AFMSS

U.S. Department of the Interior
Bureau of Land Management

Application for Permit to Drill

APD Package Report

Date Printed:

APD ID:	Well Status:
APD Received Date:	Well Name:
Operator:	Well Number:

APD Package Report Contents

- Form 3160-3

- Operator Certification Report

- Application Report
- Application Attachments
  -- Well Plat: 1 file(s)

- Drilling Plan Report
- Drilling Plan Attachments
  -- Blowout Prevention Choke Diagram Attachment: 3 file(s)
  -- Blowout Prevention BOP Diagram Attachment: 3 file(s)
  -- Casing Spec Documents: 3 file(s)
  -- Casing Design Assumptions and Worksheet(s): 4 file(s)
  -- Hydrogen sulfide drilling operations plan: 3 file(s)
  -- Proposed horizontal/directional/multi-lateral plan submission: 1 file(s)
  -- Other Facets: 4 file(s)

- SUPO Report
- SUPO Attachments
  -- Existing Road Map: 2 file(s)
  -- New Road Map: 1 file(s)
  -- Attach Well map: 2 file(s)
  -- Production Facilities map: 1 file(s)
  -- Water source and transportation map: 2 file(s)
  -- Construction Materials source location attachment: 2 file(s)
  -- Well Site Layout Diagram: 1 file(s)

- PWD Report
- PWD Attachments
  -- None

- Bond Report

- Bond Attachments
  -- None

Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

2. Name of Operator

9. API Well No.
30-025-55801

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool, or Exploratory

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*

12. County or Parish

13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
Title		
Approved by *(Signature)*	Name *(Printed/Typed)*	Date
Title	Office	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 07/21/2025

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Approval Date: 07/21/2025

Additional Operator Remarks

Location of Well

0. SHL: NWNW / 224 FNL / 845 FWL / TWSP: 19S / RANGE: 33E / SECTION: 22 / LAT: 32.6523783 / LONG: -103.6567663 (TVD: 0 feet, MD: 0 feet)

BHL: NWNW / 224 FNL / 845 FWL / TWSP: 19S / RANGE: 33E / SECTION: 22 / LAT: 32.6523783 / LONG: -103.6567663 (TVD: 15659 feet, MD: 15659 feet)

BLM Point of Contact

Name: CIJI METHOLA
Title: GIS Support - Adjudicator
Phone: (575) 234-5924
Email: cmethola@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

Outskirts FEDERAL SWD 1

APD - Geology COAs (Not in Potash or WIPP)

- For at least one well per pad (deepest well within initial development preferred) the record of the drilling rate (ROP) along with the Gamma Ray (GR) and Neutron (CNL) well logs run from TVD to surface in the vertical section of the hole shall be submitted to the BLM office as well as all other logs run on the full borehole 30 days from completion. Any other logs run on the wellbore, excluding cement remediation, should also be sent. Only digital copies of the logs in .TIF or .LAS formats are necessary; paper logs are no longer required. Logs shall be emailed to blm-cfo-geology@doimspp.onmicrosoft.com. Well completion report should have .pdf copies of any CBLs or Temp Logs run on the wellbore.

- Exceptions: In areas where there is extensive log coverage (in particular the salt zone adjacent to a pad), Operators are encouraged to contact BLM Geologists to discuss if additional GR and N logs are necessary on a pad. Operator may request a waiver of the GR and N log requirement due to good well control or other reasons to be approved by BLM Geologist prior to well completion. A waiver approved by BLM must be attached to completion well report to satisfy COAs.

- The top of the Rustler, top and bottom of the Salt, and the top of the Capitan Reef (if present) are to be recorded on the Completion Report.

Be aware that:

- H2S has been reported within one mile of the proposed project. Measurements up to 300 ppm were recorded from the Tonto Bone Spring Fm.

Questions? Contact Thomas Evans, BLM Geologist at 575-234-5965 or tvevans@blm.gov

PECOS DISTRICT

SURFACE USE

CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Permian Oilfield Partners, LLC
LEASE NO.:	NMNM034850, NMNM036915
COUNTY:	Lea County, New Mexico

Wells:

Outskirts Fed SWD #1

Approval Date: 07/21/2025

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1. GENERAL PROVISIONS

The failure of the operator to comply with these requirements may result in the assessment of liquidated damages or penalties pursuant to 43 CFR 3163.1 or 3163.2. A copy of these conditions of approval shall be present on the location during construction, drilling and reclamation activity. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

1.1. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural resource (historic or prehistoric site or object) discovered by the operator, or any person working on the operator's behalf, on the public or federal land shall be immediately reported to the Authorized Officer. The operator shall suspend all operations in the immediate area (within 100ft) of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer, in conjunction with a BLM Cultural Resource Specialist, to determine appropriate actions to prevent the loss of significant scientific values. The operator shall be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the operator.

Traditional Cultural Properties (TCPs) are protected by NHPA as codified in 36 CFR 800 for possessing traditional, religious, and cultural significance tied to a certain group of individuals. Though there are currently no designated TCPs within the project area or within a mile of the project area, but it is possible for a TCP to be designated after the approval of this project. **If a TCP is designated in the project area after the project's approval, the BLM Authorized Officer will notify the operator of the following conditions and the duration for which these conditions are required.**

1. Temporary halting of all construction, drilling, and production activities to lower noise.
2. Temporary shut-off of all artificial lights at night.

The operator is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA), specifically NAGPRA Subpart B regarding discoveries, to protect human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered during project work. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and a BLM-CFO Authorized Officer will be notified immediately. The BLM will then be required to be notified, in writing, within 24 hours of the discovery. The written notification should include the geographic location by county and state, the contents of the discovery, and the steps taken to protect said discovery. You must also include any potential threats to the discovery and a conformation that all activity within 100ft of the discovery has ceased and work will not resume until written certification is issued. All work on the entire project must halt for a minimum of 3 days and work cannot resume until an Authorized Officer grants permission to do so.

Any paleontological resource discovered by the operator, or any person working on the operator's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. The operator will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the operator.

RANGELAND RESOURCES

1.1.1. **Cattleguards**

Where a permanent cattleguard is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

1.1.2. **Fence Requirement**

Where entry granted across a fence line, the fence must be braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

1.1.3. **Livestock Watering Requirement**

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA, New Mexico Department of Agriculture, and BLM requirements and policies.

1.3.1 African Rue (Peganum harmala)

Spraying: The spraying of African Rue must be completed by a licensed or certified applicator. In order to attempt to kill or remove African Rue the proper mix of chemical is needed. The mix consists of 2% Arsenal (Imazapyr) and 2% Roundup (Glyphosate) along with a nonionic surfactant. Any other chemicals or combinations shall be approved by the BLM Noxious Weeds Coordinator prior to treatment. African Rue shall be sprayed in connection to any dirt working activities or disturbances to the site being sprayed. Spraying of African Rue shall be done on immature plants at initial growth through flowering and mature plants between budding and flowering stages. Spraying shall not be conducted after flowering when plant is fruiting. This will ensure optimal intake of chemical and decrease chances of developing herbicide resistance. After spraying, the operator or necessary parties must contact the Carlsbad Field Office to inspect the effectiveness of the application treatment to the plant species. No ground disturbing activities can take place until the inspection by the authorized officer is complete. The operator may contact the Environmental Protection Department or the BLM Noxious Weed Coordinator at (575) 234-5972 or BLM_NM_CFO_NoxiousWeeds@blm.gov.

Management Practices: In addition to spraying for African Rue, good management practices should be followed. All equipment should be washed off using a power washer in a designated containment area. The containment area shall be bermed to allow for containment of the seed to prevent it from entering any open areas of the nearby landscape. The containment area shall be excavated near or adjacent to the well pad at a depth of three feet and just large enough to get equipment inside it to be washed off. This will allow all seeds to be in a centrally located area that can be treated at a later date if the need arises.

1.2. LIGHT POLLUTION

1.2.1. **Downfacing**

All permanent lighting will be pointed straight down at the ground in order to prevent light spill beyond the edge of approved surface disturbance.

1.2.2. **Shielding**

All permanent lighting will use full cutoff luminaires, which are fully shielded (i.e., not emitting direct or indirect light above an imaginary horizontal plane passing through the lowest part of the light source).

1.2.3. **Lighting Color**

Lighting shall be 3,500 Kelvin or less (Warm White) except during drilling, completion, and workover operations. No bluish-white lighting shall be used in permanent outdoor lighting.

2. SPECIAL REQUIREMENTS

WATERSHED

The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No waterflow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be immediately corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The topsoil shall be stockpiled in an appropriate location with wattles (minimum 9" height) surrounding the stockpiled soil to prevent soil loss due to water/wind erosion. The wattles are to be maintained throughout the life of the project. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

Any water erosion that may occur due to the construction of the well pad and during the life of the well pad will be immediately corrected and proper measures will be taken to prevent future erosion.

2.1.1. **Buried/Surface Line(s)**

When crossing ephemeral drainages (marked and unmarked), the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. In ephemeral flow paths, rivers, and streams excess soil is to be compacted, contoured, and level to ground surface, allowing water to flow in its natural state. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (plastic and weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation. Any water erosion that may occur due to construction or during the life of the pipeline system will be immediately corrected within two weeks and proper measures will be taken to prevent erosion. Any spills or leaks from the proposed pipeline must be reported to BLM immediately.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

2.3 WILDLIFE

2.3.1 **Lesser Prairie Chicken**

2.3.1.1 Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be

restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

2.3.1.2 Timing Limitation Exceptions:

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

2.3.1.3 Ground-level Abandoned Well Marker to avoid raptor perching:

Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at BLM_NM_CFO_Construction_Reclamation@blm.gov.

2.3.3 **Dunes Sagebrush Lizard**

- Pre-construction contact with a BLM wildlife biologist is required within 5 days before any ground disturbing activities associated with the project occurs.
- Successful completion of the BLM Trench Stipulation Workshop is required for a non-agency person to be approved as a monitor.
- Any trench left open for (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, an agency approved monitor shall walk the entire length of the open trench and remove all trapped vertebrates. The bottom surface of the trench will be disturbed a minimum of 2 inches in order to arouse any buried vertebrates. All vertebrates will be released alive at least 100 yards from the trench.
- For trenches left open for eight (8) hours or more the following requirements apply:
    - Earthen escape ramps and/or structures (built at no more than a 30-degree slope and spaced no more than 500 feet apart) shall be placed in the trench. Metal structures will not be authorized. Options will be discussed in detail at the required Trench Stipulation Workshop.
    - One approved monitor shall be required to survey up to three miles of trench between the hours of 11 AM-2 PM. A daily report (consolidate if there is more than one monitor) on the vertebrates found and removed from the trench shall be provided to the BLM (email/fax is acceptable) the following morning.
    - Prior to backfilling of the trench all structures used as escape ramps will be removed and the bottom surface of the trench will be disturbed a minimum of 2 inches in order to arouse any buried vertebrates. All vertebrates will be released alive a minimum of 100 yards from the trench.
- This stipulation shall apply to the entire length of the project in the DSL habitat polygon regardless of land ownership or CCA/CCAA enrollment status.
- A project closeout will be required within three business days of the completion of the project.

2.4 VISUAL RESOURCE MANAGEMENT

2.5.1 **VRM IV**

Above-ground structures including meter housing that are not subject to safety requirements are painted a flat non-reflective paint color, Shale Green from the BLM Standard Environmental Color Chart (CC-001: June 2008).

3. CONSTRUCTION REQUIREMENTS

3.1 CONSTRUCTION NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at BLM_NM_CFO_Construction_Reclamation@blm.gov at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and COAs on the well site and they shall be made available upon request by the Authorized Officer.

3.2 TOPSOIL

The operator shall strip the topsoil (the A horizon) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. No more than the top 6 inches of topsoil shall be removed. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (the B horizon and below) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

3.3 CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No reserve pits will be used for drill cuttings. The operator shall properly dispose of drilling contents at an authorized disposal site.

3.4 WELL PAD & SURFACING

Any surfacing material used to surface the well pad will be removed at the time of interim and final reclamation.

3.5 EXCLOSURE FENCING (CELLARS & PITS)

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the well cellar is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

The operator will also install and maintain mesh netting for all open well cellars to prevent access to smaller wildlife before and after drilling operations until the well cellar is free of fluids and the operator. Use a maximum netting mesh size of 1 ½ inches. The netting must not have holes or gaps.

3.6 ON LEASE ACESS ROAD

3.6.1 **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

3.6.2 **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements will be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

3.6.3 Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

3.6.4 Ditching

Ditching shall be required on both sides of the road.

3.6.5 Turnouts

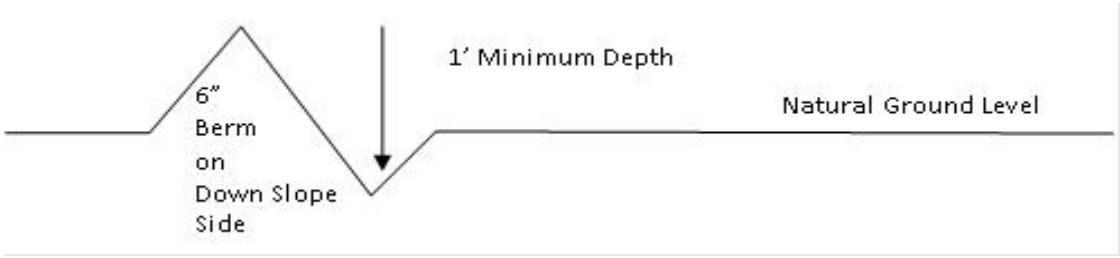
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

3.7.6 Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, leadoff ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4}$ + 100' = 200' lead-off ditch interval

3.7.7 **Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

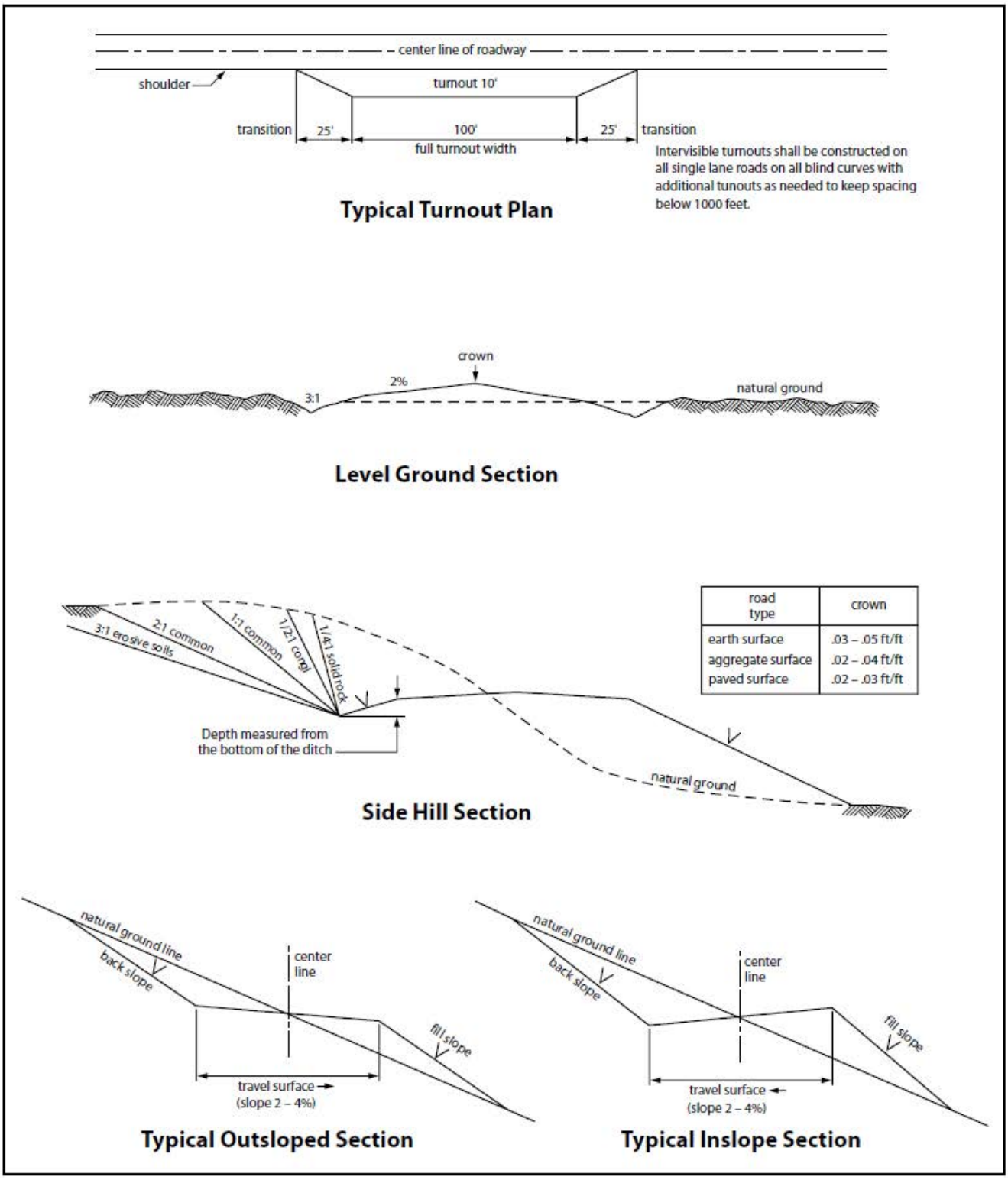


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

Approval Date: 07/21/2025

4. PIPELINES

- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, passages, or voids are intersected by trenching, and no pipe will be laid in the trench at that point until clearance has been issued by the Authorized Officer.
- A leak detection plan **will be submitted to the BLM Carlsbad Field Office for approval** prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating values and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.
- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

4.1 BURIED PIPELINES

A copy of the application (APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request a copy of your permit during construction to ensure compliance with all stipulations.

Operator agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Operator shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this APD.

2. The Operator shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the operator shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the pipeline corridor or on facilities authorized under this APD. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The operator agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Pipeline corridor (unless the release or threatened release is wholly unrelated to the operator's activity on the pipeline corridor), or resulting from the activity of the Operator on the pipeline corridor. This agreement applies without regard to whether a release is caused by the operator, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant is discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of operator, regardless of fault. Upon failure of operator to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and

fish and wildlife habitats, at the full expense of the operator. Such action by the Authorized Officer shall not relieve operator of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized pipeline corridor.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this pipeline corridor will be 30 feet:

   - Blading of vegetation within the pipeline corridor will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation*.)

   - Clearing of brush species within the pipeline corridor will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

   - The remaining area of the pipeline corridor (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The operator shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this pipeline corridor and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire pipeline corridor shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted, and a 6-inch berm will be left over the ditch line to allow for settling back to grade.

10. The pipeline will be identified by signs at the point of origin and completion of the pipeline corridor and at all road crossings. At a minimum, signs will state the operator's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

11. The operator shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the operator before maintenance begins. The operator will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the operator to construct temporary deterrence structures.

12. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

13. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them alive at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30-degree slope and spaced no more than 500 feet apart) shall be placed in the trench. Before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them alive at least 100 yards from the trench.
c. Holder shall ensure safe passage for livestock and wildlife during construction of the welded pipe on surface prior to laying in the trench every quarter of a mile or at grazing permitees reasonable discretion.

4.2 RANGELAND MITIGATION FOR PIPELINES

4.5.1 **Fence Requirement**

Where entry is granted across a fence line, the fence must be braced and tied off on both sides of the passageway with H-braces prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment operator prior to crossing any fence(s).

4.5.2 **Cattleguards**

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at road-fence crossing(s). Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

4.5.3 **Livestock Watering Requirement**

Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by moving the proposed action.

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment operator if any damage occurs to structures that provide water to livestock.

- Livestock operators will be contacted, and adequate crossing facilities will be provided as needed to ensure livestock are not prevented from reaching water sources because of the open trench.
- Wildlife and livestock trails will remain open and passable by adding soft plugs (areas where the trench is excavated and replaced with minimal compaction) during the construction phase. Soft plugs with ramps on either side will be left at all well-defined livestock and wildlife trails along the open trench to allow passage across the trench and provide a means of escape for livestock and wildlife that may enter the trench.
- Trenches will be backfilled as soon as feasible to minimize the amount of open trench. The Operator will avoid leaving trenches open overnight to the extent possible and open trenches that cannot be backfilled immediately will have escape ramps.

5. PRODUCTION (POST DRILLING)

5.1 WELL STRUCTURES & FACILITIES

5.1.1 **Placement of Production Facilities**

Production facilities must be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

5.1.2 **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

5.1.3. Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

5.1.4. Open-Vent Exhaust Stack Exclosures

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone*.) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

5.1.5. Containment Structures

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

6. RECLAMATION

Stipulations required by the Authorized Officer on specific actions may differ from the following general guidelines

6.1 ROAD AND SITE RECLAMATION

Any roads constructed during the life of the well will have the caliche removed or linear burial. If contaminants are indicated then testing will be required for chlorides and applicable contaminate anomalies for final disposal determination (disposed of in a manner approved by the Authorized Officer within Federal, State and Local statutes, regulations, and ordinances) and seeded to the specifications in sections 6.5 and 6.6.

6.2 EROSION CONTROL

Install erosion control berms, windrows, and hummocks. Windrows must be level and constructed perpendicular to down-slope drainage; steeper slopes will require greater windrow density. Topsoil between windrows must be ripped to a depth of at least 12”, unless bedrock is encountered. Any large boulders pulled up during ripping must be deep-buried on location. Ripping must be perpendicular to down-slope. The surface must be left rough in order to catch and contain rainfall on-site. Any trenches resulting from erosion cause by run-off shall be addressed immediately.

6.3 INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations must undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators must work with BLM surface protection specialists (BLM_NM_CFO_Construction_Reclamation@blm.gov) to devise the best strategies to reduce the size of the location. Interim reclamation must allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche and any other surface material is required. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided in section 6.6.

Upon completion of interim reclamation, the operator shall submit a Sundry Notice, Subsequent Report of Reclamation (Form 3160-5).

6.4 FINAL ABANDONMENT & RECLAMATION

Prior to surface abandonment, the operator shall submit a Notice of Intent Sundry Notice and reclamation plan.

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding will be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM. After earthwork and seeding is completed, the operator is required to submit a Sundry Notice, Subsequent Report of Reclamation.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (BLM_NM_CFO_Construction_Reclamation@blm.gov).

6.5 SEEDING TECHNIQUES

Seeds shall be hydro-seeded, mechanically drilled, or broadcast, with the broadcast-seeded area raked, ripped or dragged to aid in covering the seed. The seed mixture shall be evenly and uniformly planted over the disturbed area.

6.6 SOIL SPECIFIC SEED MIXTURE

The lessee/permitee shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed land application will be accomplished by mechanical planting using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area. Smaller/heavier seeds tend to drop the bottom of the drill and are planted first; the operator shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory BLM or Soil Conservation

District stand is established as determined by the Authorized Officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding or until several months of precipitation have occurred, enabling a full four months of growth, with one or more seed generations being established.

Seed Mixture for LPC #2 Sand/Shinnery Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

 Approval Date: 07/21/2025

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Permian Oilfield Partners, LLC
WELL NAME & NO.:	Outskirts Federal SWD 1
LOCATION:	Section 22, T.19S., R.33E.
COUNTY:	Lea County, New Mexico

Create COAs

H_2S	Cave / Karst	Waste Prevention Rule
Present	Low	APD Submitted Prior to 06/10/24
Potash	**R-111-Q Design**	
Secretary		
Wellhead	**Casing**	
Conventional	4-String Well	
	☐ Liner ☑ Fluid Filled ☐ Casing Clearance	
☑ Flex Hose	**Cementing**	
☐ Break Testing	☑ DV Tool ☐ Bradenhead ☐ Echometer	
	☐ Offline Cement ☐ Open Annulus ☐ Pilot Hole	
Special Requirements		
☐ Capitan Reef ☑ Water Disposal ☐ COM ☐ Unit		

Possibility of water flows in the Rustler and Capitan Reef.
Possibility of lost circulation in the Salado, Captian Reef, and Delaware
Abnormal pressures may be encountered upon penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

NOTE: OPERATOR WILL NOT BE ABLE TO USE A DIVERTER AS SETTING DEPTHS HAVE BEEN CHANGED BY BLM GEOLOGIST AND EXCEED THE CAPCITY OF THE DIVERTER.

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated AT SPUD. As a result, the Hydrogen Sulfide area must meet 43 CFR part 3170 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

Approval Date: 07/21/2025

B. CASING

1. The **26** inch surface casing shall be set at approximately **1668** feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. **Set depth adjusted per BLM geologist.**
    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic-type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 pounds compressive strength**, whichever is greater (including lead cement.)
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

1st Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **13-3/8** inch 1st intermediate casing, which shall be set at **7,852 feet per BLM geologist,** is **cement to surface**. If cement does not circulate, see B.1.a, c-d above.
    - **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry** due to the presence of potash. **Excess calculates to negative 6% operator will need to add more cement.**

2nd Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

3. The minimum required fill of cement behind the **9-5/8** inch 2nd intermediate casing is **500 feet** into the previous casing.

    - **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry** due to the presence of potash features.

NOTE: DV tool must be a minimum of 50' below the previous shoe. Please note your previous shoe depth has been moved by BLM geologist to 7,582'.

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DV Tool: The operator has proposed utilize a DV tool. Operator may adjust depth of DV tool if it remains below the Salado and cement volumes are adjusted accordingly. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. **First Stage:** Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
b. **Second Stage:** Cement to meet requirements listed for this casing string. If cement does not circulate, contact the appropriate BLM office.

4. The minimum required fill of cement behind the **7-5/8** inch production liner is at least **100 feet** into previous casing string. Operator shall provide method of verification.
   - **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry** due to the presence of potash features.

Operator will have an open hole completion from 14,649'-15,659'

C. PRESSURE CONTROL

1. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

   NOTE: OPERATOR WILL NOT BE ABLE TO USE A DIVERTER AS SETTING DEPTHS HAVE BEEN CHANGED BY BLM GEOLOGIST AND EXCEED THE CAPCITY OF THE DIVERTER.

2. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

 Approval Date: 07/21/2025

D. SPECIAL REQUIREMENT(S)

Water Disposal Well Completion Report Requirements:

The operator shall supply the BLM with a copy of a mudlog over the permitted disposal interval and estimated insitu water salinity based on open-hole logs. The operator shall provide to the BLM a summary of formation depth picks based on mudlog and geophysical logs along with a copy of the mudlog and open hole logs from TD to top of Devonian. **If hydrocarbon shows occur while drilling, the operator shall notify the BLM.**

A NOI sundry with the completion procedure for this well shall be submitted and approved prior to commencing completion work. The procedure will be reviewed to verify that the completion proposal will allow the operator to:

1. Properly evaluate the injection zone utilizing open hole logs, swab testing and/or any other method to confirm that hydrocarbons cannot be produced in paying quantities. This evaluation shall be reviewed by the BLM prior to injection commencing.
2. Restrict the injection fluid to the approved formation.
3. If a step rate test will be run an NOI sundry shall be submitted to the BLM for approval

If off-lease water will be disposed in this well, the operator shall provide proof of right-of-way approval.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
    a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
    b. When the operator proposes to set surface casing with Spudder Rig
        i. Notify the BLM when moving in and removing the Spudder Rig.
        ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
        iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or

if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-Q potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible

hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
    i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    iii. Manufacturer representative shall install the test plug for the initial BOP test.
    iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
    v. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
    i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
    ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
    iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve

open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

iv. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

v. The results of the test shall be reported to the appropriate BLM office.

vi. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

vii. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR 3172**.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

JAM 6/26/2025

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Operator Certification Data Report

08/04/2025

Operator

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Gary Fisher **Signed on:** 06/06/2025

Title: President

Street Address: PO Box 3329

City: Hobbs **State:** NM **Zip:** 88241

Phone: (817)606-7630

Email address: gfisher@popmidstream.com

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Application Data
08/04/2025

APD ID: 10400100664
Submission Date: 12/06/2024
Operator Name: PERMIAN OILFIELD PARTNERS LLC
Well Name: OUTSKIRTS FEDERAL SWD
Well Number: 1
Well Type: INJECTION - DISPOSAL
Well Work Type: Drill

Highlighted data reflects the most recent changes
Show Final Text

Section 1 - General

APD ID: 10400100664
Tie to previous NOS? N
Submission Date: 12/06/2024
BLM Office: Carlsbad
User: Gary Fisher
Title: President
Federal/Indian APD: FED
Is the first lease penetrated for production Federal or Indian? FED
Lease number: NMNM34850
Lease Acres:
Surface access agreement in place?
Allotted?
Reservation:
Agreement in place? NO
Federal or Indian agreement:
Agreement number:
Agreement name:
Keep application confidential? Y
Permitting Agent? NO
APD Operator: PERMIAN OILFIELD PARTNERS LLC
Operator letter of

Operator Info

Operator Organization Name: PERMIAN OILFIELD PARTNERS LLC
Operator Address: 726 EAST MICHIGAN DRIVE, SUITE 206
Zip: 88241
Operator PO Box:
Operator City: HOBBS
State: NM
Operator Phone: (817)600-8772
Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO
Master Development Plan name:
Well in Master SUPO? NO
Master SUPO name:
Well in Master Drilling Plan? NO
Master Drilling Plan name:
Well Name: OUTSKIRTS FEDERAL SWD
Well Number: 1
Well API Number:
Field/Pool or Exploratory? Field and Pool
Field Name: SWD
Pool Name: DEVONIAN-SILURIAN

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Is the proposed well in an area containing other mineral resources? USEABLE WATER,NATURAL GAS,OIL

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: SINGLE WELL **Multiple Well Pad Name:** **Number:**

Well Class: VERTICAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: INJECTION - DISPOSAL

Describe Well Type:

Well sub-Type: INJECTION - DISPOSAL

Describe sub-type:

Distance to town: 31 Miles **Distance to nearest well:** 546 FT **Distance to lease line:** 224 FT

Reservoir well spacing assigned acres Measurement: 40 Acres

Well plat: Outskirts_Federal_SWD_1_C102_signed_0304_20250325070416.pdf

Well work start Date: 07/01/2025 **Duration:** 75 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: **Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
SHL Leg #1	224	FNL	845	FWL	19S	33E	22	Aliquot NWNW	32.6523783	-103.6567663	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 34850	3642			N
BHL Leg #1	224	FNL	845	FWL	19S	33E	22	Aliquot NWNW	32.6523783	-103.6567663	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 34850	-12017	15659	15659	N

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024 Submittal Type: ☒ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name	
30-025-55801	97869	SWD; DEVONIAN – SILURIAN	
Property Code	Property Name		Well Number
338391NMNM34850	OUTSKIRTS FEDERAL SWD		1
OGRID No.	Operator Name		Ground Level Elevation
328259	PERMIAN OILFIELD PARTNERS, LLC		3642'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ■ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ■ Federal	

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
D	22	19S	33E		224 FNL	845 FWL	32.6523783°N	103.6567663°W	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
Order Numbers. SWD-2609			Well setbacks are under Common Ownership: ☐ Yes ☐ No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☐ Horizontal ☐ Vertical	Ground Floor Elevation:

OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and , if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Signature 2/08/2024
Signature Date

Gary Fisher
Printed Name

gfisher@popmidstream.com
Email Address

SURVEYOR CERTIFICATIONS

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me under my supervision, and that the same is true and correct to the best of my belief.

DALE E. BELL NEW MEXICO 14400 02/24/2025 PROFESSIONAL SURVEYOR

Signature and Seal of Professional Surveyor

Certificate Number: 14400

Date of Survey: 02/03/2024

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

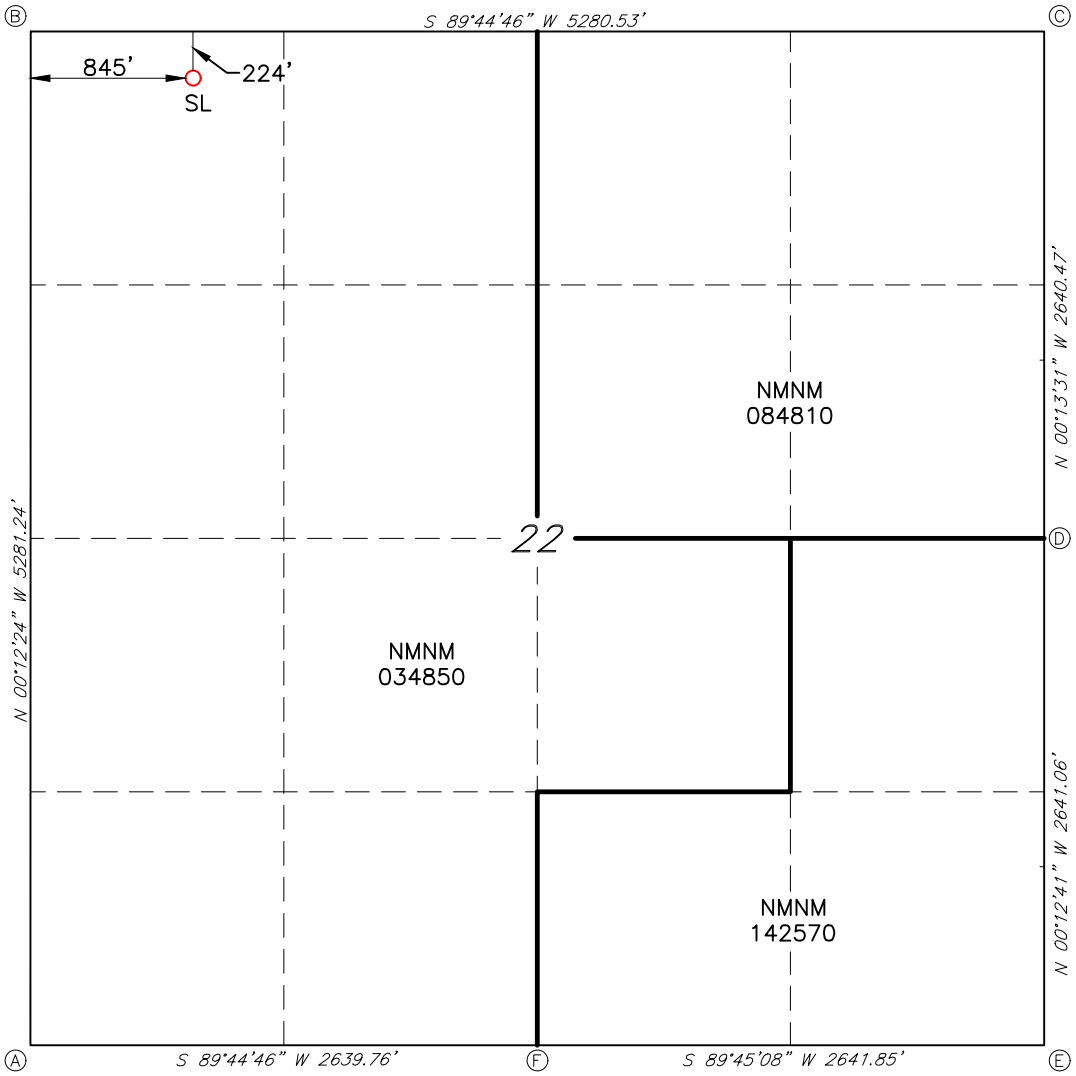
JOB #: LS24010058

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is a directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.

OUTSKIRTS FEDERAL SWD #1



GEODETIC DATA
NAD 83 GRID – NM EAST

SURFACE LOCATION

N: 601729.5 – E: 749568.7

LAT: 32.6523783° N
LONG: 103.6567663° W

DALE E. BELL
NEW MEXICO
14400
02/24/2025
PROFESSIONAL SURVEYOR

CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1912"
N: 596670.0 – E: 748742.1

B: FOUND BRASS CAP "1912"
N: 601950.1 – E: 748723.1

C: FOUND BRASS CAP "1912"
N: 601973.5 – E: 754002.4

D: FOUND BRASS CAP "1912"
N: 599333.6 – E: 754012.8

E: FOUND BRASS CAP "1912"
N: 596693.2 – E: 754022.5

F: FOUND BRASS CAP "1912"
N: 596681.7 – E: 751381.3

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U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report
08/04/2025

APD ID: 10400100664
Submission Date: 12/06/2024

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD
Well Number: 1

Well Type: INJECTION - DISPOSAL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
16067568	QUATERNARY	3642	30	30	MUDSTONE, SANDSTONE	USEABLE WATER	N
16067569	RUSTLER	2218	1424	1424	ANHYDRITE	NONE	N
16067570	SALADO	2097	1545	1545	ANHYDRITE, SALT	NONE	N
16067571	YATES	390	3252	3252	SANDSTONE, SHALE	NONE	N
16067572	DELAWARE	-1593	5235	5235	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
16067575	BONE SPRING LIME	-4246	7888	7888	LIMESTONE	NONE	N
16067576	BONE SPRING 1ST	-5477	9119	9119	SANDSTONE	NATURAL GAS, OIL	Y
16067577	BONE SPRING 2ND	-5989	9631	9631	SANDSTONE	NATURAL GAS, OIL	Y
16067578	BONE SPRING 3RD	-6981	10623	10623	LIMESTONE, SANDSTONE	NATURAL GAS, OIL	Y
16067579	WOLFCAMP	-7312	10954	10954	LIMESTONE, SHALE	NATURAL GAS, OIL	Y
16067581	STRAWN	-8485	12127	12127	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
16067583	ATOKA	-8841	12483	12483	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
16067582	MORROW	-9337	12979	12979	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
16067584	MISSISSIPPIAN	-10352	13994	13994	LIMESTONE	NONE	N
16067585	WOODFORD	-10872	14514	14514	SHALE	NONE	N
16067586	DEVONIAN	-10972	14614	14614	DOLOMITE, LIMESTONE	NONE	Y
16067587	FUSSELMAN	-11675	15317	15317	DOLOMITE	NONE	Y

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 21367

Equipment: Annular, Pipe Ram, Pipe Ram, Blind Ram

Requesting Variance? YES

Variance request: A variance is requested for the use of a diverter while drilling the 17.5" hole. A variance is requested for the use of a 5000 psi annular BOP with the 10,000 psi BOP stack. A variance is requested for the use of a flexible choke line from the BOP to the choke manifold. Anchors are not required by the manufacturer. See attached schematics

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The 5M Annular BOP will be tested to 100% working pressure (5000 psi). The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded, all of the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Choke Diagram Attachment:

Flex_Line_Specs_20190822110051.pdf

Vital_Federal_SWD_1___10M_Equipment_Schematic___11.20.23_20231122102112.pdf

SN05725_Choke_Kill_Hose__Mar_28_22__202206281338_20250619101045.pdf

BOP Diagram Attachment:

10M_BOP_Diagram_with_Valve_Sizes_20191125175300.pdf

10M_Annular_BOP_Variance_Request_Detail_20200202091705.pdf

Outskirts_Fed_SWD_1___20in_Diverter_Variance_Request_with_operation_explaination___schematic___09.27.24_202409
27112825.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	26	20.0	NEW	API	N	0	1449	0	1449	3642	2193	1449	N-80	106.5	BUTT	1.175	4.64	DRY	14.781	DRY	15.87
2	INTERMEDIATE	17.5	13.375	NEW	NON API	N	0	5285	0	5285	3146	-1643	5285	HCP-110	68	BUTT	1.177	2.514	DRY	5.785	DRY	5.785
3	INTERMEDIATE	12.25	9.625	NEW	NON API	N	0	11004	0	11004	3398	-7362	11004	HCP-110	40	BUTT	1.478	1.15	DRY	2.863	DRY	2.863

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
4	LINER	8.75	7.625	NEW	NON API	N	10804	14649	10804	14649	-7162	-11007	3845	HCL-80	39	FJ	2.074	1.33	DRY	3.55	DRY	5.96
5	OPEN HOLE	6.5	9.625				14649	15659					1010	HCL-80		BUTT						

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Outskirts_Federal_SWD_1___20_Suface_Casing_Assumptions_20241206093435.pdf

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Proprietary_Connections_Performance_Data_13.3750_68.0000_0.4800__P110_HC_20250606115228.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Outskirts_Federal_SWD_1___Int_1_Casing_Assumptions_20250606115553.pdf

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Casing Attachments

Casing ID: 3 **String** INTERMEDIATE

Inspection Document:

Spec Document:

9.625_40_HCP110_SEAH_SPECS_20231120132954.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Outskirts_Federal_SWD_1___9.625_intermediate_2_Assumptions_20241206093127.pdf

Casing ID: 4 **String** LINER

Inspection Document:

Spec Document:

7.6250_39.0000_0.5000_L80_HC_SPEC_SHEET_20230117111328.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Outskirts_Federal_SWD_1___7.625_intermediate_3_Assumptions_20241206093857.pdf

Casing ID: 5 **String** OPEN HOLE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Section 4 - Cement

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1099	1835	1.81	13.5	3321	100	HalCem Class C	Bentonite, Salt
SURFACE	Tail		1099	1449	860	1.32	14.8	1135	100	HalCem Class C	none
INTERMEDIATE	Lead		0	4785	2805	1.81	13.5	5060	50	HalCem Class C	Salt, Bentonite
INTERMEDIATE	Tail		4785	5285	420	1.32	14.8	555	50	HalCem Class C	None
INTERMEDIATE	Lead	5385	0	4885	870	2.08	12.5	1802	10	EconoCem HLC	HR-800
INTERMEDIATE	Tail		4885	5385	155	1.23	14.5	190	35	VersaCem H	Halad(R)-344, HR-601
INTERMEDIATE	Lead	5385	5385	10504	950	2.29	11.5	2176	35	NeoCem TM	None
INTERMEDIATE	Tail		10504	11004	175	1.21	14.5	212	35	VersaCem TM	Halad(R)-344, HR-601
LINER	Lead		10804	14649	325	1.49	13.2	479	25	NeoCem Class H	None

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with 43 CFR 3172:

Diagram of the equipment for the circulating system in accordance with 43 CFR 3172:

Describe what will be on location to control well or mitigate other conditions: Equipment for the circulating system will be in compliance with Onshore Order #2

Describe the mud monitoring system utilized: Visual Mud Monitoring Equipment, Pit Volume Totalizer, Stroke Counter, Flow Sensor in compliance with Onshore Order #2

Circulating Medium Table

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
5285	11004	WATER-BASED MUD	9	9.5							
0	1449	SPUD MUD	8.3	9							
11004	14649	OTHER : Weighted Brine	10	11							
14649	15659	OTHER : Cut Brine	8.4	9							
1449	5285	SALT SATURATED	9.9	10							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Will Run GR/CNL/CBL From TD (15659') to Surface

List of open and cased hole logs run in the well:

CEMENT BOND LOG,COMPENSATED NEUTRON LOG,GAMMA RAY LOG,MUD LOG/GEOLOGIC LITHOLOGY LOG,MUD LOG/GEOLOGICAL LITHOLOGY LOG,

Coring operation description for the well:

none

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7328 **Anticipated Surface Pressure:** 3883

Anticipated Bottom Hole Temperature(F): 230

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Outskirts_Fed_SWD_1___20in_Diverter_Variance_Request_with_operation_explaination___schematic___09.27.24_20241206100756.pdf

Outskirts_Federal_SWD_1___H2S_Operations_Plan___12.06.24_20241206102008.pdf

Outskirts_Federal_SWD_1___H2S_Plan_Location_Diagram___12.06.24_20241206102214.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Outskirts_Federal_SWD_1_Directional_Plan_20241206102819.pdf

Other proposed operations facets description:

All casing strings will be kept full when running in hole

Other proposed operations facets attachment:

Outskirts_Federal_SWD_1___Mud_Prog_Mojo_20241206102625.pdf

Outskirts_Federal_SWD_1___WBS___New_Design___06.04.25_20250606122915.pdf

Outskirts_Federal_SWD_1___D_C_Program___06.05.25___SP_20250606124552.pdf

Halliburton_Cement_Rec___v4.0_New_Design___06.18.25_20250620080336.pdf

Other Variance request(s)?: N

Other Variance attachment:

CONTITECH RUBBER Industrial Kft.	No:QC-DB- 231/ 2014
	Page: 14 / 119

Continental

ContiTech

Hose Data Sheet

CRI Order No.	538332
Customer	ContiTech Oil & Marine Corp.
Customer Order No	4500412631 CBC544771, CBC544769, CBC544767, CBC544763, CBC544768, CBC544745, CBC544744, CBC544746
Item No.	1
Hose Type	Flexible Hose
Standard	**API SPEC 16 C**
Inside dia in inches	3
Length	45 ft
Type of coupling one end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOURC/W BX155 ST/ST INLAID R.GR.
Type of coupling other end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOUR C/W BX155 ST/ST INLAID R.GR.
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St.steel outer wrap
Internal stripwound tube	No
Lining	OIL + GAS RESISTANT SOUR
Safety clamp	Yes
Lifting collar	Yes
Element C	Yes
Safety chain	Yes
Safety wire rope	No
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
Min. Bend Radius operating [m]	0,90
Min. Bend Radius storage [m]	0,90
Electrical continuity	The Hose is electrically continuous
Type of packing	WOODEN CRATE ISPM-15

