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: 2 file(s)

- Drilling Plan Report
- Drilling Plan Attachments
  -- Blowout Prevention Choke Diagram Attachment: 1 file(s)
  -- Blowout Prevention BOP Diagram Attachment: 1 file(s)
  -- Casing Design Assumptions and Worksheet(s): 6 file(s)
  -- Hydrogen sulfide drilling operations plan: 1 file(s)
  -- Proposed horizontal/directional/multi-lateral plan submission: 2 file(s)
  -- Other Facets: 4 file(s)
  -- Other Variances: 3 file(s)

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

[318028]

2. Name of Operator

[372165]

9. API Well No. **30-025-50267**

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory **[96434]**

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.

NGMP Rec 05/25/2022

KZ
06/23/2022

NSL

REQUIRES NSL

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 12/21/2021

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: 12/21/2021

Additional Operator Remarks

Location of Well

0. SHL: SENE / 2299 FNL / 1160 FEL / TWSP: 24S / RANGE: 34E / SECTION: 27 / LAT: 32.189461 / LONG: -103.453031 (TVD: 0 feet, MD: 0 feet)

PPP: SENE / 2548 FNL / 1254 FEL / TWSP: 24S / RANGE: 34E / SECTION: 27 / LAT: 32.188778 / LONG: -103.453333 (TVD: 10390 feet, MD: 10729 feet)

BHL: NENE / 100 FNL / 1254 FEL / TWSP: 24S / RANGE: 34E / SECTION: 22 / LAT: 32.210007 / LONG: -103.453331 (TVD: 10390 feet, MD: 17879 feet)

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.

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Centennial Resource Production, LLC
LEASE NO.:	NMNM016139
COUNTY:	Lea County, NM

Wells:

Solomon Federal Com 505H
Surface Hole Location: 2339' FNL & 1130' FEL, Section 27, T. 24 S., R. 34 E.
Bottom Hole Location: 100' FNL & 1870' FEL, Section 22, T. 24 S, R 34 E.

Sheba Federal Com 107H
Surface Hole Location: 2039' FNL & 1130' FEL, Section 27, T. 24 S., R. 34 E.
Bottom Hole Location: 100' FNL & 990' FEL, Section 22, T. 24 S, R 34 E.

Sheba Federal Com 108H
Surface Hole Location: 2039' FNL & 1100' FEL, Section 27, T. 24 S., R. 34 E.
Bottom Hole Location: 100' FNL & 330' FEL, Section 22, T. 24 S, R 34 E.

Sheba Federal Com 305H
Surface Hole Location: 2189' FNL & 1130' FEL, Section 27, T. 24 S., R. 34 E.
Bottom Hole Location: 100' FNL & 1254' FEL, Section 22, T. 24 S, R 34 E.

Sheba Federal Com 306H
Surface Hole Location: 2189' FNL & 1070' FEL, Section 27, T. 24 S., R. 34 E.
Bottom Hole Location: 100' FNL & 330' FEL, Section 22, T. 24 S, R 34 E.

Sheba Federal Com 405H
Surface Hole Location: 2189' FNL & 1100' FEL, Section 27, T. 24 S., R. 34 E.
Bottom Hole Location: 100' FNL & 792' FEL, Section 22, T. 24 S, R 34 E.

Sheba Federal Com 506H
Surface Hole Location: 2339' FNL & 1100' FEL, Section 27, T. 24 S., R. 34 E.
Bottom Hole Location: 100' FNL & 1100' FEL, Section 22, T. 24 S, R 34 E.

Sheba Federal Com 507H
Surface Hole Location: 2339' FNL & 1070' FEL, Section 27, T. 24 S., R. 34 E.
Bottom Hole Location: 100' FNL & 330' FEL, Section 22, T. 24 S, R 34 E.

Approval Date: 12/21/2021

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area 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 to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder 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 holder.

OR

If the entire project is covered under the Permian Basin Programmatic Agreement (cultural resources only):

The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. 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 the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See information below discussing NAGPRA.

If the proposed project is split between a Class III inventory and a Permian Basin Programmatic Agreement contribution, the portion of the project covered under Class III inventory should default to the first paragraph stipulations.

The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

Any paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area 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 to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder 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 holder.

