEATER TREATERS	233.50'
TANKS	362.50'
SEPARATORS	143.00'

WELL NAME	PRE-CONSTRUCTION ELEVATION	POST-CONSTRUCTION ELEVATION
HARAMBE 2920 01H	4,958.74'	4,964.62'
HARAMBE 2920 02H	4,959.30'	4,964.66'
HARAMBE 2920 03H	4,959.86'	4,964.70'
HARAMBE 2920 04H	4,960.47'	4,964.70'
HARAMBE 2920 05H	4,961.11'	4,964.78'
HARAMBE 2920 06H	4,961.76'	4,964.82'
HARAMBE 2920 07H	4,962.46'	4,964.86'
HARAMBE 2920 08H	4,963.11'	4,964.90'
HARAMBE 2920 09H	4,963.73'	4,964.94'

EARTHWORK QUANTITIES:	
CUT:	32,020 CY
FILL:	29,990 CY
TOPSOIL (6"):	6,565 CY
EXPORT:	605 CY
FILL FACTOR:	1.15
DISTURBANCE ACREAGES:	
WORKING PAD SURFACE (AC):	6.37
OIL & GAS LOCATION (AC):	9.50
ACCESS ROAD (AC):	2.134
MAX DISTURBANCE (AC):	10.00
UNRECLAIMED AREA (AC):	5.14
RECLAIMED AREA (AC):	4.86
PIPELINE & UTILITY CORRIDOR (AC):	0.98



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OIL AND GAS FACILITY LAYOUT DRAWING

HARAMBE 2920

VERDAD

COLORADO LICENSED
COURTNEY COATES
0052098
05/05/22
PROFESSIONAL ENGINEER

DATE:	05/05/22
DRAWN BY:	TJM
REVIEWED BY:	CCC
SCALE:	1" = 100'
SHEET:	1 OF 1
REVISION:	XXX XXX XXX