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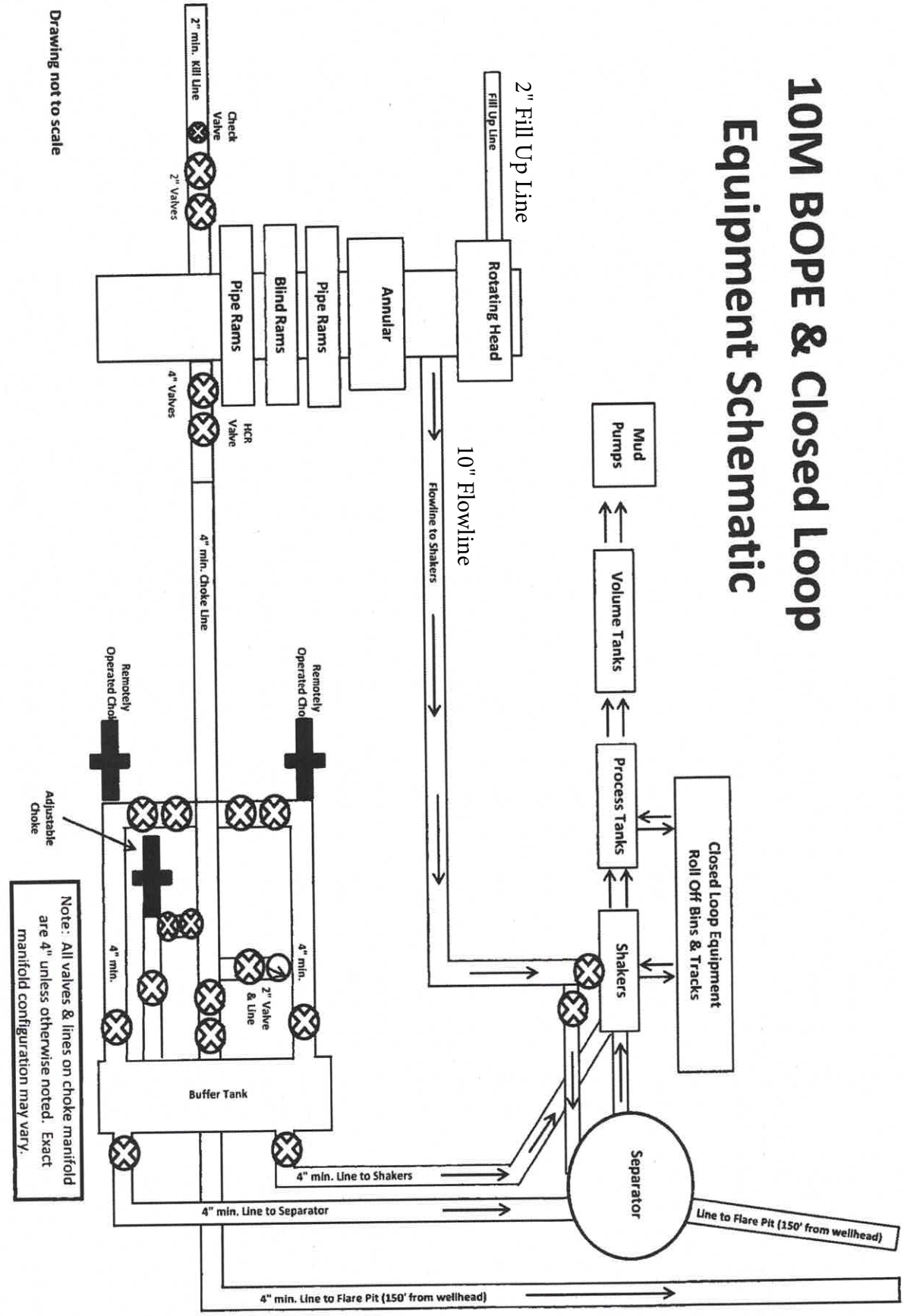
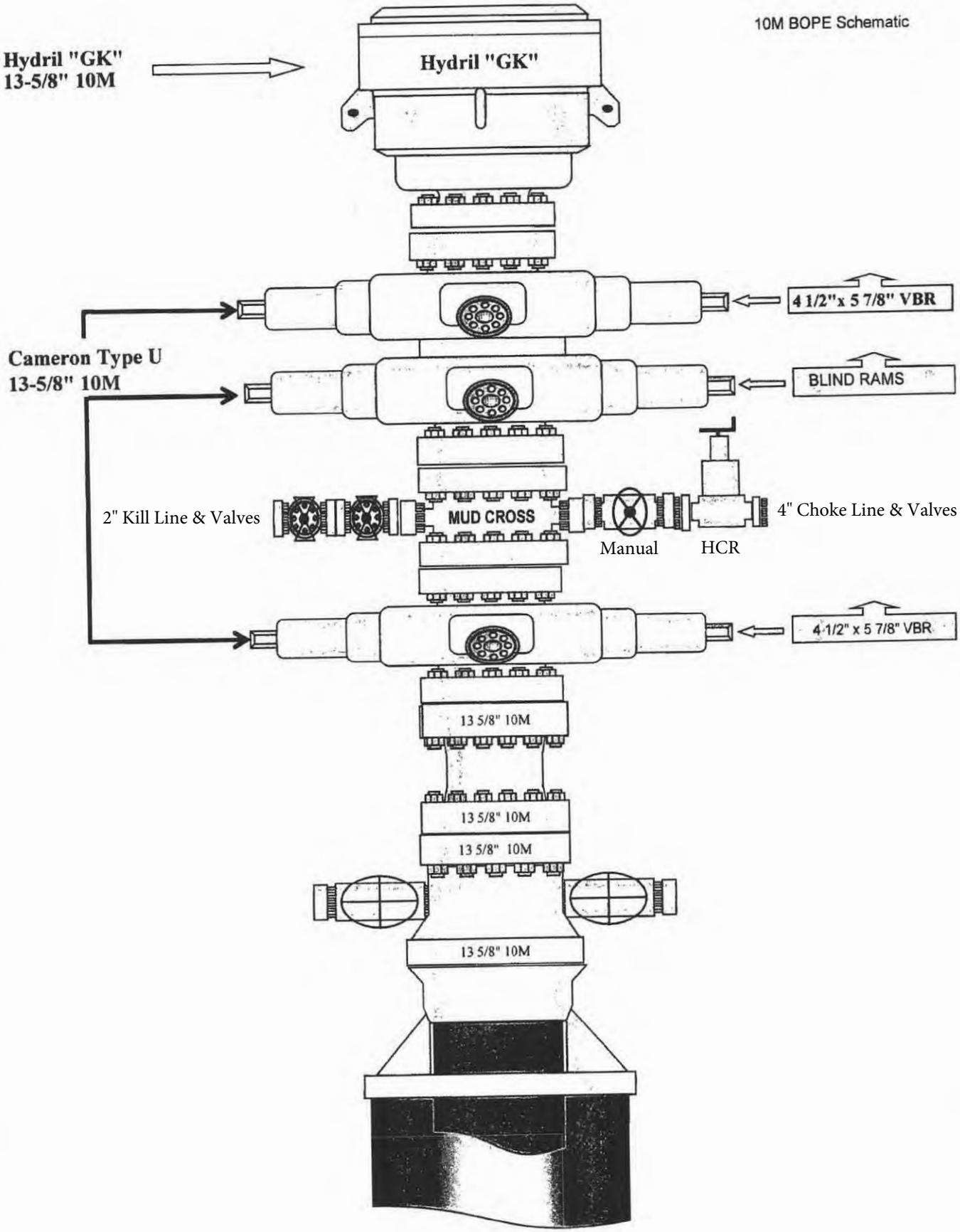

10M BOPE & Closed Loop
Equipment Schematic
Drawing not to scale
2" min. Kill Line
Check Valve
2" Valves
Fill Up Line
2" Fill Up Line
Rotating Head
Annular
Pipe Rams
Blind Rams
Pipe Rams
4" Valves
HCR Valve
10" Flowline
Flowline to Shakers
4" min. Choke Line
Mud Pumps
Volume Tanks
Process Tanks
Shakers
Closed Loop Equipment
Roll Off Bins & Tracks
Separator
Remotely Operated Choke
Remotely Operated Choke
Adjustable Choke
4" min.
4" min.
2" Valve & Line
Buffer Tank
4" min. Line to Shakers
4" min. Line to Separator
Line to Flare Pit (150' from wellhead)
4" min. Line to Flare Pit (150' from wellhead)
Note: All valves & lines on choke manifold are 4" unless otherwise noted. Exact manifold configuration may vary.


10M BOPE Schematic
Hydril "GK"
13-5/8" 10M
Hydril "GK"
4 1/2"x 5 7/8" VBR
Cameron Type U
13-5/8" 10M
BLIND RAMS
2" Kill Line & Valves
MUD CROSS
4" Choke Line & Valves
Manual
HCR
4-1/2" x 5 7/8" VBR
13 5/8" 10M
13 5/8" 10M
13 5/8" 10M
13 5/8" 10M

a. SIDPP&SICP
b. Pit gain
c. Time

8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

1. Sound alarm (alert crew)
2. Stab crossover and full-opening safety valve and close
3. Space out string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP&SICP
    b. Pit gain
    c. Time

8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams (HCR & choke will already be in the closed position)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
    a. SICP
    b. Pit gain
    c. Time

6. Regroup and identify forward plan

General Procedures While Pulling BHA Through Stack

1. PRIOR to pulling last joint of drillpipe through stack:

    a. Perform flow check. If flowing, continue to (b).

255 W 1100 N
Nephi, UT 84648
1-800-453-1480

CERTIFICATE OF COMPLIANCE

Date: 3/28/2022
Asset Desc:
Asset No: SN05725
Serial No: SN05725
Owner: NRP Jones

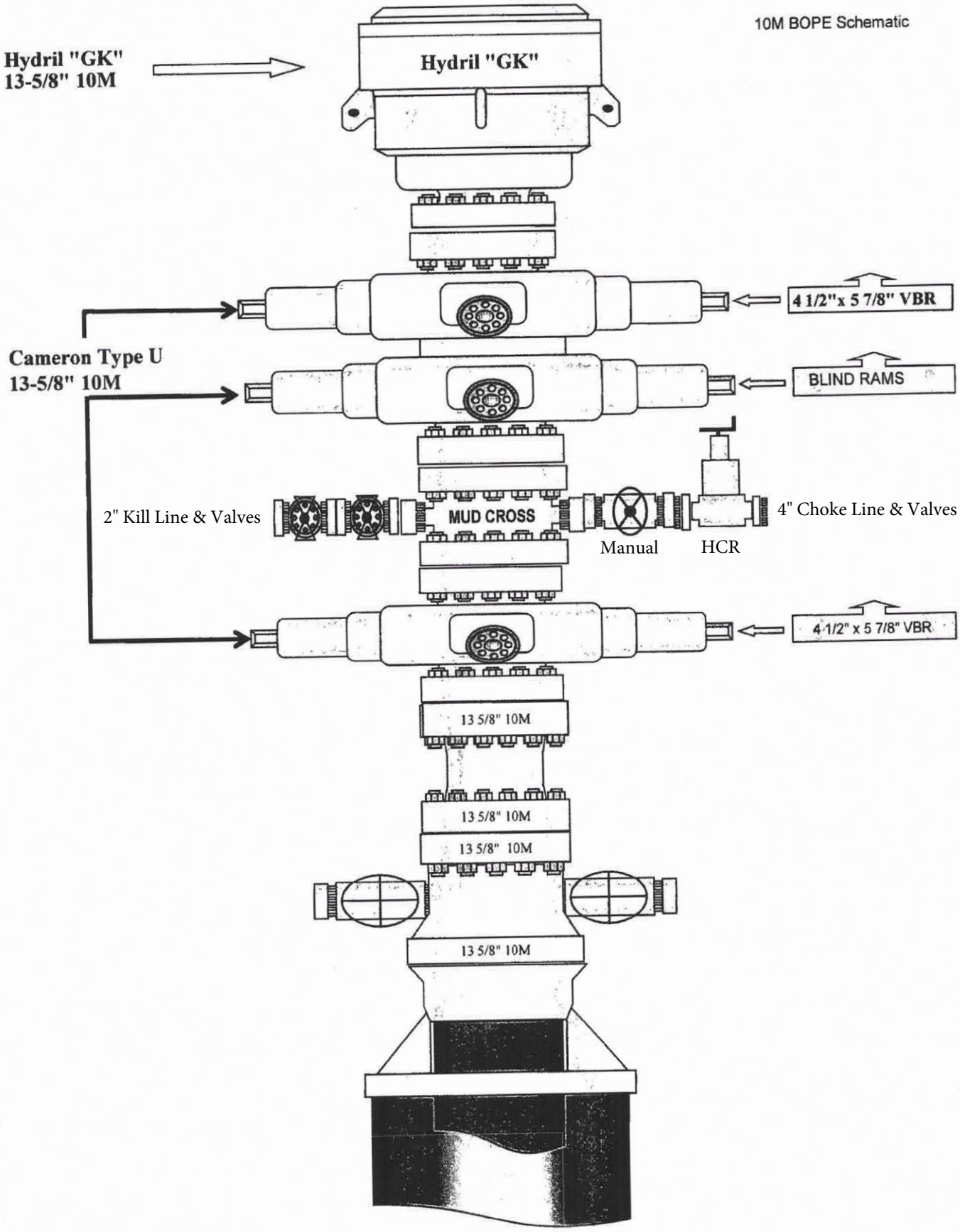
Entered by: Verne Hosie
Tested by: Verne Hosie
Witness: cjones
Location: NEPHI

Asset Characteristics	
Manufacturer	NRP Jones
Model	5640-4812-A
Application Group	Choke & Kill
Date of Manufacture	3/25/2022
Assembled By	Verne Hosie
Date of Hose Manufacture	10/13/2019 59181
Inside Diameter	3"
Length	12'
Working Pressure	10,000 PSI
Test Pressure	15,000 PSI
Coupling A	26-0766
Attach Method A	Swaged
Coupling A Size	4 1/16" 10,000# (BX-155) RTJ FIXED FLAN
Coupling A Add-On	N/A
Coupling B	26-0892
Attach Method B	Swaged
Coupling B Size	4 1/16" 10,000# (BX-155) RTJ SWIVEL
Coupling B Add-On	N/A
Production Order No	M0200604
Standard	NA

Hose Test Certificate	
Production Order No	M0200604
Serial No	SN05725
Test Pressure	15,000 PSI
Test Time	15 MIN.
Result	Pass
Date/Time	3/28/2022 5:00 A.M.
QC Sign Off	

0

10M BOPE Schematic



10M Annular BOP Variance Request Detail

Permian Oilfield Partners request a variance to use a 5M annular BOP with a 10M BOP triple ram stack. The below listed compatibility tables paired with the general well control plans show how the 5M annular BOP will be isolated from pressure that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5M annular BOP).

The below listed Component & BOPE Compatibility Tables describe the tubulars, components & compatible preventers to be used. **This table, combined with the use of drilling fluid illustrates that at least two barriers to flow will be maintained at all times.**

12 ¼" INTERMEDIATE #2 HOLE SECTION 10M PSI REQUIREMENT					
COMPONENT	**OD (in)**	**PRIMARY PREVENTER**	**RWP**	**ALTERNATE PREVENTER(S)**	**RWP**
Drillpipe	3.500" - 5.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
HWDP	3.500" - 5.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Jars	6.500" - 8.000"	Annular	5M	-	-
DC's	6.500" - 8.000"	Annular	5M	-	-
Drilling Motor	6.500" - 9.625"	Annular	5M	-	-
Casing	9.625"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

*VBR - Variable Bore Ram

8 ¾" INTERMEDIATE #3 HOLE SECTION 10M PSI REQUIREMENT					
COMPONENT	**OD (in)**	**PRIMARY PREVENTER**	**RWP**	**ALTERNATE PREVENTER(S)**	**RWP**
Drillpipe	3.500" - 5.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
HWDP	3.500" - 5.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Jars	4.750" - 6.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
DC's	4.750" - 6.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Drilling Motor	4.750" - 6.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Casing	7.625"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

*VBR - Variable Bore Ram

6 ½" INTERMEDIATE #4 HOLE SECTION (Production) 10M PSI REQUIREMENT					
COMPONENT	**OD (in)**	**PRIMARY PREVENTER**	**RWP**	**ALTERNATE PREVENTER(S)**	**RWP**
Drillpipe	3.500" - 4.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
HWDP	3.500" - 4.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Jars	4.750" - 5.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
DC's	4.750" - 5.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Drilling Motor	4.750"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Open-Hole	-	Blind Rams	10M	-	-
Casing	NONE	-	-	-	-

*VBR - Variable Bore Ram

Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, while pipe is not in the hole and moving the BHA through the BOP's. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the Permian Oilfield Partners drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore Oil & Gas Order No. 2 with the exception of the **5M annular which will be tested to 100% of its RWP.** *Note: HCR valve and choke manifold will remain closed during all normal operations. Manipulation of such equipment will occur as part of the general well control proceedures.

General Well Control Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP&SICP
    b. Pit gain
    c. Time

8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full-opening safety valve & close
3. Space out drill string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:

a. SIDPP&SICP
b. Pit gain
c. Time

8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

1. Sound alarm (alert crew)
2. Stab crossover and full-opening safety valve and close
3. Space out string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP&SICP
    b. Pit gain
    c. Time

8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams (HCR & choke will already be in the closed position)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
    a. SICP
    b. Pit gain
    c. Time

6. Regroup and identify forward plan

General Procedures While Pulling BHA Through Stack

1. PRIOR to pulling last joint of drillpipe through stack:

    a. Perform flow check. If flowing, continue to (b).

b. Sound alarm (alert crew)
c. Stab full-opening safety valve and close
d. Space out drill string with tool joint just beneath the upper variable bore rams
e. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
f. Confirm shut-in
g. Notify toolpusher/company representative
h. Read and record the following:
    i. SIDPP & SICP
    ii. Pit gain
    iii. Time
i. Regroup and identify forward plan

2. With BHA in the stack and compatible ram preventer and pipe combination immediately available:

a. Sound alarm (alert crew)
b. Stab crossover and full-opening safety valve and close
c. Space out drill string with upset just beneath the upper variable bore rams
d. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
e. Confirm shut-in
f. Notify toolpusher/company representative
g. Read and record the following:
    i. SIDPP & SICP
    ii. Pit gain
    iii. Time
h. Regroup and identify forward plan

3. With BHA in the stack and NO compatible ram preventer and pipe combination immediately available:

a. Sound alarm (alert crew)
b. If possible, pull string clear of the stack and follow "Open Hole" procedure.
c. If impossible to pull string clear of the stack:
d. Stab crossover, make up one joint/stand of drillpipe and full-opening safety valve and close
e. Space out drill string with tooljoint just beneath the upper variable bore ram
f. Shut-in using upper variable bore ram (HCR & choke will already be in the closed position)
g. Confirm shut-in
h. Notify toolpusher/company representative
i. Read and record the following:
    i. SIDPP & SICP

ii. Pit gain
iii. Time

j. Regroup and identify forward plan

Outskirts Federal SWD #1

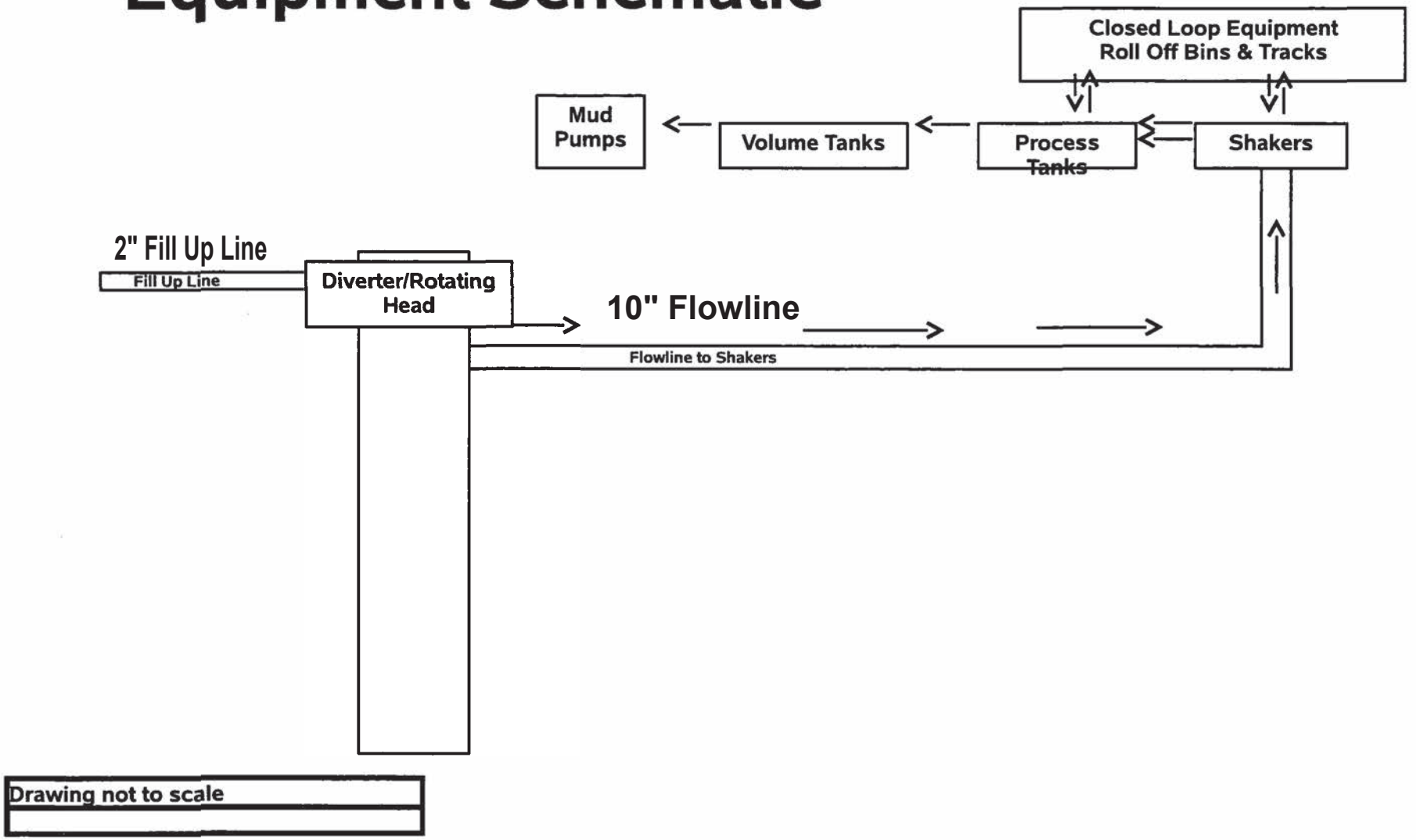
20" Diverter Variance Request

Permian Oilfield Partners requests a variance for the use of a 20" weld-on diverter to drill the 18 ½" hole sections to a depth of **3302'.** In this area, there has not been flammable gas encountered through this interval. Air pockets are common in the salt section and the diverter allows them to blow down safely to the pits without causing damage to the surface casing or cement.

Permian Oilfield Partners has been granted similar diverter variance requests for similar wells including the Monsoon Federal SWD #1 - API # 30-025-47362, the Cyclone Federal SWD #1 - API # 30-025-46685, & the Ramrod Fee SWD #1 - API # 30-015-49301. These wells were drilled utilizing the requested diverter system safely and without incident. In addition, the BLM has recently approved similar diverter variance request for the Marauder Federal SWD #1, the Vortex Federal SWD #1 & the Carpet Bomb Federal SWD #1 wells.

Other operators including Mewbourne Oil Company have been granted similar diverter variance request for wells in the area including the Red Hills West SWD #2 - API # 30-025-45469. This well was drilled utilizing the requested diverter system safely and without incident.

20" Diverter & Closed Loop Equipment Schematic



Permian Oilfield Partners requests a variance for the use of a 20" weld-on diverter to drill the 18.5" hole to a depth of 3302'. We have drilled several wells in the area and have not encountered any flammable gas deposits through this interval. Air pockets are common in the salt section and the diverter allows them to blow down safely to the pits without causing damage to the surface casing.

The 20" weld-
on diverter will be affixed to the previously cemented 20" surface casing and connected to the separa tor through the flowline. The separator flare line remains open to the atmosphere. In the presence of any air influx during operations, the following procedures will be utilized:

General Procedure While Drilling

1. Sound alarm (alert crew)
2. Pick string up off bottom while keeping pumps running
3. Notify rig manager/company representative
4. Continue circulation until all air has been evacuated from hole through diverter
5. Regroup and identify forward plan
6. Resume drilling activities

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Space out string
3. Notify rig manager/company representative
4. Allow air to evacuate safely to pits through diverter
5. Circulate until all air has been evacuated from hole through diverter
6. Regroup and identify forward plan
7. Resume drilling activities

General Procedure While Running Casing

1. Sound alarm (alert crew)
2. Space out string
3. Notify rig manager/company representative
4. Allow air to evacuate safely to pits through diverter
5. Circulate until all air has been evacuated from hole through diverter
6. Regroup and identify forward plan
7. Resume casing activities

SeAH

9.625" 40# .395" P-110 High Collapse

Dimensions (Nominal)

Outside Diameter	9.625	in.
Wall	0.395	in.
Inside Diameter	8.835	in.
Drift	8.750	in.
Weight, T&C	40.000	lbs/ft
Weight, PE	38.970	lbs/ft

Performance Properties (Minimum)

Collapse, PE	4230	psi
Internal Yield Pressure		
PE	7900	psi
LTC	7900	psi
BTC	7900	psi
Yield Strength, Pipe Body	1260	1000 lbs
Joint Strength		
LTC	988	1000 lbs
BTC	1266	1000 lbs

Note: SeAH Steel has produced this specification sheet for general information only. SeAH does not assume liability or responsibility for any loss or injury resulting from the use of information or data contained herein. All applications for the material described are at the customer's own risk and responsibility.

U. S. Steel Tubular Products

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7.625" 39.00lbs/ft (0.500" Wall) L80 HC USS-LIBERTY FJM®

MECHANICAL PROPERTIES	Pipe	USS-LIBERTY FJM®	
Minimum Yield Strength	80,000	--	psi
Maximum Yield Strength	95,000	--	psi
Minimum Tensile Strength	95,000	--	psi
DIMENSIONS	**Pipe**	**USS-LIBERTY FJM®**	
Outside Diameter	7.625	7.625	in.
Wall Thickness	0.500	--	in.
Inside Diameter	6.625	6.539	in.
Standard Drift	6.500	6.500	in.
Alternate Drift	--	--	in.
Nominal Linear Weight, T&C	39.00	--	lbs/ft
Plain End Weight	38.08	--	lbs/ft
SECTION AREA	**Pipe**	**USS-LIBERTY FJM®**	
Critical Area	11.192	6.665	sq. in.
Joint Efficiency	--	59.5	%
PERFORMANCE	**Pipe**	**USS-LIBERTY FJM®**	
Minimum Collapse Pressure	9,480	9,480	psi
Minimum Internal Yield Pressure	9,190	9,190	psi
Minimum Pipe Body Yield Strength	895,000	--	lbs
Joint Strength	--	533,000	lbs
Compression Rating	--	533,000	lbs
Reference Length	--	9,339	ft
Maximum Uniaxial Bend Rating	--	28.6	deg/100 ft
MAKE-UP DATA	**Pipe**	**USS-LIBERTY FJM®**	
Make-Up Loss	--	4.75	in.
Minimum Make-Up Torque	--	12,550	ft-lbs
Maximum Make-Up Torque	--	16,850	ft-lbs

1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness and Specified Minimum Yield Strength (SMYS).
2. Compressive & Tensile Connection Efficiencies are calculated by dividing the connection critical area by the pipe body area.
3. Uniaxial bending rating shown is structural only, and equal to compression efficiency.
4. USS-LIBERTY FJM™ connections are optimized for each combination of OD and wall thickness and cannot be interchanged.
5. Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
6. Reference length is calculated by joint strength divided by nominal plain end weight with 1.5 safety factor.
7. Connection external pressure leak resistance has been verified to 100% API pipe body collapse pressure following the guidelines of API 5C5 Cal III.

U. S. Steel Tubular Products
460 Wildwood Forest Drive, Suite 300S
Spring, Texas 77380

1-877-893-9461
connections@uss.com
www.usstubular.com

U. S. Steel Tubular Products

6/4/2025 1:08:04 PM

13.375" 68.00lb/ft (0.480" Wall) P110 HC USS-BTC®

MECHANICAL PROPERTIES	Pipe	USS-CDC®		--
Minimum Yield Strength	110,000	--	psi	--
Maximum Yield Strength	140,000	--	psi	--
Minimum Tensile Strength	125,000	--	psi	--
DIMENSIONS	**Pipe**	**USS-CDC®**		**--**
Outside Diameter	13.375	14.375	in.	--
Wall Thickness	0.480	--	in.	--
Inside Diameter	12.415	12.415	in.	--
Standard Drift	12.259	12.259	in.	--
Alternate Drift	--	--	in.	--
Nominal Linear Weight, T&C	68.00	--	lb/ft	--
Plain End Weight	66.17	--	lb/ft	--
SECTION AREA	**Pipe**	**USS-CDC®**		**--**
Critical Area	19.445	19.445	sq. in.	--
Joint Efficiency	--	100.0	%	--
PERFORMANCE	**Pipe**	**USS-CDC®**		**--**
Minimum Collapse Pressure	2,910	2,910	psi	--
External Pressure Leak Resistance	--	2,330	psi	--
Minimum Internal Yield Pressure	6,910	6,910	psi	--
Minimum Pipe Body Yield Strength	2,139,000	--	lb	--
Joint Strength	--	2,079,000	lb	--
Compression Rating	--	1,247,400	lb	--
Reference Length	--	20,382	ft	--
Maximum Uniaxial Bend Rating	--	22.0	deg/100 ft	--
MAKE-UP DATA	**Pipe**	**USS-CDC®**		**--**
Make-Up Loss	--	5.31	in.	--
Minimum Make-Up Torque	--	17,000	ft-lb	--
Maximum Make-Up Torque	--	21,000	ft-lb	--
Connection Yield Torque	--	98,800	ft-lb	--

Notes

1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness and Specified Minimum Yield Strength (SMYS).
2. Uniaxial bending rating shown is structural only, and equal to compression efficiency.
3. Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
4. Reference length is calculated by joint strength divided by nominal threaded and coupled weight with 1.5 safety factor.
5. Connection external pressure leak resistance has been verified to 80% API pipe body collapse pressure following the guidelines of API 5C5 Call II.

U. S. Steel Tubular Products
460 Wildwood Forest Drive, Suite 300S
Spring, Texas 77380

1-877-893-9461
connections@uss.com
www.usstubular.com

Intermediate #2 Casing

General Dimensions & Capacities

Bit Size	Verify Size	**Max Bit Size:**	**15** "	**PASS**	**12 1/4**	"
Casing Size	Verify Size	**Max Casing Size:**	**11 3/4** "	**PASS**	**9 5/8**	"
Setting Depth	Casing Design Type	**(Conventional)**			**11004**	'
Mud Weight	From Mud Program Sheet				**10.0**	ppg
Mud Weight	Pressure Applied on Casing				**5722**	psi
Length	Intermediate #1 Casing 1				**3302**	'
Length	Intermediate #1 Casing 2					'
Length	Intermediate #1 Casing 3					'
Length	Intermediate #1 Casing 4					'
Surface Casing Setting Depth	Sum of All Intermediate #1 Casing's				**3302**	'
Annular Capacity (Per ft)	Intermediate #2 Casing to Intermediate #1 Casing 1				**0.742**	ft³/ft
Annular Capacity (Per ft)	Intermediate #2 Casing to Intermediate #1 Casing 2					ft³/ft
Annular Capacity (Per ft)	Intermediate #2 Casing to Intermediate #1 Casing 3					ft³/ft
Annular Capacity (Per ft)	Intermediate #2 Casing to Intermediate #1 Casing 4					ft³/ft
Annular Capacity	Intermediate #2 Casing to Intermediate #1 Casing 1				**2451.01**	ft³
Annular Capacity	Intermediate #2 Casing to Intermediate #1 Casing 2					ft³
Annular Capacity	Intermediate #2 Casing to Intermediate #1 Casing 3					ft³
Annular Capacity	Intermediate #2 Casing to Intermediate #1 Casing 4					ft³
Annular Capacity	Intermediate #2 Casing to All Intermediate #1 Casings				**2451**	ft³
Int. #2 Csg. length Below Surface Csg. Shoe	Intermediate #2 Casing Shoe to Intermediate #1 Casing Length (Open Hole)				**7702**	'
Annular Capacity (Per ft)	Intermediate #2 Casing Shoe to Intermediate #1 Casing Shoe (Open Hole)				**0.31**	ft³/ft
Annular Capacity	Intermediate #2 Casing Shoe to Intermediate #1 Casing Shoe (Open Hole)				**2412**	ft³
Total Annular Capacity	Intermediate #2 Casing to Open Hole & Intermediate #2 Casing to Intermediate #1 Casing				**4863**	ft³
ECP/DV Tool Present?	**YES**					
ECP/DV Tool	Setting Depth				**3402**	'
Int. #1 Csg Length Above ECP/DV Tool	ECP/DV Tool Depth to Surface (Cased Hole)				**3302**	'
Int. #2 Csg Length Above ECP/DV Tool	ECP/DV Tool Depth to Intermediate #1 Casing Shoe (Open Hole)				**100**	'
Annular Capacity Above ECP/DV Tool	Intermediate #1 Casing Shoe to Surface (Cased Hole)				**2451**	ft³
Annular Capacity Above ECP/DV Tool	ECP/DV Tool to Intermediate #1 Casing Shoe (Open Hole)				**31**	ft³
TOTAL Annular Cap. Above ECP/DV Tool	ECP/DV Tool Depth to Surface (Open Hole + Cased Hole)				**2482**	ft³
Int. #2 Csg Length Below ECP/DV Tool	Intermediate #2 Casing Shoe to ECP/DV Tool (Open Hole)				**7602**	'
TOTAL Annular Cap. Below ECP/DV Tool	Intermediate #2 Casing Shoe to ECP/DV Tool Depth (All Open Hole)				**2381**	ft³

Cement Program

Cement from Shoe to Surface			
Cmt Sks	Lead	**907**	sks
	Tail	**200**	sks
Cmt Yield	Lead	**2.36**	ft³/sk
	Tail	**1.18**	ft³/sk
Cmt ft³	Lead	**2144**	ft³
	Tail	**236**	ft³
Cmt Weight	Lead	**12.3**	ppg
	Tail	**15.6**	ppg
Cmt Height	Lead	**6847**	'
	Tail	**755**	'
Cmt Applied Wt.	Lead (Wet) -	**4379**	psi
	Tail (Wet)	**613**	psi
	Total (Wet)	**4992**	psi
Constant	**0.052**		
Stage 2 - Cement from DV Tool to Surface			
Cmt Sks	Lead	**938**	sks
	Tail	**200**	sks
Cmt Yield	Lead	**2.36**	ft³/sk
	Tail	**1.33**	ft³/sk
Cmt ft³	Lead	**2217**	ft³
	Tail	**265**	ft³
CmtWeight	Lead	**12.3**	ppg
	Tail	**14.8**	ppg
Cmt Height	Lead	**2555**	'
	Tail	**847**	'
Cmt Applied Wt.	Lead	**1634**	psi
	Tail	**652**	psi
	Total	**2286**	psi
Constant	**0.052**		

Casing Design Safety Factors

Surface Casing	Collapse	**BLM Minimum Safety Factors**			**Partially Evacuated - % Free Gas**		**1.125**
Surface Casing	Burst	**(Applied or Hydrostatic)**		**1.0**			**1.0**
Surface Casing	Tension (Connection)	**Dry:**	**1.6**	**Wet:** **1.8**	**50%**		**1.6**
Surface Casing	Tension (Body)	**Dry:**	**1.6**	**Wet:** **1.8**			**1.6**

First Casing - Select Size & Specs

First Casing	Type	**Casing**	
First Casing	Size	**9.625**	"
First Casing	Weight	**40**	#
First Casing	ID	**8.835**	"
First Casing	Drift	**8.750**	"
First Casing	Connection	**BTC**	
First Casing	Grade	**HCP110**	
First Casing	Collapse	**4230**	psi
First Casing	Joint Yield	**1260**	klbs
First Casing	Body Yield	**1260**	klbs
First Casing	Joint Burst	**7900**	psi
First Casing	Tube Burst	**7900**	psi
First Casing	**Max Running Depth Collapse**	**11004**	'

Second Casing - (None)

Second Casing	Type	**None**	
Second Casing	Size		"
Second Casing	Weight	**40**	#
Second Casing	ID		"
Second Casing	Drift		"
Second Casing	Connection	**BTC**	
Second Casing	Grade	**HCL-80**	
Second Casing	Collapse		psi
Second Casing	Joint Yield		klbs
Second Casing	Body Yield		klbs
Second Casing	Joint Burst		psi
Second Casing	Tube Burst		psi
Second Casing	**Max Running Depth Collapse**		'

Third Casing - (None)

Third Casing	Type	**None**	
Third Casing	Size		"
Third Casing	Weight	**72**	#
Third Casing	ID		"
Third Casing	Drift		"
Third Casing	Connection	**PE**	
Third Casing	Grade	**HCL-80**	
Third Casing	Collapse		psi
Third Casing	Joint Yield		klbs
Third Casing	Body Yield		klbs
Third Casing	Joint Burst		psi
Third Casing	Tube Burst		psi
Third Casing	**Max Running Depth Collapse**		'

Fourth Casing - (None)

Fourth Casing	Type	**None**	
Fourth Casing	Size		"
Fourth Casing	Weight	**80.7**	#
Fourth Casing	ID		"
Fourth Casing	Drift		"
Fourth Casing	Connection	**PE**	
Fourth Casing	Grade	**HCP-110**	
Fourth Casing	Collapse		psi
Fourth Casing	Joint Yield		klbs
Fourth Casing	Body Yield		klbs
Fourth Casing	Joint Burst		psi
Fourth Casing	Tube Burst		psi
Fourth Casing	**Max Running Depth Collapse**		'

Collapse Design Verification

First Casing	9.625	"	40.0	#	HCP110	BTC	Casing	=	**11004**	'	**Dp SF:** **1.125**	**SF:** **1.478**	**PASS**
Collapse Design									**11004**	'			**PASS**

Tension Design Verification

First Casing	11004	'	40.0	#	HCP110	BTC	Casing	=	**440160**	lbs	**Dp SF:** **1.6**	**(Body)**	**SF:** **2.863**	**PASS**
Tension Design									**440160**	lbs		**(AIR)**		**PASS**

Intermediate #2 Casing Design

First Casing	**11004**	'	**40.0**	#	**HCP110**	**BTC**	**Casing**	**ID: 8.835**	**Drift: 8.750**		**Weight: 372960**	**lbs (Fluid)**	

Surface Casing

General Dimensions & Capacities						
Bit Size	Verify Size	Max Bit Size:	26 "	PASS	26	"
Casing Size	Verify Size	Max Casing Size:	20 "	PASS	20	"
Setting Depth	Casing Design Type	(Conventional)			1449	'
Mud Weight	From Mud Program Sheet				8.7	ppg
Mud Weight	Pressure Applied on Casing				656	psi
Length	Conductor				80	
Conductor Setting Depth	Conductor Setting Depth				80	'
Annular Capacity (Per ft)	Surface Casing to Conductor				2.094	ft³/ft
Annular Capacity	Surface Casing to Conductor				167.55	ft³
Annular Capacity	Intermediate 1 Casing to All Surface Casing				168	ft³
Int. 1 Csg. length Below Conductor	Surface Casing Shoe to Conductor Length (Open Hole)				1369	'
Annular Capacity (Per ft)	Surface Casing Shoe to Conductor (Open Hole)				1.51	ft³/ft
Annular Capacity	Surface Casing Shoe to Conductor (Open Hole)				2061	ft³
Total Annular Capacity	Surface Casing to Open Hole & Surface Casing to Conductor				2228	ft³
ECP/DV Tool Present?	NO					

Cement Program		
Cement from Shoe to Surface		
Cmt Sks	Lead	1000 sks
	Tail	369 sks
Cmt Yield	Lead	1.73 ft³/sk
	Tail	1.34 ft³/sk
Cmt ft³	Lead	1732 ft³
	Tail	496 ft³
Cmt Weight	Lead	13.5 ppg
	Tail	14.8 ppg
Cmt Height	Lead	1119 '
	Tail	330 '
Cmt Applied Wt.	Lead (Wet) -	786 psi
	Tail (Wet)	254 psi
	Total (Wet)	1039 psi
Constant	0.052	

Casing Design Safety Factors						
Surface Casing	Collapse	BLM Minimum Safety Factors			Fully Evacuated - (100% Free Gas)	1.125
Surface Casing	Burst	(Applied or Hydrostatic)		1.0		1.0
Surface Casing	Tension (Connection)	Dry:	1.6	Wet: 1.8	100%	1.6
Surface Casing	Tension (Body)	Dry:	1.6	Wet: 1.8		1.6

First Casing - Select Size & Specs			
First Casing	Type	Casing	
First Casing	Size	20.000	"
First Casing	Weight	106.5	#
First Casing	ID	19	"
First Casing	Drift	18.812	"
First Casing	Connection	BTC	
First Casing	Grade	N-80	
First Casing	Collapse	770	psi
First Casing	Joint Yield	2281	klbs
First Casing	Body Yield	2450	klbs
First Casing	Joint Burst	3500	psi
First Casing	Tube Burst	3500	psi
First Casing	Max Running Depth Collapse	1513	'

Second Casing - (None)			
Second Casing	Type	None	
Second Casing	Size		"
Second Casing	Weight	106.5	#
Second Casing	ID		"
Second Casing	Drift		"
Second Casing	Connection	BTC	
Second Casing	Grade	J-55	
Second Casing	Collapse		psi
Second Casing	Joint Yield		klbs
Second Casing	Body Yield		klbs
Second Casing	Joint Burst		psi
Second Casing	Tube Burst		psi
Second Casing	Max Running Depth Collapse		'

Third Casing - (None)			
Third Casing	Type	None	
Third Casing	Size		"
Third Casing	Weight	61	#
Third Casing	ID		"
Third Casing	Drift		"
Third Casing	Connection	STC	
Third Casing	Grade	J-55	
Third Casing	Collapse		psi
Third Casing	Joint Yield		klbs
Third Casing	Body Yield		klbs
Third Casing	Joint Burst		psi
Third Casing	Tube Burst		psi
Third Casing	Max Running Depth Collapse		'

Fourth Casing - (None)			
Fourth Casing	Type	None	
Fourth Casing	Size		"
Fourth Casing	Weight		#
Fourth Casing	ID		"
Fourth Casing	Drift		"
Fourth Casing	Connection		
Fourth Casing	Grade		
Fourth Casing	Collapse		psi
Fourth Casing	Joint Yield		klbs
Fourth Casing	Body Yield		klbs
Fourth Casing	Joint Burst		psi
Fourth Casing	Tube Burst		psi
Fourth Casing	Max Running Depth Collapse		'

Collapse Design Verification																	
First Casing	20.000	"	106.5	#	N-80	BTC	Casing	=	1449	'	Dp SF:	1.125		SF:	1.175	PASS
Collapse Design									1449	'						PASS

Tension Design Verification																	
First Casing	1449	'	106.5	#	N-80	BTC	Casing	=	154319	lbs	Dp SF:	1.6	(Conn)	SF:	14.781	PASS
Tension Design									154319	lbs			(AIR)			PASS

Surface Casing Design															
First Casing	1449	'	106.5	#	N-80	BTC	Casing	ID:	19	"	Drift:	18.812	Weight:	133821.2336	lbs (Fluid)