IV. 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 and BLM requirements and policies.

SPECIAL REQUIREMENT(S)

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 water flow 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 quickly 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 to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. 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.

TANK BATTERY:
Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

Range:

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.

Lesser Prairie Chicken:
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.

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.

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 575-234-5972.

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).

V. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 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 Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. 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 (below six inches) 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.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
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 pit 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.)

G. ON LEASE ACCESS ROADS

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.

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 should 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.

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.

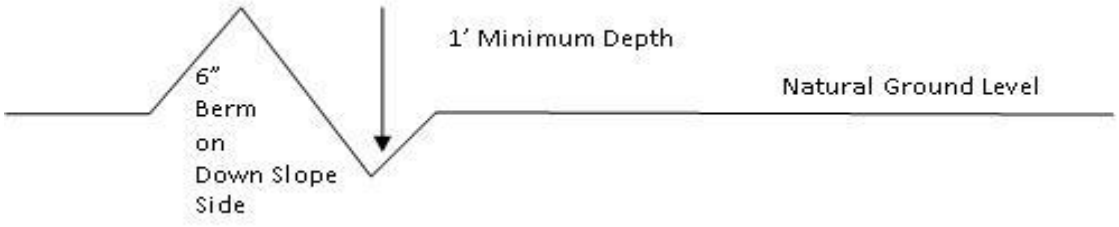
Ditching
Ditching shall be required on both sides of the road.

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.

Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off 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:

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

Cattle guards
An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route 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 cattle guards that are in place and are utilized during lease operations.