Intermediate #3 Casing

General Dimensions & Capacities

Bit Size	Verify Size	Max Bit Size:	8 3/4 "	PASS	8 3/4	"
Casing Size	Verify Size	Max Casing Size:	7 3/4 "	PASS	7 5/8	"
Setting Depth	Casing Design Type	(Liner)	(Liner Top Depth) -	10804 '	14649	'
Mud Weight	From Mud Program Sheet				12.0	ppg
Mud Weight	Pressure Applied on Casing				9141	psi
Length	Intermediate #2 Casing 1				11004	'
Length	Intermediate #2 Casing 2				-	'
Length	Intermediate #2 Casing 3				-	'
Length	Intermediate #2 Casing 4				-	'
Surface Casing Setting Depth	Sum of All Intermediate #2 Casing's				11004	'
Annular Capacity (Per ft)	Intermediate #3 Casing to Intermediate #2 Casing 1				0.109	ft³/ft
Annular Capacity (Per ft)	Intermediate #3 Casing to Intermediate #2 Casing 2					ft³/ft
Annular Capacity (Per ft)	Intermediate #3 Casing to Intermediate #2 Casing 3					ft³/ft
Annular Capacity (Per ft)	Intermediate #3 Casing to Intermediate #2 Casing 4					ft³/ft
Annular Capacity	Intermediate #3 Casing to Intermediate #2 Casing 1				1195.34	ft³
Annular Capacity	Intermediate #3 Casing to Intermediate #2 Casing 2					ft³
Annular Capacity	Intermediate #3 Casing to Intermediate #2 Casing 3					ft³
Annular Capacity	Intermediate #3 Casing to Intermediate #2 Casing 4					ft³
Annular Capacity	Intermediate #3 Casing to All Intermediate #2 Casings				1195	ft³
Int. #3 Csg. length Below Int. #2 Csg. Shoe	Intermediate #3 Casing Shoe to Intermediate #2 Casing Length (Open Hole)				3645	'
Annular Capacity (Per ft)	Intermediate #3 Casing Shoe to Intermediate #2 Casing Shoe (Open Hole)				0.10	ft³/ft
Annular Capacity	Intermediate #3 Casing Shoe to Intermediate #2 Casing Shoe (Open Hole)				366	ft³
Total Annular Capacity	Intermediate #3 Casing to Open Hole & Intermediate #3 Casing to Intermediate #2 Casing				1562	ft³
ECP/DV Tool Present?	NO					

Cement Program

Cement from Shoe to Surface			
Cmt Sks	Lead	236	sks
	Tail	0	sks
Cmt Yield	Lead	1.64	ft³/sk
	Tail	0.00	ft³/sk
Cmt ft³	Lead	388	ft³
	Tail	0	ft³
Cmt Weight	Lead	15.3	ppg
	Tail	0.0	ppg
Cmt Height	Lead	3845	'
	Tail	0	'
Cmt Applied Wt.	Lead (Wet) -	3059	psi
	Tail (Wet)	0	psi
	Total (Wet)	3059	psi
Constant	0.052		

Casing Design Safety Factors

		BLM Minimum Safety Factors		Partially Evacuated - % Free Gas	
Surface Casing	Collapse	(Applied or Hydrostatic)	1.0		1.125
Surface Casing	Burst				1.0
Surface Casing	Tension (Connection)	Dry: 1.6	Wet: 1.8	50%	1.6
Surface Casing	Tension (Body)	Dry: 1.6	Wet: 1.8		1.6

First Casing - Select Size & Specs

First Casing	Type		Casing
First Casing	Size		7.625 "
First Casing	Weight		39 #
First Casing	ID		6.625 "
First Casing	Drift		6.500 "
First Casing	Connection		PE
First Casing	Grade		HCL-80
First Casing	Collapse		9480 psi
First Casing	Joint Yield		533 klbs
First Casing	Body Yield		895 klbs
First Casing	Joint Burst		9180 psi
First Casing	Tube Burst		9180 psi
First Casing	Max Running Depth Collapse		14649 '

Second Casing - (None)

Second Casing	Type		None
Second Casing	Size		"
Second Casing	Weight		47 #
Second Casing	ID		"
Second Casing	Drift		"
Second Casing	Connection		BTC
Second Casing	Grade		HCL-80
Second Casing	Collapse		psi
Second Casing	Joint Yield		klbs
Second Casing	Body Yield		klbs
Second Casing	Joint Burst		psi
Second Casing	Tube Burst		psi
Second Casing	Max Running Depth Collapse		'

Third Casing - (None)

Third Casing	Type		None
Third Casing	Size		"
Third Casing	Weight		47 #
Third Casing	ID		"
Third Casing	Drift		"
Third Casing	Connection		BTC
Third Casing	Grade		HCL-80
Third Casing	Collapse		psi
Third Casing	Joint Yield		klbs
Third Casing	Body Yield		klbs
Third Casing	Joint Burst		psi
Third Casing	Tube Burst		psi
Third Casing	Max Running Depth Collapse		'

Fourth Casing - (None)

Fourth Casing	Type		None
Fourth Casing	Size		"
Fourth Casing	Weight		#
Fourth Casing	ID		"
Fourth Casing	Drift		"
Fourth Casing	Connection		
Fourth Casing	Grade		
Fourth Casing	Collapse		psi
Fourth Casing	Joint Yield		klbs
Fourth Casing	Body Yield		klbs
Fourth Casing	Joint Burst		psi
Fourth Casing	Tube Burst		psi
Fourth Casing	Max Running Depth Collapse		'

Collapse Design Verification

First Casing	7.625 " 39 # HCL-80 FJ Casing = 14649 '	Dp SF: 1.125	SF: 2.074	PASS
Collapse Design	14649 '			PASS

Tension Design Verification

First Casing	3845 ' 39.0 # HCL-80 FJ Casing = 149955 lbs	Dp SF: 1.6 (Conn)	SF: 3.554	PASS
Tension Design	149955 lbs	(AIR)		PASS

Intermediate #3 Casing Design

First Casing	3845 '	39.0 #	HCL-80	FJ	Casing	ID: 6.625	Drift: 6.500	Weight: 122482.3	lbs (Fluid)

Intermediate #1 Casing

General Dimensions & Capacities

Bit Size	Verify Size	**Max Bit Size:**	**18 3/4** "	**PASS**	**17 1/2**	"
Casing Size	Verify Size	**Max Casing Size:**	**16** "	**PASS**	**13 3/8**	"
Setting Depth	Casing Design Type	**(Conventional)**			**5285**	'
Mud Weight	From Mud Program Sheet				**10.0**	ppg
Mud Weight	Pressure Applied on Casing				**2748**	psi
Length	Surface Casing 1				**1449**	'
Length	Surface Casing 2					'
Length	Surface Casing 3					'
Length	Surface Casing 4					'
Surface Casing Setting Depth	Sum of All Surface Casing's				**1449**	'
Annular Capacity (Per ft)	Intermediate 1 Casing to Surface Casing 1				**0.993**	ft³/ft
Annular Capacity (Per ft)	Intermediate 1 Casing to Surface Casing 2					ft³/ft
Annular Capacity (Per ft)	Intermediate 1 Casing to Surface Casing 3					ft³/ft
Annular Capacity (Per ft)	Intermediate 1 Casing to Surface Casing 4					ft³/ft
Annular Capacity	Intermediate 1 Casing to Surface Casing 1				**1439**	ft³
Annular Capacity	Intermediate 1 Casing to Surface Casing 2					ft³
Annular Capacity	Intermediate 1 Casing to Surface Casing 3					ft³
Annular Capacity	Intermediate 1 Casing to Surface Casing 4					ft³
Annular Capacity	Intermediate 1 Casing to All Surface Casing				**1439**	ft³
Int. 1 Csg. length Below Surface Csg. Shoe	Intermediate 1 Casing Shoe to Surface Casing Length (Open Hole)				**3836**	'
Annular Capacity (Per ft)	Intermediate 1 Casing Shoe to Surface Casing Shoe (Open Hole)				**0.69**	ft³/ft
Annular Capacity	Intermediate 1 Casing Shoe to Surface Casing Shoe (Open Hole)				**2665**	ft³
Total Annular Capacity	Intermediate 1 Casing to Open Hole & Intermediate 1 Casing to Surface Casing				**4104**	ft³
ECP/DV Tool Present?	**NO**					

Cement Program

Cement from Shoe to Surface			
Cmt Sks	Lead	**1709**	sks
	Tail	**460**	sks
Cmt Yield	Lead	**2.04**	ft³/sk
	Tail	**1.33**	ft³/sk
Cmt ft³	Lead	**3494**	ft³
	Tail	**610**	ft³
Cmt Weight	Lead	**12.9**	ppg
	Tail	**14.8**	ppg
Cmt Height	Lead	**4406**	'
	Tail	**879**	'
Cmt Applied Wt.	Lead (Wet) -	**2956**	psi
	Tail (Wet)	**676**	psi
	Total (Wet)	**3632**	psi
Constant	**0.052**		

Casing Design Safety Factors

Surface Casing	Collapse	**BLM Minimum Safety Factors**			**Partially Evacuated - % Free Gas**	**1.125**
Surface Casing	Burst	**(Applied or Hydrostatic)**		**1.0**		**1.0**
Surface Casing	Tension (Connection)	**Dry:**	**1.6**	**Wet:** **1.8**	**90%**	**1.6**
Surface Casing	Tension (Body)	**Dry:**	**1.6**	**Wet:** **1.8**		**1.6**

First Casing - Select Size & Specs

First Casing	Type		Casing
First Casing	Size		**13.375** "
First Casing	Weight		**68** #
First Casing	ID		**12.415** "
First Casing	Drift		**12.259** "
First Casing	Connection		**BTC**
First Casing	Grade		**HCP-110**
First Casing	Collapse		**2910** psi
First Casing	Joint Yield		**2079** klbs
First Casing	Body Yield		**2139** klbs
First Casing	Joint Burst		**6910** psi
First Casing	Tube Burst		**6910** psi
First Casing	**Max Running Depth Collapse**		**5285** '

Second Casing - (None)

Second Casing	Type		**None**
Second Casing	Size		"
Second Casing	Weight		**61** #
Second Casing	ID		"
Second Casing	Drift		"
Second Casing	Connection		**BTC**
Second Casing	Grade		**J-55**
Second Casing	Collapse		psi
Second Casing	Joint Yield		klbs
Second Casing	Body Yield		klbs
Second Casing	Joint Burst		psi
Second Casing	Tube Burst		psi
Second Casing	**Max Running Depth Collapse**		'

Third Casing - (None)

Third Casing	Type		**None**
Third Casing	Size		"
Third Casing	Weight		**95** #
Third Casing	ID		"
Third Casing	Drift		"
Third Casing	Connection		**BTC**
Third Casing	Grade		**N-80**
Third Casing	Collapse		psi
Third Casing	Joint Yield		klbs
Third Casing	Body Yield		klbs
Third Casing	Joint Burst		psi
Third Casing	Tube Burst		psi
Third Casing	**Max Running Depth Collapse**		'

Fourth Casing - (None)

Fourth Casing	Type		**None**
Fourth Casing	Size		"
Fourth Casing	Weight		**95** #
Fourth Casing	ID		"
Fourth Casing	Drift		"
Fourth Casing	Connection		**BTC**
Fourth Casing	Grade		**HCN-80**
Fourth Casing	Collapse		psi
Fourth Casing	Joint Yield		klbs
Fourth Casing	Body Yield		klbs
Fourth Casing	Joint Burst		psi
Fourth Casing	Tube Burst		psi
Fourth Casing	**Max Running Depth Collapse**		'

Collapse Design Verification

First Casing	**13.375** " **68** # **HCP-110** **BTC** Casing = **5285** '	**Dp SF:**	**1.125**	**SF:**	**1.177**	**PASS**
Collapse Design	**5285** '					**PASS**

Tension Design Verification

First Casing	**5285** ' **68.0** # **HCP-110** **BTC** Casing = **359380** lbs	**Dp SF:**	**1.6**	**(Conn)**	**SF:** **5.785**	**PASS**
Tension Design	**359380** lbs			**(AIR)**		**PASS**

Intermediate #1 Casing Design

First Casing	**5285** ' **68.0** # **HCP-110** **BTC** Casing **ID: 12.415** **Drift: 12.259** **Weight: 304512.8** **lbs (Fluid)**

Outskirts Federal SWD #1

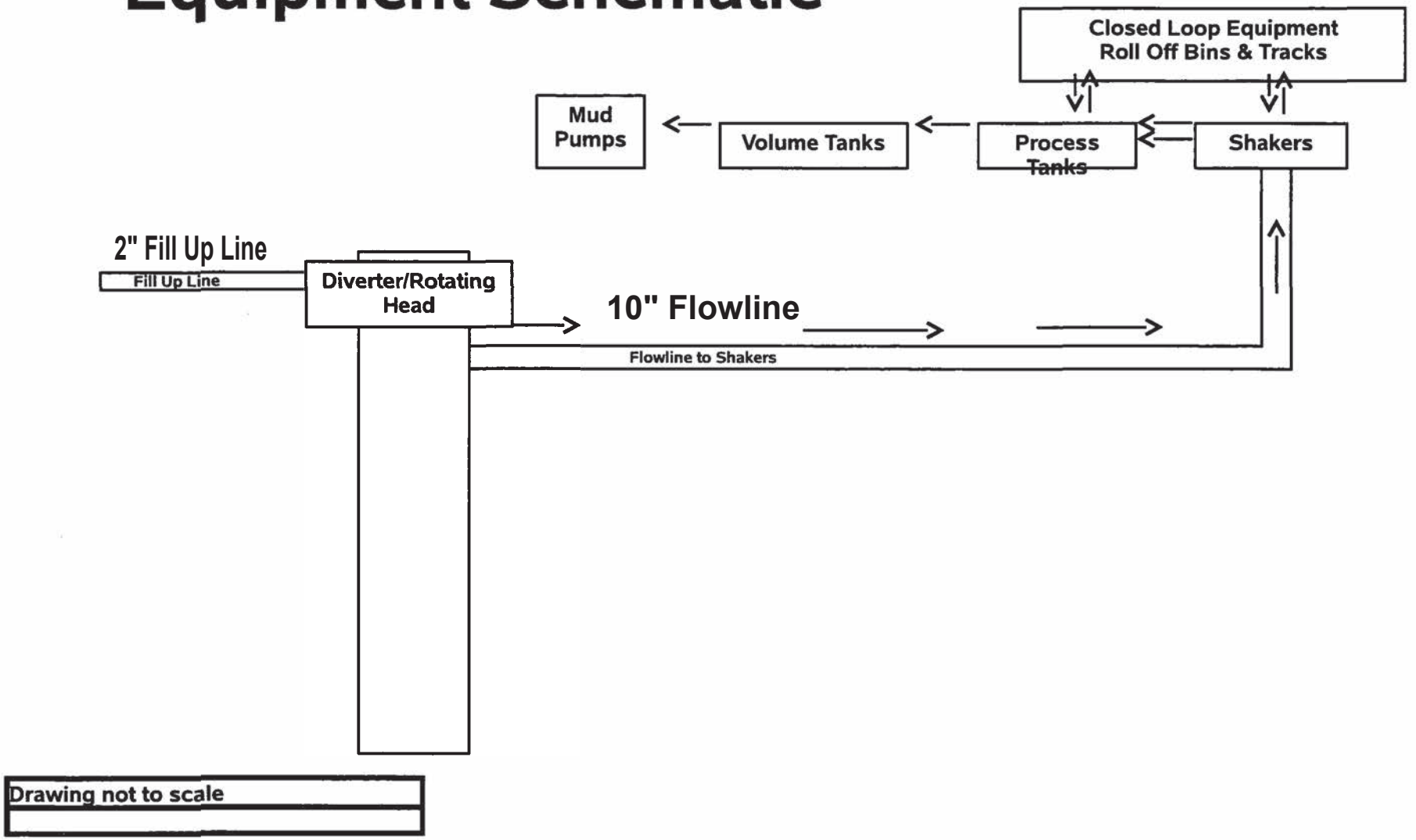
20" Diverter Variance Request

Permian Oilfield Partners requests a variance for the use of a 20" weld-on diverter to drill the 18 ½" hole sections to a depth of **3302'.** In this area, there has not been flammable gas encountered through this interval. Air pockets are common in the salt section and the diverter allows them to blow down safely to the pits without causing damage to the surface casing or cement.

Permian Oilfield Partners has been granted similar diverter variance requests for similar wells including the Monsoon Federal SWD #1 - API # 30-025-47362, the Cyclone Federal SWD #1 - API # 30-025-46685, & the Ramrod Fee SWD #1 - API # 30-015-49301. These wells were drilled utilizing the requested diverter system safely and without incident. In addition, the BLM has recently approved similar diverter variance request for the Marauder Federal SWD #1, the Vortex Federal SWD #1 & the Carpet Bomb Federal SWD #1 wells.

Other operators including Mewbourne Oil Company have been granted similar diverter variance request for wells in the area including the Red Hills West SWD #2 - API # 30-025-45469. This well was drilled utilizing the requested diverter system safely and without incident.

20" Diverter & Closed Loop Equipment Schematic



Permian Oilfield Partners requests a variance for the use of a 20" weld-on diverter to drill the 18.5" hole to a depth of 3302'. We have drilled several wells in the area and have not encountered any flammable gas deposits through this interval. Air pockets are common in the salt section and the diverter allows them to blow down safely to the pits without causing damage to the surface casing.

The 20" weld-
on diverter will be affixed to the previously cemented 20" surface casing and connected to the separa tor through the flowline. The separator flare line remains open to the atmosphere. In the presence of any air influx during operations, the following procedures will be utilized:

General Procedure While Drilling

1. Sound alarm (alert crew)
2. Pick string up off bottom while keeping pumps running
3. Notify rig manager/company representative
4. Continue circulation until all air has been evacuated from hole through diverter
5. Regroup and identify forward plan
6. Resume drilling activities

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Space out string
3. Notify rig manager/company representative
4. Allow air to evacuate safely to pits through diverter
5. Circulate until all air has been evacuated from hole through diverter
6. Regroup and identify forward plan
7. Resume drilling activities

General Procedure While Running Casing

1. Sound alarm (alert crew)
2. Space out string
3. Notify rig manager/company representative
4. Allow air to evacuate safely to pits through diverter
5. Circulate until all air has been evacuated from hole through diverter
6. Regroup and identify forward plan
7. Resume casing activities

Hydrogen Sulfide Drilling Operations Plan

Permian Oilfield Partners, LLC.

Outskirts Federal SWD #1
224' FNL, 845' FWL
Sec. 22, T19S, R33E, Lea Co. NM
Lat 32.6523783˚ N, Lon 103.6567663˚ W

1. General Requirements

Rule 118 does not apply to this well because POP has researched this area and no high concentrations of H2S were found. POP will have on location and working all H2S safety equipment before the Delaware formation for purposes of safety and insurance requirements.

2. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will have received training from a qualified instructor in the following areas prior to entering the drilling pad area of the well:

1. **The hazards and characteristics of hydrogen sulfide gas.**
2. **The proper use of personal protective equipment and life support systems.**
3. **The proper use of hydrogen sulfide detectors, alarms, warning systems, briefing areas, evacuation procedures.**
4. **The proper techniques for first aid and rescue operations. Additionally, supervisory personnel will be trained in the following areas:**

    - The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.
    - Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.
    - The contents of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering a known hydrogen sulfide source. The initial training session shall include a review of the site-specific Hydrogen Sulfide Drilling Operations Plan.

3. Hydrogen Sulfide Safety Equipment and Systems

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the 16" intermediate #1 casing.

1. **Well Control Equipment**

    - Choke manifold with minimum of one adjustable choke.
    - Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

- Auxiliary equipment including annular type blowout preventer.

2. **Protective Equipment for Essential Personnel**

- A Thirty-minute self-contained work unit located in the dog house and at briefing areas.
- If H2S is encountered in concentrations less than 10 ppm, fans will be placed in work areas to prevent the accumulation of hazardous amounts of poisonous gas.
- If higher concentrations of H2S are detected the well will be shut in and POP will follow Onshore Order 6 and install a rotating head, mud/gas separator, remote choke and flare line with igniter.

3. **Hydrogen Sulfide Protection and Monitoring Equipment**

- Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 PPM.

4. **Visual Warning Systems**

- Wind direction indicators as indicated on the wellsite diagram.
- Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

4. Mud Program

The mud program has been designed to minimize the amount of hydrogen sulfide entrained in the mud system. Proper mud weight, safe drilling practices, and the use of hydrogen sulfide scavengers will minimize hazards while drilling the well.

5. Metallurgy

All tubular systems, wellheads, blowout preventers, drilling spools, kill lines, choke manifolds, and valves shall be suitable for service in a hydrogen sulfide environment when chemically treated.

6. Communications

State & County Officials phone numbers are posted on rig floor and supervisor's trailer. Communications in company vehicles and tool pushers are either two-way radios or cellular phones.

7. Well Testing

Drill stem testing is not an anticipated requirement for evaluation of this well. If a drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

8. Emergency Phone Numbers

Lea County Sheriff's Office 911 or (575 396-3611

Ambulance Service 911 or (575 885-2111

Carlsbad Fire Dept 911 or (575) 885-2111

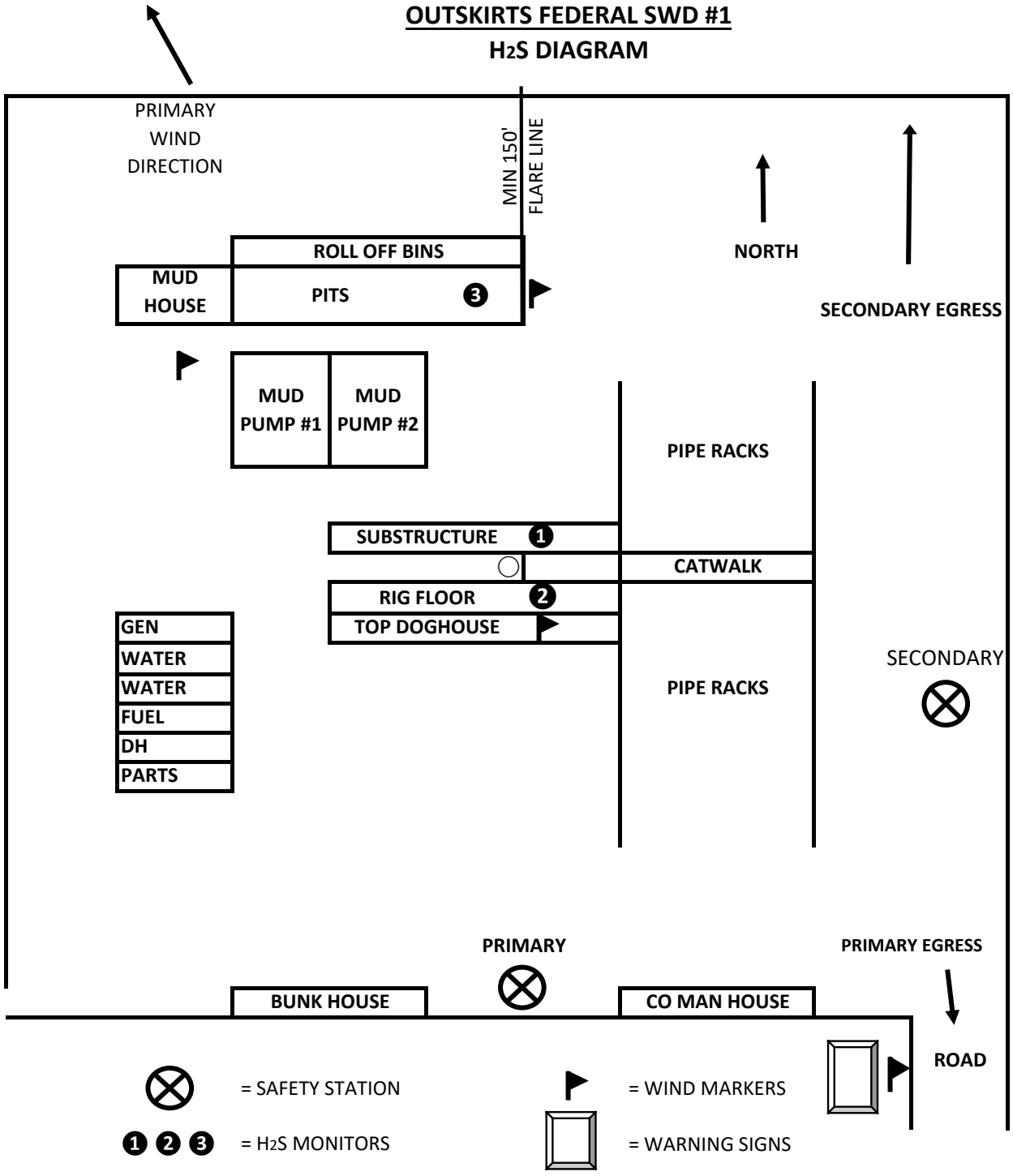
Closest Medical Facility - Lea Regional Medical Center (575) 392-7798

Permian Oilfield Partners Hobbs Office (817) 606-7630

- Sean Puryear - (817) 600-8772
- Tyler Ledlow - (580) 603-1323
- Gary Fisher - (720) 315-8035

OUTSKIRTS FEDERAL SWD #1

H_2S DIAGRAM



Permian Oilfield Partners, LLC

Lea County, NM (NAD 83)
Outskirts Federal SWD #1
Outskirts Federal SWD #1

OH

Plan: Permit Plan

Standard Planning Report

27 September, 2024

SDT

Planning Report

Database:	EDM 5000 Multi User Db	**Local Co-ordinate Reference:**	Well Outskirts Federal SWD #1
Company:	Permian Oilfield Partners, LLC	**TVD Reference:**	3642+30 @ 3672.00usft (TBD)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	3642+30 @ 3672.00usft (TBD)
Site:	Outskirts Federal SWD #1	**North Reference:**	Grid
Well:	Outskirts Federal SWD #1	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Permit Plan		

Project Lea County, NM (NAD 83)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Outskirts Federal SWD #1

Site Position:		**Northing:**	601,729.54 usft	**Latitude:**	32.652378
From:	Lat/Long	**Easting:**	749,568.68 usft	**Longitude:**	-103.656767
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well Outskirts Federal SWD #1

Well Position	**+N/-S**	0.00 usft	**Northing:**	601,729.54 usft	**Latitude:**	32.652378
	+E/-W	0.00 usft	**Easting:**	749,568.68 usft	**Longitude:**	-103.656767
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,642.00 usft
Grid Convergence:		0.37 °				

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/27/2024	6.23	60.34	47,429.51399024

Design Permit Plan

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	0.00

Plan Survey Tool Program **Date** 9/27/2024

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	15,659.00	Permit Plan (OH)	MWD+HRGM OWSG Rev5 OWSG MWD + HRGM	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15,659.00	0.00	0.00	15,659.00	0.00	0.00	0.00	0.00	0.00	0.00	

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Well:	Outskirts Federal SWD #1	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Permit Plan		

Planned Survey

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0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

SDT

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	0.00	0.00
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00
10,100.00	0.00	0.00	10,100.00	0.00	0.00	0.00	0.00	0.00	0.00
10,200.00	0.00	0.00	10,200.00	0.00	0.00	0.00	0.00	0.00	0.00
10,300.00	0.00	0.00	10,300.00	0.00	0.00	0.00	0.00	0.00	0.00
10,400.00	0.00	0.00	10,400.00	0.00	0.00	0.00	0.00	0.00	0.00
10,500.00	0.00	0.00	10,500.00	0.00	0.00	0.00	0.00	0.00	0.00
10,600.00	0.00	0.00	10,600.00	0.00	0.00	0.00	0.00	0.00	0.00
10,700.00	0.00	0.00	10,700.00	0.00	0.00	0.00	0.00	0.00	0.00

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10,800.00	0.00	0.00	10,800.00	0.00	0.00	0.00	0.00	0.00	0.00
10,900.00	0.00	0.00	10,900.00	0.00	0.00	0.00	0.00	0.00	0.00
11,000.00	0.00	0.00	11,000.00	0.00	0.00	0.00	0.00	0.00	0.00
11,100.00	0.00	0.00	11,100.00	0.00	0.00	0.00	0.00	0.00	0.00
11,200.00	0.00	0.00	11,200.00	0.00	0.00	0.00	0.00	0.00	0.00
11,300.00	0.00	0.00	11,300.00	0.00	0.00	0.00	0.00	0.00	0.00
11,400.00	0.00	0.00	11,400.00	0.00	0.00	0.00	0.00	0.00	0.00
11,500.00	0.00	0.00	11,500.00	0.00	0.00	0.00	0.00	0.00	0.00
11,600.00	0.00	0.00	11,600.00	0.00	0.00	0.00	0.00	0.00	0.00
11,700.00	0.00	0.00	11,700.00	0.00	0.00	0.00	0.00	0.00	0.00
11,800.00	0.00	0.00	11,800.00	0.00	0.00	0.00	0.00	0.00	0.00
11,900.00	0.00	0.00	11,900.00	0.00	0.00	0.00	0.00	0.00	0.00
12,000.00	0.00	0.00	12,000.00	0.00	0.00	0.00	0.00	0.00	0.00
12,100.00	0.00	0.00	12,100.00	0.00	0.00	0.00	0.00	0.00	0.00
12,200.00	0.00	0.00	12,200.00	0.00	0.00	0.00	0.00	0.00	0.00
12,300.00	0.00	0.00	12,300.00	0.00	0.00	0.00	0.00	0.00	0.00
12,400.00	0.00	0.00	12,400.00	0.00	0.00	0.00	0.00	0.00	0.00
12,500.00	0.00	0.00	12,500.00	0.00	0.00	0.00	0.00	0.00	0.00
12,600.00	0.00	0.00	12,600.00	0.00	0.00	0.00	0.00	0.00	0.00
12,700.00	0.00	0.00	12,700.00	0.00	0.00	0.00	0.00	0.00	0.00
12,800.00	0.00	0.00	12,800.00	0.00	0.00	0.00	0.00	0.00	0.00
12,900.00	0.00	0.00	12,900.00	0.00	0.00	0.00	0.00	0.00	0.00
13,000.00	0.00	0.00	13,000.00	0.00	0.00	0.00	0.00	0.00	0.00
13,100.00	0.00	0.00	13,100.00	0.00	0.00	0.00	0.00	0.00	0.00
13,200.00	0.00	0.00	13,200.00	0.00	0.00	0.00	0.00	0.00	0.00
13,300.00	0.00	0.00	13,300.00	0.00	0.00	0.00	0.00	0.00	0.00
13,400.00	0.00	0.00	13,400.00	0.00	0.00	0.00	0.00	0.00	0.00
13,500.00	0.00	0.00	13,500.00	0.00	0.00	0.00	0.00	0.00	0.00
13,600.00	0.00	0.00	13,600.00	0.00	0.00	0.00	0.00	0.00	0.00
13,700.00	0.00	0.00	13,700.00	0.00	0.00	0.00	0.00	0.00	0.00
13,800.00	0.00	0.00	13,800.00	0.00	0.00	0.00	0.00	0.00	0.00
13,900.00	0.00	0.00	13,900.00	0.00	0.00	0.00	0.00	0.00	0.00
14,000.00	0.00	0.00	14,000.00	0.00	0.00	0.00	0.00	0.00	0.00
14,100.00	0.00	0.00	14,100.00	0.00	0.00	0.00	0.00	0.00	0.00
14,200.00	0.00	0.00	14,200.00	0.00	0.00	0.00	0.00	0.00	0.00
14,300.00	0.00	0.00	14,300.00	0.00	0.00	0.00	0.00	0.00	0.00
14,400.00	0.00	0.00	14,400.00	0.00	0.00	0.00	0.00	0.00	0.00
14,500.00	0.00	0.00	14,500.00	0.00	0.00	0.00	0.00	0.00	0.00
14,600.00	0.00	0.00	14,600.00	0.00	0.00	0.00	0.00	0.00	0.00
14,700.00	0.00	0.00	14,700.00	0.00	0.00	0.00	0.00	0.00	0.00
14,800.00	0.00	0.00	14,800.00	0.00	0.00	0.00	0.00	0.00	0.00
14,900.00	0.00	0.00	14,900.00	0.00	0.00	0.00	0.00	0.00	0.00
15,000.00	0.00	0.00	15,000.00	0.00	0.00	0.00	0.00	0.00	0.00
15,100.00	0.00	0.00	15,100.00	0.00	0.00	0.00	0.00	0.00	0.00
15,200.00	0.00	0.00	15,200.00	0.00	0.00	0.00	0.00	0.00	0.00
15,300.00	0.00	0.00	15,300.00	0.00	0.00	0.00	0.00	0.00	0.00
15,400.00	0.00	0.00	15,400.00	0.00	0.00	0.00	0.00	0.00	0.00
15,500.00	0.00	0.00	15,500.00	0.00	0.00	0.00	0.00	0.00	0.00
15,600.00	0.00	0.00	15,600.00	0.00	0.00	0.00	0.00	0.00	0.00
15,659.00	0.00	0.00	15,659.00	0.00	0.00	0.00	0.00	0.00	0.00
TD at 15659.00									

SDT
Planning Report

Database:	EDM 5000 Multi User Db	**Local Co-ordinate Reference:**	Well Outskirts Federal SWD #1
Company:	Permian Oilfield Partners, LLC	**TVD Reference:**	3642+30 @ 3672.00usft (TBD)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	3642+30 @ 3672.00usft (TBD)
Site:	Outskirts Federal SWD #1	**North Reference:**	Grid
Well:	Outskirts Federal SWD #1	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Permit Plan		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Outskirts Federal SWD # - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	601,729.54	749,568.68	32.652378	-103.656767
Outskirts Federal SWD # - plan hits target center - Point	0.00	0.00	15,659.00	0.00	0.00	601,729.54	749,568.68	32.652378	-103.656767

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,449.00	1,449.00	20" Surface Casing	20	26
3,302.00	3,302.00	16" Intermediate Casing	16	18-1/2
11,004.00	11,004.00	9-5/8" Intermediate Casing	9-5/8	12-1/4
14,649.00	14,649.00	7-5/8" Intermediate Liner	7-5/8	8-3/4

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
15,659.00	15,659.00	0.00	0.00	TD at 15659.00

Permian Oilfield Partne
Outskirts Federal SWD #1

September 27, 2024

PREPARED FOR:
Mr. Sean Puryear
Permian Oilfield Partners
Hobbs, NM

Outskirts Federal SWD #1
Fusselman Test to 15659 Depth

LeaCounty, New Mexico

Prepared By:
Chris Smith

Permian Oilfield Partners
Outskirts Federal SWD #1
S22-T19S-R33E
LeaCounty, New Mexico

September 27, 2024

Mr. Sean Puryear
Permian Oilfield Partners
Hobbs, NM

Mojo Mud would like to thank you for the opportunity to participate in your upcoming drilling program in Lea County, New Mexico. We appreciate the opportunity to work with Permian Oilfield Partners toward the common goal of reducing total well costs and optimizing services used on Permian Oilfield Partners wells in the .

Mojo is focused on team building to do the job better. Having all parties involved sharing information, communicating ideas, capturing data and consistently being on the same page of expectations and goals will ultimately help us reach our common goal of economic success. Our intentions are to aid in Permian Oilfield Partners success of drilling performance and reducing overall well costs. The more efficient and economical we all make it to drill, the more wells there will be to drill. Mojo wants to be a part of the longevity of drilling more wells and will do our part to help get us all there.

Mojo Mud estimates the total cost of drilling fluids at $ 125792.42 to $ 135792.42 and is based on 23 - 25 days of drill time. This estimate includes all material, drayage, taxes, and engineering services to a total depth of 15659(MD).

Stock Points and Trucking

Our Primary stock point for this well is Midland Texas with a back up stock point in Odessa Texas.

Engineering and Staffing

Mud Engineer	TBD	-
Sales	Chris Smith	(405) 593-0380
Area Manager	Chris Smith	(817) 584-5840

OBM Lost Price Information

The current cost per lost barrel of Oil Based Mud is $187
Please note that whole OBM pricing will be based on the volatile price of diesel.

Sincerely,

Chris Smith / Jeremy Jackson
Owners
817.584.5840 / 405.5

Permian Oilfield Partners
Outskirts Federal SWD #1
S22-T19S-R33E
LeaCounty, New Mexico

Mojo Mud Price List

September 27, 2024

Weighting Agents										
Product	Packaging	UOM	lbs.	Pricing		Product	Packaging	UOM	lbs.	Pricing
Barite 4.1, 100#	sack	lbs.	100	$ 19.98		Barite, ton	bulk	ton	2000	$ 259.00

Water Base Chemicals										
Product	Packaging	UOM	lbs./gal	Pricing		Product	Packaging	UOM	lbs./gal	Pricing
Aluminum Stearate, 25#	sack	lbs.	25	$ 142.66		Pac R, 50#	sack	lbs.	50	$ 161.00
Caustic Soda, 50#	sack	lbs.	50	$ 65.76		Pac LV, 50#	sack	lbs.	50	$ 116.50
Bentonite, 100#	sack	lbs.	100	$ 13.50		Salt Gel, 50#	sack	lbs.	50	$ 18.48
White Starch, 50#	sack	lbs.	50	$ 48.28		Soda Ash, 50#	sack	lbs.	50	$ 20.01
Lime, 50#	sack	lbs.	50	$ 9.85		Sodium Bicarbonate, 50#	sack	lbs.	50	$ 26.50

Lost Circulation Materials										
Product	Packaging	UOM	lbs./gal	Pricing		Product	Packaging	UOM	lbs./gal	Pricing
LCF Blend, 25#	sack	lbs.	25	$ 18.00		LCF 1/2, 25#	sack	lbs.	25	$ 18.00
Calcium Carbonate Coarse, 50#	sack	lbs.	50	$ 8.30		LCF Fine, 25#	sack	lbs.	25	$ 19.00
Calcium Carbonate Fine, 50#	sack	lbs.	50	$ 8.30		Mica Fine, 25#	sack	lbs.	25	$ 21.56
Calcium Carbonate Medium, 50#	sack	lbs.	50	$ 8.30						
Cedar Fiber, 40#	sack	lbs.	40	$ 11.75						
Cottonseed Hulls, 50#	sack	lbs.	50	$ 21.50						
Drilling Paper, 30#	sack	lbs.	40	$ 17.99						

Specialty Products										
Product	Packaging	UOM	lbs./gal	Pricing		Product	Packaging	UOM	lbs./gal	Pricing
BIOCIDE, 5 gal	pail	gallon	45	$ 160.00		MF-55, 5 gal	pail	gallon	45	$ 113.50
Xanthan Gum, 25#	sack	lbs.	25	$ 159.00		Oil Dry, 50#	sack	lbs.	50	$ 15.75
PHPA/POLYVIS II, 5 gal	pail	gallon	45	$ 85.32		Pipe Free, 55 gal	drum	gallon	455	$ 1,254.00
Defoamer - A, 5 gal	pail	gallon	45	$ 82.77		SAPP Sticks, stick	stick	each	1	$ 6.50
Co-Polymer Beads, 50#	sack	lbs.	50	$ 156.50		Soap Sticks, stick	stick	each	1	$ 7.54
Glass Beads Coarse, 50#	sack	lbs.	50	$ 98.50		Drilling Detergent, 5 gal	pail	gallon	5	$ 58.46
Corrosion Inhibitor, 1 gal	tote	gallon	8	$ 15.80		Rig Wash, 55 gal	drum	gallon	455	$ 569.88
H2S Scavenger, 55 gal	drum	gallon	55	$ 685.00		Myacide-5G, 5 gal	pail	gallon	45	$ 140.00
Oxygen Scavenger, gal	each	gallon	8	$ 10.50		Zinc Oxide, 50#	sack	lbs.	50	$ 176.00
WBM Emulsifier, gal	tote	gallon	8	$ 15.56		Desco, 25#	sack	lbs.	25	$ 70.07

Oil Base Chemicals										
Product	Packaging	UOM	lbs./gal	Pricing		Product	Packaging	UOM	lbs./gal	Pricing
Calcium Chloride, 50#	sack	lbs.	50	$ 21.95		Claytone II	sack	lbs.	50	$ 147.50
Primary Emulsifier, gal	tote	gallon	7	$ 16.16		Soltex, 50#	sack	lbs.	50	$ 118.02
Secondary Emulsifier, gal	tote	gallon	7	$ 17.53		Ultraphalt Sulfonated Asphalt, 50#	sack	lbs.	50	$ 93.67
Wetting Agent, gal	tote	gallon	7	$ 15.11		Gilsonite, 50#	sack	lbs.	50	$ 53.33
OBM- RM LEM, 55 gal	drum	gallon	455	$ 969.00						

Transportation										
Trucking	each			$ 1,350.00						

Equipment/Misc										
Bulk Tank	each	day		$ 50.00		OBM Lease	each	bbl		$ 3.00
Blower Rental	each	day		$ 50.00		24/hr Service	each	day		$ 1,150.00
Forklift	each	hour		$ 150.00		Trucking	each			$ 1,350.00
Pallets	each	each		$ 30.00						
Shrink Wrap	each	each		$ 20.00						
Drum Disposal	each	each		$ 40.00						
Tote Disposal	each	each		$ 200.00						

Permian Oilfield Partners
Outskirts Federal SWD #1
S22-T19S-R33E
LeaCounty, New Mexico

September 27, 2024

Interval 1 Surface 1449									
Pit Vol	500	Hole Vol	951.5		Water GPM		5	Mud Built Daily	214.3
Drill Days	2	Ttl Bbls	1880.1		Water bbls/Day		171.4	Daily Dilution %	27%
Product	#/Interval	Cost/sk	lbs/sk	lbs/bbl	Ttl Cost	lbs Mixed		**Interval Cost**	**$ 10,429.39**
Bentonite, 100#	100	$ 13.50	100 lbs	5.3	$ 1,350.00	10,000.00			
SAPP Sticks, stick	10	$ 6.50	1 lbs	0.0	$ 65.00	10.00		Eng Cost	$ 2,300.00
Lime, 50#	10	$ 9.85	50 lbs	0.3	$ 98.50	500.00		Tank Rental	$ 200.00
MF-55, 5 gal	2	$ 113.50	45 lbs	0.0	$ 227.00	90.00		Trucking	$ 5,400.00
Soap Sticks, stick	10	$ 7.54	1 lbs	0.0	$ 75.40	10.00		Taxes	$ 613.49
	10							Blower Rental	$ 100.00
	5								
	100								
				SubTotal	$ 1,815.90				

Interval 2 1st Intermediate 3302									
Pit Vol	500	Hole Vol	1097.8		Water GPM		5	Mud Built Daily	214.3
Drill Days	2	Ttl Bbls	2026.4		Water bbls/Day		171.4	Daily Dilution %	13%
Product	#/Interval	Cost/sk	lbs/sk	lbs/bbl	Ttl Cost	lbs Mixed		**Interval Cost**	**$ 12,647.83**
Salt Gel, 50#	100	$ 18.48	50 lbs	2.5	$ 1,848.00	5,000.00		**Running Cost**	**$ 23,077.22**
Caustic Soda, 50#	50	$ 65.76	50 lbs	1.2	$ 3,288.00	2,500.00			
Soda Ash, 50#	10	$ 20.01	50 lbs	0.2	$ 200.10	500.00		Eng Cost	$ 2,300.00
Lime, 50#	10	$ 9.85	50 lbs	0.2	$ 98.50	500.00		Tank Rental	$ 200.00
Aluminum Stearate, 25#	5	$ 142.66	25 lbs	0.1	$ 713.30	125.00		Trucking	$ 1,350.00
Soap Sticks, stick	10	$ 7.54	1 lbs	0.0	$ 75.40	10.00		Taxes	$ 743.99
SAPP Sticks, stick	10	$ 6.50	1 lbs	0.0	$ 65.00	10.00		Blower	$ 100.00
Defoamer - A, 5 gal	2	$ 82.77	45 lbs	0.0	$ 165.54	90.00			
Pallets	30	$ 30.00			$ 900.00				
Shrink Wrap	30	$ 20.00			$ 600.00				
				SubTotal	$ 7,953.84				

Interval 3 2nd Intermediate 11004									
Pit Vol	500	Hole Vol	1604.1		Water GPM		2	Mud Built Daily	85.7
Drill Days	10	Ttl Bbls	2961.3		Water bbls/Day		68.6	Daily Dilution %	4%
Product	#/Interval	Cost/sk	lbs/sk	lbs/bbl	Ttl Cost	lbs Mixed		**Interval Cost**	**$ 21,449.15**
MF-55, 5 gal	10	$ 113.50	45 lbs	0.2	$ 1,135.00	450.00		**Runnning Cost**	**$ 44,526.38**
Caustic Soda, 50#	20	$ 65.76	50 lbs	0.3	$ 1,315.20	1,000.00			
Defoamer - A, 5 gal	5	$ 82.77	45 lbs	0.1	$ 413.85	225.00		Eng Cost	$ 11,500.00
Salt Gel, 50#	150	$ 18.48	50 lbs	2.5	$ 2,772.00	7,500.00		Tank Rental	$ 1,000.00
Soap Sticks, stick	20	$ 7.54	1 lbs	0.0	$ 150.80	20.00		Trucking	$ 1,350.00
SAPP Sticks, stick	20	$ 6.50	1 lbs	0.0	$ 130.00	20.00		Taxes	$ 1,182.30
								Blower	$ 500.00
				SubTotal	$ 5,916.85				

Interval 4 3rd Intermediate 14469									
Pit Vol	500	Hole Vol	1076.1		Water GPM		2	Mud Built Daily	85.7
Drill Days	7	Ttl Bbls	2176.1		Water bbls/Day		68.6	Daily Dilution %	5%
	#/Interval	Cost/sk	lbs/sk	lbs/bbl	Ttl Cost	lbs Mixed		**Interval Cost**	**$ 74,193.76**
Pac LV, 50#	80	$ 116.50	50 lbs	1.8	$ 9,320.00	4,000.00		**Runnning Cost**	**$ 118,720.13**
Xanthan Gum, 25#	70	$ 159.00	25 lbs	0.8	$ 11,130.00	1,750.00			
MF-55, 5 gal	10	$ 113.50	45 lbs	0.2	$ 1,135.00	450.00		Eng Cost	$ 8,050.00
Ultraphalt Sulfonated Asphalt, 50#	100	$ 93.67	50 lbs	2.3	$ 9,367.00	5,000.00		Rental	$ 700.00
Caustic Soda, 50#	30	$ 65.76	50 lbs	0.7	$ 1,972.80	1,500.00		Trucking	$ 6,000.00
BIOCIDE, 5 gal	7	$ 160.00	45 lbs	0.1	$ 1,120.00	315.00		Taxes	$ 4,011.40
Defoamer - S, 5 gal	7	$ 100.08	45 lbs	0.1	$ 700.56	315.00		Blower	$ 350.00
White Starch, 50#	60	$ 48.28	50 lbs	1.4	$ 2,896.80	3,000.00			
Soda Ash, 50#	20	$ 20.01	50 lbs	0.5	$ 400.20	1,000.00			
Pallets	30	$ 30.00			$ 900.00				
Shrink Wrap	30	$ 20.00	5400 lbs		$ 600.00				
Barite, ton	60	$ 259.00	2000 lbs	55.1	$ 15,540.00	120,000.00			
				SubTotal	$ 55,082.36				

Interval 5 4th Intermediate 15659									
Pit Vol	500	Hole Vol	642.7	1142.7	Water GPM		5	Mud Built Daily	50
Drill Days	3	Ttl Bbls	1807.0		Water bbls/Day		171.4	Daily Dilution %	19%
	#/Interval				Ttl Cost	lbs Mixed		**Interval Cost**	**$ 12,072.29**
Magma Fiber Coarse, 30#	10	$ 35.97	30 lbs	0.2	$ 359.70	300.00		**Runnning Cost**	**$ 130,792.42**
Caustic Soda, 50#	10	$ 65.76	50 lbs	0.3	$ 657.60	500.00			
Xanthan Gum, 25#	5	$ 159.00	25 lbs	0.1	$ 795.00	125.00		Eng Cost	$ 3,450.00

MF-55, 5 gal	5	$ 113.50	45 lbs	0.1	$ 567.50	225.00		Rental	$ 300.00
								Trucking	$ 5,400.00
								Taxes	$ 392.49
								Blower	$ 150.00
				SubTotal	$ 2,379.80				

Permian Oilfield Partners
Outskirts Federal SWD #1
S22-T19S-R33E
LeaCounty, New Mexico

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DRILLING PARAMETERS ZONE CHART

Formation Tops

Formation	Depth	Issues
Surface		
1st Intermediate		
2nd Intermediate		
3rd Intermediate		
4th Intermediate		

Casing Program

Depth	Hole Size	Casing Size
1449	26	20
3302	18 1/2	16
11004	12 1/4	9 5/8
14649	20 3/4	7 5/8

Drilling Properties - By Interval

Depth	Denisty	Viscosity	PV	YP	Gels	pH/Lime	HTPH/FL	OWR	WPS	LGS
0 to 1449	8.4-9.0	29-36	3-5	1-3	1-2	10	NC			
1449 to 3302	9.9-10.1	29-36	3-5	1-3	1-2	10	NC			
33002 to 11004	9.0-10.0	29-36	3-5	1-3	1-2	10-10.5	NC			
11004 to 14469	11-11.9	45-55	10-20	10-15	8-10	9-10	<5			<9
14469 to 15659	8.4-9.2	29-36	3-5	1-3	1-2	8	NC			0

Permian Oilfield Partners
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SUGGESTED MUD PROPERTIES

Interval 1 - Surface - 0 to 1449 - $10429.39 Interval Cost

System:SPUD

Density	Viscosity	PV	YP	Gels	pH	Fluid Loss			
8.4-9.0	29-36	3-5	1-3	1-2	10.00	NC		<4000	

If values are outside of Interal parameters, please address immediately before drilling ahead.