Fence Requirement
Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

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

Approval Date: 12/21/2021

Construction Steps

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

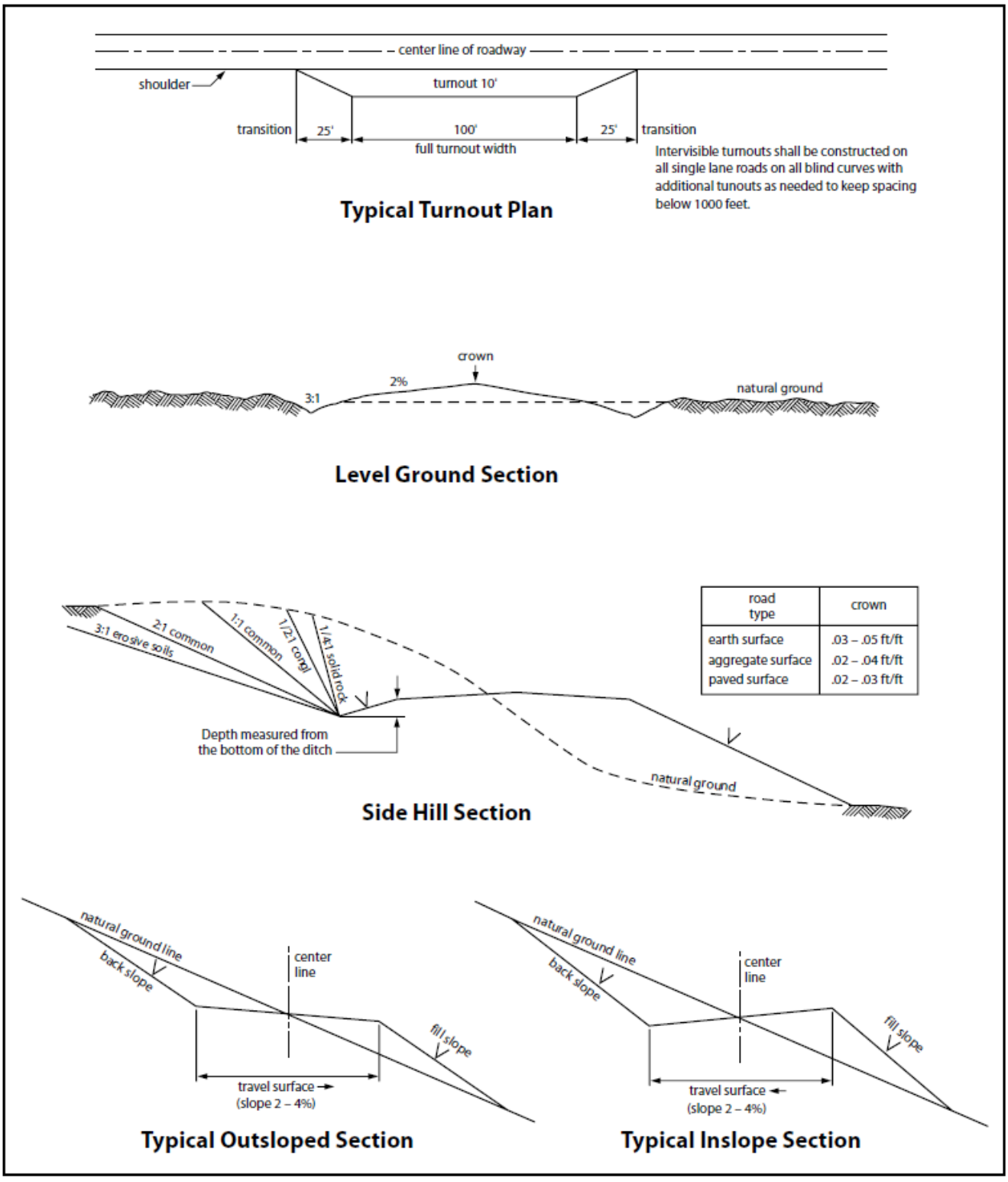


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

Approval Date: 12/21/2021

VI. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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.

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.

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.

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.

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

VII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should 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 should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. 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 below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

VIII. FINAL ABANDONMENT & RECLAMATION

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 should 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.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

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.

Seed Mixture 2, for Sandy Sites

The 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 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 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). The 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. The seeding will be repeated until a satisfactory 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.

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

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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

Approval Date: 12/21/2021

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Centennial Resources**
LEASE NO.:	**NMNM16139**
LOCATION:	Section 27, T.24 S., R.34 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Sheba Fed Com 305H
SURFACE HOLE FOOTAGE:	2299'/N & 1160'/E
BOTTOM HOLE FOOTAGE	100'/N & 1254'/E

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☑ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1190** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.

    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**

Approval Date: 12/21/2021

hours or 500 pounds compressive strength, whichever is greater. (This is to include the 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.

Intermediate casing must be kept 1/3rd fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing 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 cave/karst.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
   - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. 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).

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

   a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
   b. 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.
   c. Manufacturer representative shall install the test plug for the initial BOP test.
   d. 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.
   e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

Approval Date: 12/21/2021

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

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)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

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. Operator is approve 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
   - Notify the BLM when moving in and removing the Spudder Rig.
   - 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.
   - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 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. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

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, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity 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 intergrity 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-P 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 Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

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:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

b. 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.
c. Manufacturer representative shall install the test plug for the initial BOP test.
d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
e. 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.

a. 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 when specified), 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).

b. 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 plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 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 water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. 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.

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

f. 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.

g. 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.

h. 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 Onshore Order No. 2.

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.
ZS121621

AFMSS

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

Operator Certification Data Report

03/02/2022

Operator Certification

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: **Signed on:** 03/04/2021

Title:

Street Address:

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

Phone:

Email address:

Field Representative

Representative Name:

Street Address:

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

Phone:

Email address:

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

Application Data Report
03/02/2022

APD ID: 10400070418 **Submission Date:** 03/04/2021

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400070418 **Tie to previous NOS?** N **Submission Date:** 03/04/2021

BLM Office: Carlsbad **User:** KANICIA SCHLICHTING **Title:** Sr. Regulatory Analyst

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM016139 **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:** CENTENNIAL RESOURCE PRODUCTION LLC

Operator letter of designation:

Operator Info

Operator Organization Name: CENTENNIAL RESOURCE PRODUCTION LLC

Operator Address: 1001 17th Street, Suite 1800

Zip: 80202

Operator PO Box:

Operator City: Denver **State:** CO

Operator Phone: (720)499-1400

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: SHEBA FEDERAL COM **Well Number:** 305H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** 1st BONE SPRING **Pool Name:** RED HILLS BONE SPRING, NORTH

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

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

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

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

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** Solomon/Sheba Federal **Number:** 1

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

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 20 Miles **Distance to nearest well:** 30 FT **Distance to lease line:** 1160 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: Sheba_305H_C_102_11.29.21_20211129161548.pdf