1	Surface will be drilled with a 40-45 bentonite spud mud boosted with lime. High vis sweeps at TD are encouraged
2	Surface - Keep the MW below 9.4 ppg with solids control/dump and dilute. LCM should consist of cedar fiber and LCF

Offset Averages		
Drill Days	Max MW	Cost

EXPECTED FORMATIONS FOR THIS INTERVAL		

Recommendation for Losses	TD Recommendation
If minor losses, consider pumping Drill Paper or other course LCM to bridge over lost zones. If complete losses are observed consider blind drilling to TD - circulating high vis sweeps to ensure clean well bore. Use caution when TOH and watch for washouts and/or bridges.	At TD - Consider pumping 1-2 high vis sweeps and circulate 2-3 bottoms up to ensure a clean wellbore. Watch cuttings at shakers for signs of well bore cleaning up before TOH.

Products to Have On Location for this Interval:									
Bentonite, 100#	MF-55, 5 gal	Soap Sticks, stick	0	0	0				

Permian Oilfield Partners
Outskirts Federal SWD #1
S22-T19S-R33E
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SUGGESTED MUD PROPERTIES

Interval 2 - 1st Intermediate - 1449 to 3302 - $12647.83 Interval Cost

System:Brine

Density	Viscosity	PV	YP	Gels	pH	Fluid Loss			
9.9-10.1	29-36	3-5	1-3	1-2	10	NC		170-186000	

If values are outside of Interal parameters, please address immediately before drilling ahead.

1	Drill out in to the 1st intermediate with a 10 ppg brine
2	Sweep the hole with salt gel (50-60 vis) as required
3	Adjust pH to 10
4	MF 55 can be used for solids flocculation and as a viscosifier to change the flow profile of the annulus
5	High vis salt gel sweeps and pill can be utilized at TD

Offset Averages		
Drill Days	Max MW	Cost

EXPECTED FORMATIONS FOR THIS INTERVAL		

Recommendation for Losses	TD Recommendation
If minor losses, consider pumping Drill Paper/Cedar/LCF Blend/ Fiber or other course LCM to bridge over lost zones. If complete losses are observed consider blind drilling to TD - circulating high vis sweeps to ensure clean well bore. Use caution when TOH and watch for washouts and/or bridges. ** Always Consult w/ MWD/Directional to determine Concentrations for tools***	At TD - Consider pumping 1-2 high vis sweeps and circulate 2-3 bottoms up to ensure a clean wellbore. Watch cuttings at shakers for signs of well bore cleaning up before TOH.

Products to Have On Location for this Interval:									
Salt Gel, 50#	Caustic Soda, 50#	Soda Ash, 50#	Lime, 50#	Aluminum Stearate, 25#	Soap Sticks, stick	SAPP Sticks, stick	Defoamer - A, 5 gal	0	
0	Pallets	Shrink Wrap							

Permian Oilfield Partners
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SUGGESTED MUD PROPERTIES

Interval 3 - 2nd Intermediate - 33002 to 11004 - $21449.15 Interval Cost

System:Cut Brine

Density	Viscosity	PV	YP	Gels	pH	Fluid Loss		Chlorides	
9.0-10.0	29-36	3-5	1-3	1-2	10-10.5	NC		60-186000	

If values are outside of Interal parameters, please address immediately before drilling ahead.

1	Drill out with 9.0 ppg cut brine
2	Sweep hole with MF55 and salt gel - alternating in salt gel every 3rd stand as need be for hole cleaning
3	Losses can be treated with LCF Blend and cedar fiber
4	White starch can be utilized at TD for casing and logging operations
5	Run H2S scavenger as required

Offset Averages		
Drill Days	Max MW	Cost

EXPECTED FORMATIONS FOR THIS INTERVAL		

Recommendation for Losses	TD Recommendation
Keep various sized LCM Material on hand for losses. Always confer with Directional/MWD personel on location to determine LCM Concentrations allowed with their tools.	At TD - Consider pumping 1-2 high vis sweeps with salt gel and circulate 2-3 bottoms up to ensure a clean wellbore. Watch cuttings at shakers for signs of well bore cleaning up before TOH.

Products to Have On Location for this Interval:									
MF-55, 5 gal	Caustic Soda, 50#	Defoamer - A, 5 gal	Salt Gel, 50#	Soap Sticks, stick	SAPP Sticks, stick	0	0	0	
0	0								

Permian Oilfield Partners
Outskirts Federal SWD #1
S22-T19S-R33E
LeaCounty, New Mexico

September 27, 2024

SUGGESTED MUD PROPERTIES

Interval 4 - 3rd Intermediate - 11004 to 14469 - $74193.76 Interval Cost

System:WBM

Density	Viscosity	PV	YP	Gels	pH	Fluid Loss		Chlorides	LGS
11-11.9	45-55	10-20	10-15	8-10	9-10	<5		100-186000	<9

If values are outside of Interal parameters, please address immediately before drilling ahead.

1	Utilize 10 ppg brine as base fluid for mudding up - drop hardness with soda ash
2	Prior to drilling out - drop the water loss to under 5cc' ultizing PAC LV/starch/sulphonated asphalt
3	Maintain for the entire interval to protect the Wolfcamp to the Devonian top
4	Increase MW as necessary for gas shows
5	Increase the visocsity with xanthan gum for hole cleaning and carrying capacity as barite addtions are required
6	Sweep the hole adequately at TD and spot weighted pills for hydrostatic correction as necessary
7	MOJO GOLD lubricant can be utilized for torque reduction, if required

Offset Averages		
Drill Days	Max MW	Cost

EXPECTED FORMATIONS FOR THIS INTERVAL		

Recommendation for Losses	TD Pill Recommendation
Keep various sized LCM Material on hand for losses. Always confer with Directional/MWD personel on location to determine LCM Concentrations allowed with their tools.	

Products to Have On Location for this Interval:									
Pac LV, 50#	Xanthan Gum, 25#	MF-55, 5 gal	Ultraphalt Sulfonated Asphalt, 50#	Caustic Soda, 50#	BIOCIDE, 5 gal	Defoamer - S, 5 gal	White Starch, 50#	Soda Ash, 50#	
Pallets	Barite, ton	0	0						

Permian Oilfield Partners
Outskirts Federal SWD #1
S22-T19S-R33E
Lea, New Mexico

September 27, 2024

SUGGESTED MUD PROPERTIES

Interval 5 - 4th Intermediate - 14469 to 15659 - $12072.29 Interval Cost

System:WBM

Density	Viscosity	PV	YP	Gels	pH	Fluid Loss			6 Speed
8.4-9.2	29-36	3-5	1-3	1-2	8	NC		0	0

If values are outside of Interal parameters, please address immediately before drilling ahead.

1	Drill out with fresh water in to open hole interval
2	Utilize Magna Fiber (acid soluble LCM) as necessary
3	Sweep the hole with MF55/xan/soap and SAPP sticks

Offset Averages		
Drill Days	Max MW	Cost

EXPECTED FORMATIONS FOR THIS INTERVAL		

Recommendation for Losses	TD Pill Recommendation
Keep various sized LCM Material on hand for losses. Always confer with Directional/MWD personel on location to determine LCM Concentrations allowed with their tools.	

Products to Have On Location for this Interval:									
Magma Fiber Coarse, 30#	Caustic Soda, 50#	Xanthan Gum, 25#	MF-55, 5 gal	0	0	0	0	0	
0	0	0							

Permian Oilfield Partners
Outskirts Federal SWD #1
S22-T19S-R33E
LeaCounty, New Mexico

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WBM Lost Circulation Recommendations

Prevention: Option 1 (Seepage)
Drilling Paper @ 3-5 lb/bbl *Mix in Suction Tank*

Prevention: Option 2 (Seepage)
Drilling Paper @ 3-5 lb/bbl *Mix in Suction Tank*
Cedar @ 3-5 lb/bbl

Prevention: Option 3 (100% Returns) - 60 bbl Sweeps
Paper @ 5 lb/bbl 2*0ppb mixture. If possible,*
Cedar Fiber @ 5lb/bbl *have it premixed in pill tank.*
Fiber Seal @ 5 lb/bbl
Cal Carb @ 5 lb/bbl

**** All recommendations may be adjusted on location as Required and are only suggestions****

Partial Losses: Option 1 (50 - 90% Returns) - 50 bbl Sweeps
Fiber Seal @ 15 lb/bbl *Mix in Suction Tank*
Cedar Fiber @ 5 lb/bbl
Walnut Shells @ 5 lb/bbl Sawdust @ 5 lb/bbl

Partial Losses: Option 2 (50 - 90% Returns) - 50 bbl Sweeps
CalCarb @ 7 lb/bbl *Mix in premix and send*
Cedar Fiber @ 5 lb/bbl
Cotton Seed Hulls @ 8 lb/bbl Cal Carb MS @ 5 lb/bbl

Partial Losses: Option 3 (50-90% Returns) - 50 bbl Sweeps
CalCarb Fine/Coarse @ 30 lb/bbl *Mix in premix and send*
Cotton Seed Hulls @ 10 lb/bbl
Fiber Seal @ 10 lb/bbl
Walnut Shells @ 5 lb/bbl

Severe Losses: Option 1 (0-50% Returns) - 100 bbls
Fiber Seal @ 10 lb/bbl *40ppb mixture. If possible*
Cedar Fiber @ 10 lb/bbl *have it premixed in pill tank.*
Walnut Shells @ 5 lb/bbl
Mica Fine @ 5 lb/bbl
Cotton Seed Hulls @ 10 lb/bbl

Severe Losses: Option 2 (0-50% Returns) - 100 bbls
Fiber Seal @ 15 lb/bbl *45 ppb mixture.*
Cotton Seed Hulls @ 15 lb/bbl
Cal Carb MS @ 5 lb/bbl
Cedar Fiber @ 5 lb/bbl
Polyswell LCP @ 5 lb/bbl

Severe Losses: Option 3 (0% Returns) - 100 bbls
Fiber Seal @ 15 lb/bbl *52 ppb mixture.*
Cedar Fiber @ 5 lb/bbl
Cotton Seed Hulls @ 18 lb/bbl

Severe Losses: Option 4 (0-50% Returns) - 50 bbls
Add 7 lb/bbl Polyswell LCP and 15 lb/bbl Cal Carb MS to 50 bbls water or active mud. Allow to hydrate for 15-30 minutes. As pumping begins, add an additional 5-7 lb/bbl Polyswell LCP. Pump pill as fast as possible to loss area and clear pipe. Pull above loss zone immediately. If possible Squeeze. Leave pill to continue hydrating for 2-3 hours across the theif zone and repeat as needed.

***When using Polyswell LCP, completely clear mixture through bit and drillpipe.**

****Not recommended to use Polyswell LCP when by-passing shakers.**

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.
Outskirts Federal SWD #1
224' FNL, 845' FWL
Sec. 22, T19S, R33E, Lea Co. NM
Lat 32.6523783° N, Lon -103.6567663° W
GL 3642', RKB 3672'

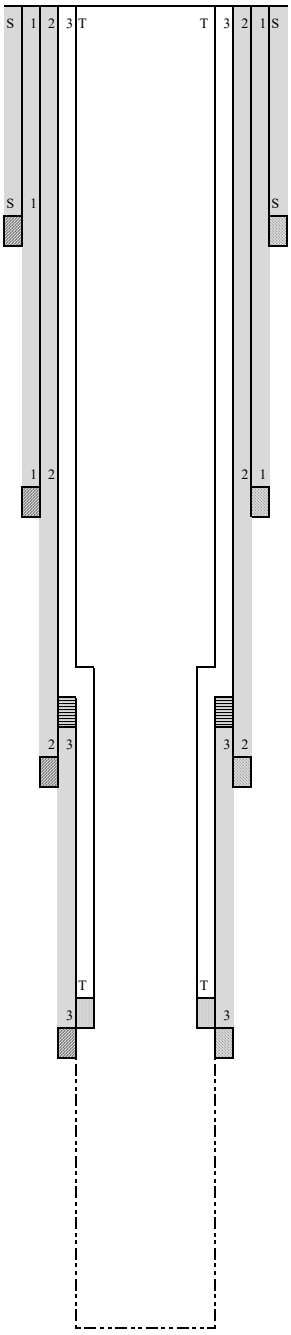
Surface - (Conventional)
Hole Size: 26"
Casing: 20" - 106.5# N-80 BTC Casing
Depth Top: Surface
Depth Btm: 1449'
Cement: 2695 sks - Class C + Additives (100% Excess)
Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)
Hole Size: 17.5"
Casing: 13.375" - 68# HCP-110 BTC Casing
Depth Top: Surface
Depth Btm: 5285'
Cement: 1295 sks - Class C + Additives (50% excess)
Cement Top: Surface - (Circulate)

Intermediate #2 - (Conventional)
Hole Size: 12.25"
Casing: 9.625" - 40# HCP110 BTC Casing
Depth Top: Surface
Depth Btm: 11004'
Cement: 2060 sks - Class C + Additives (35% excess)
Cement Top: Surface - (Circulate)
ECP/DV Tool: 5385'

Intermediate #3 - (Liner)
Hole Size: 8.75"
Casing: 7.625" - 39# HCL-80 FJ Casing
Depth Top: 10804'
Depth Btm: 14649'
Cement: 325 sks - Class H + Additives (25% excess)
Cement Top: 10804' - (Circulate & Bond Log)

Intermediate #4 - (Open Hole)
Hole Size: 6.5"
Depth: 15659'
Inj. Interval: 14649' - 15659' (Open-Hole Completion)



Tubing - (Tapered)
Tubing Depth: 14604'
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
X/O Depth: 10804'
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 14614'
Packer: 5.5" - Perma-Pak or Equivalent (Inconel)
Packer Fluid: 8.4 ppg FW + Additives

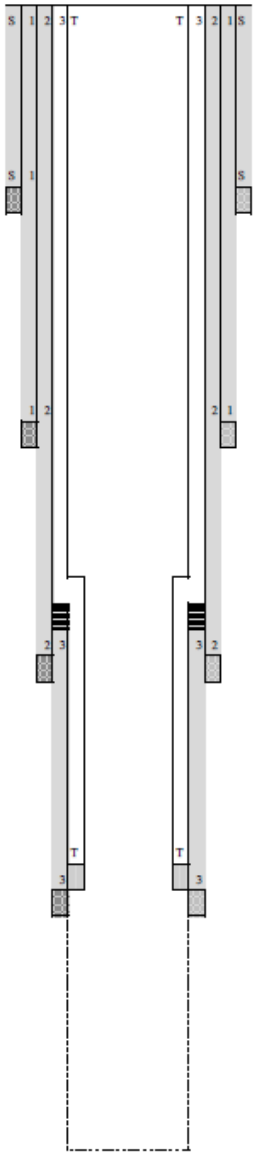
Drilling Program

Permian Oilfield Partners LLC
Outskirts Federal SWD #1
Lea County, NM

API #TBD
Class II UIC #SWD-2609
Property Code TBD
Lat. 32.6523783, Lon. -103.6567663
224' FNL & 845' FWL
Lot D, Sec. 22, Twp. 19S, Rge. 33E
GL 3642'

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.
Outskirts Federal SWD #1
224' FNL, 845' FWL
Sec. 22, T19S, R33E, Lea Co. NM
Lat 32.6523783° N, Lon -103.6567663° W
GL 3642', RKB 3672'



Surface - (Conventional)
Hole Size: 26"
Casing: 20" - 106.5# N-80 BTC Casing
Depth Top: Surface
Depth Btm: 1449'
Cement: 2695 sks - Class C + Additives (100% Excess)
Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)
Hole Size: 17.5"
Casing: 13.375" - 68# HCP-110 BTC Casing
Depth Top: Surface
Depth Btm: 5285'
Cement: 1295 sks - Class C + Additives (50% excess)
Cement Top: Surface - (Circulate)

Intermediate #2 - (Conventional)
Hole Size: 12.25"
Casing: 9.625" - 40# HCP110 BTC Casing
Depth Top: Surface
Depth Btm: 11004'
Cement: 2060 sks - Class C + Additives (35% excess)
Cement Top: Surface - (Circulate)
ECP/DV Tool: 5385'

Intermediate #3 - (Liner)
Hole Size: 8.75"
Casing: 7.625" - 39# HCL-80 FJ Casing
Depth Top: 10804'
Depth Btm: 14649'
Cement: 325 sks - Class H + Additives (25% excess)
Cement Top: 10804' - (Circulate & Bond Log)

Intermediate #4 - (Open Hole)
Hole Size: 6.5"
Depth: 15659'
Inj. Interval: 14649' - 15659' (Open-Hole Completion)

Tubing - (Tapered)
Tubing Depth: 14604'
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Packer Depth: 14614'
Packer: 5.5" - Perma-Pak or Equivalent (Inconel)
Packer Fluid: 8.4 ppg FW + Additives

Operations Contacts:

Company	Name	Responsibility	Phone
POP	TBD	Onsite Supervisor	

Data Distribution:

Name	Email	Daily Drilling Report	Daily Mud Report	Daily Directional Report	Daily Mud Log	Final Reports	Wireline Logs	Sundry Notices
TBD								

Driving Directions

TBD

Geologic Tops:

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
14004880	QUATERNARY	3642	30	30	MUDSTONE, SANDSTONE	USEABLE WATER	N
14004884	RUSTLER	2218	1424	1424	ANHYDRITE	NONE	N
14004885	SALADO	2097	1545	1545	ANHYDRITE, SALT	NONE	N
14004886	YATES	390	3252	3252	SANDSTONE, SHALE	NONE	N
14004887	DELAWARE	-1593	5235	5235	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
14004890	BONE SPRING LIME	-4246	7888	7888	LIMESTONE	NONE	N
14004891	BONE SPRING 1ST	-5477	9119	9119	SANDSTONE	NATURAL GAS, OIL	Y
14004892	BONE SPRING 2ND	-5969	9631	9631	SANDSTONE	NATURAL GAS, OIL	Y
14004893	BONE SPRING 3RD	-6961	10623	10623	LIMESTONE, SANDSTONE	NATURAL GAS, OIL	Y
14004894	WOLFCAMP	-7312	10954	10954	LIMESTONE, SHALE	NATURAL GAS, OIL	Y
14004896	STRAWN	-8485	12127	12127	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
14004898	ATOKA	-8841	12483	12483	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
14004897	MORROW	-9337	12979	12979	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
14004899	MISSISSIPPIAN	-10352	13994	13994	LIMESTONE	NONE	N
14004900	WOODFORD	-10672	14514	14514	SHALE	NONE	N
14004901	DEVONIAN	-10972	14814	14814	DOLOMITE, LIMESTONE	NONE	Y
14004902	FUSSELMAN	-11675	15317	15317	DOLOMITE	NONE	Y

Vendors:

Vendor	Contact	Phone 1	Phone 2	Item
TBD				

Location Preparation

Pad Construction:	400’ x 400’ as per plat.
Road & Signage	Ensure road is wide enough to allow truck traffic to pass in opposite directions, and that corners are large enough to allow semi-truck traffic to negotiate corner (approx. 30’ wide road, and angled on inside of corners). Install signage to direct traffic. Install well and location signage as per regulations.
Fluid Storage:	**I**nstall 100’ x 100’ containment liner w/ berms in SE corner of location. Move in 10 fluid storage frac tanks on top of liner, manifold to East. Manifold tanks together into 2 groups of 5 tanks each. Fill assembled manifolds with fresh water to check for leaks.
Cellar & Conductor:	10’ dia x 12’ Deep tinhorn cellar. Drill & set 30” conductor @ 120’ (or until hit redbed).
Conductor Hole size:	42"
Depth:	100'
Mud:	Fresh water native mud.
Casing:	From 0' to 120' – (30" CSG) Run 30" casing with open shoe.
Cement:	Class A Ready Mix Fill annulus down backside from TD to surface. Cut off casing 6” above cellar floor. Leave remnant on location for use as drilling riser.
Wellhead:	Weld on **Capping Plate**

MIRU Drilling Rig

Drilling Rig:	MIRU TBD drilling rig. Confirm receipt of DP/DC/XO inspection reports to DS-1 Cat 4 standard. Confirm all DP S-135 grade. Confirm starting DP & DC count.
Housing:	MIRU housing, sewer and water for company man, directional, mud & solids control personnel, and mud lab. MIRU mud logger trailer.
Fluids & Transfer:	MIRU rental 4" transfer pump to be located on corner of liner. Build qty. 2, 4" poly lines w/ 4" Fig 100 hammer unions and install drive overs from edge of lined pad at transfer pump location to south end of rig mud pits. MIRU cement water frac tanks and manifold together. Fill cement water tanks with city fresh water. Fill fluid storage frac tanks 1 & 2 w/ fresh water. Fill pits with fresh water and circulate system to check for leaks.
Solids Control:	MIRU solids control equipment & cuttings bins.
Mud:	Deliver fresh mud products to location as per mud program.

Surface Hole

Hole size: **26”**

Depth: **1449'**

Mud: Refer to attached mud program. Fresh water native spud mud. Need 29 to 36 visc. (mud weight not to exceed 9.0 ppg).

BHA:

1	26” Bit
1	8” Bit Sub
1	8” DC
1	8” Shock sub
1	8” Directional survey tool
1	25 ¾” 4 blade stabilizer
11	8" DC
1	XO
21	6 ½” DC
1	XO

Shaker Screens: 120’s

Tubulars:

Item type	Casing	Drill Pipe
Size	20”	5"
Weight (#/ft)	106.5	19.5
Grade	N-80	S-135
Thread	BTC	4 1/2 IF
ID (in)	19.000	4.276 (2.750 conn)
Drift (in)	18.823	
Burst (psi)	3500	17105
Collapse (psi)	770	15672
Tension (klbs)	2450	712
Min MU Torque (ft-lb)		
Rec. Torque (ft-lb)	To triangle	38044
Max MU Torque (ft-lb)		

Drilling: Weld 30" drilling conductor with flow nipple onto the 30" conductor pipe at surface. **Notify NMOCD prior to spudding well *and* in sufficient time to witness cementing of surface casing.** Run 26", BHA w/ directional survey tool and 5" DP to 1449' casing point. **Deviation not to exceed 3˚**. Seepage should be controllable with LCM sweeps. Pump heavy LCM sweep and circulate hole clean. TOOH to run casing. Clean, drift & tally casing.

Casing: From 0' to 1449' – (20" 106.5# N-80 BTC CSG)

RU casing crew. **Fill casing with drilling fluid as needed.** RU casing crew & run 20" float shoe, 1 jt 20" 106.5# N-80 BTC casing, and 20" float collar with sting-in adapter. Thread lock float shoe, float collar, and next 2 jts. Run remainder of 20" 106.5# N-80 BTC casing to surface. Centralizers to go in the middle of the first joint, on the second coupling and the fourth coupling. Float equipment should be PDC drillable. After getting casing to TD, RU API Bowl and false table. TIH w/ 5" DP and sting in adaptor. Sting into shoe.

Cement: Lead: 1835 sks HalCem + Additives
Yield – 1.805 cu ft/sk @ 13.5 ppg

Tail: 860 sks HalCem + Additives
Yield – 1.324 cu ft/sk @ 14.8 ppg

Notify NMOCD in sufficient time to witness cementing of casing. After getting casing to TD, displace annular volume with rig pump. RU cementers and cement as prescribed**.** If cement ***does not*** circulate, notify NMOCD. If cement ***does*** circulate, sting out of adapter & circulate out cement. TOH w/ DP. WOC 8 hours (subject to change based on cement lab report). Cut off conductor & 20" casing and weld on 21 ¼" slipover wellhead. NU 21 ¼" flange and weld to 20" riser. Add 2" circulating outlet to 20" riser in cellar. Weld on 20" diverter head. MIRU mud loggers to be ready to begin logging upon drill out of shoe.

Wellhead: **21 ¼" slipover wellhead**

BOPE: **21 ¼" x 20" riser w/weld on diverter & rotating head**

BOPE Testing: **None**

First Intermediate Hole

Hole size: **17½"**

Depth: **5285'**

Mud: Refer to attached mud program. Saturated Brine with 29 to 36 visc. (Mud weight not to exceed 10.3 ppg).

BHA:

1	17 ½"" Bit
1	8" Bit Sub
1	17 ½" Vertical Scout RSS
1	8" x 9 5/8" Combo Motor
1	8" Shock sub
1	8" Directional survey tool
1	17 ½" Stabilizer
12	8" DC
1	XO
21	6 ½" DC
1	XO

Shaker Screens: 120's

Tubulars:

Item type	Casing	Drill Pipe
Size	13 3/8"	5"
Weight (#/ft)	68	19.5
Grade	HC-P110	S-135
Thread	USS-CDC	4 1/2 IF
ID (in)	12.415	4.276
Drift (in)	12.259	
Burst (psi)	6910	17105
Collapse (psi)	2910	15672
Tension (klbs)	2079	712
Min MU Torque (ft-lb)	17000	38044
Max MU Torque (ft-lb)	21000	

Drilling:	**Ensure 20" riser w/weld on diverter & rotating head is installed prior to TIH**. Run 17 ½" bit, BHA w/survey tool and 5" DP to casing point. Saturated brine water will be used to minimize washout in salt sections. **Deviation not to exceed 3˚.** Seepage should be controllable with LCM sweeps. After drilling to 5285', pump heavy LCM sweep and circulate hole clean. TOOH to run casing. Clean, drift & tally casing**.**
Casing:	From 0' to 5285' – (13 3/8" 68# HC-P110 USS-CDC CSG) RU casing crew. **Fill casing with drilling fluid every 20 jts or less as needed.** Run float shoe, 1 jt 13 3/8" 68# HC-P110 USS-CDC casing, float collar, & remainder jts 13 3/8" 68# HC-P110 USS-CDC casing to surface. **Thread - lock guide shoe and first 2 joints.** Centralizers will go in the middle of the first joint, on the second coupling on the fourth coupling, and every 4th joint thereafter. Float equipment should be PDC drillable. After getting casing to TD, RU cementers & cement as per Halliburton cement recommendation.
Cement:	Lead: 990 sks HalCem C + Additives Yield – 1.805 cu ft/sk @ 13.5 ppg Tail: 305 sks HalCem C + Additives Yield – 1.324 cu ft/sk @ 14.8 ppg
	Notify NMOCD in sufficient time to witness cementing of casing. After getting casing to TD, displace annular volume with the rig pump. Take returns to cellar. RU cementers and cement as per cement recommendation. If cement ***does not*** circulate, notify NMOCD. If cement ***does*** circulate, test floats & set slips. WOC 8 hours (subject to change based on cement lab report). ND 20" riser, set slips & cut off 113 3/8" casing. Install 21 ¼" x 13 ⅝" casing spool, DSA, BOPE, 10K choke system, & vent/panic/flare system.
Wellhead:	**21 ¼" x 13 ⅝" 10M rated casing spool**
BOPE:	**13 ⅝" 10M rated triple ram BOP stack w/ 13 ⅝" 10M DSA, 5M rated annular & rotating head.**
BOPE Testing:	**Test BOP Rams to 10000 psi & Annular to 5000 psi with third party. Test all lines to pump valves, and flexible line to chokes to 10000 psi.**

Third Intermediate Hole

Hole size: **12 ¼"**

Depth: **11004'**

Mud: Refer to attached mud program. Cut Brine 9.0 to 10.0 ppg, 29 to 36 visc. Mud weight not to exceed 10.5 ppg

BHA:

1	12 ¼" Bit
1	8" Bit Sub
1	12 ¼" Digital Vertical Scout
1	8" Straight Motor
1	8" Shock sub
1	8" Directional survey tool
1	12 ¼" Stabilizer
12	8" DC
1	XO
21	6 ½" DC
1	XO

Shaker Screens: 170's

Tubulars:

Item type	Casing	Drill Pipe
Size	9 ⅝"	5"
Weight (#/ft)	40	19.5
Grade	HCP-110	S-135
Thread	BTC	4 1/2 IF
ID (in)	8.835	4.276 (2.750 conn)
Drift (in)	8.750 (Special Drift)	
Burst (psi)	7900	17105
Collapse (psi)	4230	15672
Tension (klbs)	1260	712
Min Torque (ft-lb)		
Rec Torque (ft-lb)	To triangle	38044
Max Torque (ft-lb)		

Drilling:

Ensure 13 ⅝" triple ram BOP stack, 5M rated annular & rotating head are NU & Tested. Ensure flare is installed and running. H_2S monitors and related safety equipment will be operational before drilling out 13 ⅝" casing shoe. Operationally function check pipe rams every 24 hours and blind rams every trip. Run 12 ¼" bit, BHA w/ Vertical Scout, survey tools & 5" DP back to surface. Drill out float collar. Do not drill float shoe. Use caution when drilling float equipment to avoid damaging bit. **Test casing to 1500 psi for 30 mins with rig pump**. **Before drilling 20' into formation, perform a FIT to 10.5 ppg mud equivalent.** Drill out with viscous cut brine and circulate through steel pits. Utilize mud cleaning equipment to keep fluid as clean as possible. Seepage should be controllable with LCM sweeps. After drilling to 11004' pump heavy LCM sweep and circulate hole clean. TOOH. Clean, drift & tally casing **(8 ¾" oversize drift).**

Casing:

From 0' to 11004'– (9 ⅝" 40# HCP-110 BTC CSG)
(ECP/DV tool @ 5385')

RU casing crew. **Fill casing with drilling fluid every 20 jts or less as needed.** Run float shoe, 1 jt 9 ⅝" 40# HCP-110 BTC casing, float collar, ~7600' - 9 ⅝" 40# HCP-110 BTC casing, **ECP/DV TOOL,** 9 ⅝" 40# HCP-110 BTC casing to surface. **Thread - lock guide shoe and first 2 joints.** Run centralizers in the middle of 1st joint, top of 2nd joint, then centralizers every 3rd joint. Ensure one centralizer on joint below DV tool and one centralizer on joint above DV tool. Float equipment should be PDC drillable.

Cement:

Stage 1:

Lead: 950 sks NeoCem + Additives
Yield – 2.289 cu ft/sk @ 11.5 ppg

Tail: 175 sks VersaCem + Additives
Yield – 1.213 cu ft/sk @ 14.5 ppg

ECP/DV TOOL @ 5385'

Stage 2:

Lead: 790 sks EconoCem + Additives
Yield – 2.082 cu ft/sk @ 12.5 ppg

Tail: 145 sks VersaCem + Additives
Yield – 1.233 cu ft/sk @ 14.5 ppg

Notify NMOCD in sufficient time to witness cementing of casing. After getting casing to TD, displace casing volume with the rig pump. RU cementers and cement as per recommendation**.** If cement ***does not*** circulate, notify NMOCD. If cement ***does*** circulate, ND 13 ⅝" BOPE & 13 ⅝" DSA, set slips, NU 13 ⅝" BOPE & 13 ⅝" DSA and WOC 8 hours (subject to change based on cement lab report). ND 13 ⅝" BOPE & 13 ⅝" DSA, cut off casing & NU 13 ⅝" x 11" casing spool w/ 13

⅝” BOPE & 11” DSA.

Wellhead:	**13 ⅝" x 11” 10M rated casing spool**
BOPE:	**13 ⅝" 10M psi rated triple ram BOP stack w/10M 13 ⅝” x 5M 11” DSA, 5M annular & MPD.**
BOPE Testing:	**Test BOP Rams to 10000 psi & Annular to 5000 psi with third party. Test all lines to pump valves, MPD and lines to chokes to 10000 psi.**

Production Hole

Hole size: **8 ¾”**

Depth: **14649'**

Mud: Refer to attached mud program. Mud up to 11.0 ppg WBM. Expect to increase weight to 12.5 ppg as required for well control. 45-55 sec viscosity. Mud properties may have to be adjusted as needed for hole conditions. **It is critical that fluid loss be maintained at 4 cc or less. Add 24 hour mud representative on location.**

BHA:

1	8 ¾” Bit
1	6” Bit Sub
1	8 ¾” Vertical Scout
1	6” Straight Motor
1	6 ¼” Shock sub
1	6 ¼” Directional survey tool
1	8 ¾” Roller Stabilizer
21	6 ½” DC
1	XO

Shaker Screens: 170’s

Tubulars:

Item type	Casing	Drill Pipe	Drill Collar	Drill Pipe
Size	7 ⅝”	4”	4 ⅞”	5"
Weight (#/ft)	39#	15.91	44	19.5
Grade	HCL-80	S-135	S-135	S-135
Thread	Liberty FJM	XT-39	XT-39	4 1/2 IF
ID (in)	6.625	2.963	2.963	4.276 (2.750 conn)
Drift (in)	6.500			
Burst (psi)	9190	19,490		17105
Collapse (psi)	9480	20,140		15672
Tension (klbs)	895	404	664	712
Min MU Torque (ft-lb)	12550	22,850	17,000	
Rec Torque (ft-lb)		25,150	20,300	38044
Max MU Torque (ft-lb)	16850			

Drilling: **Ensure 13 ⅝" 10M rated triple ram BOP stack, 5M rated annular & MPD system are NU & tested.** Ensure H_2S monitors and related safety equipment are operational before drilling out shoe. Operationally function check pipe rams every 24 hours and blind rams every trip. PU 8 ¾" bit, BHA w/ RSS, survey tools and 5" drill pipe back to surface. Drill out DV-ECP tools and float collar. **NOTE: (DV-ECP Tool @ 3402'.** Do not drill float shoe. Use caution when drilling DV tools & float equipment to avoid damaging bit. **Test casing to 2420 psi for 30 mins with rig pump**. **Before drilling 20' into formation, perform a FIT to 13.0 ppg mud equivalent.** Utilize mud cleaning equipment to keep fluid as clean as possible. When nearing the top of the Devonian formation, slow ROP to 20 fph. Upon seeing drilling break at Devonian top, stop drilling & circulate samples to surface. If samples do not indicate good carbonate, continue drilling 5' & circ samples until clean dolomite/lime is observed. After drilling to TD (est. 14649'), pump heavy LCM sweep and circulate hole clean. Run thru-DP WL GR to verify depths if necessary. TOOH to run casing. Clean drift and tally casing.

Casing: From 10804' to 14649'– (7 ⅝" 39# HCL-80 Liberty FJM CSG)
Halliburton Versaflex Liner Hanger

RU casing crew w/ torque turn. **Fill casing with drilling fluid every 20 jts or less as needed.** Run float shoe, 1 jt 7 ⅝" 39# HCL-80 Liberty FJM casing, float collar, 1 jt 7 ⅝" 39# HCL-80 Liberty FJM casing, landing collar, ~4600' of 7 ⅝" 39# HCL-80 Liberty FJM casing, 7 ⅝" x 9 ⅝" liner hanger & 5" DP to surface. **Thread - lock guide shoe and first 2 joints.** Run centralizers in the middle of 1st joint, top of 2nd joint, then every 3rd coupling thereafter. **Set liner hanger to tie back minimum 100' inside 9 ⅝" casing**. Float equipment should be PDC drillable.

Cement:

Stage 1: Lead: 325 sks NeoCem + Additives
Yield – 1.49 cu ft/sk @ 13.2 ppg

Notify NMOCD in sufficient time to witness cementing of casing. After getting casing to TD, displace casing volume with the rig pump. RU cementers and cement as per recommendation**.** If cement ***does not*** circulate, notify NMOCD. If cement ***does*** circulate, TOOH w/ liner hanger setting tool. WOC 24 hours (subject to change based on cement lab report). While WOC, LD excess 5" DP (need 10700' remaining in derrick). PU 6 ½" bit, BHA, ~5200' 4" XT39 DP & 5" DP to surface. Drill out float collar. Do not drill float shoe. Use caution when drilling DV tools & float equipment to avoid damaging bit. **Test casing to 3222 psi for 30 mins with rig pump**. TOOH. Run WL CBL-CNL TD to surface to verify sufficient cement placement in liner annulus. Ensure CNL logged to surface.

Wellhead: **No change in wellhead required**

BOPE: **13 ⅝" 10M psi rated triple ram BOP stack w/10M 13 ⅝" x 5M 11" DSA, 5M**

annular & rotating head.

BOPE Testing: **No BOPE testing required as the stack was not broken.**

Open Injection Hole

Hole size: 6 ½”

Depth: **15,659’**

Mud: Refer to attached mud program. 8.4 ppg fresh water, 29 to 36 visc. Mud weight not to exceed 9.2 ppg. Mud properties may have to be adjusted as needed for hole conditions. **Lost circulation possible.**

BHA:

1	6 ½” Bit
1	4 ⅞” Bit Sub
1	4 ⅞” 1.5˚ Motor
1	4 ⅞” MWD Tools
21	4 ⅞” DC
1	XO

Shaker Screens: 170’s

Tubulars:

Item type	Drill Pipe	Drill Pipe	Drill Collar
Size (in)	4”	5"	4 ⅞”
Weight (#/ft)	15.91	19.5	44
Grade	S-135	S-135	S-135
Thread	XT-39	4 1/2 IF	XT-39
ID (in)	2.963	4.276 (2.750 conn)	2.963
Drift (in)			
Burst (psi)	19,490	17105	
Collapse (psi)	20,140	15672	
Tension (klbs)	403,500	712	663,700
Min MU Torque (ft-lb)	22,850		17,000
Max MU Torque (ft-lb)	25,150	38044	20,300

Drilling:	**Ensure 13 ⅝" 10M rated triple ram BOP stack, 5M rated annular & rotating head are NU & tested.** Ensure H_2S monitors and related safety equipment are operational before drilling out 7 ⅝" casing shoe. Operationally function check pipe rams every 24 hours and blind rams every trip. PU 6 ½" bit, BHA, survey tools & 4" XT39 DP, and 5" DP or equivalent back to surface. **Before drilling 20' into formation, perform a FIT to 9.0 ppg mud equivalent. Deviation not to exceed 3˚**. Utilize mud cleaning equipment to keep fluid as clean as possible. Drill to 15659', pump hi-vis sweep and circulate hole clean. Do not pump LCM. Dry drilling is preferable to LCM. **DO NOT DRILL INTO MONTOYA FORMATION (Limestone – may see CHERT RETURNS prior to Montoya).** TOOH. Spot 10# brine as necessary to kill well. Run OH logs (GR-NEU-PRESS).
Wellhead:	**No Change in wellhead required**
BOPE:	**13 ⅝" 10M psi rated triple ram BOP stack, 5M rated 13 ⅝" X 11" 5M DSA, annular & rotating head.**
BOPE Testing:	**No BOPE testing required as the stack was not broken.**

Completion

Stimulation: PU 7” test packer, 4" XT39 DP or equivalent & 5” DP back to surface. Set test packer at ~14,630’ (depth may adjust depending on actual casing set depths). Pump acid and SRT as per design (TBD, 40K gal 15% HCl + salt block). Unseat test packer and TOOH. LD test packer & PU 6 ½” bit, BHA, 4” XT39 DP, and 5” DP back to surface. Pump hi-vis sweep and circulate hole clean.

Packer: 7 ⅝” x 5 ½" Inconel 925 permanent packer w/ X profile nipple

Packer Fluid: Fresh Water w/ biocide & anti-corrosion additives

Packer Setting: MIRU wireline truck. PU Setting Tool, CCL & 7 ⅝” 5 ½" x 7" Perma-Pak Packer with 1 jt 4 ½" 12.6# L-80 BTC tubing tail pipe & pump out plug. RIH on wireline to packer setting depth **(~14614’ < 100’ to 7 ⅝” csg shoe req’d)** & set packer. POOH & RDMO wireline truck.

Tubing:

Item type	Tubing	Tubing
Size (in)	7	5 1/2
Weight (#/ft)	26	17
Grade	HCP-110	HCP-110
Thread	HCTG/CBR-P800	HCTG/CBR-P800
ID (in)	6.276	4.892
Drift (in)	6.151	4.767
Burst (psi)	9960	10640
Collapse (psi)	7540	8730
Tension (klbs)	830	546
Min MU Torque (ft-lb)		
Max MU Torque (ft-lb)		

From 0’ to 10804’ (7” 26# HCP-110 HCTG/CBR w/P800 coating)
From 10804’ to 14614’ (5 ½” 17# HCP-110 HCTG/CBR w/P800 coating)

Clean, drift & tally tubing. RU casing crew w/ torque turn. Run packer seal assembly, 3655’ 5 ½” 17# L-80 HCGT/CBR tubing w/P800 coating, 5 ½” x 7” HCGT/CBR crossover w/ P800 coating, 7” 26# HCP-110 HCGT/CBR tubing w/ P800 coating to surface and tubing hanger. PU landing joint and space out packer to correspond with proper landing depth. Confirm rotating torque and drag on tubing prior to tagging packer. Sting into packer to confirm space out. Sting out of packer. Reverse circulate FW packer fluid down backside & up

tubing. Pump 25% excess. Once backside is displaced, sting into packer & set weight on packer as per packer representative specifications. ND BOPE & NU 7 1/16" 5M gate valve w/ capping flange. Pressure test annulus to 500 psi minimum for 30 minutes using rig pump. 10% deviation from initial pressure is maximum allowable in 1st 15 minutes, 0 psi thereafter. RDMO Rig. Install remainder of 7 1/16" 5M x 4 1/16" 5M injection tree.

Note: Schedule MIT with Barbara Lydick, NMOCD Hobbs (575)-703-4641, as soon as possible.

Wellhead: **7 1/16" 10M x 4 1/16" 10M injection tree**

HALLIBURTON

PERMIAN OILFIELD PARTNERS LLC-EBUS
1008 SOUTHVIEW CIRCLE
CENTER, TX, 75935
US

Outskirts Federal SWD 1

Lea County, NM, US

Primary Cement Cost Estimate

Proposal 496657 - Version 4.0
June 18, 2025

Submitted by:
Jose Moroles
303 West Wall St. - Suite 300
Midland, TX - 79701
432-222-1975

HALLIBURTON

Contents

Halliburton appreciates the opportunity to present this cost estimate and looks forward to being of service to you.

1 Foreword

Permian Basin Area Wide Cementing Services
1-432-571-8744

Cementing:

Adam Strong
Kayla Janowski
Lucas Ginanni
Haytham Abou El Hoda
Chris Soto
James Elliott

Casing Attachments:

Steven Beckworth
Rene Lopez

_____
Joe Moroles, Principle Account Representative

Cementing Best Practices

1. **Cement quality and weight**: You must choose cement slurry that is designed to solve the problems specific to each string of pipe.
2. **Waiting time**: You must hold the cement slurry in place and under pressure until it hardens. Cement slurry is a time-dependent liquid and must be allowed to undergo a hydration reaction to produce a competent cement sheath. Fresh cement slurry can be worked (thickening or pump time) as long as it is plastic, and the initial set of cement occurs during the rapid reaction stage. If the cement is not allowed to hydrate; it will be subject to changes in density, dilution, settling, water separation, and gas cutting that can lead to lack of zonal isolation with resultant bridging in the annulus.
3. **Pipe movement**: Pipe movement may be one of the single most influential factors in mud removal. Reciprocation and/or rotation mechanically breaks up gelled mud and constantly changes the flow patterns in the annulus for better cement bonding.
4. **Mud properties:** Plastic viscosity (PV) should be less than 15 centipoise (cp), and less than 10 cp, if possible, yield point (YP) should be less than 10 pound/100-square feet (lb/100 ft²) decreasing down to about 5 lb/100 ft².
5. **Mud gel strength**: A nonthixotropic mud is desirable for good mud removal. Mud left in the hole prior to running casing should have 10-second/10-minute/30-minute gel strength such that the 10-minute is less than double the 10-second and the 30-minute is less than 20 lb/100 ft²). Sufficient shear strength may not be achieved on a primary cement job to remove mud left in the hole should the mud develop more than 25 lb/100 ft².
6. **Mud fluid loss**: Decreasing the filtrate loss into a permeable zone enhances the creation of a thin filter cake. This increases the fluid mud in the hole, which is more easily removed. Generally, an API fluid loss of 7 or 8 milliliter (ml) is sufficient with high-temperature/high-pressure fluid loss (HTHP) no more than double this amount.
7. **Circulation**: Circulate bottoms up twice, or until well conditioned mud is being returned to the surface. There should be no cuttings in the mud returns. An annular velocity of 260 feet per minute is optimum (SPE/IADC 18617), if possible.
8. **Flow rate**: Turbulent flow is more desirable flow regime for mud removal. If turbulence cannot be achieved, better mud removal is found when maximum flow energy is used. The maximum pump rate should be determined to obtain the best flow regime.
9. **Hole size**: The optimum hole size recommended for good mud removal is 1.5 to 2 inches larger than the casing or liner size. Hole sizes larger than 2 inches annular space can be dealt with, but those that are smaller than 1.5 inches present difficult problems.
10. **Pipe Centralization**: This helps to create a uniform flow area perpendicular to flow direction. Cement will take the path of least resistance so that centralization is important in keeping the pipe off the walls of the hole. At least a 70 percent standoff should be achieved for centralization.
11. **Rat hole:** When applicable, a weighted viscous pill in the rat hole prevents cement from swapping with lighter weight mud when displacement stops.
12. **Shoe joint**: A shoe joint is recommended on all primary casings and liners. The length of the shoe joint will vary, although the absolute minimum length is one joint of pipe. If conditions exist, such as not running a bottom plug, two joints should be the minimum length.

2 Surface Casing

2.1 Job Information Surface Casing

Job Criticality Status: GREEN
Well Name: Outskirts Federal SWD Well #: 1

26" Hole	0 - 1,449 ft (MD)
Inner Diameter	26 in
Excess Factor	100 %
Surface Casing	0 - 1,449 ft (MD)
Outer Diameter	20 in
Inner Diameter	19 in
Linear Weight	106.5 lbm/ft
Casing Grade	N-80
Shoe Joint Length	40 ft
Thread Type	BTC

Additional hours will be charged only after 8 hours on location from job time.

Mud Type	Spud Mud
Mud Weight	8.7 lbm/gal

2.2 Estimated Calculations Surface Casing

Stage 1

CEMENT: (1,099 ft fill)

1,099 ft * 1.5053 ft3/ft * 100 %	= 3,308.75 ft3
ExtendaCem C	= 3,308.75 ft3
	= 589.3 bbl
Total Lead	= 1,833.06 sack

CEMENT: (350 ft fill)

350 ft * 1.5053 ft3/ft * 100 %	= 1,053.74 ft3
HalCem™ C	= 1,053.74 ft3
	= 187.7 bbl

Shoe Joint Volume: (40 ft fill)

40 ft * 1.9689 ft3/ft	= 78.76 ft3
	= 14 bbl

Tail plus shoe joint	= 1,132.46 ft3
	= 201.7 bbl
Total Tail	= 855.33 sack

Total Pipe Capacity:

1,449 ft * 1.9689 ft3/ft	= 2,853.01 ft3
	= 508.1 bbl

Displacement Volume to Shoe Joint:

Capacity of Pipe - Shoe Joint	= 508.1 bbl - 14 bbl
	= 494.1 bbl

2.3 Job Volume Estimates Surface Casing

Stage 1

Fluid 1: Spacer Sweep

Gel Spacer w/Red Dye	Fluid Density:	8.4 lbm/gal
2.5 lbm/bbl WG-36	**Volume:**	**20 bbl**
0.1 lbm/bbl Rhodamine Red Dye No. 2		

Fluid 2: Lead Slurry

HALCEM (TM) SYSTEM	Fluid Weight:	13.5 lbm/gal
4 % BENTONITE	Slurry Yield:	1.805 ft3/sack
5 lbm/sk Salt	Total Mixing Fluid:	9.55 Gal/sack
9.55 Gal/sk FRESH WATER	**Calculated Volume:**	**589.3 bbl**
	Proposed Volume:	**589.3 bbl**
	Top Of Fluid:	0 ft
	Calculated Fill:	1,099 ft
	Calculated sack:	1,833.1 sack
	Proposed sack:	1,835 sack

Fluid 3: Tail Slurry

HALCEM (TM) SYSTEM	Fluid Weight:	14.8 lbm/gal
	Slurry Yield:	1.324 ft3/sack
	Total Mixing Fluid:	6.31 Gal/sack
	Calculated Volume:	**201.7 bbl**
	Proposed Volume:	**201.7 bbl**
	Top Of Fluid:	1,099 ft
	Calculated Fill:	350 ft
	Calculated sack:	855.36 sack
	Proposed sack:	860 sack

Fluid 4: Water Based Spacer

Displacement	Fluid Density:	8.4 lbm/gal
	Volume:	**494.1 bbl**

2.4 Volume Estimate Table Surface Casing

Calculations are used for volume estimation. Well conditions will dictate final cement job design.

Stage 1

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate bbl/min	Downhole Volume
1	SPACER	Gel Spacer w/Red Dye	8.4		20 bbl
2	CEMENT	ExtendaCem C	13.5	5	1,835 sack
3	CEMENT	HalCem™ C	14.8		860 sack
4	SPACER	Displacement	8.4		494.1 bbl

NOTE: These slurries and spacers will require lab testing. The additives and concentrations are estimates based on field experience in the area and may need to be modified prior to the job. The proposed spacer is designed to be generally compatible with water base mud systems. Compatibility testing with field mud samples used may indicate changes in the additive package and the related costs.

2.5 Cost Estimate

Mtrl Nbr	Description	Qty	UOM	Net Amount	
7521	**CMT SURFACE CASING BOM** ***7521***	1.00	JOB	0.00	
1	ZI-MILEAGE FROM NEAREST HES BASE,/UNIT Number of Units	270.00 1	MI	713.69	
2	MILEAGE FOR CEMENTING CREW Number of Units	270.00 1	MI	419.90	
7	ENVIRONMENTAL CHARGE,/JOB,ZI	1.00	JOB	134.00	
372867	Cmt PSL - DOT Vehicle Charge, CMT	6.00	EA	1,446.00	
11881	OVERWEIGHT PERMIT FEE-CEMENTING	1.00	EA	60.00	
141	RCM II W/ADC,/JOB,ZI ENTER FEET\METER\JOB\DAY NUMBER OF JOBS NUMBER OF UNITS	1.00 JOB 1 1	JOB	537.30	
16115	FIELD STORAGE BIN ON SITE >8 HRS,DAY,ZI DAYS OR PARTIAL DAY(WHOLE NO.)	3.00 1	EA	1,088.64	
74038	ZI PLUG CONTAINER RENTAL-1ST DAY HR/DAY/WEEK/MTH/YEAR/JOB/RUN DAYS OR FRACTION (MIN1)	1.00 DAY 1	EA	356.94	
16091	ZI - PUMPING CHARGE FEET/METERS (FT/M) DEPTH	1.00 FT 1449	EA	1,428.30	
1214102	CMT FUEL SURCHARGE Number of Units	270.00 6	MI	2,268.00	
1100106	CMT CREW RETENTION BONUS STD	1.00	JOB	150.00	
	SubTotal			**8,602.77**	
101627238	CHEM, WG-36, 50 LB BAG *WG-36*	50.00	LB	648.00	
101201084	CHEM,RHODAMINE RED LIQ DYE (2) *Rhodamine Red Dye No. 2*	2.00	LB	86.40	
452986	CMT, HalCem (TM) system	1,835.00	SK	26,080.49	
100003695	SALT,CEM GR,BULK *Salt*	9,175.00	LB	1,412.03	
1258019	CHEM,BENTONITE,BULK *BENTONITE*	6,900.00	LB	1,117.80	
452986	CMT, HalCem (TM) system	860.00	SK	12,223.01	
3965	HANDLE&DUMP SVC CHRG, CMT&ADDITIVES,ZI Unit of Measurement NUMBER OF EACH	2,940.00 EA 1	CF	4,357.96	
76400	MILEAGE,CMT MTLS DEL/RET MIN NUMBER OF TONS	135.00 134.702	MI	16,448.12	
	Total Net Amount	**USD**		**70,976.58**	

Mtrl Nbr	Description	Qty	UOM	Net Amount	
Optional Charge					
3	ZI-DERRICK CHARGE	1.00	EA	**246.75**	
22	ADDITIONAL HOURS (PUMPING EQUIPMENT), ZI Number of Units	1.00 1	H	**1,139.00**	
802332	CMT STBY UNIT 1ST 8 HR CSG JOB	1.00	UN	**10,000.00**	
803106	CMT STBY UNIT CSG JOB ADDL HR >BASE HR/DAY/WEEK/MTH/YEAR/JOB/RUN TOTAL NUMBER	1.00 H 1	EA	**1,139.00**	
116	BOOSTER PUMP-SKID,/DAY,ZI NUMBER OF DAYS	1.00 1	EA	**340.50**	
356745	3rd Party Rental Pass Through, CMT	1.00	EA	**1,500.00**	

Primary Plant: Odessa TX, USA
Secondary Plant: Odessa TX, USA
Price Book Ref: 27 - PERMIAN BASIN
Price Date: 01/19/2024

3 1st Intermediate Casing

3.1 Job Information 1st Intermediate Casing

Job Criticality Status: GREEN
Well Name: Outskirts Federal SWD Well #: 1

20" Surface Casing	0 - 1,449 ft (MD)
Outer Diameter	20 in
Inner Diameter	19 in
Linear Weight	106.5 lbm/ft
Excess Factor	10 %
17.5" Hole	1,449 - 5,285 ft (MD)
Inner Diameter	17.5 in
Excess Factor	50 %
13.3/8" Intermediate Casing	0 - 5,285 ft (MD)
Outer Diameter	13.375 in
Inner Diameter	12.415 in
Linear Weight	68 lbm/ft
Casing Grade	HCP110
Shoe Joint Length	40 ft
Thread Type	BTC

Additional hours will be charged only after 8 hours on location from job time.

Mud Type	Diesel Cut Brine Emulsion
Mud Weight	10 lbm/gal

3.2 Estimated Calculations 1st Intermediate Casing

Stage 1

CEMENT: (4,785 ft fill)

3,336 ft * 0.6946 ft3/ft * 50 %	= 3,475.97 ft3
1,449 ft * 0.9933 ft3/ft * 10 %	= 1,583.15 ft3
ExtendaCem C	= 5,059.12 ft3
	= 901.1 bbl
Total Lead	= 2,802.94 sack

CEMENT: (500 ft fill)

500 ft * 0.6946 ft3/ft * 50 %	= 520.98 ft3
HalCem™ C	= 520.98 ft3
	= 92.8 bbl

Shoe Joint Volume: (40 ft fill)

40 ft * 0.8407 ft3/ft	= 33.63 ft3
	= 6 bbl

Tail plus shoe joint	= 554.72 ft3
	= 98.8 bbl
Total Tail	= 418.97 sack

Total Pipe Capacity:

1,449 ft * 0.8407 ft3/ft	= 1,218.12 ft3
3,836 ft * 0.8407 ft3/ft	= 3,224.78 ft3
	= 791.3 bbl

Displacement Volume to Shoe Joint:

Capacity of Pipe - Shoe Joint	= 791.3 bbl - 6 bbl
	= 785.3 bbl

3.3 Job Volume Estimates 1st Intermediate Casing

Stage 1

Fluid 1: Water Based Spacer

Gel Spacer w/ Red Dye	Fluid Density:	8.4 lbm/gal
2.5 lbm/bbl WG-36	**Volume:**	**20 bbl**
0.1 lbm/bbl Rhodamine Red Dye No. 2		

Fluid 2: Lead Slurry

HALCEM (TM) SYSTEM	Fluid Weight:	13.5 lbm/gal
4 % BENTONITE	Slurry Yield:	1.805 ft3/sack
5 lbm/sk Salt	Total Mixing Fluid:	9.55 Gal/sack
9.55 Gal/sk FRESH WATER	**Calculated Volume:**	**901.1 bbl**
	Proposed Volume:	**901.1 bbl**
	Top Of Fluid:	0 ft
	Calculated Fill:	4,785 ft
	Calculated sack:	2,802.83 sack
	Proposed sack:	2,805 sack

Fluid 3: Tail Slurry

HALCEM (TM) SYSTEM	Fluid Weight:	14.8 lbm/gal
	Slurry Yield:	1.324 ft3/sack
	Total Mixing Fluid:	6.31 Gal/sack
	Calculated Volume:	**98.8 bbl**
	Proposed Volume:	**98.8 bbl**
	Top Of Fluid:	4,785 ft
	Calculated Fill:	500 ft
	Calculated sack:	418.89 sack
	Proposed sack:	420 sack

Fluid 4: Water Based Spacer

Displacement	Fluid Density:	8.4 lbm/gal
	Volume:	**785.3 bbl**

3.4 Volume Estimate Table 1st Intermediate Casing

Calculations are used for volume estimation. Well conditions will dictate final cement job design.

Stage 1

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate bbl/min	Downhole Volume
1	SPACER	Gel Spacer w/ Red Dye	8.4		20 bbl
2	CEMENT	ExtendaCem C	13.5	5	2,805 sack
3	CEMENT	HalCem™ C	14.8		420 sack
4	SPACER	Displacement	8.4		785.3 bbl

NOTE: These slurries and spacers will require lab testing. The additives and concentrations are estimates based on field experience in the area and may need to be modified prior to the job. The proposed spacer is designed to be generally compatible with water base mud systems. Compatibility testing with field mud samples used may indicate changes in the additive package and the related costs.

3.5 Cost Estimate

Mtrl Nbr	Description	Qty	UOM	Net Amount	
7522	**CMT INTERMEDIATE CASING BOM** ***7522***	1.00	JOB	0.00	
1	ZI-MILEAGE FROM NEAREST HES BASE,/UNIT Number of Units	270.00 1	MI	925.15	
2	MILEAGE FOR CEMENTING CREW Number of Units	270.00 1	MI	544.32	
7	ENVIRONMENTAL CHARGE,/JOB,ZI	1.00	JOB	134.00	
372867	Cmt PSL - DOT Vehicle Charge, CMT	7.00	EA	1,687.00	
11881	OVERWEIGHT PERMIT FEE-CEMENTING	1.00	EA	60.00	
141	RCM II W/ADC,/JOB,ZI ENTER FEET\METER\JOB\DAY NUMBER OF JOBS NUMBER OF UNITS	1.00 JOB 1 1	JOB	696.50	
16115	FIELD STORAGE BIN ON SITE >8 HRS,DAY,ZI DAYS OR PARTIAL DAY(WHOLE NO.)	2.00 1	EA	940.80	
74038	ZI PLUG CONTAINER RENTAL-1ST DAY HR/DAY/WEEK/MTH/YEAR/JOB/RUN DAYS OR FRACTION (MIN1)	1.00 DAY 1	EA	462.70	
16091	ZI - PUMPING CHARGE FEET/METERS (FT/M) DEPTH	1.00 FT 5285	EA	3,047.80	
1214102	CMT FUEL SURCHARGE Number of Units	270.00 7	MI	2,646.00	
1100106	CMT CREW RETENTION BONUS STD	1.00	JOB	150.00	
	SubTotal			**11,294.27**	
101627238	CHEM, WG-36, 50 LB BAG *WG-36*	50.00	LB	840.00	
101201084	CHEM,RHODAMINE RED LIQ DYE (2) *Rhodamine Red Dye No. 2*	2.00	LB	112.00	
452986	CMT, HalCem (TM) system	2,805.00	SK	51,679.32	
100003695	SALT,CEM GR,BULK *Salt*	14,025.00	LB	2,797.99	
1258019	CHEM,BENTONITE,BULK *BENTONITE*	10,547.00	LB	2,214.87	
452986	CMT, HalCem (TM) system	420.00	SK	7,738.08	
3965	HANDLE&DUMP SVC CHRG, CMT&ADDITIVES,ZI Unit of Measurement NUMBER OF EACH	3,599.00 EA 1	CF	6,915.48	
76400	MILEAGE,CMT MTLS DEL/RET MIN NUMBER OF TONS	135.00 163.861	MI	25,937.15	
	Total Net Amount	**USD**		**109,529.16**	

Mtrl Nbr	Description	Qty	UOM	Net Amount	
Optional Charge					
3	ZI-DERRICK CHARGE	1.00	EA	**246.75**	
22	ADDITIONAL HOURS (PUMPING EQUIPMENT), ZI Number of Units	1.00 1	H	**1,139.00**	
802332	CMT STBY UNIT 1ST 8 HR CSG JOB	1.00	UN	**10,000.00**	
803106	CMT STBY UNIT CSG JOB ADDL HR >BASE HR/DAY/WEEK/MTH/YEAR/JOB/RUN TOTAL NUMBER	1.00 H 1	EA	**1,139.00**	
116	BOOSTER PUMP-SKID,/DAY,ZI NUMBER OF DAYS	1.00 1	EA	**340.50**	
356745	3rd Party Rental Pass Through, CMT	1.00	EA	**1,500.00**	

Primary Plant: Odessa TX, USA
Secondary Plant: Odessa TX, USA
Price Book Ref: 27 - PERMIAN BASIN
Price Date: 01/19/2024

4 2 stage 2nd Intermediate Casing

4.1 Job Information 2 stage 2nd Intermediate Casing

Job Criticality Status: YELLOW
Well Name: Outskirts Federal SWD Well #: 1

1s Intermediate Casing	0 - 5,285 ft (MD)
Outer Diameter	13.375 in
Inner Diameter	12.415 in
Linear Weight	68 lbm/ft
Casing Grade	HCP110
Excess Factor	10 %
Thread Type	BTC
12 1/4" Hole	5,285 - 5,385 ft (MD)
Inner Diameter	12.25 in
Excess Factor	35 %
12 1/4" Hole	5,385 - 11,004 ft (MD)
Inner Diameter	12.25 in
Excess Factor	35 %
2nd Intermediate Casing	0 - 11,004 ft (MD)
Outer Diameter	9.625 in
Inner Diameter	8.835 in
Linear Weight	40 lbm/ft
Casing Grade	HCP110
Thread Type	BTC
DV Tool	- 5,385 ft (MD)
Multiple Stage Cementer	5,385 ft (MD)

Additional hours will be charged only after 14 hours on location from requested time.

Mud Type	Cut Brine
Mud Weight	10 lbm/gal

4.2 Estimated Calculations 2 stage 2nd Intermediate Casing

Stage 1

SPACER: (594 ft fill)

100 ft * 0.3132 ft3/ft * 35 %	= 42.28 ft3
494 ft * 0.3354 ft3/ft * 10 %	= 182.3 ft3
Total Spacer	= 224.58 ft3
	= 40 bbl

CEMENT: (5,119 ft fill)

5,119 ft * 0.3132 ft3/ft * 35 %	= 2,164.33 ft3
NeoCem™ PL2	= 2,164.33 ft3
	= 385.5 bbl
Total Lead	= 945.58 sack

CEMENT: (500 ft fill)

500 ft * 0.3132 ft3/ft * 35 %	= 211.4 ft3
VersaCem™ H	= 211.4 ft3
	= 37.8 bbl

Total Tail = 174.96 sack

Total Pipe Capacity:

5,619 ft * 0.4257 ft3/ft	= 2,392.21 ft3
5,285 ft * 0.4257 ft3/ft	= 2,250.02 ft3
100 ft * 0.4257 ft3/ft	= 42.57 ft3
	= 834.4 bbl

Stage 2

CEMENT: (4,885 ft fill)

4,885 ft * 0.3354 ft3/ft * 10 %	= 1,802.19 ft3
EconoCem - HLC	= 1,802.19 ft3
	= 321 bbl
Total Lead	= 865.65 sack

CEMENT: (500 ft fill)

100 ft * 0.3132 ft3/ft * 35 %	= 42.28 ft3
400 ft * 0.3354 ft3/ft * 10 %	= 147.57 ft3
VersaCem™ H	= 189.85 ft3
	= 34 bbl

Total Tail = 154.82 sack

Total Pipe Capacity:

5,285 ft * 0.4257 ft3/ft	= 2,250.02 ft3
100 ft * 0.4257 ft3/ft	= 42.57 ft3
	= 408.3 bbl

4.3 Job Volume Estimates 2 stage 2nd Intermediate Casing

Stage 1

Fluid 1: Spacer Sweep

Mud Flush III	Fluid Density:	8.4 lbm/gal
4 lbm/bbl Mud Flush III	**Volume:**	**40 bbl**
0.05 gal/bbl BE-9		
0.2 gal/bbl Anhib II		

Fluid 2: Lead Slurry

NeoCem TM	Fluid Weight:	11.5 lbm/gal
	Slurry Yield:	2.289 ft3/sack
	Total Mixing Fluid:	13.66 Gal/sack
	Calculated Volume:	**385.5 bbl**
	Proposed Volume:	**385.5 bbl**
	Top Of Fluid:	5,385 ft
	Calculated Fill:	5,119 ft
	Calculated sack:	945.54 sack
	Proposed sack:	950 sack

Fluid 3: Tail Slurry

VERSACEM (TM) SYSTEM	Fluid Weight:	14.5 lbm/gal
0.4 % CHEM, HALAD-344 NAL	Slurry Yield:	1.213 ft3/sack
0.275 % HR-601	Total Mixing Fluid:	5.44 Gal/sack
	Calculated Volume:	**37.7 bbl**
	Proposed Volume:	**37.8 bbl**
	Top Of Fluid:	10,504 ft
	Calculated Fill:	500 ft
	Calculated sack:	174.28 sack
	Proposed sack:	175 sack

Fluid 4: Water Based Spacer

Displacement	Fluid Density:	8.4 lbm/gal
	Volume:	**834.4 bbl**

Multiple Stage Cementer 5,385(MD)

Stage 2

Fluid 1: Spacer Sweep

Mud Flush III	Fluid Density:	8.4 lbm/gal
4 lbm/bbl Mud Flush III	**Volume:**	**40 bbl**
0.05 gal/bbl BE-9		
0.2 gal/bbl Anhib II		

Fluid 2: Lead Slurry

ECONOCEM (TM) SYSTEM
0.3 % HR-800
11.69 Gal/sk FRESH WATER

Fluid Weight:	12.5 lbm/gal
Slurry Yield:	2.082 ft3/sack
Total Mixing Fluid:	11.69 Gal/sack
Calculated Volume:	**321 bbl**
Proposed Volume:	**321 bbl**
Top Of Fluid:	0 ft
Calculated Fill:	4,885 ft
Calculated sack:	865.6 sack
Proposed sack:	870 sack

Fluid 3: Tail Slurry

VERSACEM (TM) SYSTEM
0.4 % CHEM, HALAD-344 NAL
0.25 % HR-601

Fluid Weight:	14.5 lbm/gal
Slurry Yield:	1.233 ft3/sack
Total Mixing Fluid:	5.71 Gal/sack
Calculated Volume:	**33.8 bbl**
Proposed Volume:	**34 bbl**
Top Of Fluid:	4,885 ft
Calculated Fill:	500 ft
Calculated sack:	153.97 sack
Proposed sack:	155 sack

Fluid 4: Water Based Spacer

Displacement

Fluid Density:	8.4 lbm/gal
Volume:	**408.3 bbl**

4.4 Volume Estimate Table 2 stage 2nd Intermediate Casing

Calculations are used for volume estimation. Well conditions will dictate final cement job design.

Stage 1

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate	Downhole Volume
1	SPACER	Mud Flush III	8.4		40 bbl
2	CEMENT	NeoCem™ PL2	11.5		387.3 bbl
3	CEMENT	VersaCem™ H	14.5		175 sack
4	SPACER	Displacement	8.4		834.4 bbl

Stage 2

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate bbl/min	Downhole Volume
1	SPACER	Mud Flush III	8.4		40 bbl
2	CEMENT	EconoCem - HLC	12.5		870 sack
3	CEMENT	VersaCem™ H	14.5	5	155 sack
4	SPACER	Displacement	8.4		408.3 bbl

NOTE: These slurries and spacers will require lab testing. The additives and concentrations are estimates based on field experience in the area and may need to be modified prior to the job. The proposed spacer is designed to be generally compatible with water base mud systems. Compatibility testing with field mud samples used may indicate changes in the additive package and the related costs.

4.5 Cost Estimate

Mtrl Nbr	Description	Qty	UOM	Net Amount	
392189	**CMT MULTIPLE STAGES BOM** ***392189***	1.00	JOB	0.00	
1	ZI-MILEAGE FROM NEAREST HES BASE,/UNIT Number of Units	270.00 1	MI	740.12	
2	MILEAGE FOR CEMENTING CREW Number of Units	270.00 1	MI	435.46	
7	ENVIRONMENTAL CHARGE,/JOB,ZI	1.00	JOB	134.00	
372867	Cmt PSL - DOT Vehicle Charge, CMT	5.00	EA	1,205.00	
11881	OVERWEIGHT PERMIT FEE-CEMENTING	1.00	EA	60.00	
141	RCM II W/ADC,/JOB,ZI ENTER FEET\METER\JOB\DAY NUMBER OF JOBS NUMBER OF UNITS	1.00 JOB 1 1	JOB	557.20	
16115	FIELD STORAGE BIN ON SITE >8 HRS,DAY,ZI DAYS OR PARTIAL DAY(WHOLE NO.)	1.00 1	EA	376.32	
74038	ZI PLUG CONTAINER RENTAL-1ST DAY HR/DAY/WEEK/MTH/YEAR/JOB/RUN DAYS OR FRACTION (MIN1)	1.00 DAY 1	EA	370.16	
16	MULTIPLE STAGE CEMENTING Number of Units	1.00 1	STG	1,415.40	
16093	MSC PUMP CHARGE (1ST STAGE), ZI FEET/METERS (FT/M) DEPTH	1.00 FT 11004	EA	6,411.44	
1214102	CMT FUEL SURCHARGE Number of Units	270.00 5	MI	1,890.00	
1100106	CMT CREW RETENTION BONUS STD	1.00	JOB	150.00	
	SubTotal			**13,745.10**	
101633304	CHEM, MUD FLUSH III, 40 LB SACK *Mud Flush III*	160.00	LB	896.00	
100003821	CHEM-ANHIB II - PACKER FLUID-5 GAL PAIL	8.00	GAL	1,520.00	
101718548	CHEM, BE-9, 5 GAL PAIL *BE-9*	2.00	GAL	26.88	
1012301	SBM CEM NEOCEM™ LEAD	386.00	BBL	17,756.00	
452010	CMT, VersaCem (TM) system	175.00	SK	3,105.36	
100003670	CHEM, HALAD-344, 50 LB SACK *Halad(R)-344*	59.00	LB	1,346.38	
101328348	Chem - HR-601 - 50 Lb Bag *HR-601*	41.00	LB	265.30	
101633304	CHEM, MUD FLUSH III, 40 LB SACK *Mud Flush III*	160.00	LB	896.00	
100003821	CHEM-ANHIB II - PACKER FLUID-5 GAL PAIL	8.00	GAL	1,520.00	
101718548	CHEM, BE-9, 5 GAL PAIL *BE-9*	2.00	GAL	26.88	
452992	CMT, EconoCem (TM) system	870.00	SK	11,913.61	
101619742	CHEM, HR-800, 50 LB SACK *HR-800*	228.00	LB	706.71	
452010	CMT, VersaCem (TM) system	155.00	SK	2,706.72	
100003670	CHEM, HALAD-344, 50 LB SACK *Halad(R)-344*	49.00	LB	1,118.18	
101328348	Chem - HR-601 - 50 Lb Bag *HR-601*	33.00	LB	213.54	
1258019	CHEM,BENTONITE,BULK *BENTONITE*	261.00	LB	43.85	
3965	HANDLE&DUMP SVC CHRG, CMT&ADDITIVES,ZI Unit of Measurement NUMBER OF EACH	2,473.00 EA 1	CF	3,801.50	
	Total Net Amount	**USD**		**61,608.01**	

Mtrl Nbr	Description	Qty	UOM	Net Amount	
Optional Charge					
3	ZI-DERRICK CHARGE	1.00	EA	**246.75**	
22	ADDITIONAL HOURS (PUMPING EQUIPMENT), ZI Number of Units	1.00 1	H	**1,139.00**	
802332	CMT STBY UNIT 1ST 8 HR CSG JOB	1.00	UN	**10,000.00**	
803106	CMT STBY UNIT CSG JOB ADDL HR >BASE HR/DAY/WEEK/MTH/YEAR/JOB/RUN TOTAL NUMBER	1.00 H 1	EA	**1,139.00**	
116	BOOSTER PUMP-SKID,/DAY,ZI NUMBER OF DAYS	1.00 1	EA	**340.50**	
356745	3rd Party Rental Pass Through, CMT	1.00	EA	**1,500.00**	

Primary Plant: Odessa TX, USA
Secondary Plant: Odessa TX, USA
Price Book Ref: 27 - PERMIAN BASIN
Price Date: 01/19/2024

5 3rd Intermediate Liner

5.1 Job Information 3rd Intermediate Liner

Job Criticality Status: YELLOW
Well Name: Outskirts Federal SWD Well #: 1

2nd Int casing	0 - 11,004 ft (MD)
Outer Diameter	9.625 in
Inner Diameter	8.835 in
Linear Weight	40 lbm/ft
8.75" Hole	11,004 - 14,649 ft (MD)
Inner Diameter	8.75 in
Excess Factor	25 %
4-1/2" Drill Pipe	0 - 10,804 ft (MD)
Outer Diameter	4.5 in
Inner Diameter	3.826 in
Linear Weight	16.6 lbm/ft
3rd Intermediate Casing	10,804 - 14,649 ft (MD)
Outer Diameter	7.625 in
Inner Diameter	6.625 in
Linear Weight	39 lbm/ft
Casing Grade	HCL-80
Thread Type	FSL

Additional hours will be charged only after 8 hours on location from requested time.

Mud Type	Brine
Mud Weight	12 lbm/gal

5.2 Estimated Calculations 3rd Intermediate Liner

Stage 1

SPACER: (791 ft fill)

791 ft * 0.4257 ft3/ft * 0 %	= 336.88 ft3
Total Spacer	= 336.88 ft3
	= 60 bbl

CEMENT: (3,845 ft fill)

3,645 ft * 0.1005 ft3/ft * 25 %	= 457.79 ft3
200 ft * 0.1086 ft3/ft * 0 %	= 21.73 ft3
NeoCem™ PL2	= 479.52 ft3
	= 85.4 bbl

Total Tail = 321.8 sack

Total Pipe Capacity:

10,804 ft * 0.0798 ft3/ft	= 862.58 ft3
200 ft * 0.2394 ft3/ft	= 47.88 ft3
3,645 ft * 0.2394 ft3/ft	= 872.56 ft3
	= 317.6 bbl

5.3 Job Volume Estimates 3rd Intermediate Liner

Stage 1

Fluid 1: Spacer Sweep

Tuned Defense Cement Spacer
31.421 gal/bbl FRESH WATER
96.481 lbm/bbl BARITE
5 lbm/bbl SEM-93P, 35 LB SACK
5 lbm/bbl SEM-94P, 35 LB SACK
1 lbm/bbl FE-2
0.5 gal/bbl D-AIR 3000L
64.35 lbm/bbl Salt
5 lbm/bbl BRIDGEMAKER II LCM, 50 LB SACK

Fluid Density:	11.5 lbm/gal
Volume:	**60 bbl**

Fluid 2: Tail Slurry

NeoCem TM

Fluid Weight:	13.2 lbm/gal
Slurry Yield:	1.49 ft3/sack
Total Mixing Fluid:	7.68 Gal/sack
Calculated Volume:	**85.4 bbl**
Proposed Volume:	**85.4 bbl**
Top Of Fluid:	10,804 ft
Calculated Fill:	3,845 ft
Calculated sack:	321.82 sack
Proposed sack:	325 sack

Fluid 3: Water Based Spacer

Displacement

Fluid Density:	8.4 lbm/gal
Volume:	**317.6 bbl**

5.4 Volume Estimate Table 3rd Intermediate Liner

Calculations are used for volume estimation. Well conditions will dictate final cement job design.

Stage 1

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate bbl/min	Downhole Volume
1	SPACER	Tuned Defense Cement Spacer	11.5	5	60 bbl
2	CEMENT	NeoCem™ PL2	13.2		86.2 bbl
3	SPACER	Displacement	8.4		317.6 bbl

NOTE: These slurries and spacers will require lab testing. The additives and concentrations are estimates based on field experience in the area and may need to be modified prior to the job. The proposed spacer is designed to be generally compatible with water base mud systems. Compatibility testing with field mud samples used may indicate changes in the additive package and the related costs.

5.5 Cost Estimate

Mtrl Nbr	Description	Qty	UOM	Net Amount	
7524	**CMT DRILLING LINER BOM** ***7524***	1.00	JOB	0.00	
1	ZI-MILEAGE FROM NEAREST HES BASE,/UNIT Number of Units	270.00 1	MI	634.39	
2	MILEAGE FOR CEMENTING CREW Number of Units	270.00 1	MI	373.25	
16100	CMTG LINER/SHORT CSG STRING FEET/METERS (FT/M) DEPTH	1.00 FT 14649	EA	12,129.60	
7	ENVIRONMENTAL CHARGE,/JOB,ZI	1.00	JOB	134.00	
372867	Cmt PSL - DOT Vehicle Charge, CMT	5.00	EA	1,205.00	
11881	OVERWEIGHT PERMIT FEE-CEMENTING	1.00	EA	60.00	
141	RCM II W/ADC,/JOB,ZI ENTER FEET\METER\JOB\DAY NUMBER OF JOBS NUMBER OF UNITS	1.00 JOB 1 1	JOB	477.60	
16115	FIELD STORAGE BIN ON SITE >8 HRS,DAY,ZI DAYS OR PARTIAL DAY(WHOLE NO.)	1.00 1	EA	322.56	
74038	ZI PLUG CONTAINER RENTAL-1ST DAY HR/DAY/WEEK/MTH/YEAR/JOB/RUN DAYS OR FRACTION (MIN1)	1.00 DAY 1	EA	317.28	
1214102	CMT FUEL SURCHARGE Number of Units	270.00 5	MI	1,890.00	
1100106	CMT CREW RETENTION BONUS STD	1.00	JOB	150.00	
	SubTotal			**17,693.68**	
1094834	SBM TUNED DEFENSE CEMENT SPACER SYS	60.00	BBL	14,112.00	
1023977	CHEM, SEM-93P, 35 LB SACK *SEM-93P, 35 LB SACK*	300.00	LB	2,289.60	
1023987	CHEM, SEM-94P, 35 LB SACK *SEM-94P, 35 LB SACK*	300.00	LB	3,002.40	
100001615	CHEM, FE-2 *FE-2*	60.00	LB	80.06	
101007444	CHEM, D-AIR 3000L, 5 GAL PAIL *D-AIR 3000L*	30.00	GAL	1,011.96	
100003695	SALT,CEM GR,BULK *Salt*	3,861.00	LB	528.18	
1062609	CHEM, BRIDGEMAKER II LCM, 50 LB SACK *BRIDGEMAKER II LCM, 50 LB SACK*	300.00	LB	936.00	
1257440	CHEM, BARITE, BULK *BARITE*	5,789.00	LB	430.70	
1012301	SBM CEM NEOCEM™ LEAD	86.00	BBL	3,612.00	
3965	HANDLE&DUMP SVC CHRG, CMT&ADDITIVES,ZI Unit of Measurement NUMBER OF EACH	423.00 EA 1	CF	557.34	
76400	MILEAGE,CMT MTLS DEL/RET MIN NUMBER OF TONS	135.00 20.016	MI	2,172.54	
	Total Net Amount	**USD**		**46,426.46**	

Mtrl Nbr	Description	Qty	UOM	Net Amount	
Optional Charge					
3	ZI-DERRICK CHARGE	1.00	EA	**246.75**	
22	ADDITIONAL HOURS (PUMPING EQUIPMENT), ZI Number of Units	1.00 1	H	**1,139.00**	
802332	CMT STBY UNIT 1ST 8 HR CSG JOB	1.00	UN	**10,000.00**	
803106	CMT STBY UNIT CSG JOB ADDL HR >BASE HR/DAY/WEEK/MTH/YEAR/JOB/RUN TOTAL NUMBER	1.00 H 1	EA	**1,139.00**	
116	BOOSTER PUMP-SKID,/DAY,ZI NUMBER OF DAYS	1.00 1	EA	**340.50**	
356745	3rd Party Rental Pass Through, CMT	1.00	EA	**1,500.00**	

Primary Plant: Odessa TX, USA
Secondary Plant: Odessa TX, USA
Price Book Ref: 27 - PERMIAN BASIN
Price Date: 01/19/2024

6 Proposal Cost Summary

Job Name	Cost
Surface Casing	70,976.58
1st Intermediate Casing	109,529.16
2 stage 2nd Intermediate Casing	61,608.01
3rd Intermediate Liner	46,426.46
Total Cost USD	288,540.21

7 Conditions

The cost in this analysis is good for the materials and/or services outlined within and shall be valid for 30 days from the date of this proposal. In order to meet your needs under this proposal with a high quality of service and responsive timing, Halliburton will be allocating limited resources and committing valuable equipment and materials to your area of operations. Accordingly, the discounts reflected in this proposal are available only for materials and services awarded on a first-call basis. Alternate pricing may apply in the event that Halliburton is awarded work on any basis other than as a first-call provider.

The unit prices stated in the proposal are based on our current published prices. The projected equipment, personnel, and material needs are only estimates based on information about the work presently available to us. At the time the work is actually performed, conditions then existing may require an increase or decrease in the equipment, personnel, and/or material needs. Charges will be based upon unit prices in effect at the time the work is performed and the amount of equipment, personnel, and/or material actually utilized in the work. Taxes, if any, are not included. Applicable taxes, if any, will be added to the actual invoice.

It is understood and agreed between the parties that with the exception of the subject discounts, all services performed and equipment and materials sold are provided subject to Halliburton's General Terms and Conditions contained in our current price list, (which include LIMITATION OF LIABILITY and WARRANTY provisions), and pursuant to the applicable Halliburton Work Order Contract (whether or not executed by you), unless a Master Service and/or Sales Contract applicable to the services, equipment, or materials supplied exists between your company and Halliburton, in which case the negotiated Master Contract shall govern the relationship between the parties. A copy of the latest version of our General Terms and Conditions is available from your Halliburton representative or at: http://www.halliburton.com/terms for your convenient review, and we would appreciate receiving any questions you may have about them. Should your company be interested in negotiating a Master Contract with Halliburton, our Law Department would be pleased to work with you to finalize a mutually agreeable contract. In this connection, it is also understood and agreed that Customer will continue to execute Halliburton usual field work orders and/or tickets customarily required by Halliburton in connection with the furnishing of said services, equipment, and materials.

Any terms and conditions contained in purchase orders or other documents issued by the customer shall be of no effect except to confirm the type and quantity of services, equipment, and materials to be supplied to the customer.

If customer does not have an approved open account with Halliburton or a mutually executed written contract with Halliburton, which dictates payment terms different than those set forth in this clause, all sums due are payable in cash at the time of performance of services or delivery of equipment, products, or materials. If customer has an approved open account, invoices are payable on the twentieth day after date of invoice.

Customer agrees to pay interest on any unpaid balance from the date payable until paid at the highest lawful contract rate applicable, but never to exceed 18% per annum. In the event Halliburton employs an attorney for collection of any account, customer agrees to pay attorney fees of 20% of the unpaid account, plus all collection and court costs.

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

SUPO Data Report
08/04/2025

APD ID: 10400100664
Submission Date: 12/06/2024
Operator Name: PERMIAN OILFIELD PARTNERS LLC
Well Name: OUTSKIRTS FEDERAL SWD
Well Number: 1
Well Type: INJECTION - DISPOSAL
Well Work Type: Drill

Highlighted data reflects the most recent changes
Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Outskirts_Federal_SWD_1_Existing_Access_Road_RRC_20240930082624.pdf
Outskirts_Federal_SWD_1_Existing_Access_Road_Google_Earth_20240930082721.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT
Row(s) Exist? NO

ROW ID(s)

ID: NM-140184

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Outskirts_Federal_SWD_1_Access_Road_20250107103247.pdf

New road type: RESOURCE

Length: 41.65 Feet
Width (ft.): 20

Max slope (%): 3
Max grade (%): 3

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: NONE

New road access plan or profile prepared? N

New road access plan

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Access road engineering design? N

Access road engineering design

Turnout? N

Access surfacing type: OTHER

Access topsoil source: OFFSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth:

Offsite topsoil source description: Stored onsite, on edge of slope

Onsite topsoil removal process:

Access other construction information: None

Access miscellaneous information: None

Number of access turnouts:

Access turnout map:

Drainage Control

New road drainage crossing: OTHER

Other Description: None

Drainage Control comments: None

Road Drainage Control Structures (DCS) description: None

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Existing Well map Attachment:

Outskirts_Federal_SWD_1_Wells_in_1mi_Radius_Table_20240930083004.pdf
Outskirts_Federal_SWD_1_Wells_in_1mi_Radius_Map_20240930083007.pdf

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Production facility will be on the North side of pad.

Production Facilities map:

Outskirts_Federal_SWD_1_All_plats_with_Pipeline_0304_20250304101008.pdf

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: IRRIGATION

Water source use type: DUST CONTROL

CAMP USE

SURFACE CASING

INTERMEDIATE/PRODUCTION CASING

Source latitude: 32.642036 **Source longitude:** -103.622221

Source datum: NAD83

City:

Water source permit type: WATER WELL

Water source transport method: TRUCKING

Source land ownership: FEDERAL

Source transportation land ownership: FEDERAL

Water source volume (barrels): 3500 **Source volume (acre-feet):** 0.45112583

Source volume (gal): 147000

Water source and transportation

Outskirts_Federal_SWD_1_Proposed_Access_Road_to_Water_20240930083700.pdf

Outskirts_Federal_SWD_1_Proposed_Water_20240930083705.pdf

Water source comments:

New water well? N

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Source caliche from nearby pit.

Construction Materials source location

Outskirts_Federal_SWD_1_Proposed_Access_Road_to_Caliche_20240930084007.pdf
Outskirts_Federal_SWD_1_Proposed_Caliche_20240930084107.pdf

Section 7 - Methods for Handling

Waste type: DRILLING

Waste content description: Drill Cuttings

Amount of waste: 3500 barrels

Waste disposal frequency : One Time Only

Safe containment description: Drill cuttings will be properly contained in steel tanks (20 yard rolloff bins)

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE

Disposal type description:

Disposal location description: NMOCD approved waste disposal locations are CRI or Lea Land, both facilities are located on HWY 62/180, Sec. 27 T20S R32E.