Sheba_Lease_Plat_10.29.21_20211129161556.pdf

Well work start Date: 02/01/2022 **Duration:** 45 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 lease?
SHL Leg #1	2299	FNL	1160	FEL	24S	34E	27	Aliquot SENE	32.189461	-103.453031	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 117125	3465	0	0	Y
KOP Leg #1	2548	FNL	1254	FEL	24S	34E	27	Aliquot SENE	32.188778	-103.453333	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 117125	-6352	9830	9817	Y

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

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 lease?
PPP Leg #1-1	2548	FNL	1254	FEL	24S	34E	27	Aliquot SENE	32.188778	-103.453333	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 117125	-6925	10729	10390	Y
EXIT Leg #1	100	FNL	1254	FEL	24S	34E	22	Aliquot NENE	32.210007	-103.453331	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 117125	-6925	17879	10390	Y
BHL Leg #1	100	FNL	1254	FEL	24S	34E	22	Aliquot NENE	32.210007	-103.453331	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 117125	-6925	17879	10390	Y

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	96434	Red Hills Bone Spring, North

[4] Property Code	[5] Property Name	[6] Well Number
	SHEBA FEDERAL COM	305H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372165	CENTENNIAL RESOURCE PRODUCTION, LLC	3464.8'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	27	24S	34E		2299	NORTH	1160	EAST	LEA

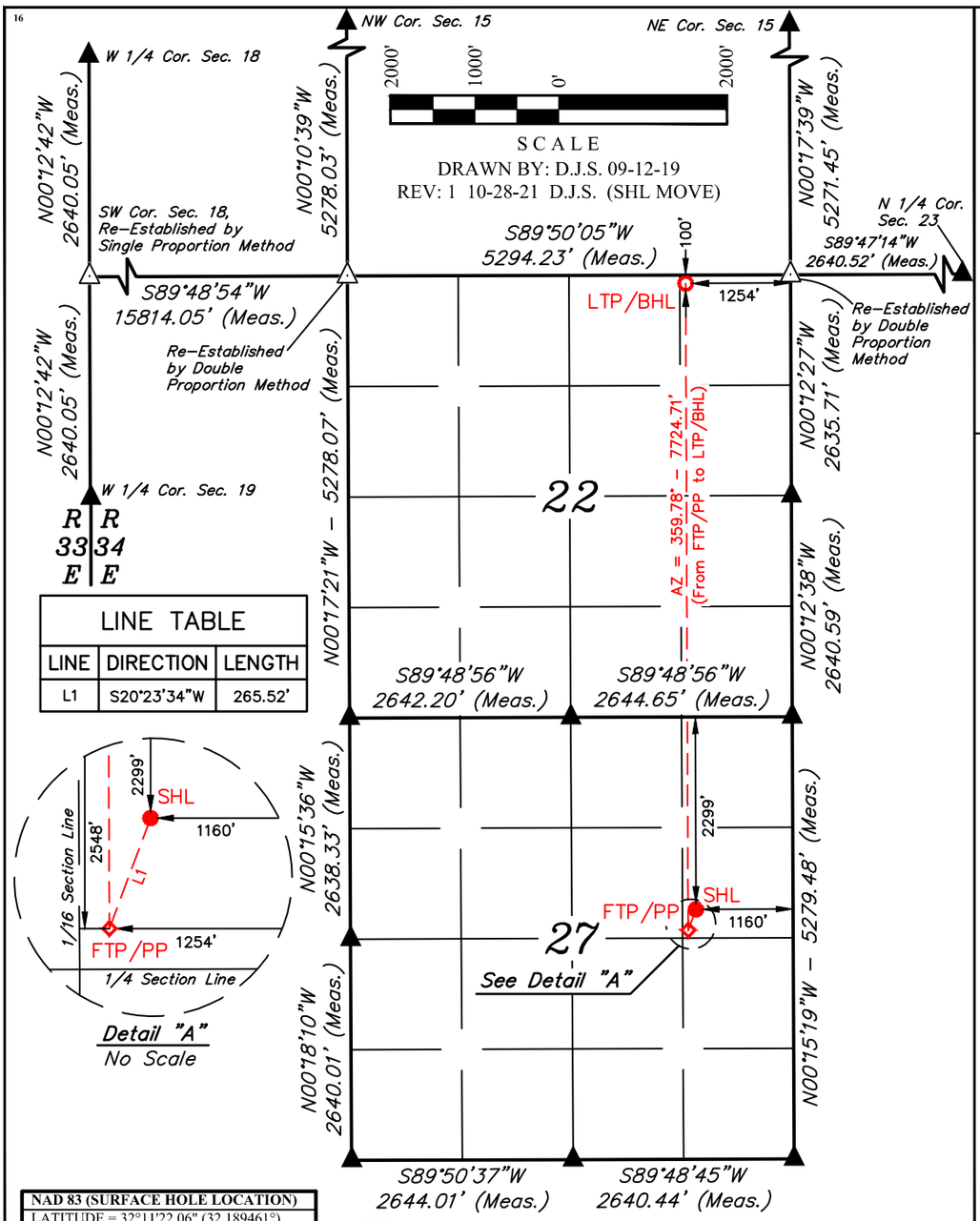
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	22	24S	34E		100	NORTH	1254	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
240			

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.

[16]



NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°11'22.06" (32.189461°)
LONGITUDE = 103°27'10.91" (103.453031°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 433774.81' X: 813662.84'
UTM, NAD 83 (ZONE 13)
Y: 11687920.11' X: 2118847.36'

NAD 83 (FTP/PP)
LATITUDE = 32°11'19.60" (32.188778°)
LONGITUDE = 103°27'12.00" (103.453333°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 433525.58' X: 813571.37'
UTM, NAD 83 (ZONE 13)
Y: 11687670.35' X: 2118757.46'

NAD 83 (LTP/BHL)
LATITUDE = 32°12'36.03" (32.210007°)
LONGITUDE = 103°27'11.99" (103.453331°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 441248.81' X: 813508.81'
UTM, NAD 83 (ZONE 13)
Y: 11695392.03' X: 2118647.01'

NOTE:
- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

● = SURFACE HOLE LOCATION
◇ = FIRST TAKE POINT/ PENETRATION POINT
○ = LAST TAKE POINT/ BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED
△ = SECTION CORNER RE-ESTABLISHED. (Not Set on Ground.)

[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and 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 such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Katie Biersmith 11/29/21
Printed Name

Katie.Biersmith@cdevinc.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

August 23, 2019
Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number:

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name

[4] Property Code	[5] Property Name	[6] Well Number
	SHEBA FEDERAL COM	305H
[7] OGRID No.	[8] Operator Name	[9] Elevation
	CENTENNIAL RESOURCE PRODUCTION, LLC	3464.8'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	27	24S	34E		2299	NORTH	1160	EAST	LEA