Waste type: GARBAGE

Waste content description: Garbage & Trash

Amount of waste: 1500 pounds

Waste disposal frequency : One Time Only

Safe containment description: Enclosed Trash Trailer

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE

Disposal type description:

Disposal location description: Waste Management Facility in Carlsbad

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Waste type: SEWAGE

Waste content description: Human waste & grey water

Amount of waste: 1500 gallons

Waste disposal frequency : Weekly

Safe containment description: 2000 gallon plastic container

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE

Disposal type description:

Disposal location description: City of Carlsbad Water Treatment Facility

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? N

Description of cuttings location

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

Cuttings area liner

Cuttings area liner specifications and installation description

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

Outskirts_Federal_SWD_1_All_plats_with_Pipeline_0304_20250304101326.pdf

Comments: The production facility will be on the North side of location.

Section 10 - Plans for Surface

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name:

Multiple Well Pad Number:

Recontouring

Drainage/Erosion control construction: None

Drainage/Erosion control reclamation: None

Well pad proposed disturbance (acres): 4.13	**Well pad interim reclamation (acres):** 0.46	**Well pad long term disturbance (acres):** 3.67
Road proposed disturbance (acres): 0.02	**Road interim reclamation (acres):** 0.01	**Road long term disturbance (acres):** 0.01
Powerline proposed disturbance (acres): 0	**Powerline interim reclamation (acres):** 0	**Powerline long term disturbance (acres):** 0
Pipeline proposed disturbance (acres): 0.8	**Pipeline interim reclamation (acres):** 0.8	**Pipeline long term disturbance (acres):** 0
Other proposed disturbance (acres): 0	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance: 4.949999999999999	**Total interim reclamation:** 1.27	**Total long term disturbance:** 3.6799999999999997

Disturbance Comments: In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

Reconstruction method: The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.
Topsoil redistribution: Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used.

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Soil treatment: N/A

Existing Vegetation at the well pad: Shinnery oak, yucca, threeawn, lovegrass, honey mesquite, broom snakeweed, bristlegrass
Existing Vegetation at the well pad

Existing Vegetation Community at the road: Shinnery oak, yucca, threeawn, lovegrass, honey mesquite, broom snakeweed, bristlegrass
Existing Vegetation Community at the road

Existing Vegetation Community at the pipeline: Shinnery oak, yucca, threeawn, lovegrass, honey mesquite, broom snakeweed, bristlegrass
Existing Vegetation Community at the pipeline

Existing Vegetation Community at other disturbances: Shinnery oak, yucca, threeawn, lovegrass, honey mesquite, broom snakeweed, bristlegrass
Existing Vegetation Community at other disturbances

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Seed

Seed Table

Seed type: FORB **Seed source:**

Seed name: Plains Coreopsis

Source name: **Source address:**

Source phone:

Seed cultivar:

Seed use location: PIPELINE,WELL PAD

PLS pounds per acre: 2 **Proposed seeding season:**

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Seed type: PERENNIAL GRASS **Seed source:**

Seed name: Little Bluestem

Source name: **Source address:**

Source phone:

Seed cultivar:

Seed use location: PIPELINE,WELL PAD

PLS pounds per acre: 3 **Proposed seeding season:**

Seed type: PERENNIAL GRASS **Seed source:**

Seed name: Big Bluestem

Source name: **Source address:**

Source phone:

Seed cultivar:

Seed use location: PIPELINE,WELL PAD

PLS pounds per acre: 6 **Proposed seeding season:**

Seed type: PERENNIAL GRASS **Seed source:**

Seed name: Plains Bristlegrass

Source name: **Source address:**

Source phone:

Seed cultivar:

Seed use location: PIPELINE,WELL PAD

PLS pounds per acre: 5 **Proposed seeding season:**

Seed type: PERENNIAL GRASS **Seed source:**

Seed name: Sand Bluestem

Source name: **Source address:**

Source phone:

Seed cultivar:

Seed use location: PIPELINE,WELL PAD

PLS pounds per acre: 5 **Proposed seeding season:**

Seed type: PERENNIAL GRASS **Seed source:**

Seed name: Sand Dropseed

Source name: **Source address:**

Source phone:

Seed cultivar:

Seed use location: PIPELINE,WELL PAD

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

PLS pounds per acre: 1 **Proposed seeding season:**

Seed Summary

Total pounds/Acre: 22

Seed Type	Pounds/Acre
FORB	2
PERENNIAL GRASS	20

Seed reclamation

Operator Contact/Responsible Official

First Name: **Last Name:**

Phone: **Email:**

Seedbed prep: Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.

Seed BMP: To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used.

Seed method: Drilling or broadcasting seed over entire reclaimed area.

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment

Weed treatment plan description: N/A

Weed treatment plan

Monitoring plan description: All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion and invasive/noxious weeds are controlled.

Monitoring plan

Success standards: Regrowth within 1 full growing season of reclamation.

Pit closure description: N/A

Pit closure attachment:

Section 11 - Surface

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: PIPELINE

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Section 12 - Other

Right of Way needed? Y **Use APD as ROW?** Y

ROW Type(s): 281001 ROW - ROADS,288103 ROW – Salt Water Disposal Pipeline/Facility

ROW

SUPO Additional Information: Operator Contact Info: Sean Puryear, (817) 600-8772, spuryear@popmidstream.com

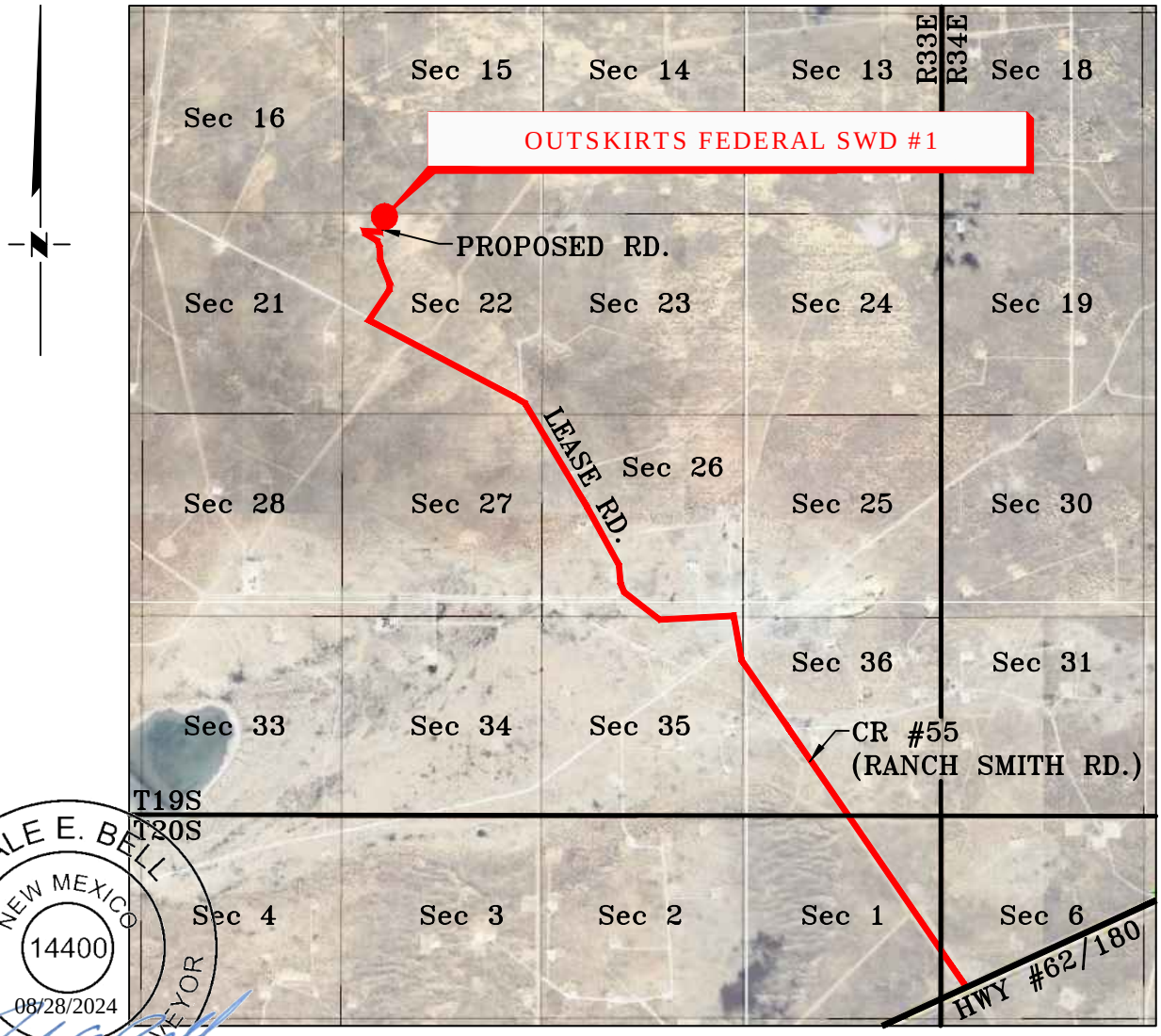
Use a previously conducted onsite? Y

Previous Onsite information: NRS Agent - Kendra Davis

Other SUPO

VICINITY MAP

NOT TO SCALE



DALE E. BELL
NEW MEXICO
14400
08/28/2024
PROFESSIONAL SURVEYOR

SECTION 22, TWP. 19 SOUTH, RGE. 33 EAST, N. M. P. M., LEA COUNTY, NEW MEXICO

OPERATOR: Permian Oilfield Partners, LLC.
LEASE: Outskirts Federal SWD
WELL NO.: 1

LOCATION: 224' FNL & 845' FWL
ELEVATION: 3642'

NO.	REVISION	DATE

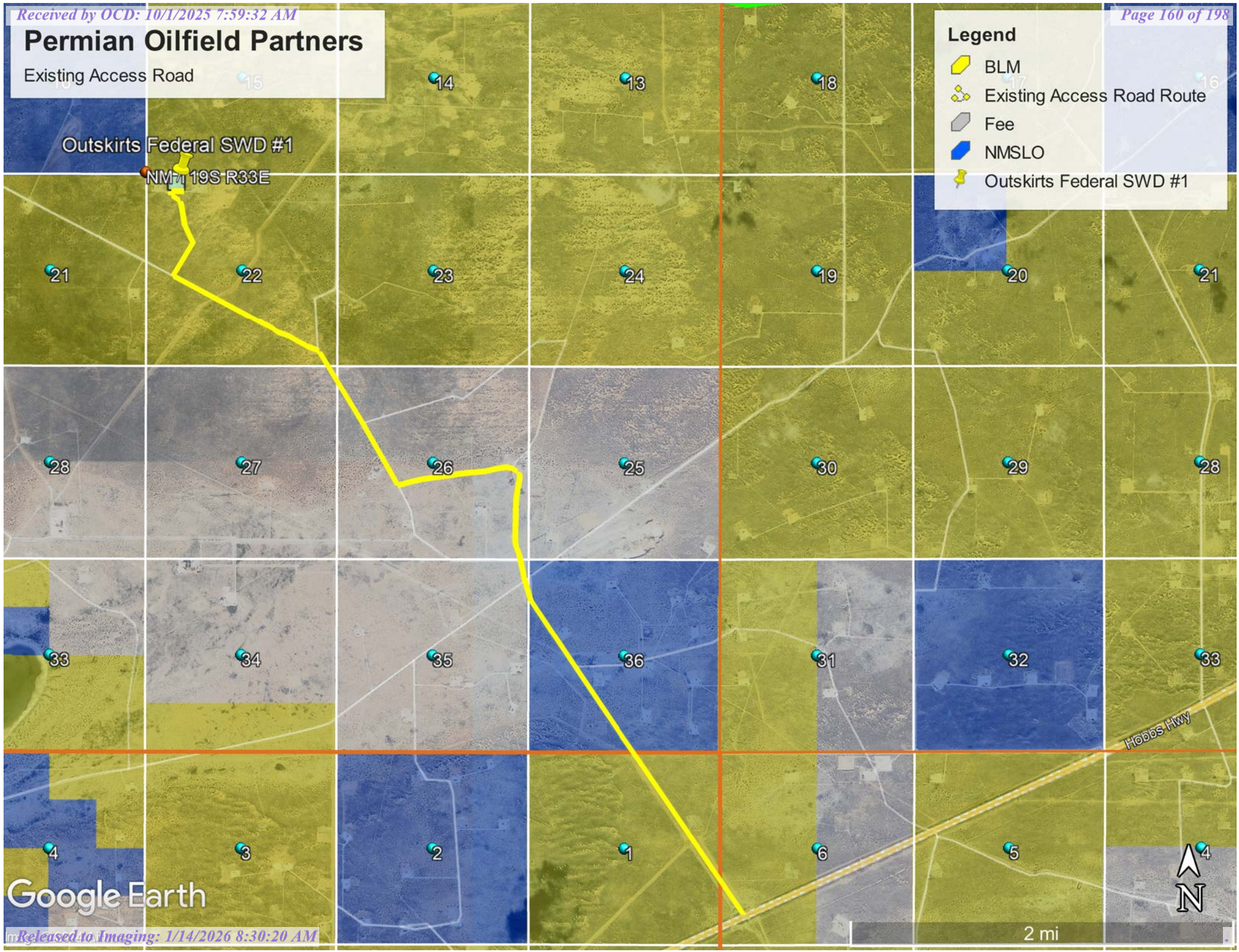
JOB NO.: LS24010058
DWG. NO.: 24010058-3

RRC ENERGY SERVICES, LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

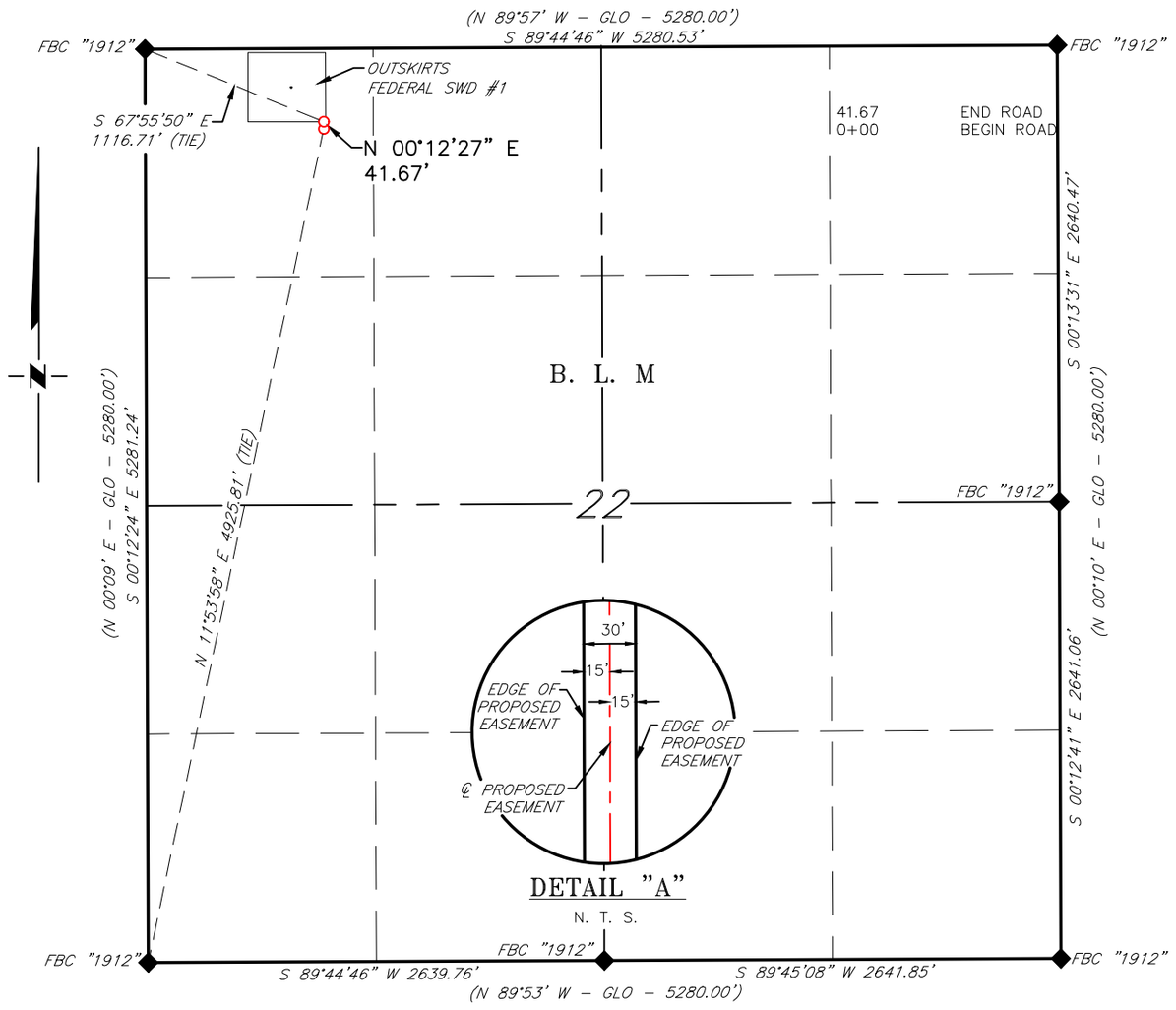
SCALE: N. T. S.
DATE: 02/03/2024
SURVEYED BY: RG/HA
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 1 OF 1

Permian Oilfield Partners

Existing Access Road



PERMIAN OILFIELD PARTNERS, LLC
PROPOSED ACCESS ROAD FOR THE OUTSKIRTS FEDERAL SWD #1
SECTION 22, T19S, R33E,
N. M. P. M., LEA CO., NEW MEXICO



DESCRIPTION

A strip of land 30 feet wide, being 41.67 feet or 2.525 rods in length, lying in Section 22, Township 19 South, Range 33 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in the Northwest quarter, Section 22, which bears, N 11°48'01" E, 4,966.59 feet from a brass cap, stamped "1912", found for the Southwest corner of Section 22;

Thence N 00°12'27" E, 41.67 feet, to Engr. Sta. 4+1.67, the End of Survey, a point in the Northwest quarter of Section 22, which bears, S 67°55'50" W, 1,116.71 feet from a brass cap, stamped "1912", found for the Northwest corner of Section 22;

Said strip of land contains 0.029 acres, more or less and is allocated by forties as follows:

NW 1/4 NW 1/4	2.525 Rods	0.029 Acres

SCALE: 1" = 1000'
0 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

( ) RECORD DATA – GLO

◆ FOUND MONUMENT AS NOTED

PROPOSED ACCESS ROAD

I, Dale E. Bell, New Mexico Professional Surveyor No. 14400, do hereby certify that this Plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that I am responsible for this survey, said survey and plat meets the Minimum Standards for Land Surveying in the State of New Mexico and that it is true and correct to the best of my knowledge and belief.

Dale E. Bell NM PS 14400

DALE E. BELL
NEW MEXICO
14400
12/30/2024
PROFESSIONAL SURVEYOR

NO.	REVISION	DATE
1	REROUTE	12/10/24
JOB NO.: LS24010058R1		
DWG. NO.: 24010058R1–1		

RRC ENERGY SERVICES LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964–8200

SCALE: 1" = 1000'
DATE: 02/03/2024
SURVEYED BY: RG/HA
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 1 OF 1

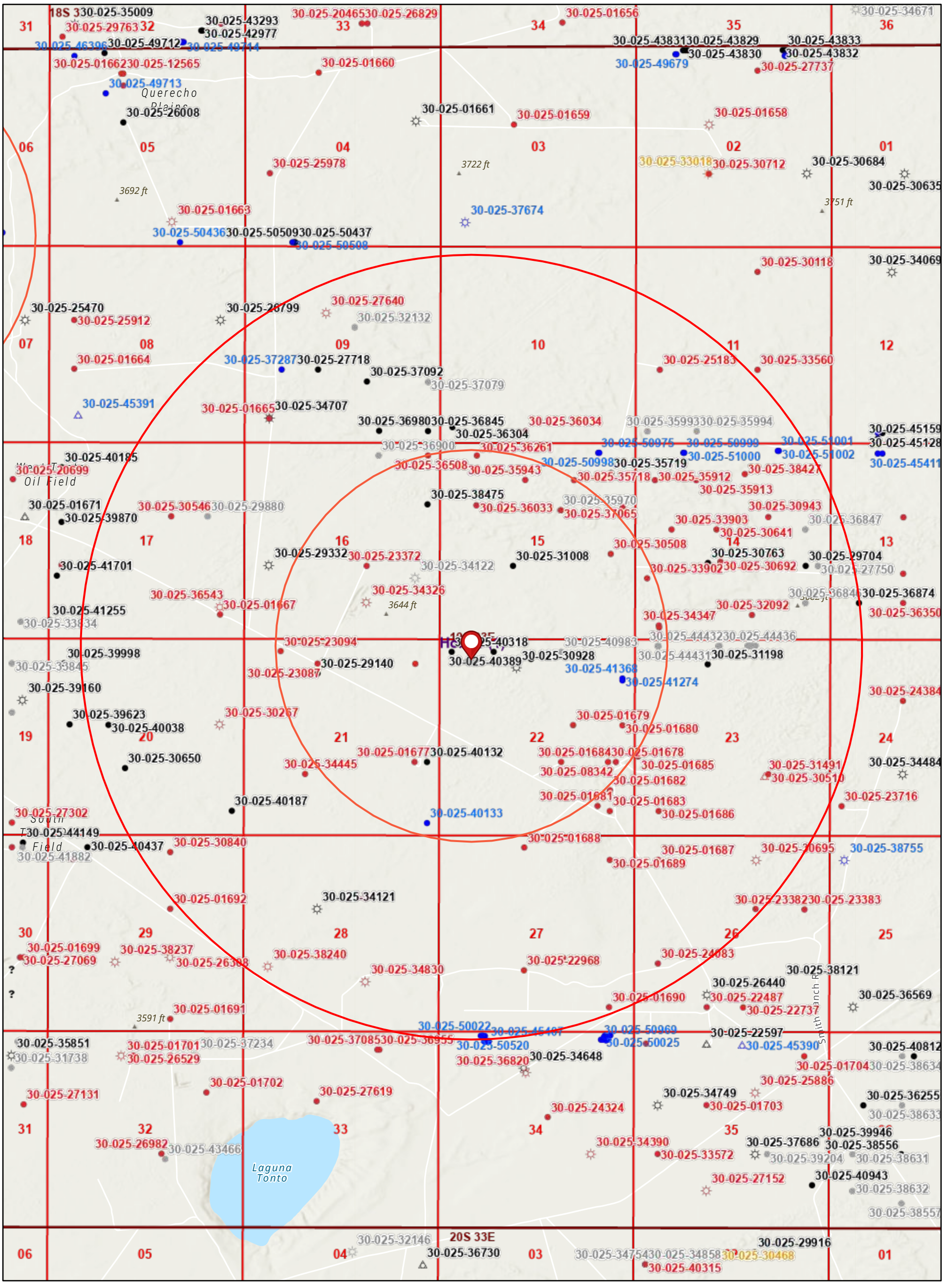
VI.

Outskirts Federal SWD #1 - Wells Within 1 Mile Area of Review

API Number	Current Operator	Well Name	Well Number	Well Type	Well Direction	Well Status	Section	Township	Range	OCD Unit Letter	Surface Location	Bottomhole Location	Formation	MD	TVD
30-025-40389	[330220] RAYBAW Operating, LLC	MALACHITE 22 FEDERAL	#002H	Oil	Horizontal	Active	22	T19S	R33E	C	C-22-19S-33E 330 FNL 1465 FWL	N-22-19S-33E 338 FSL 1985 FWL	BONE SPRING	13676	9291
30-025-36262	[147179] CHESAPEAKE OPERATING, INC.	GANTRYPERSON	#004	Oil	Vertical	Plugged, Site Released	15	T19S	R33E	F	F-15-19S-33E 1650 FNL 1650 FWL	F-15-19S-33E 1650 FNL 1650 FWL	YATES-SEVEN RIVER	3900	3900
30-025-31008	[265378] G and C Operating, LLC	LOWELL FEDERAL	#001	Oil	Vertical	Active	15	T19S	R33E	K	K-15-19S-33E 1980 FSL 1980 FWL	K-15-19S-33E 1980 FSL 1980 FWL	BONE SPRING	13700	13700
30-025-30928	[330220] RAYBAW Operating, LLC	AMETHYST 22 FEDERAL	#001	Gas	Vertical	Active	22	T19S	R33E	C	C-22-19S-33E 760 FNL 2080 FWL	C-22-19S-33E 760 FNL 2080 FWL	MORROW	13700	13700
30-025-35943	[229137] COG OPERATING LLC	GANTRYPERSON	#001	Oil	Vertical	Plugged, Site Released	15	T19S	R33E	C	C-15-19S-33E 990 FNL 2310 FWL	C-15-19S-33E 990 FNL 2310 FWL	YATES-SEVEN RIVER	3906	3906
30-025-37065	[229137] COG OPERATING LLC	WYNELL FEDERAL	#005	Oil	Vertical	Plugged, Site Released	15	T19S	R33E	G	G-15-19S-33E 1800 FNL 2010 FEL	G-15-19S-33E 1800 FNL 2010 FEL	YATES-SEVEN RIVER	3918	3918
30-025-40983	[6137] DEVON ENERGY PRODUCTION COMPANY, LP	AZURITE 22 FEDERAL COM	#002C	Oil	Horizontal	Cancelled Apd	22	T19S	R33E	B	B-22-19S-33E 331 FNL 1980 FEL	O-22-19S-33E 331 FSL 1980 FEL	BONE SPRING	13631	9200
30-025-35970	[193407] CONCHO RESOURCES, INC.	WYNELL FEDERAL	#005	Oil	Vertical	Cancelled Apd	15	T19S	R33E	G	G-15-19S-33E 1800 FNL 2010 FEL	G-15-19S-33E 1800 FNL 2010 FEL	SEVEN RIVER	3900	3900
30-025-01684	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#002	Oil	Vertical	Plugged, Site Released	22	T19S	R33E	J	J-22-19S-33E 1980 FSL 1980 FEL	J-22-19S-33E 1980 FSL 1980 FEL	YATES-SEVEN RIVER	3593	3593
30-025-01679	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#002	Oil	Vertical	Plugged, Site Released	22	T19S	R33E	G	G-22-19S-33E 2310 FNL 1650 FEL	G-22-19S-33E 2310 FNL 1650 FEL	SEVEN RIVER	3055	3055
30-025-01678	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	Vertical	Plugged, Site Released	22	T19S	R33E	I	I-22-19S-33E 1980 FSL 710 FEL	I-22-19S-33E 0 FSL 710 FEL	WOLFCAMP	13800	13800
30-025-08342	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	Vertical	Plugged, Site Released	22	T19S	R33E	I	I-22-19S-33E 1980 FSL 495 FEL	I-22-19S-33E 0 FSL 495 FEL	YATES-SEVEN RIVER	3565	3565
30-025-01680	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	Vertical	Plugged, Site Released	22	T19S	R33E	H	H-22-19S-33E 2310 FNL 330 FEL	H-22-19S-33E 2310 FNL 330 FEL	YATES-SEVEN RIVER	3810	3810
30-025-41274	[6137] DEVON ENERGY PRODUCTION COMPANY, LP	SYLVITE 22 FEDERAL COM	#002H	Oil	Horizontal	New	22	T19S	R33E	A	A-22-19S-33E 1100 FNL 330 FEL	E-22-19S-33E 1980 FNL 330 FWL	DELAWARE	12364	7890
30-025-30508	[147179] CHESAPEAKE OPERATING, INC.	WYNELL FEDERAL	#001	Oil	Vertical	Plugged, Site Released	15	T19S	R33E	I	I-15-19S-33E 2310 FSL 660 FEL	I-15-19S-33E 2310 FSL 660 FEL	WOLFCAMP	13700	13700
30-025-41368	[6137] DEVON ENERGY PRODUCTION COMPANY, LP	SYLVITE 22 FEDERAL COM	#001H	Oil	Horizontal	New	22	T19S	R33E	A	A-22-19S-33E 1050 FNL 330 FEL	D-22-19S-33E 550 FNL 330 FEL	DELAWARE	12243	7840
30-025-33902	[229137] COG OPERATING LLC	FEDERAL USA L	#006	Oil	Vertical	Plugged, Site Released	14	T19S	R33E	L	L-14-19S-33E 1650 FSL 330 FWL	L-14-19S-33E 1650 FSL 330 FWL	YATES-SEVEN RIVER	3900	3900
30-025-44431	[228937] MATADOR PRODUCTION COMPANY	MJ FEDERAL COM	#221H	Oil	Horizontal	Cancelled Apd	23	T19S	R33E	D	D-23-19S-33E 188 FNL 599 FWL	M-23-19S-33E 240 FSL 330 FWL	WOLFCAMP	15955	11360
30-025-44434	[228937] MATADOR PRODUCTION COMPANY	MJ FEDERAL COM	#231H	Oil	Horizontal	Cancelled Apd	23	T19S	R33E	D	D-23-19S-33E 188 FNL 629 FWL	M-23-19S-33E 241 FSL 330 FWL	WOLFCAMP	16543	11790
30-025-01666	[13954] MANZANO OIL CORP	FEDERAL USA L	#009	Oil	Vertical	Plugged, Site Released	14	T19S	R33E	M	M-14-19S-33E 330 FSL 660 FWL	M-14-19S-33E 330 FSL 660 FWL	YATES-SEVEN RIVER	5084	5084
30-025-34347	[147179] CHESAPEAKE OPERATING, INC.	FEDERAL USA L	#009Y	Oil	Vertical	Plugged, Site Released	14	T19S	R33E	M	M-14-19S-33E 383 FSL 652 FWL	M-14-19S-33E 383 FSL 652 FWL	YATES-SEVEN RIVER	3864	3864
30-025-45054	[215099] CIMAREX ENERGY CO.	MESCALERO RIDGE 21 FEDERAL	#001H	Oil	Horizontal	Active	21	T19S	R34E	B	B-21-19S-34E 544 FNL 1980 FEL	P-21-19S-34E 104 FSL 670 FEL	BONE SPRING	15630	10759
30-025-23094	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	Vertical	Plugged, Site Released	21	T19S	R33E	D	D-21-19S-33E 330 FNL 990 FWL	D-21-19S-33E 330 FNL 990 FWL	YATES-SEVEN RIVER	3600	3600
30-025-23087	[16850] PAN AMERICAN PETROLEUM CORP	BRIGHT FEDERAL	#001	Oil	Vertical	Plugged, Site Released	21	T19S	R33E	C	C-21-19S-33E 660 FNL 1980 FWL	C-21-19S-33E 660 FNL 1980 FWL	YATES-SEVEN RIVER	3385	3385
30-025-29140	[372098] MARATHON OIL PERMIAN LLC	SUN BRIGHT FEDERAL	#001	Oil	Vertical	Active	21	T19S	R33E	C	C-21-19S-33E 920 FNL 1980 FWL	C-21-19S-33E 920 FNL 1980 FWL	WOLFCAMP	13750	13750
30-025-34326	[16696] OXY USA INC	LONE RANGER 16 STATE COM	#001	Gas	Vertical	Plugged, Site Released	16	T19S	R33E	O	O-16-19S-33E 990 FSL 1980 FEL	O-16-19S-33E 990 FSL 1980 FEL	WOLFCAMP	13620	13620
30-025-23372	[149035] BASIN OPERATING COMPANY	KIMO SABE	#001	Oil	Vertical	Plugged, Site Released	16	T19S	R33E	J	J-16-19S-33E 1980 FSL 1980 FEL	J-16-19S-33E 1980 FSL 1980 FEL	DEVONIAN	14700	14700
30-025-01677	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	Vertical	Plugged, Site Released	21	T19S	R33E	I	I-21-19S-33E 1980 FSL 660 FEL	I-21-19S-33E 1980 FSL 660 FEL	YATES-SEVEN RIVER	3600	3600
30-025-34122	[15742] NEARBURG PRODUCING CO	LONE RANGER 16 STATE	#001	Gas	Vertical	Cancelled Apd	16	T19S	R33E	I	I-16-19S-33E 1650 FSL 660 FEL	I-16-19S-33E 1650 FSL 660 FEL	MORROW	13600	13600
30-025-40132	[162683] CIMAREX ENERGY CO. OF COLORADO	DIAMANTE 21 FEDERAL	#002	Oil	Horizontal	Active	21	T19S	R33E	I	I-21-19S-33E 1980 FSL 330 FEL	L-21-19S-33E 1925 FSL 4940 FEL	BONE SPRING	14666	10118
30-025-38475	[151323] PRIDE ENERGY COMPANY	TONTO STATE	#001	Oil	Vertical	Active	16	T19S	R33E	H	H-16-19S-33E 1650 FNL 330 FEL	H-16-19S-33E 1650 FNL 330 FEL	YATES-SEVEN RIVER	3857	3857
30-025-25843	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	Vertical	Plugged, Site Released	21	T19S	R33E	A	A-21-19S-33E 660 FNL 660 FEL	A-21-19S-33E 660 FNL 660 FEL	YATES-SEVEN RIVER	3725	3725
30-025-40133	[162683] CIMAREX ENERGY CO. OF COLORADO	DIAMANTE 21 FEDERAL	#003H	Oil	Horizontal	New	21	T19S	R33E	P	P-21-19S-33E 330 FSL 330 FEL	M-21-19S-33E 660 FSL 330 FWL	BONE SPRING	14611	10100
30-025-40318	[330220] RAYBAW Operating, LLC	MALACHITE 22 FEDERAL	#001H	Oil	Horizontal	Active	22	T19S	R33E	D	D-22-19S-33E 330 FNL 330 FWL	M-22-19S-33E 4948 FNL 402 FWL	BONE SPRING	13591	9200
30-025-36261	[229137] COG OPERATING LLC	GANTRYPERSON	#003	Oil	Vertical	Plugged, Site Released	15	T19S	R33E	D	D-15-19S-33E 330 FNL 990 FWL	D-15-19S-33E 330 FNL 990 FWL	YATES-SEVEN RIVER	3900	3900
30-025-36033	[229137] COG OPERATING LLC	GANTRYPERSON	#002	Oil	Vertical	Plugged, Site Released	15	T19S	R33E	E	E-15-19S-33E 1670 FNL 990 FWL	E-15-19S-33E 1670 FNL 990 FWL	YATES-SEVEN RIVER	3900	3900

V (b)

Outskirts Federal SWD #1, 1 & 2 Mi AOR, Wells



1/22/2024, 2:36:18 PM

Override 1

Wells - Large Scale

- Gas, Active
- Gas, Cancelled
- Gas, New
- Gas, Plugged
- Gas, Temporarily Abandoned
- Oil, Active
- Oil, Cancelled
- Oil, New
- Oil, Plugged
- Oil, Temporarily Abandoned
- Salt Water Injection, Active
- Salt Water Injection, New
- Salt Water Injection, Plugged
- undefined
- OCD Districts
- PLSS First Division
- PLSS Townships

1:36,112

0 0.33 0.65 1.3 mi

0 0.5 1 2 km

Esri, NASA, NGA, USGS, FEMA
Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department.
Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS,

New Mexico Oil Conservation Division

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024 Submittal Type: ☐ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
	97869	SWD; DEVONIAN – SILURIAN

Property Code	Property Name	Well Number
NMNM34850	OUTSKIRTS FEDERAL SWD	1

OGRID No.	Operator Name	Ground Level Elevation
328259	PERMIAN OILFIELD PARTNERS, LLC	3642'

Surface Owner: ☐ State ☐ Fee ☐ Tribal ■ Federal | Mineral Owner: ☐ State ☐ Fee ☐ Tribal ■ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
D	22	19S	33E		224 FNL	845 FWL	32.6523783°N	103.6567663°W	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code

Order Numbers. | Well setbacks are under Common Ownership: ☐ Yes ☐ No

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☐ Horizontal ☐ Vertical	Ground Floor Elevation:

OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and , if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Signature: Gary Fisher Date: 2/08/2024

Printed Name: Gary Fisher

Email Address: gfisher@popmidstream.com

SURVEYOR CERTIFICATIONS

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me under my supervision, and that the same is true and correct to the best of my belief.

DALE E. BELL NEW MEXICO 14400 02/24/2025 PROFESSIONAL SURVEYOR

Signature and Seal of Professional Surveyor

Certificate Number: 14400

Date of Survey: 02/03/2024

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

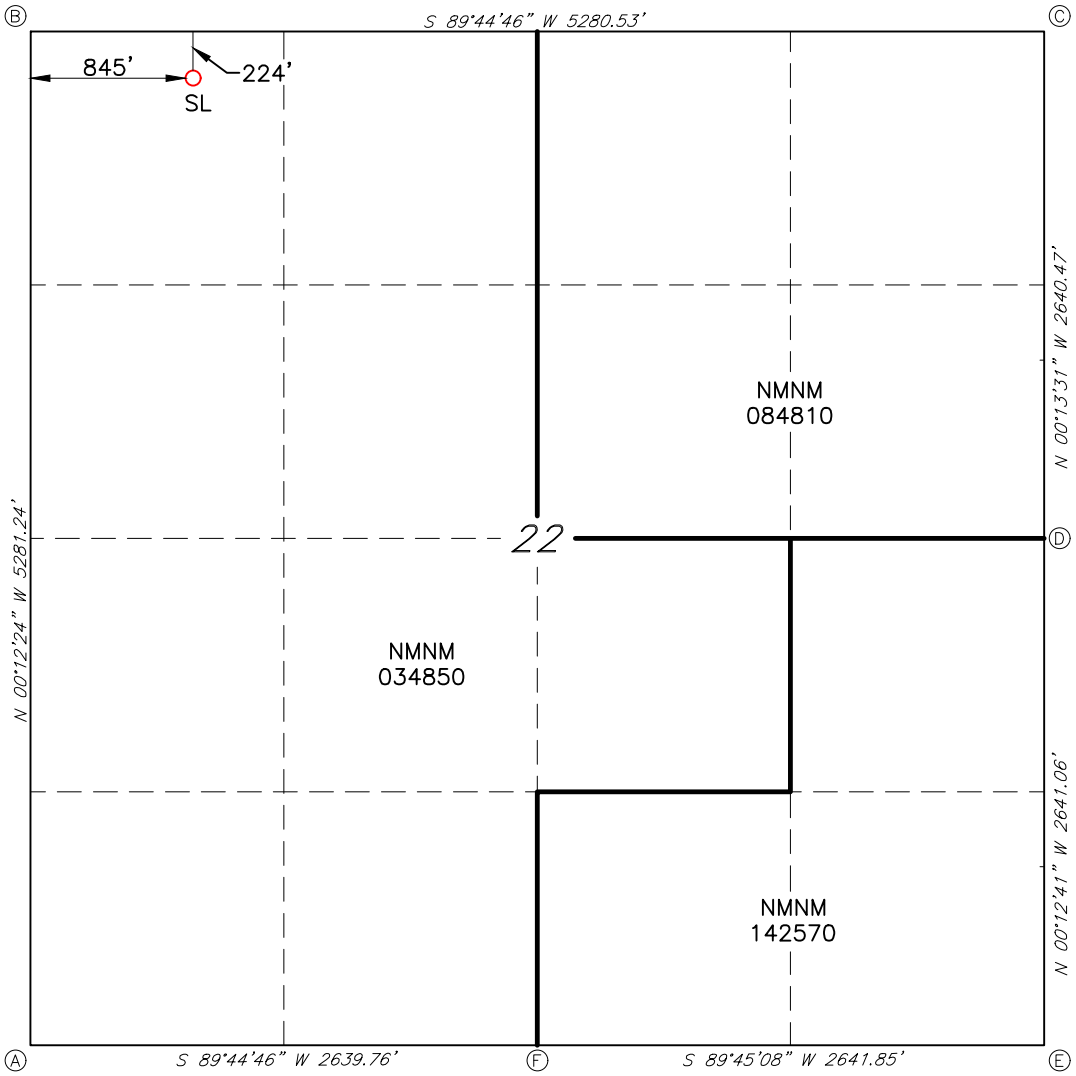
JOB #: LS24010058

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is a directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.