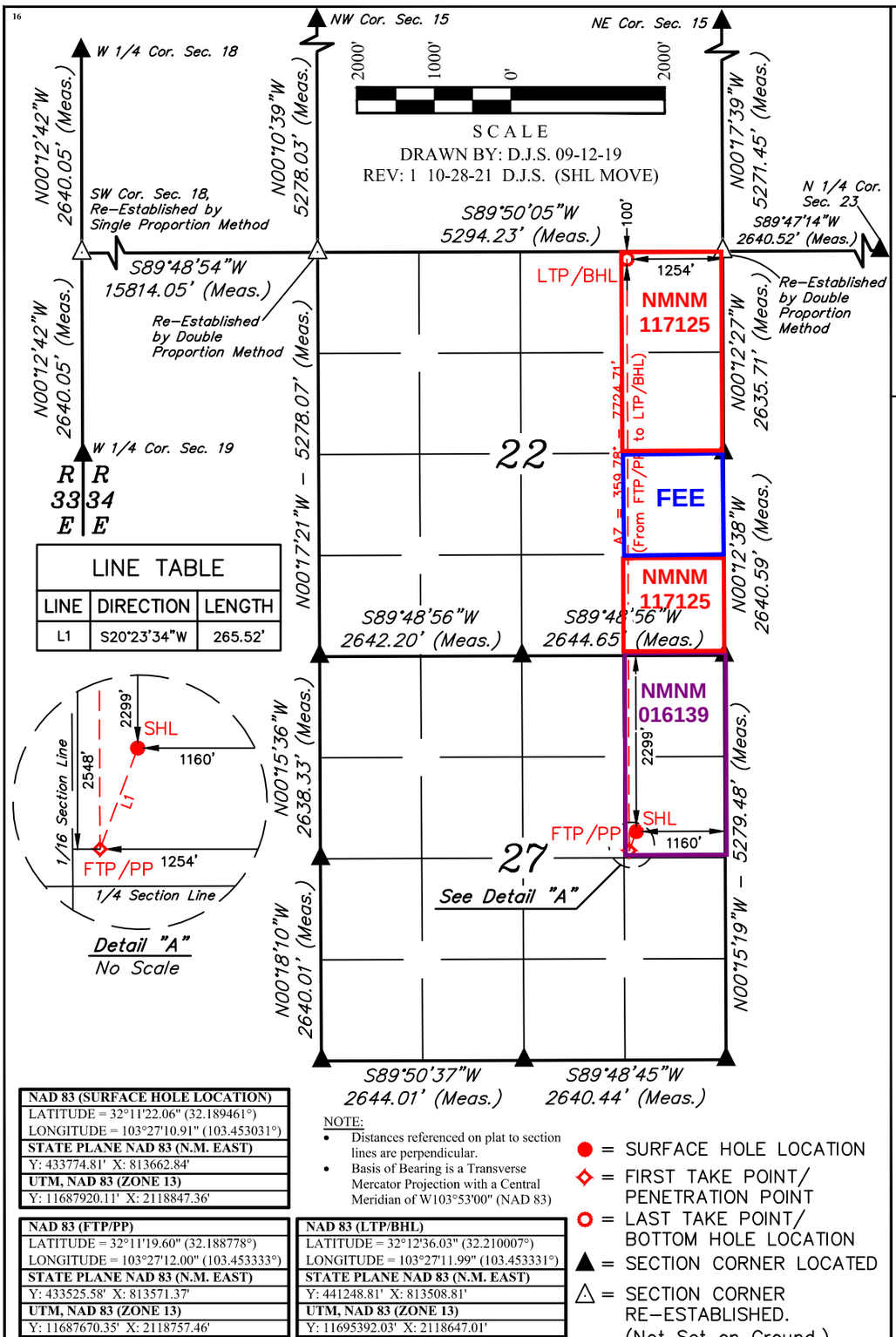
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	22	24S	34E		100	NORTH	1254	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
240			

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.

[16]



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S20°23'34"W	265.52'

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°11'22.06" (32.189461°)
LONGITUDE = 103°27'10.91" (103.453031°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 433774.81' X: 813662.84'
UTM, NAD 83 (ZONE 13)
Y: 11687920.11' X: 2118847.36'

NAD 83 (FTP/PP)
LATITUDE = 32°11'19.60" (32.188778°)
LONGITUDE = 103°27'12.00" (103.453333°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 433525.58' X: 813571.37'
UTM, NAD 83 (ZONE 13)
Y: 11687670.35' X: 2118757.46'

NAD 83 (LTP/BHL)
LATITUDE = 32°12'36.03" (32.210007°)
LONGITUDE = 103°27'11.99" (103.453331°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 441248.81' X: 813508.81'
UTM, NAD 83 (ZONE 13)
Y: 11695392.03' X: 2118647.01'

NOTE:
- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

● = SURFACE HOLE LOCATION
◇ = FIRST TAKE POINT/ PENETRATION POINT
○ = LAST TAKE POINT/ BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED
△ = SECTION CORNER RE-ESTABLISHED. (Not Set on Ground.)