OUTSKIRTS FEDERAL SWD #1



DALE E. BELL
NEW MEXICO
14400
02/24/2025
PROFESSIONAL SURVEYOR

GEODETIC DATA
NAD 83 GRID – NM EAST

SURFACE LOCATION

N: 601729.5 – E: 749568.7

LAT: 32.6523783° N
LONG: 103.6567663° W

CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1912"
N: 596670.0 – E: 748742.1

B: FOUND BRASS CAP "1912"
N: 601950.1 – E: 748723.1

C: FOUND BRASS CAP "1912"
N: 601973.5 – E: 754002.4

D: FOUND BRASS CAP "1912"
N: 599333.6 – E: 754012.8

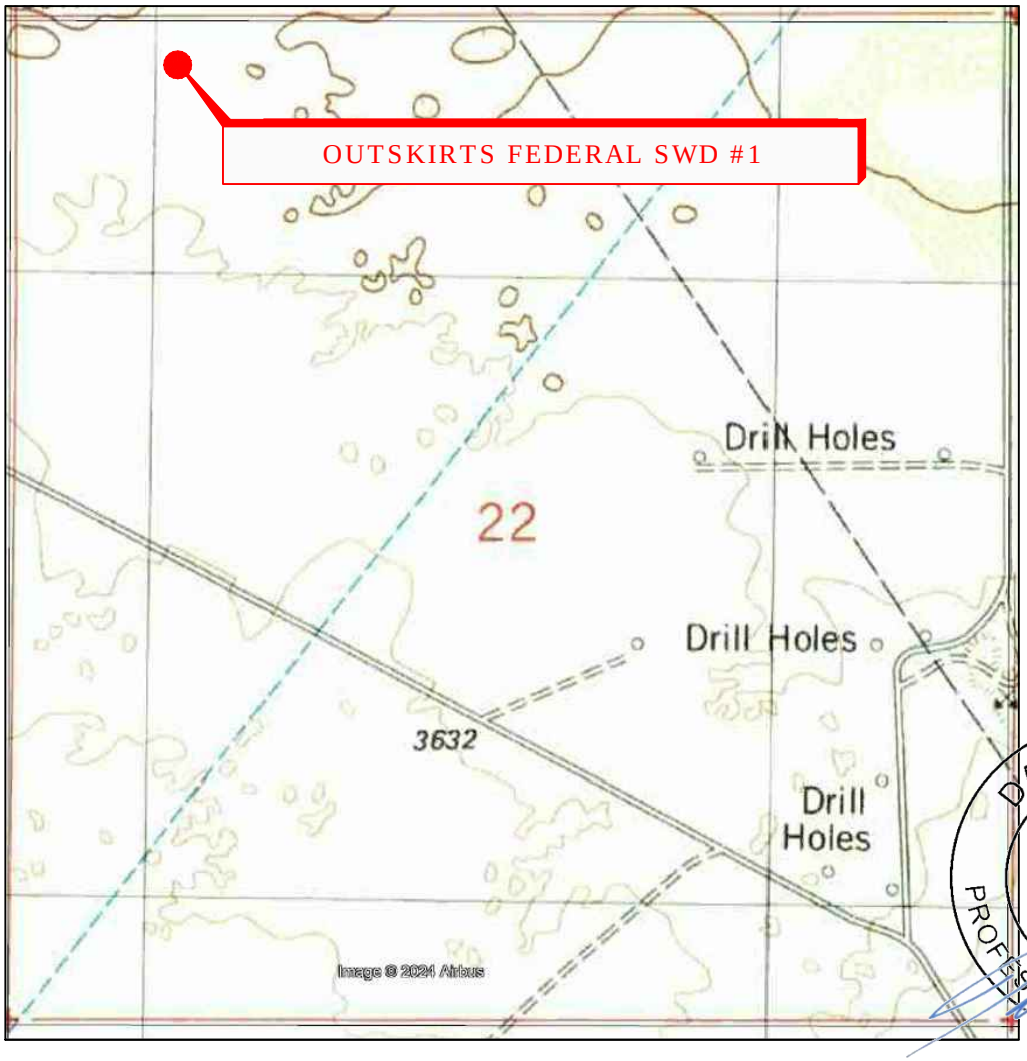
E: FOUND BRASS CAP "1912"
N: 596693.2 – E: 754022.5

F: FOUND BRASS CAP "1912"
N: 596681.7 – E: 751381.3

JOB #: LS24010058

LOCATION VERIFICATION MAP

NOT TO SCALE



DALE E. BELL
NEW MEXICO
14400
12/30/2024
PROFESSIONAL SURVEYOR

SECTION 22, TWP. 19 SOUTH, RGE. 33 EAST, N. M. P. M., LEA COUNTY, NEW MEXICO

OPERATOR: Permian Oilfield Partners, LLC.
LEASE: Outskirts Federal SWD
WELL NO.: 1H
ELEVATION: 3642'

LOCATION: 244' FNL & 845' FWL
CONTOUR INTERVAL: 10'
USGS TOPO. SOURCE MAP:
Laguna Gatuna NW, NM (1984)

NO.	REVISION	DATE

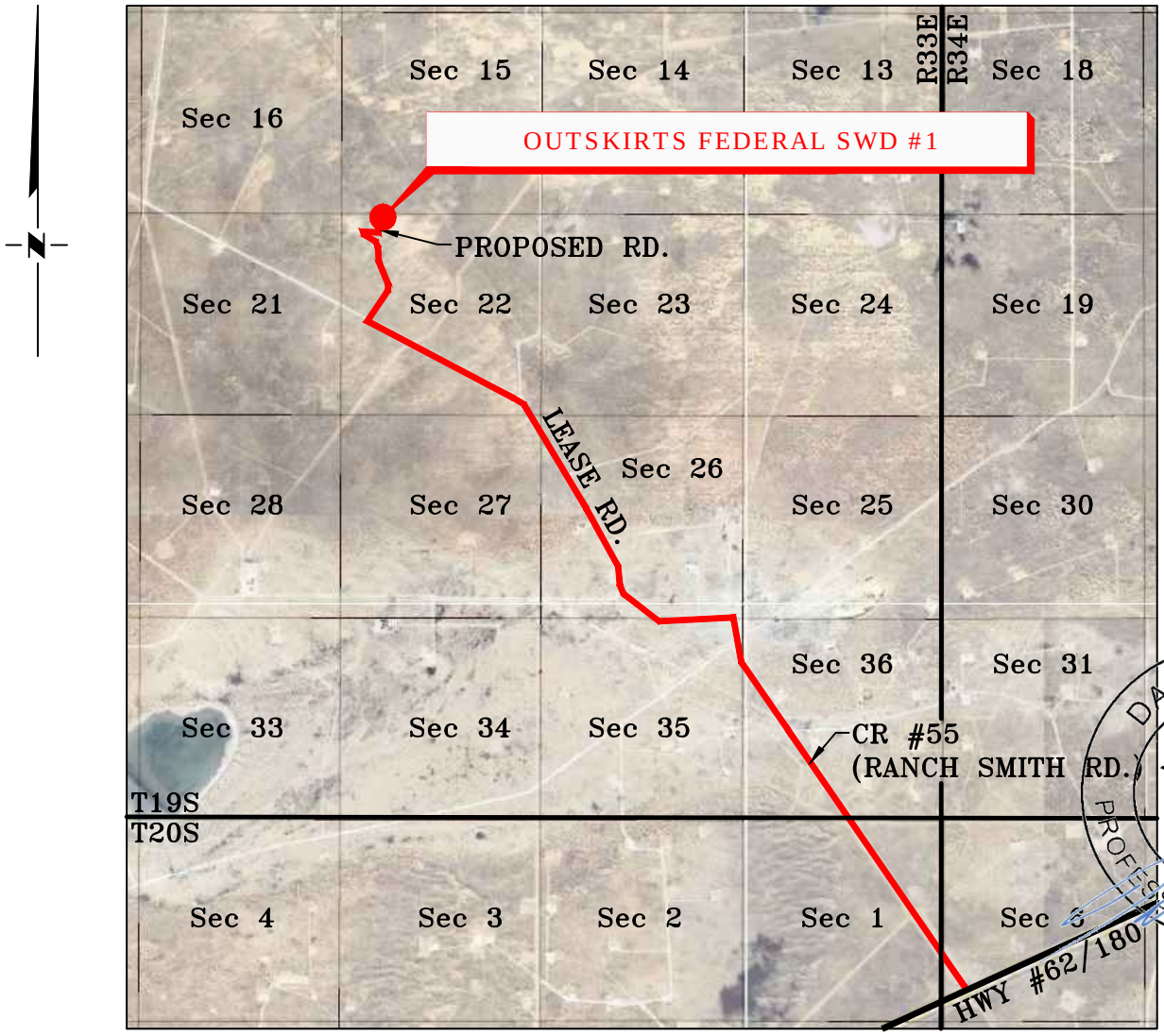
JOB NO.: LS24010058
DWG. NO.: 24010058-2

RRC ENERGY SERVICES, LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: N. T. S.
DATE: 02/03/2024
SURVEYED BY: RG/HA
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 1 OF 1

VICINITY MAP

NOT TO SCALE



DALE E. BELL
NEW MEXICO
14400
12/30/2024
PROFESSIONAL SURVEYOR

SECTION 22, TWP. 19 SOUTH, RGE. 33 EAST,
N. M. P. M., LEA COUNTY, NEW MEXICO

OPERATOR: Permian Oilfield Partners, LLC.
LEASE: Outskirts Federal SWD
WELL NO.: 1

LOCATION: 224' FNL & 845' FWL
ELEVATION: 3642'

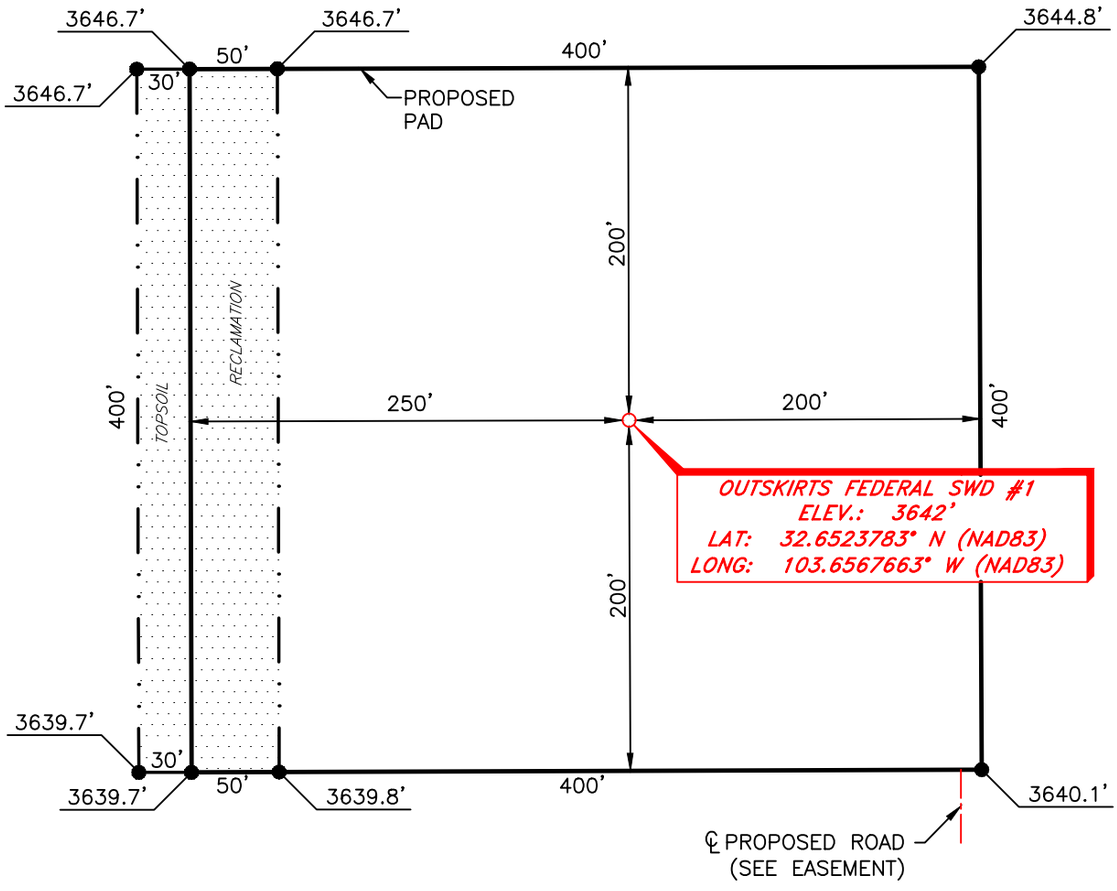
NO.	REVISION	DATE

JOB NO.: LS24010058
DWG. NO.: 24010058-3

RRC ENERGY SERVICES, LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: N. T. S.
DATE: 02/03/2024
SURVEYED BY: RG/HA
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 1 OF 1

PERMIAN OILFIELD PARTNERS, LLC
OUTSKIRTS FEDERAL SWD #1
(244' FNL & 845' FWL)
SECTION 22, T19S, R33E
N. M. P. M., LEA CO., NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of HWY 62/180 (Carlsbad Hwy) & CR #55 (Smith Ranch Rd.);

Go North on CR #55 approx. 2.2 miles to a lease road on the left;

Turn left and go West approx. 0.6 miles to a "Y";

At "Y" turn right and go Northwest approx. 2.0 miles to a lease road on the right;

Turn right and go Northwest approx. 0.5 miles to a lease road on the right;

Turn right and go East approx. 450 feet to proposed road on the left;

Turn left and go North approx. 350 feet to location on the left.

SCALE: 1" = 100'
0 50 100

BEARINGS ARE NAD 83 GRID – NM EAST DISTANCES ARE GROUND

I, Dale E. Bell, New Mexico Professional Surveyor No. 14400, do hereby certify that this Plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that I am responsible for this survey, said survey and plat meets the Minimum Standards for Land Surveying in the State of New Mexico and that it is true and correct to the best of my knowledge and belief.

Dale E. Bell NM PS 14400

DALE E. BELL
NEW MEXICO
14400
12/30/2024
PROFESSIONAL SURVEYOR

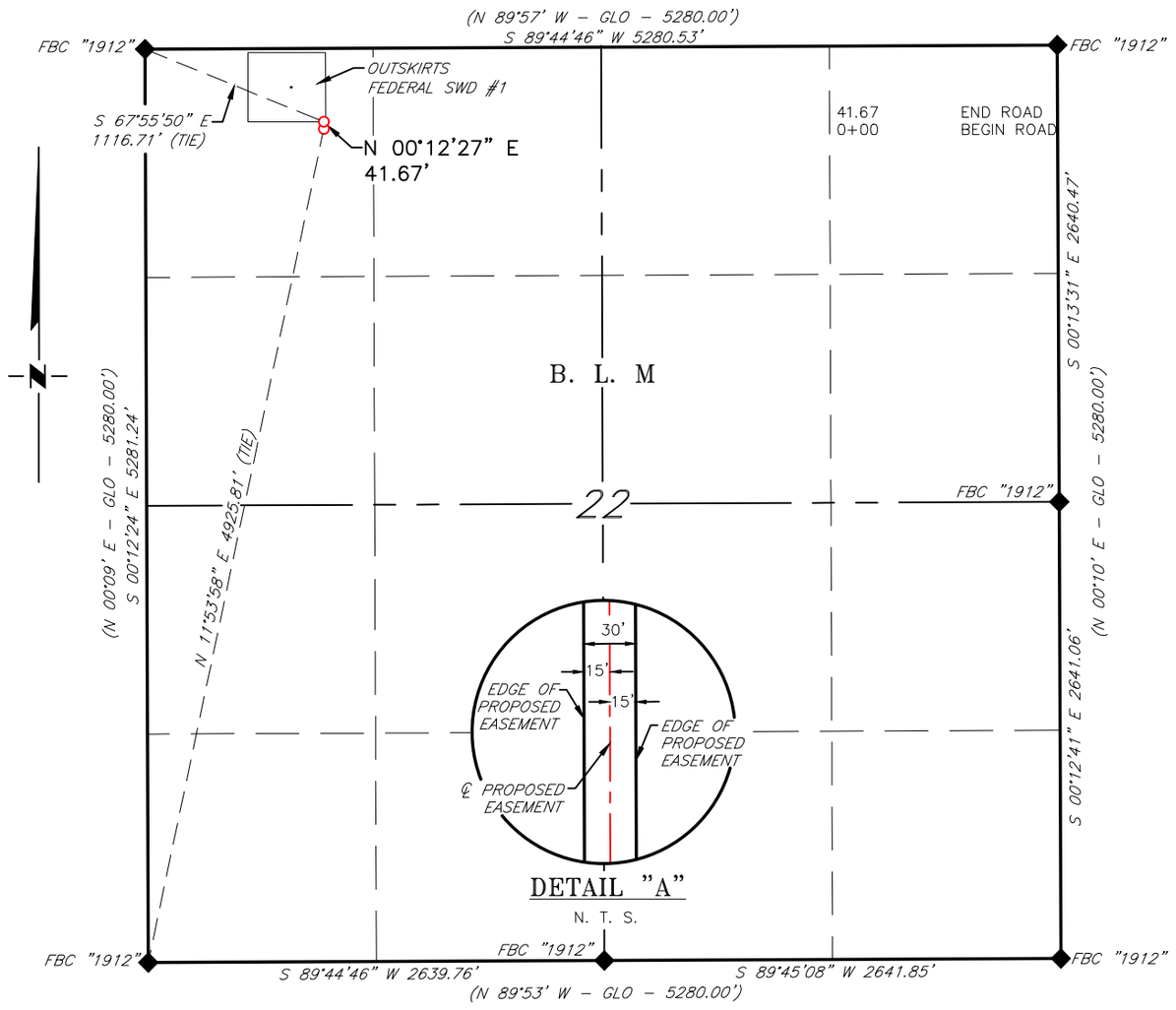
NO.	REVISION	DATE

JOB NO.: LS24010058
DWG. NO.: 24010058–4

RRC ENERGY SERVICES, LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964–8200

SCALE: 1" = 100'
DATE: 02/03/2024
SURVEYED BY: RG/HA
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 1 OF 1

PERMIAN OILFIELD PARTNERS, LLC
PROPOSED ACCESS ROAD FOR THE OUTSKIRTS FEDERAL SWD #1
SECTION 22, T19S, R33E,
N. M. P. M., LEA CO., NEW MEXICO



DESCRIPTION

A strip of land 30 feet wide, being 41.67 feet or 2.525 rods in length, lying in Section 22, Township 19 South, Range 33 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in the Northwest quarter, Section 22, which bears, N 11°48'01" E, 4,966.59 feet from a brass cap, stamped "1912", found for the Southwest corner of Section 22;

Thence N 00°12'27" E, 41.67 feet, to Engr. Sta. 4+1.67, the End of Survey, a point in the Northwest quarter of Section 22, which bears, S 67°55'50" W, 1,116.71 feet from a brass cap, stamped "1912", found for the Northwest corner of Section 22;

Said strip of land contains 0.029 acres, more or less and is allocated by forties as follows:

NW 1/4 NW 1/4	2.525 Rods	0.029 Acres

SCALE: 1" = 1000'
0 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

( ) RECORD DATA – GLO

◆ FOUND MONUMENT AS NOTED

PROPOSED ACCESS ROAD

I, Dale E. Bell, New Mexico Professional Surveyor No. 14400, do hereby certify that this Plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that I am responsible for this survey, said survey and plat meets the Minimum Standards for Land Surveying in the State of New Mexico and that it is true and correct to the best of my knowledge and belief.

Dale E. Bell NM PS 14400

DALE E. BELL
NEW MEXICO
14400
12/30/2024
PROFESSIONAL SURVEYOR

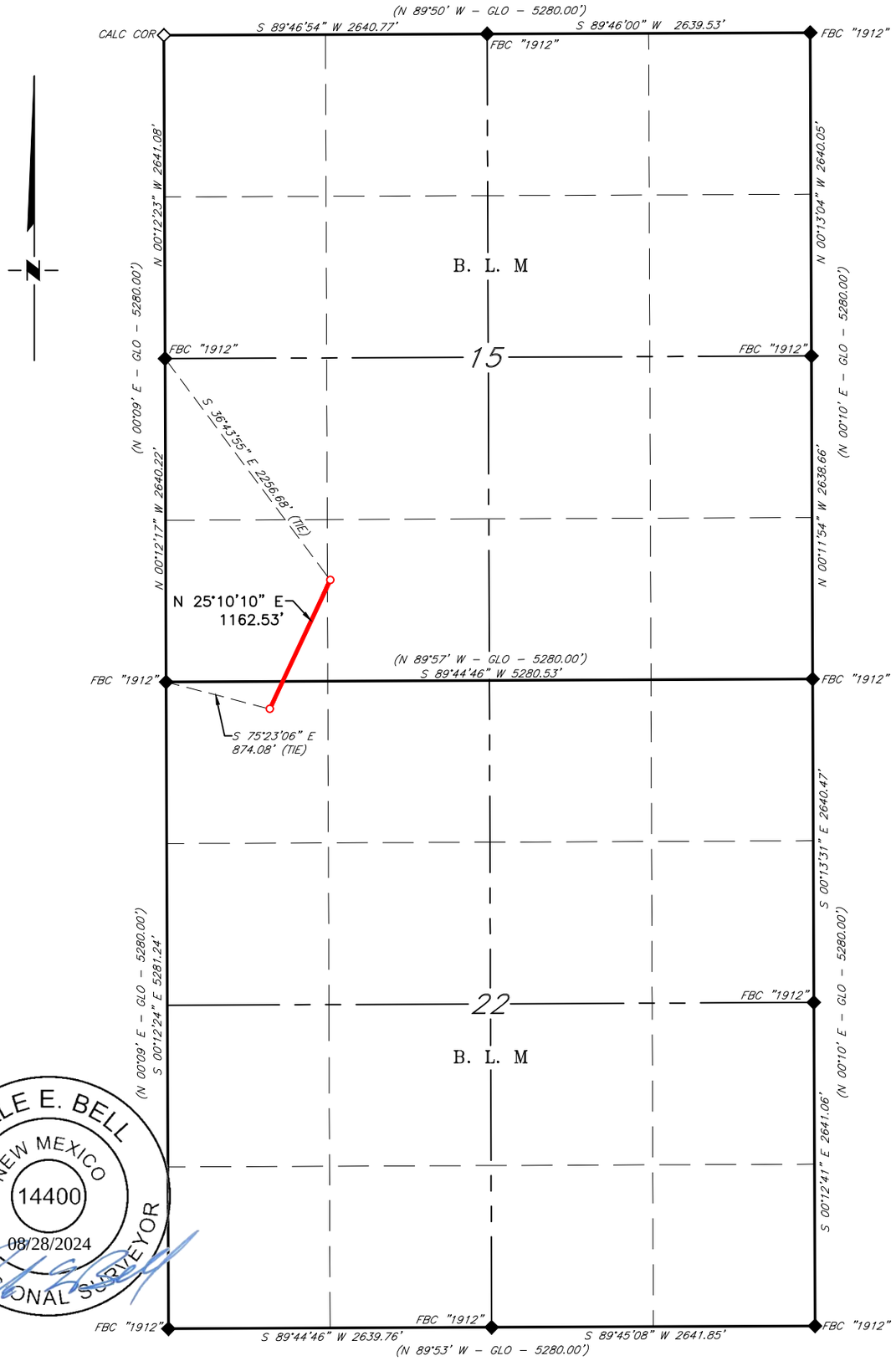
NO.	REVISION	DATE
1	REROUTE	12/10/24

JOB NO.: LS24010058R1
DWG. NO.: 24010058R1–1

RRC ENERGY SERVICES LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964–8200

SCALE: 1" = 1000'
DATE: 02/03/2024
SURVEYED BY: RG/HA
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 1 OF 1

PERMIAN OILFIELD PARTNERS, LLC
OUTSKIRTS TO MOONRAKER ROW
SECTIONS 15 & 22, T19S, R33E,
N. M. P. M., LEA CO., NEW MEXICO



DALE E. BELL
NEW MEXICO
14400
08/28/2024
PROFESSIONAL SURVEYOR

LEGEND

( ) RECORD DATA – GLO

◇ CALCULATED CORNER

◆ FOUND MONUMENT AS NOTED

PROPOSED PIPELINE

SCALE: 1" = 1200'
0 600' 1200'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

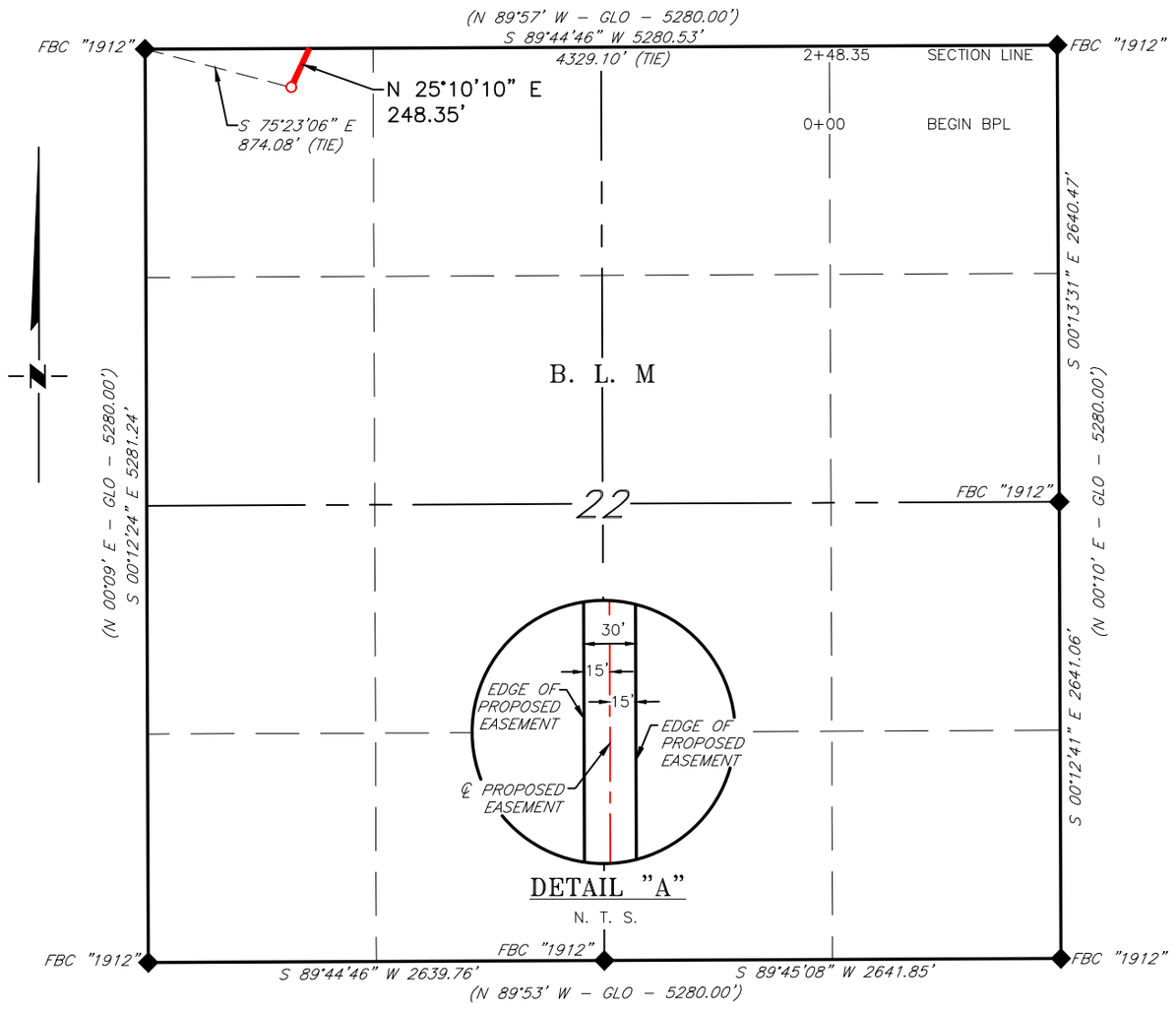
NO.	REVISION	DATE

JOB NO.: LS24080718
DWG. NO.: 24080718–1

RRC ENERGY SERVICES LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964–8200

SCALE: 1" = 1200'
DATE: 08/26/2024
SURVEYED BY: RL/EU
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 1 OF 3

PERMIAN OILFIELD PARTNERS, LLC
OUTSKIRTS TO MOONRAKER ROW
SECTION 22, T19S, R33E,
N. M. P. M., LEA CO., NEW MEXICO



DESCRIPTION

A strip of land 30 feet wide, being 248.35 feet or 15.052 rods in length, lying in Section 22, Township 19 South, Range 33 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in the Northwest quarter, Section 22, which bears, S 75°23'06" E, 874.08 feet from a brass cap, stamped "1912", found for the Northwest corner of Section 22;

Thence N 25°10'10" E, 248.35 feet, to Engr. Sta. 2+48.35, a point on the North line of Section 22, which bears, S 89°44'46" W, 4,329.10 feet from a brass cap, stamped "1912", found for the Northeast corner of Section 22;

Said strip of land contains 0.171 acres, more or less and is allocated by forties as follows:

NW 1/4 NW 1/4	15.052 Rods	0.171 Acres

SCALE: 1" = 1000'
0 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

( ) RECORD DATA – GLO

FOUND MONUMENT AS NOTED

PROPOSED PIPELINE

I, Dale E. Bell, New Mexico Professional Surveyor No. 14400, do hereby certify that this Plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that I am responsible for this survey, said survey and plat meets the Minimum Standards for Land Surveying in the State of New Mexico and that it is true and correct to the best of my knowledge and belief.

Dale E. Bell NM PS 14400

DALE E. BELL
NEW MEXICO
14400
08/28/2024
PROFESSIONAL SURVEYOR

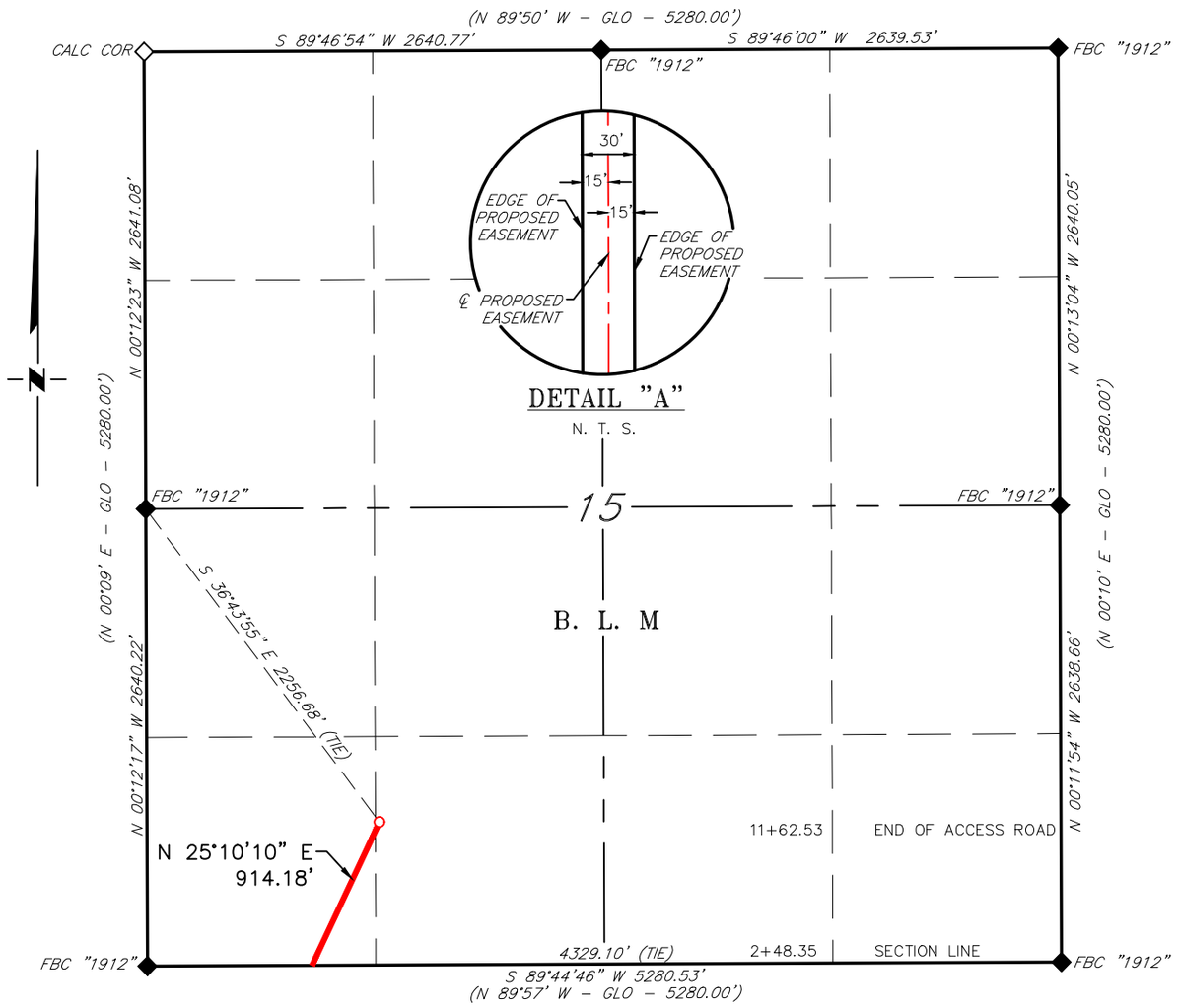
NO.	REVISION	DATE

JOB NO.: LS24080718
DWG. NO.: 24080718–2

RRC ENERGY SERVICES LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964–8200

SCALE: 1" = 1000'
DATE: 08/26/2024
SURVEYED BY: RL/EU
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 2 OF 3

PERMIAN OILFIELD PARTNERS, LLC
OUTSKIRTS TO MOONRAKER ROW
SECTION 15, T19S, R33E,
N. M. P. M., LEA CO., NEW MEXICO



DESCRIPTION

A strip of land 30 feet wide, being 914.18 feet or 55.405 rods in length, lying in Section 15, Township 19 South, Range 33 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 2+48.35, a point on the South line of, Section 15, which bears, S 89°44'46" W, 4,329.10 feet from a brass cap, stamped "1912", found for the Southeast corner of Section 15;

Thence N 25°10'10" E, 914.18 feet, to Engr. Sta. 11+62.53, the End of Survey, a point in the Southwest quarter of Section 15, which bears, S 36°43'55" E, 2,256.68 feet from a brass cap, stamped "1912", found for the West quarter corner of Section 15;

Said strip of land contains 0.630 acres, more or less and is allocated by forties as follows:

SW 1/4 SW 1/4	52.150 Rods	0.593 Acres
SE 1/4 SW 1/4	3.255 Rods	0.037 Acres

SCALE: 1" = 1000'
0 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

( ) RECORD DATA - GLO
◇ CALCULATED CORNER
◆ FOUND MONUMENT AS NOTED
PROPOSED PIPELINE

I, Dale E. Bell, New Mexico Professional Surveyor No. 14400, do hereby certify that this Plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that I am responsible for this survey, said survey and plat meets the Minimum Standards for Land Surveying in the State of New Mexico and that it is true and correct to the best of my knowledge and belief.

Dale E. Bell NM PS 14400

DALE E. BELL
NEW MEXICO
14400
08/28/2024
PROFESSIONAL SURVEYOR

NO.	REVISION	DATE

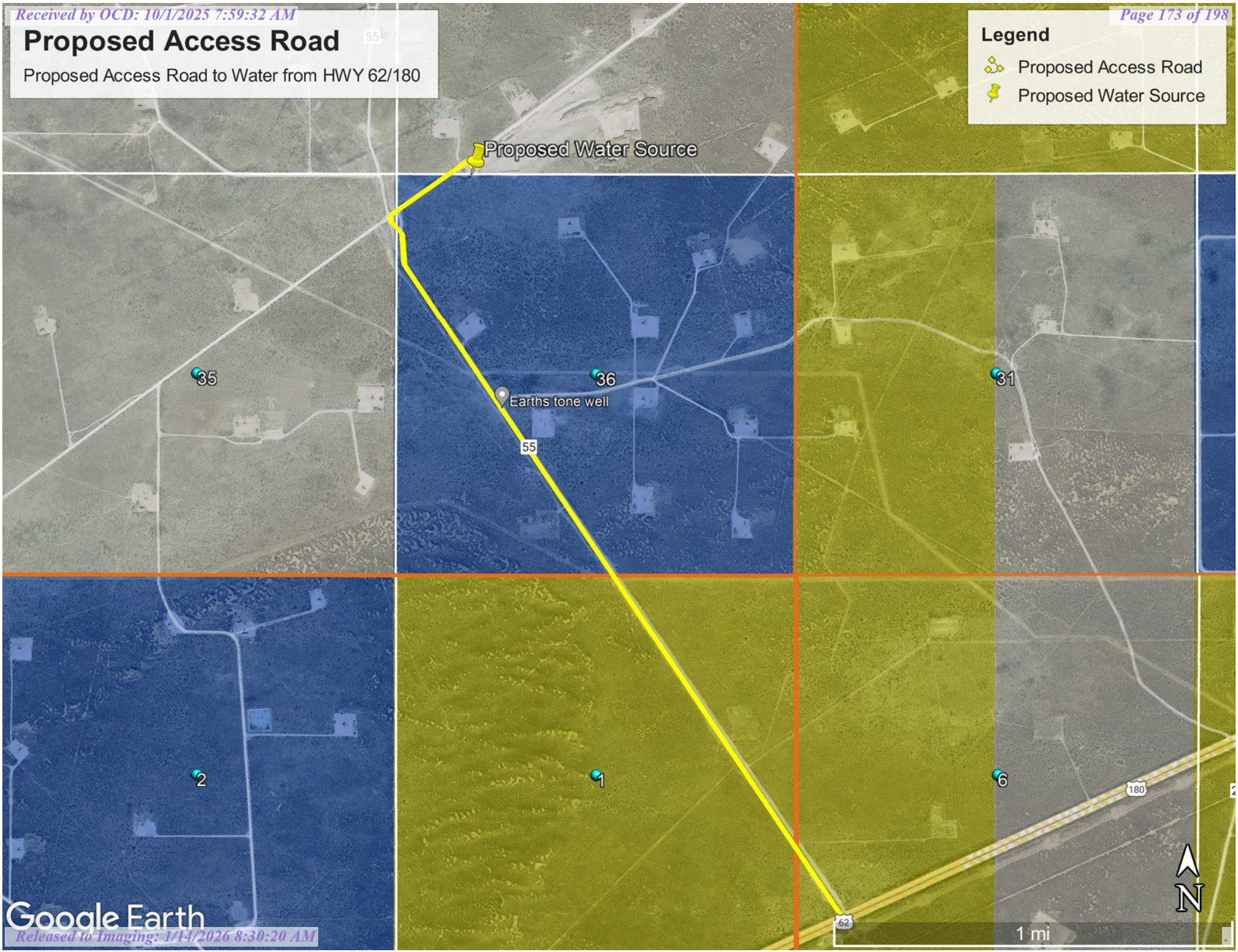
JOB NO.: LS24080718
DWG. NO.: 24080718-3

RRC ENERGY SERVICES LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 08/26/2024
SURVEYED BY: RL/EU
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 3 OF 3

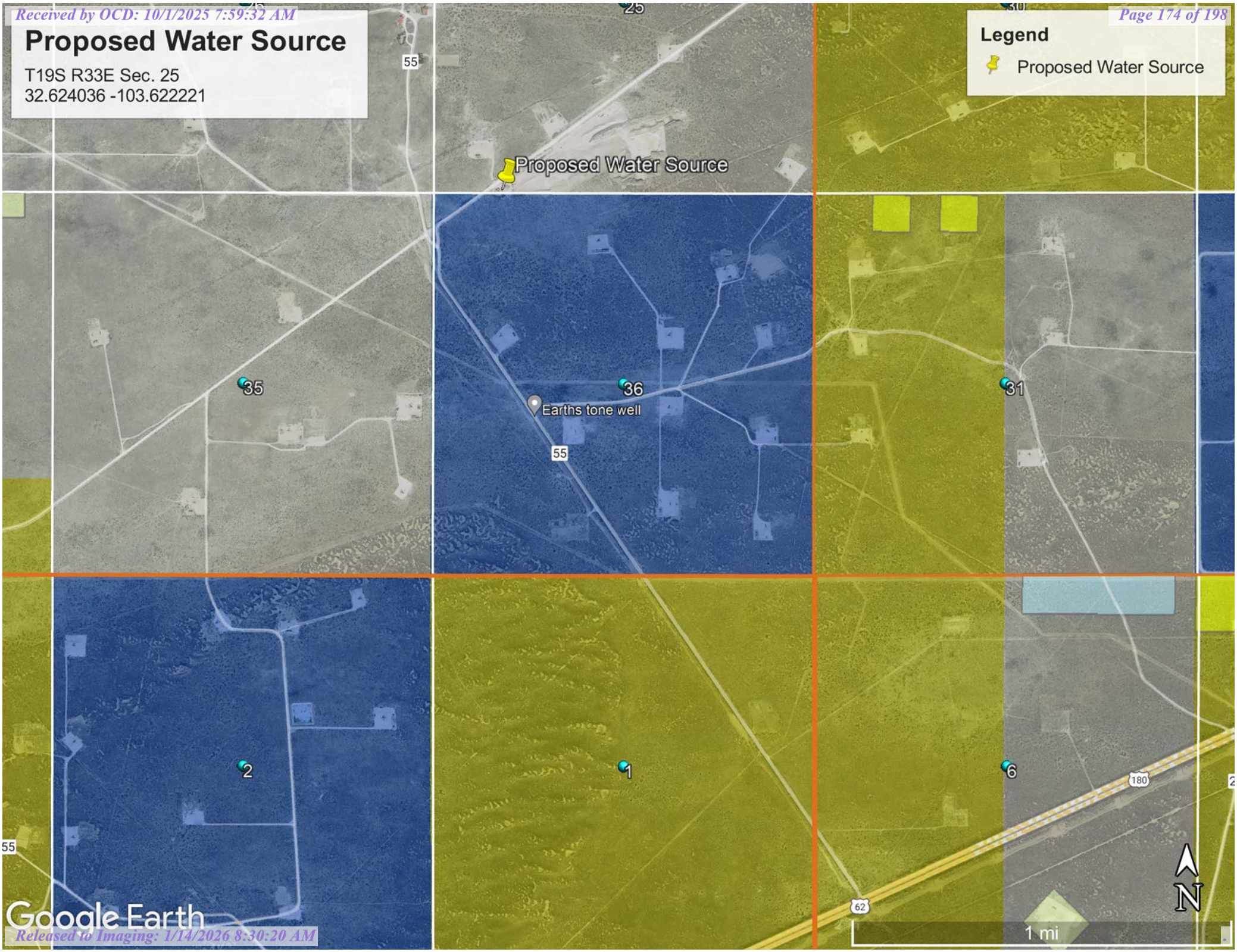
Proposed Access Road

Proposed Access Road to Water from HWY 62/180



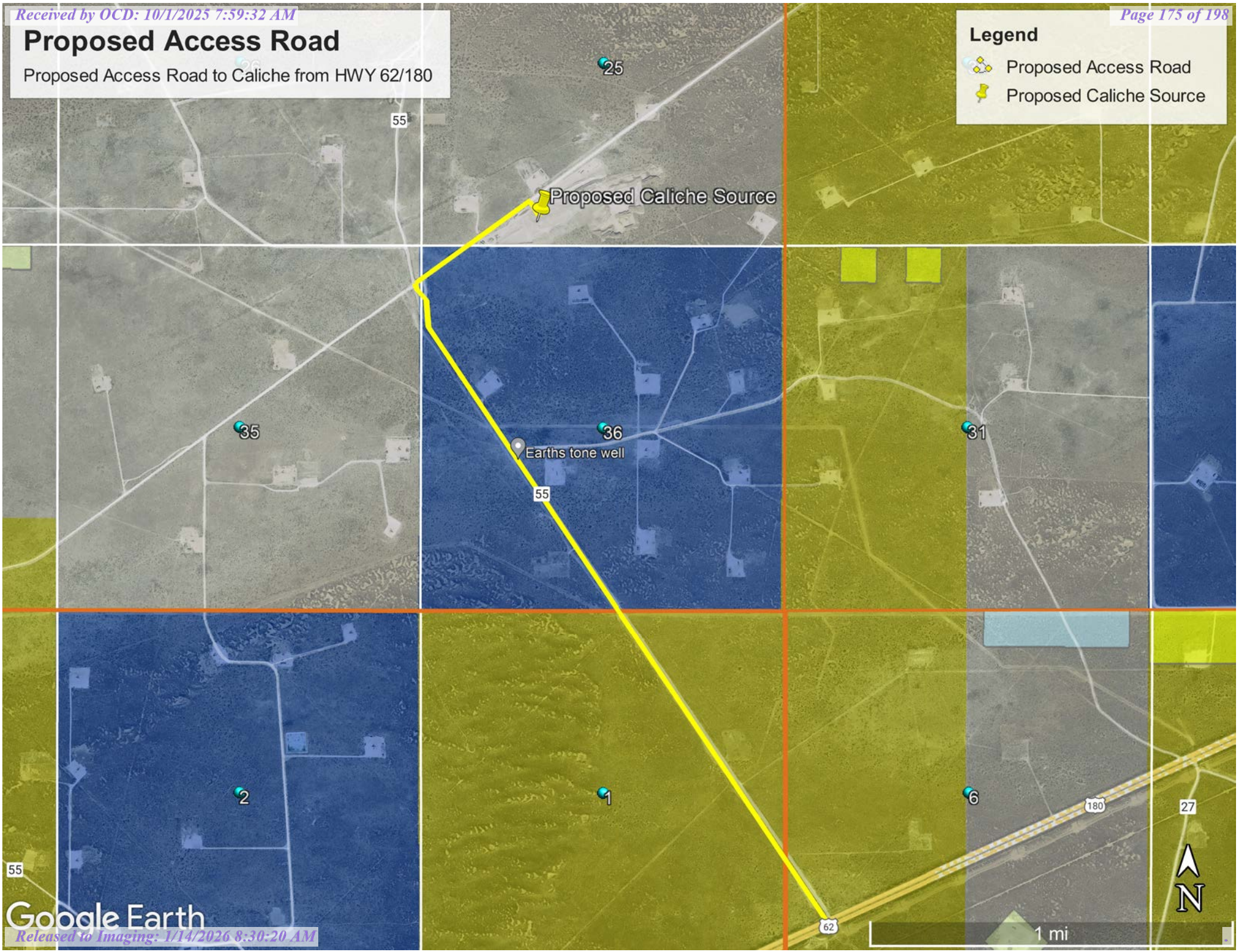
Proposed Water Source

T19S R33E Sec. 25
32.624036 -103.622221



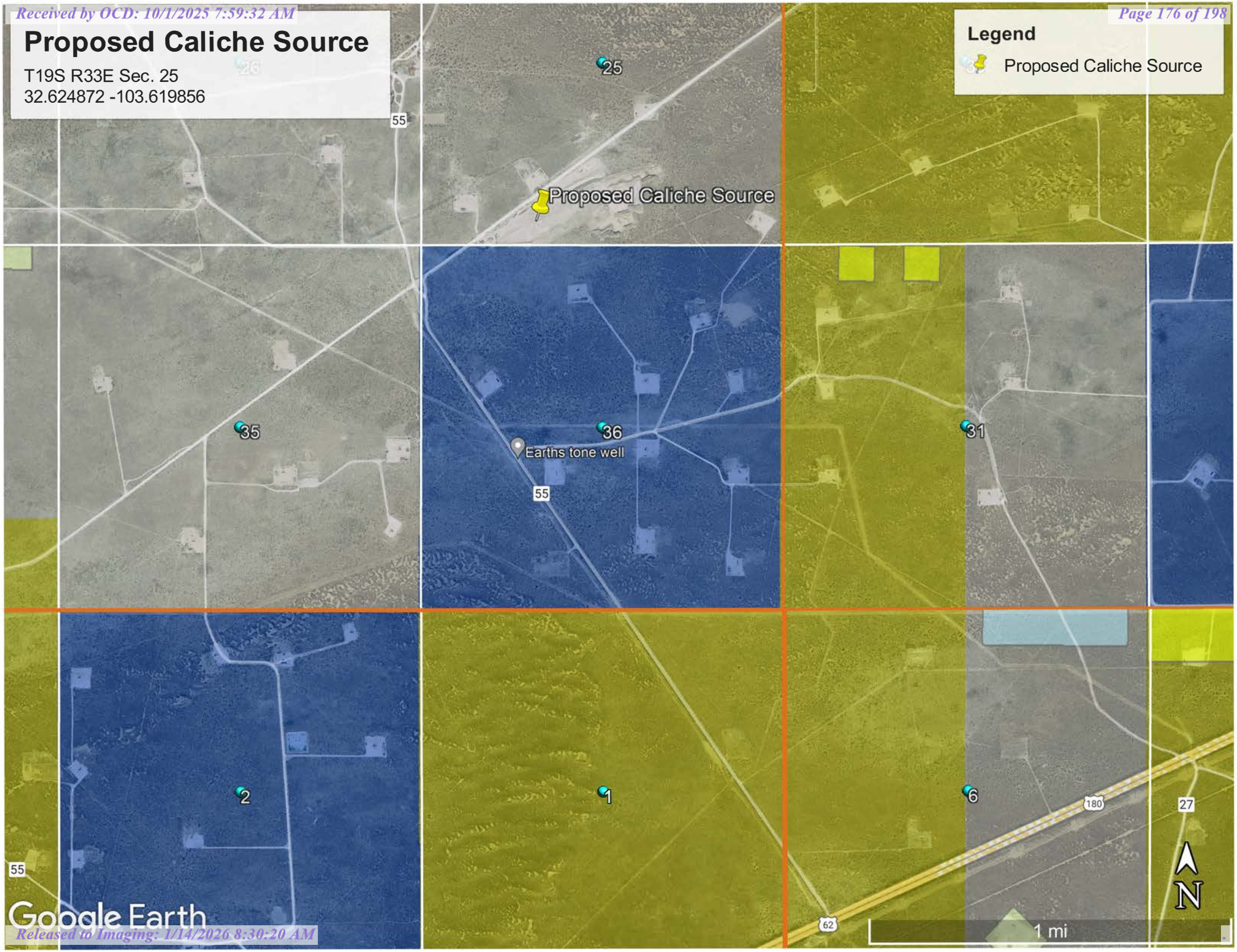
Proposed Access Road

Proposed Access Road to Caliche from HWY 62/180



Proposed Caliche Source

T19S R33E Sec. 25
32.624872 -103.619856



C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024 Submittal Type: ☐ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
	97869	SWD; DEVONIAN – SILURIAN

Property Code	Property Name	Well Number
NMNM34850	OUTSKIRTS FEDERAL SWD	1

OGRID No.	Operator Name	Ground Level Elevation
328259	PERMIAN OILFIELD PARTNERS, LLC	3642'

Surface Owner: ☐ State ☐ Fee ☐ Tribal ■ Federal | Mineral Owner: ☐ State ☐ Fee ☐ Tribal ■ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
D	22	19S	33E		224 FNL	845 FWL	32.6523783°N	103.6567663°W	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code

Order Numbers. | Well setbacks are under Common Ownership: ☐ Yes ☐ No

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☐ Horizontal ☐ Vertical	Ground Floor Elevation:

OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and , if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Signature: [signature] Date: 2/08/2024

Printed Name: Gary Fisher

Email Address: gfisher@popmidstream.com

SURVEYOR CERTIFICATIONS

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me under my supervision, and that the same is true and correct to the best of my belief.