[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and 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 such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Printed Name

E-mail Address

[18] SURVEYOR CERTIFICATION

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

August 23, 2019

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number:

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

Drilling Plan Data Report
03/02/2022

APD ID: 10400070418 **Submission Date:** 03/04/2021

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Well Type: OIL WELL **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 Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1643498	RUSTLER	3524	1172	1172	SANDSTONE	NONE	N
1643508	SALADO	1731	1793	1793	SALT	NONE	N
7853779	CASTILE	-1658	5182	5182	ANHYDRITE, SALT	NONE	N
1643509	LAMAR	-1892	5416	5416	ANHYDRITE	NONE	N
1643499	BELL CANYON	-1947	5471	5471	SANDSTONE	NATURAL GAS, OIL	N
1643500	CHERRY CANYON	-2862	6386	6386	SANDSTONE	NATURAL GAS, OIL	N
1643501	BRUSHY CANYON	-4360	7884	7884	SANDSTONE	NATURAL GAS, OIL	N
1643502	BONE SPRING LIME	-5771	9295	9295	OTHER : Carbonate	NATURAL GAS, OIL	N
1643503	AVALON	-5799	9323	9323	SHALE	CO2, NATURAL GAS, OIL	N
1643504	BONE SPRING 1ST	-6814	10338	10338	SANDSTONE	NATURAL GAS, OIL	N
1643505	BONE SPRING 2ND	-7014	10538	10538	OTHER, SHALE : Carbonate	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 10390

Equipment: The BOP and related equipment will meet or exceed the requirements of a 5M-psi system as set forth in On Shore Order No. 2. See attached BOP Schematic. A. Casinghead: 13 5/8 5,000 psi SOW x 13 5,000 psi WP Intermediate Spool: 13 5,000 psi WP x 11 5,000 psi WP Tubinghead: 11 5,000 psi WP x 7 1/16" 15,000 psi WP B. Minimum Specified Pressure Control Equipment Annular preventer One Pipe ram, One blind ram Drilling spool, or blowout preventer with 2 side outlets. Choke side will be a 3-inch minimum diameter, kill line shall be at least 2-inch diameter 3 inch diameter choke line 2 3 inch choke line valves 2 inch kill line 2 chokes with 1 remotely controlled from rig floor (see Figure 2) 2 2 inch kill line valves and a check valve Upper kelly cock valve with handle available When the expected pressures approach working pressure of the system, 1 remote kill line tested to stack pressure (which shall run to the outer edge of the substructure and be unobstructed) Lower kelly cock valve with handle available Safety valve(s) and subs to fit all drill string connections in use Inside BOP or float sub available Pressure gauge on choke manifold All BOPE connections subjected to well pressure shall be flanged, welded, or clamped Fill-up line above the uppermost preventer. C. Auxiliary Equipment Audio and visual mud

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

monitoring equipment shall be placed to detect volume changes indicating loss or gain of circulating fluid volume. (OOS 1, III.C.2) Gas Buster will be used below intermediate casing setting depth. Upper and lower kelly cocks with handles, safety valve and subs to fit all drill string connections and a pressure gauge installed on choke manifold.

Requesting Variance? YES

Variance request: Centennial Resource Production, LLC hereby requests flex hose, well control and offline cement variances for this well. Please see attachments in section 8 for details

Testing Procedure: The BOP test shall be performed before drilling out of the surface casing shoe and will occur at a minimum: a. when initially installed b. whenever any seal subject to test pressure is broken c. following related repairs d. at 30 day intervals e. checked daily as to mechanical operating conditions. The ram type preventer(s) will be tested using a test plug to 250 psi (low) and 5,000 psi (high) (casinghead WP) with a test plug upon its installation onto the 13 surface casing. If a test plug is not used, the ram type preventer(s) shall be tested to 70% of the minimum internal yield pressure of the casing. The annular type preventer(s) shall be tested to 50% of its working pressure. Pressure will be maintained for at least 10 minutes or until provisions of the test are met, whichever is longer. A Sundry Notice (Form 3160 5), along with a copy of the BOP test report, shall be submitted to the local BLM office within 5 working days following the test. If the bleed line is connected into the buffer tank (header), all BOP equipment including the buffer tank and associated valves will be rated at the required BOP pressure. The BLM office will be provided with a minimum of four (4) hours notice of BOP testing to allow witnessing. The BOP Configuration, choke manifold layout, and accumulator system, will be in compliance with Onshore Order 2 for a 5,000 psi system. A remote accumulator will be used. Pressures, capacities, and specific placement and use of the manual and/or hydraulic controls, accumulator controls, bleed lines, etc., will be identified at the time of the BLM 'witnessed BOP test. Any remote controls will be capable of both opening and closing all preventers and shall be readily accessible