DALE E. BELL NEW MEXICO 14400 02/24/2025 PROFESSIONAL SURVEYOR

Signature and Seal of Professional Surveyor

Certificate Number: 14400

Date of Survey: 02/03/2024

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

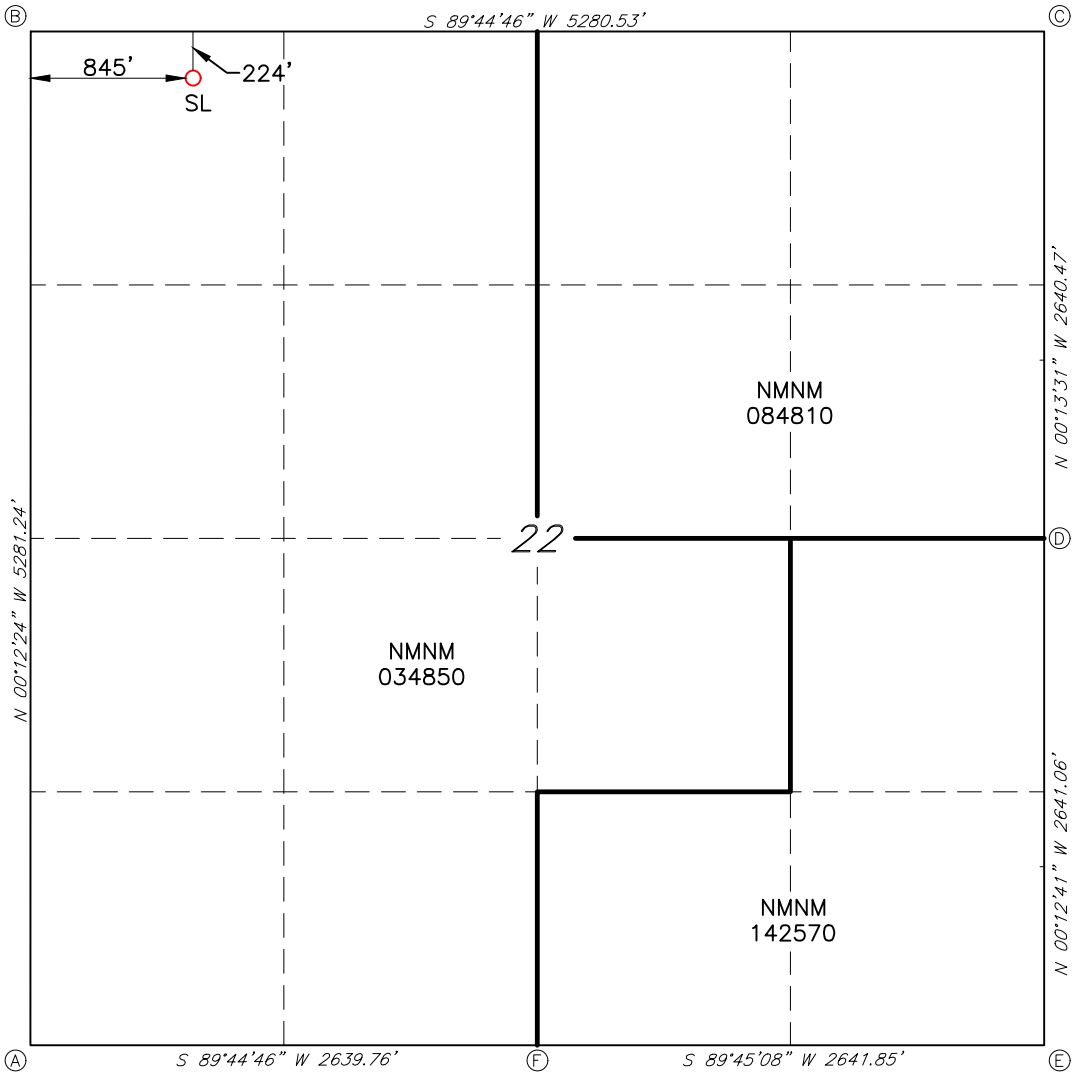
JOB #: LS24010058

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is a directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.

OUTSKIRTS FEDERAL SWD #1



GEODETIC DATA
NAD 83 GRID – NM EAST

SURFACE LOCATION

N: 601729.5 – E: 749568.7

LAT: 32.6523783° N
LONG: 103.6567663° W

DALE E. BELL
NEW MEXICO
14400
02/24/2025
PROFESSIONAL SURVEYOR

CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1912"
N: 596670.0 – E: 748742.1

B: FOUND BRASS CAP "1912"
N: 601950.1 – E: 748723.1

C: FOUND BRASS CAP "1912"
N: 601973.5 – E: 754002.4

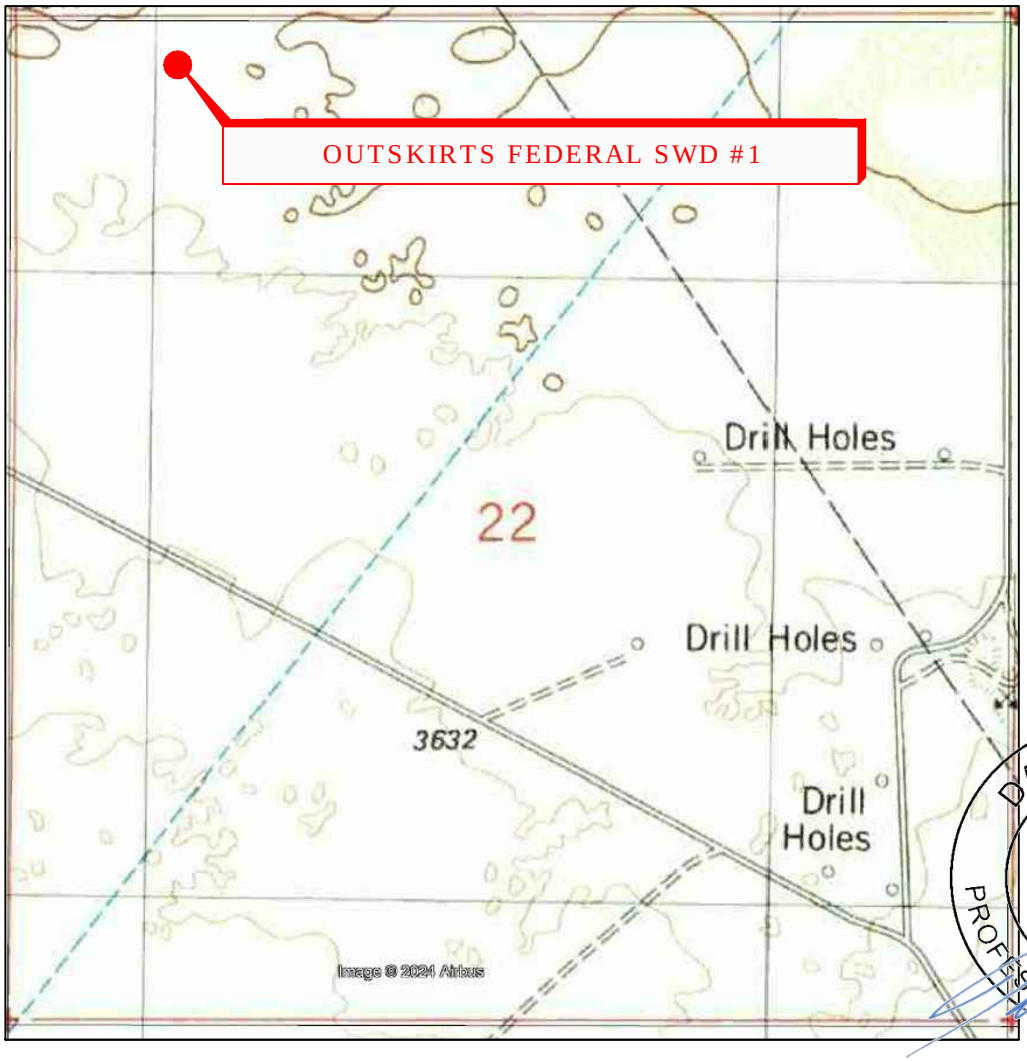
D: FOUND BRASS CAP "1912"
N: 599333.6 – E: 754012.8

E: FOUND BRASS CAP "1912"
N: 596693.2 – E: 754022.5

F: FOUND BRASS CAP "1912"
N: 596681.7 – E: 751381.3

LOCATION VERIFICATION MAP

NOT TO SCALE



DALE E. BELL
NEW MEXICO
14400
12/30/2024
PROFESSIONAL SURVEYOR

SECTION 22, TWP. 19 SOUTH, RGE. 33 EAST, N. M. P. M., LEA COUNTY, NEW MEXICO

OPERATOR: Permian Oilfield Partners, LLC.
LEASE: Outskirts Federal SWD
WELL NO.: 1H
ELEVATION: 3642'

LOCATION: 244' FNL & 845' FWL
CONTOUR INTERVAL: 10'
USGS TOPO. SOURCE MAP:
Laguna Gatuna NW, NM (1984)

NO.	REVISION	DATE

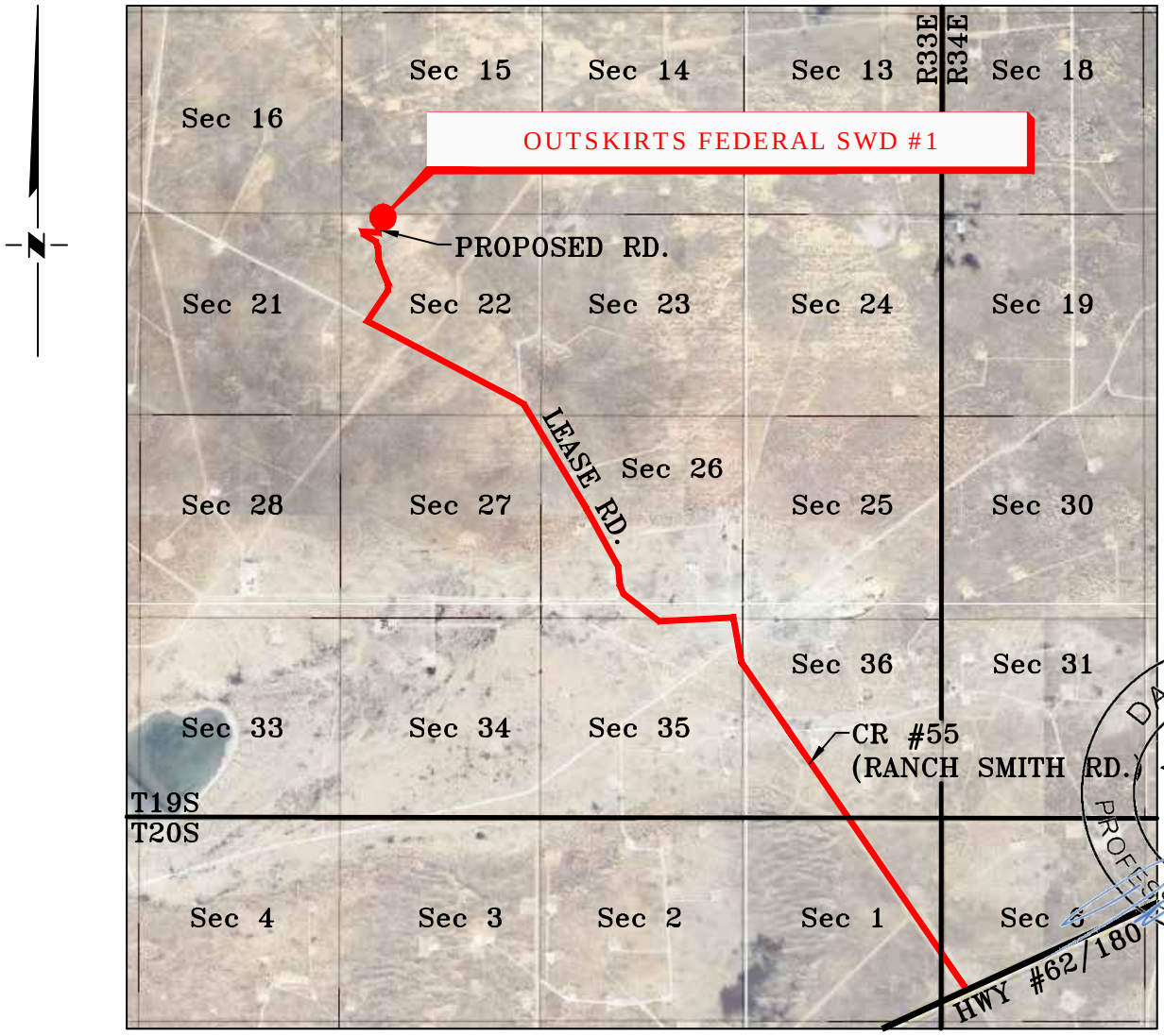
JOB NO.: LS24010058
DWG. NO.: 24010058-2

RRC ENERGY SERVICES, LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: N. T. S.
DATE: 02/03/2024
SURVEYED BY: RG/HA
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 1 OF 1

VICINITY MAP

NOT TO SCALE



DALE E. BELL
NEW MEXICO
14400
12/30/2024
PROFESSIONAL SURVEYOR

SECTION 22, TWP. 19 SOUTH, RGE. 33 EAST,
N. M. P. M., LEA COUNTY, NEW MEXICO

OPERATOR: Permian Oilfield Partners, LLC.
LEASE: Outskirts Federal SWD
WELL NO.: 1

LOCATION: 224' FNL & 845' FWL
ELEVATION: 3642'

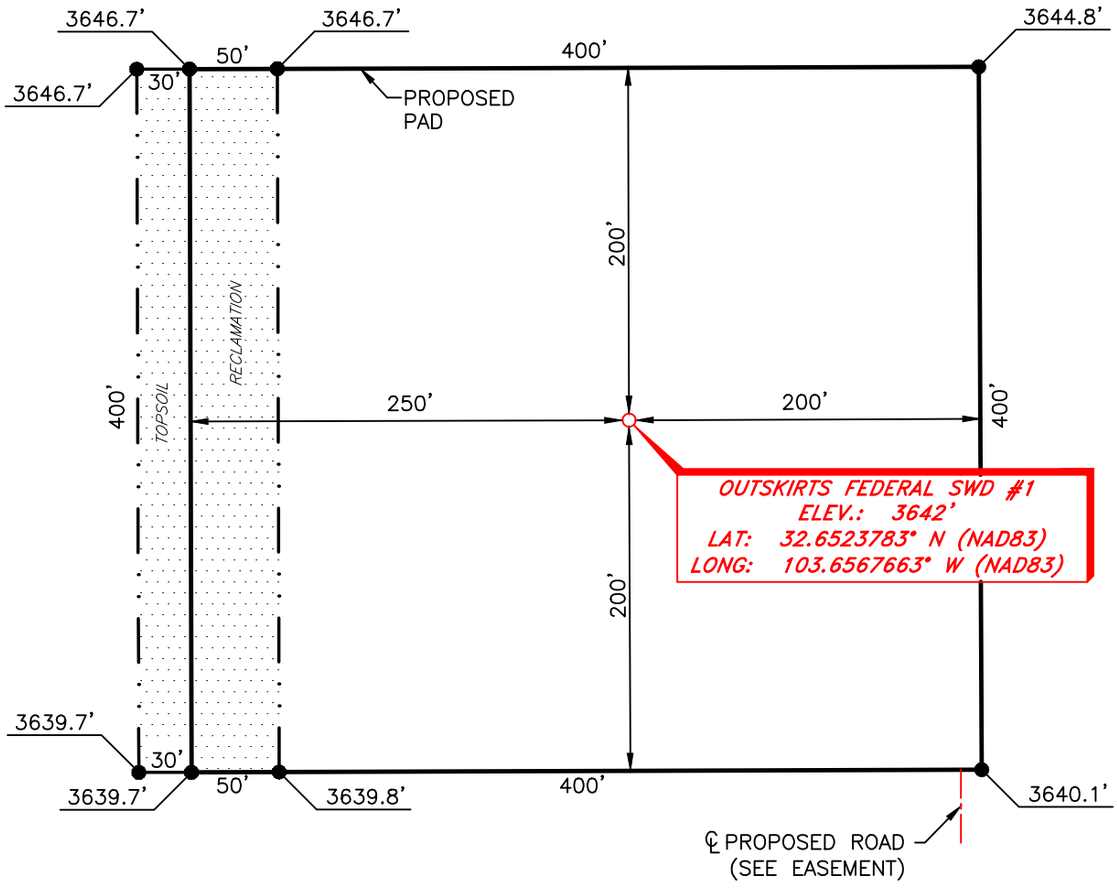
NO.	REVISION	DATE

JOB NO.: LS24010058
DWG. NO.: 24010058-3

RRC ENERGY SERVICES, LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: N. T. S.
DATE: 02/03/2024
SURVEYED BY: RG/HA
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 1 OF 1

PERMIAN OILFIELD PARTNERS, LLC
OUTSKIRTS FEDERAL SWD #1
(244' FNL & 845' FWL)
SECTION 22, T19S, R33E
N. M. P. M., LEA CO., NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of HWY 62/180 (Carlsbad Hwy) & CR #55 (Smith Ranch Rd.);

Go North on CR #55 approx. 2.2 miles to a lease road on the left;

Turn left and go West approx. 0.6 miles to a "Y";

At "Y" turn right and go Northwest approx. 2.0 miles to a lease road on the right;

Turn right and go Northwest approx. 0.5 miles to a lease road on the right;

Turn right and go East approx. 450 feet to proposed road on the left;

Turn left and go North approx. 350 feet to location on the left.

SCALE: 1" = 100'
0 50 100

BEARINGS ARE NAD 83 GRID – NM EAST DISTANCES ARE GROUND

I, Dale E. Bell, New Mexico Professional Surveyor No. 14400, do hereby certify that this Plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that I am responsible for this survey, said survey and plat meets the Minimum Standards for Land Surveying in the State of New Mexico and that it is true and correct to the best of my knowledge and belief.

Dale E. Bell NM PS 14400

DALE E. BELL
NEW MEXICO
14400
12/30/2024
PROFESSIONAL SURVEYOR

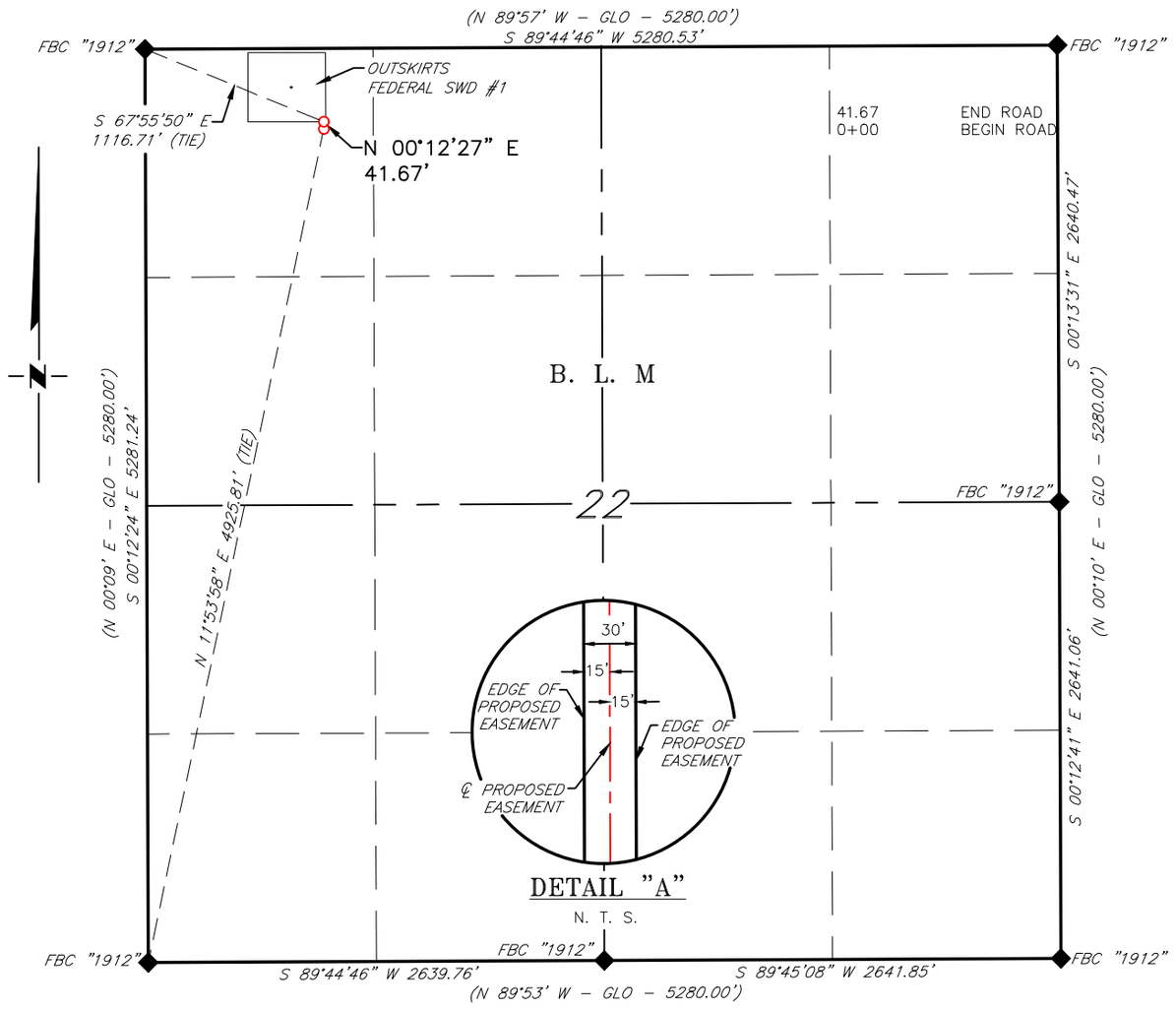
NO.	REVISION	DATE

JOB NO.: LS24010058
DWG. NO.: 24010058-4

RRC ENERGY SERVICES, LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 02/03/2024
SURVEYED BY: RG/HA
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 1 OF 1

PERMIAN OILFIELD PARTNERS, LLC
PROPOSED ACCESS ROAD FOR THE OUTSKIRTS FEDERAL SWD #1
SECTION 22, T19S, R33E,
N. M. P. M., LEA CO., NEW MEXICO



DESCRIPTION

A strip of land 30 feet wide, being 41.67 feet or 2.525 rods in length, lying in Section 22, Township 19 South, Range 33 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in the Northwest quarter, Section 22, which bears, N 11°48'01" E, 4,966.59 feet from a brass cap, stamped "1912", found for the Southwest corner of Section 22;

Thence N 00°12'27" E, 41.67 feet, to Engr. Sta. 4+1.67, the End of Survey, a point in the Northwest quarter of Section 22, which bears, S 67°55'50" W, 1,116.71 feet from a brass cap, stamped "1912", found for the Northwest corner of Section 22;

Said strip of land contains 0.029 acres, more or less and is allocated by forties as follows:

NW 1/4 NW 1/4	2.525 Rods	0.029 Acres

SCALE: 1" = 1000'
0 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

( ) RECORD DATA – GLO

◆ FOUND MONUMENT AS NOTED

PROPOSED ACCESS ROAD

I, Dale E. Bell, New Mexico Professional Surveyor No. 14400, do hereby certify that this Plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that I am responsible for this survey, said survey and plat meets the Minimum Standards for Land Surveying in the State of New Mexico and that it is true and correct to the best of my knowledge and belief.

Dale E. Bell NM PS 14400

DALE E. BELL
NEW MEXICO
14400
12/30/2024
PROFESSIONAL SURVEYOR

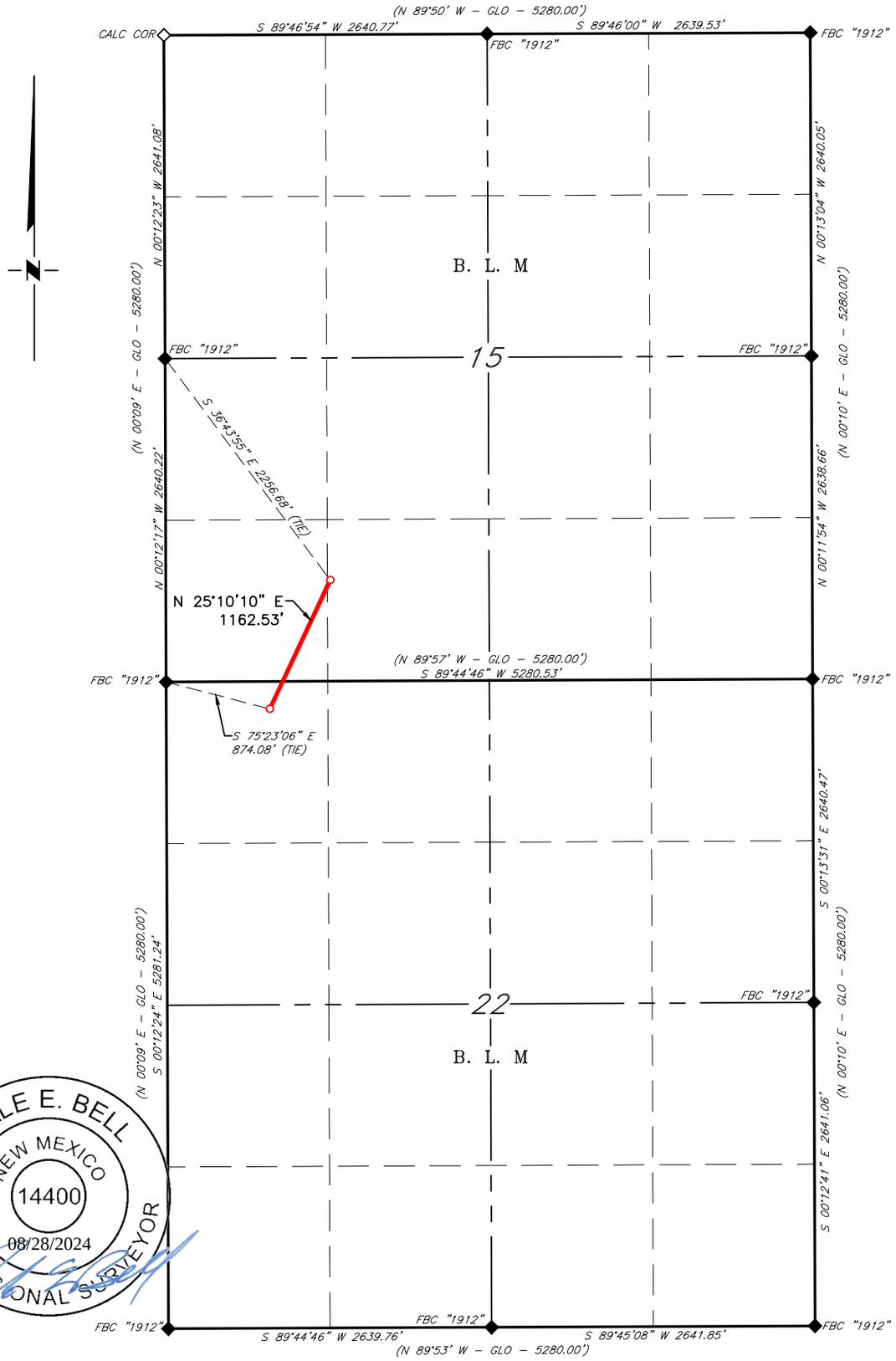
NO.	REVISION	DATE
1	REROUTE	12/10/24

JOB NO.: LS24010058R1
DWG. NO.: 24010058R1–1

RRC ENERGY SERVICES LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964–8200

SCALE: 1" = 1000'
DATE: 02/03/2024
SURVEYED BY: RG/HA
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 1 OF 1

PERMIAN OILFIELD PARTNERS, LLC
OUTSKIRTS TO MOONRAKER ROW
SECTIONS 15 & 22, T19S, R33E,
N. M. P. M., LEA CO., NEW MEXICO



DALE E. BELL
NEW MEXICO
14400
08/28/2024
PROFESSIONAL SURVEYOR

LEGEND

( ) RECORD DATA – GLO

◇ CALCULATED CORNER

◆ FOUND MONUMENT AS NOTED

PROPOSED PIPELINE

SCALE: 1" = 1200'
0 600' 1200'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

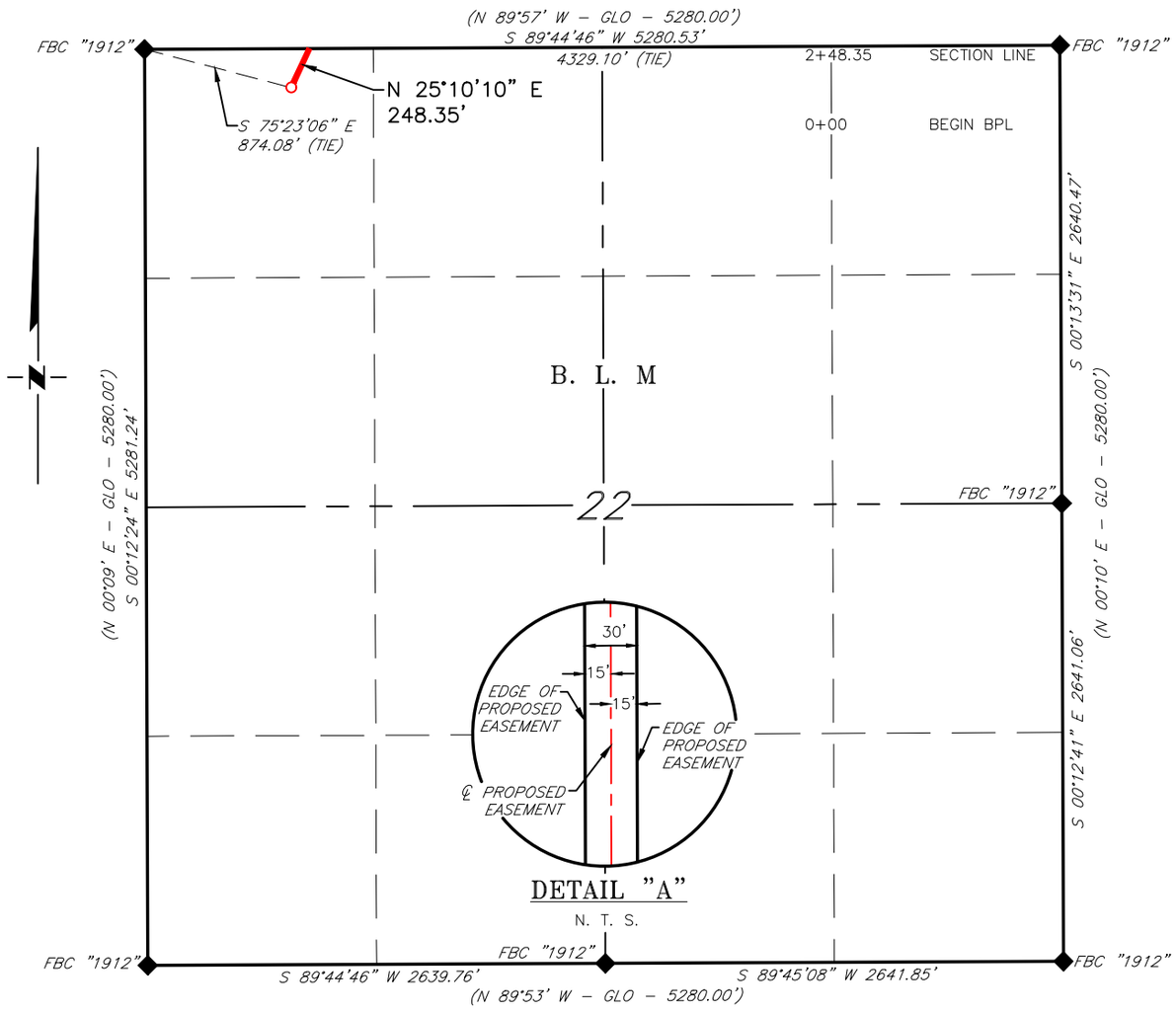
NO.	REVISION	DATE

JOB NO.: LS24080718
DWG. NO.: 24080718–1

RRC ENERGY SERVICES LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964–8200

SCALE: 1" = 1200'
DATE: 08/26/2024
SURVEYED BY: RL/EU
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 1 OF 3

PERMIAN OILFIELD PARTNERS, LLC
OUTSKIRTS TO MOONRAKER ROW
SECTION 22, T19S, R33E,
N. M. P. M., LEA CO., NEW MEXICO



DESCRIPTION

A strip of land 30 feet wide, being 248.35 feet or 15.052 rods in length, lying in Section 22, Township 19 South, Range 33 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in the Northwest quarter, Section 22, which bears, S 75°23'06" E, 874.08 feet from a brass cap, stamped "1912", found for the Northwest corner of Section 22;

Thence N 25°10'10" E, 248.35 feet, to Engr. Sta. 2+48.35, a point on the North line of Section 22, which bears, S 89°44'46" W, 4,329.10 feet from a brass cap, stamped "1912", found for the Northeast corner of Section 22;

Said strip of land contains 0.171 acres, more or less and is allocated by forties as follows:

NW 1/4 NW 1/4	15.052 Rods	0.171 Acres

SCALE: 1" = 1000'
0 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

( ) RECORD DATA – GLO

FOUND MONUMENT AS NOTED

PROPOSED PIPELINE

I, Dale E. Bell, New Mexico Professional Surveyor No. 14400, do hereby certify that this Plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that I am responsible for this survey, said survey and plat meets the Minimum Standards for Land Surveying in the State of New Mexico and that it is true and correct to the best of my knowledge and belief.

Dale E. Bell NM PS 14400

DALE E. BELL
NEW MEXICO
14400
08/28/2024
PROFESSIONAL SURVEYOR

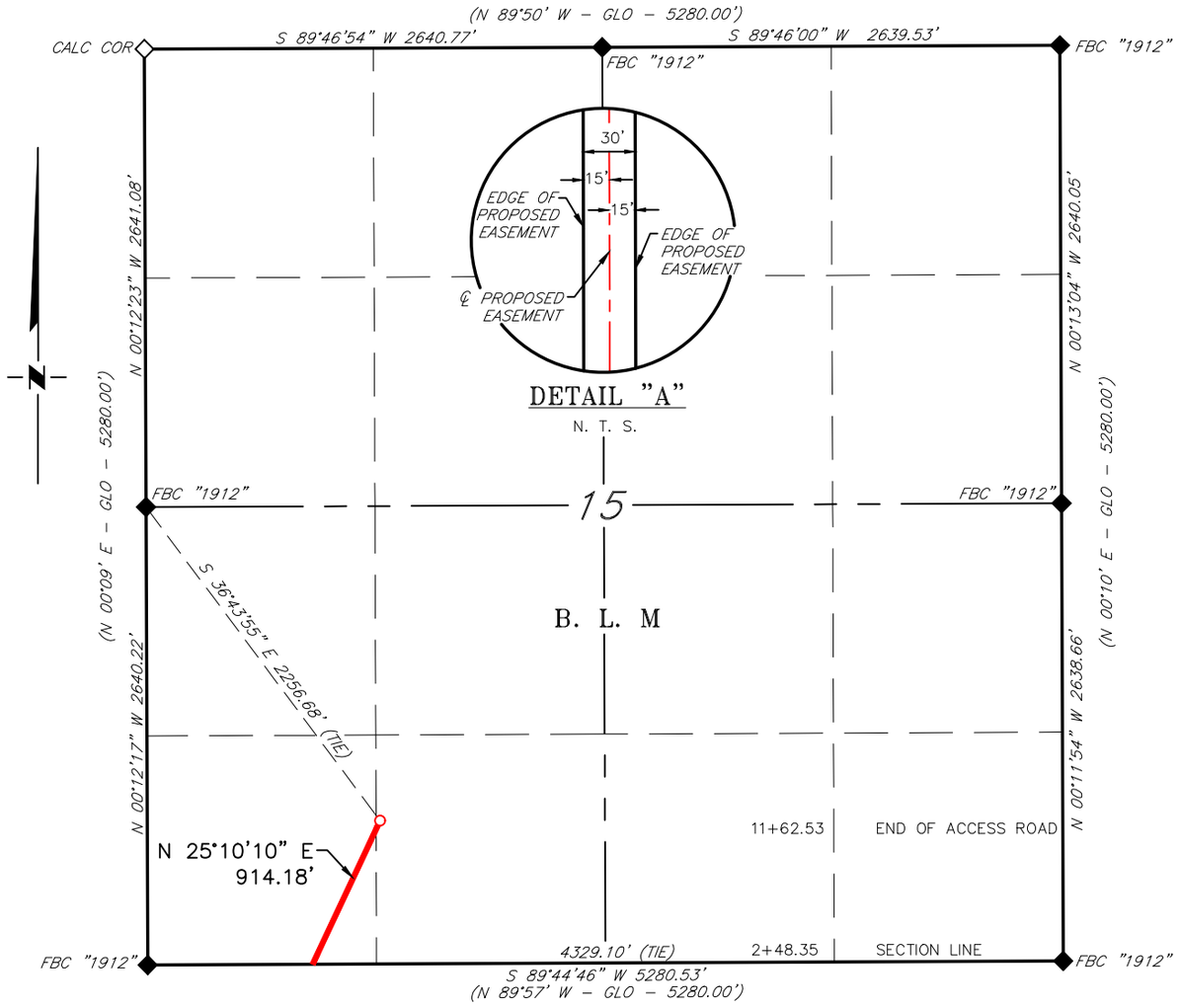
NO.	REVISION	DATE

JOB NO.: LS24080718
DWG. NO.: 24080718–2

RRC ENERGY SERVICES LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964–8200

SCALE: 1" = 1000'
DATE: 08/26/2024
SURVEYED BY: RL/EU
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 2 OF 3

PERMIAN OILFIELD PARTNERS, LLC
OUTSKIRTS TO MOONRAKER ROW
SECTION 15, T19S, R33E,
N. M. P. M., LEA CO., NEW MEXICO



DESCRIPTION

A strip of land 30 feet wide, being 914.18 feet or 55.405 rods in length, lying in Section 15, Township 19 South, Range 33 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 2+48.35, a point on the South line of, Section 15, which bears, S 89°44'46" W, 4,329.10 feet from a brass cap, stamped "1912", found for the Southeast corner of Section 15;

Thence N 25°10'10" E, 914.18 feet, to Engr. Sta. 11+62.53, the End of Survey, a point in the Southwest quarter of Section 15, which bears, S 36°43'55" E, 2,256.68 feet from a brass cap, stamped "1912", found for the West quarter corner of Section 15;

Said strip of land contains 0.630 acres, more or less and is allocated by forties as follows:

SW 1/4 SW 1/4	52.150 Rods	0.593 Acres
SE 1/4 SW 1/4	3.255 Rods	0.037 Acres

SCALE: 1" = 1000'
0 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

( ) RECORD DATA - GLO
◇ CALCULATED CORNER
◆ FOUND MONUMENT AS NOTED
PROPOSED PIPELINE

I, Dale E. Bell, New Mexico Professional Surveyor No. 14400, do hereby certify that this Plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that I am responsible for this survey, said survey and plat meets the Minimum Standards for Land Surveying in the State of New Mexico and that it is true and correct to the best of my knowledge and belief.

Dale E. Bell NM PS 14400

DALE E. BELL
NEW MEXICO
14400
08/28/2024
PROFESSIONAL SURVEYOR

NO.	REVISION	DATE

JOB NO.: LS24080718
DWG. NO.: 24080718-3

RRC ENERGY SERVICES LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 08/26/2024
SURVEYED BY: RL/EU
DRAWN BY: RQ
APPROVED BY: DEB
SHEET: 3 OF 3

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

PWD Data Report

08/04/2025

APD ID: 10400100664 **Submission Date:** 12/06/2024

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Well Type: INJECTION - DISPOSAL **Well Work Type:** Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD Surface Owner Description:

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit

Pit liner description:

Pit liner manufacturers

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule

Lined pit reclamation description:

Lined pit reclamation

Leak detection system description:

Leak detection system

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Lined pit Monitor description:

Lined pit Monitor

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information

Section 3 - Unlined

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Other PWD Surface Owner Description:

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule

Unlined pit reclamation description:

Unlined pit reclamation

Unlined pit Monitor description:

Unlined pit Monitor

Do you propose to put the produced water to beneficial use?

Beneficial use user

Estimated depth of the shallowest aquifer (feet):

Precipitated Solids Permit

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

State

Unlined Produced Water Pit Estimated

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information

Section 4 -

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD Surface Owner Description:

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection

Underground Injection Control (UIC) Permit?

UIC Permit

Section 5 - Surface

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD Surface Owner Description :

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: OUTSKIRTS FEDERAL SWD **Well Number:** 1

Section 6 -

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

PWD Surface Owner Description:

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type

Have other regulatory requirements been met?

Other regulatory requirements

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Bond Info Data
08/04/2025

APD ID: 10400100664
Submission Date: 12/06/2024
Operator Name: PERMIAN OILFIELD PARTNERS LLC
Well Name: OUTSKIRTS FEDERAL SWD
Well Number: 1
Well Type: INJECTION - DISPOSAL
Well Work Type: Drill

Highlighted data reflects the most recent changes
Show Final Text

Bond

Federal/Indian APD: FED

BLM Bond number: NMB001780

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

Attached in compiled 3160-3 document.

Attached in compiled 3160-3 document.

Attached in compiled 3160-3 document.

Attached in compiled 3160-3 document.

Attached in compiled 3160-3 document.

Attached in compiled 3160-3 document.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

ACKNOWLEDGMENTS

Operator: Permian Oilfield Partners, LLC PO Box 3329 Hobbs, NM 88241	OGRID: 328259
	Action Number: 511034
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

ACKNOWLEDGMENTS

☑	I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Operator: Permian Oilfield Partners, LLC PO Box 3329 Hobbs, NM 88241	OGRID: 328259
	Action Number: 511034
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
gefisher	Cement is required to circulate on both surface and intermediate1 strings of casing.	10/1/2025
gefisher	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	10/1/2025
jeffrey.harrison	File As Drilled C-102 and a directional Survey with C-104 completion packet.	12/12/2025
jeffrey.harrison	Notify the OCD 24 hours prior to casing & cement.	12/12/2025
jeffrey.harrison	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.	12/12/2025
jeffrey.harrison	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.	12/12/2025
jeffrey.harrison	Operator shall conduct a step-rate test (SRT) before the commencement of injection to determine the fracture gradient and maximum injection rate.	1/14/2026
jeffrey.harrison	In addition to the logging listed in Section 6 of the Drilling Plan Data Report, Operator shall run a cement bond log (CBL) to determine all cement tops for each casing (or liner) and subsequently notify the OCD Engineering Bureau.	1/14/2026
jeffrey.harrison	Operator shall provide a cement report that includes densities, and the percentage of excess cement returned to the surface.	1/14/2026
jeffrey.harrison	Operator shall install a telemetry system, such as SCADA, to acquire real-time pressure and temperature data and maintain the dataset to be made available to the OCD.	1/14/2026