Choke Diagram Attachment:

HP_10M_Choke_Manifold_20210304152554.pdf

BOP Diagram Attachment:

HP_BOP_Schematic_CoFlex_Choke_10K_20210304152630.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	CONDUCTOR	26	20.0	NEW	API	N	0	120	0	120	3465	3345	120	H-40	94	OTHER - WELD						
2	SURFACE	17.5	13.375	NEW	API	N	0	1175	0	1175	3465	2290	1175	J-55	54.5	OTHER - BTC	1.95	26.76	DRY	13.32	DRY	13.32
3	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5250	0	5235	3461	-1770	5250	J-55	40	LT&C	1.34	8.69	DRY	2.48	DRY	3.01
4	PRODUCTION	8.75	5.5	NEW	API	N	0	10730	0	10361	3461	-6896	10730	OTHER	23	OTHER - DQX	2.39	13.9	DRY	2.64	DRY	2.64
5	PRODUCTION	8.5	5.5	NEW	API	N	10730	17857	10361	10361	-6896	-6896	7127	OTHER	23	OTHER - DQX	2.39	13.9	DRY	2.64	DRY	2.64

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Casing Attachments

Casing ID: 1 **String Type:** CONDUCTOR

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing ID: 2 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20200226070116.pdf

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20200225145837.pdf

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Casing Attachments

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20200225150125.pdf

Technical_Data_Sheet_TMK_UP_DQX_5.5_x_23_T95_20210304153028.pdf

Casing ID: 5 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20200225150415.pdf

Technical_Data_Sheet_TMK_UP_DQX_5.5_x_20_P110_CY_20200305165658.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	0	0	0	0	0	0	0	0
CONDUCTOR	Lead		0	120	121	1.49	12.9	181		Grout	Bentonite 4% BWOC, Cellophane #sx, CaCl2 2% BWOC

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	675	539	1.74	13.5	938	100	Class C Premium	Premium Gel Bentonite 4%, C-45 Econolite 0.25%, Phenoseal 0.25#/sk, CaCl 1%, Defoamer C-41P 0.75%
SURFACE	Tail		675	1175	518	1.34	14.8	695	100	Class C Premium	C-45 Econolite 0.10%, CaCl 1.0%
INTERMEDIATE	Lead		0	4750	1123	3.44	10.7	3864	150	TXI Lightweight	Salt 1.77/sk, C-45 Econolite 2.25%, STE 6.00%, Citric Acid 0.18%, C-19 0.10%, CSA-1000 0.20%, C-530P 0.30%, CTB-15 LCM 7#/sk, Gyp Seal 8#/sk
INTERMEDIATE	Tail		4750	5250	141	1.33	14.8	188	20	Class C Premium	C-45 Econolite 0.10%, Citric acid 0.05%, C503P 0.25%
PRODUCTION	Lead		0	9830	963	3.41	10.6	3283	30	TXI Lightweight	Salt 8.98#/sk, STE 6.00%, Citric acid 0.20%, CSA-1000 0.23%, C47B 0.10%, C-503P 0.30%
PRODUCTION	Tail		9830	17857	1880	1.24	14.2	2331	25	50:25:25 Class H: Poz: CPO18	Citric acid 0.03%, CSA-1000 0.05%, C47B 0.25%, C-503P 0.30%

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 Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient quantities of mud materials will be on the well site at all times for the purpose of assuring well control and maintaining wellbore integrity. Surface interval will employ fresh water mud. The intermediate hole will utilize a diesel emulsified brine fluid to inhibit salt washout and prevent severe fluid losses. The production hole will employ oil base fluid to inhibit formation reactivity and of the appropriate density to maintain well control.

Describe the mud monitoring system utilized: Centrifuge separation system. Open tank monitoring with EDR will be used for drilling fluids and return volumes. Open tank monitoring will be used for cement and cuttings return volumes. Mud properties will be monitored at least every 24 hours using industry accepted mud check practices.

Circulating Medium Table

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

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
0	1175	WATER-BASED MUD	8.6	9.5							
1175	5250	SALT SATURATED	9	10							
5250	17857	OIL-BASED MUD	8.8	10							

Section 6 - Test, Logging, Coring

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

Will utilize MWD/LWD (Gamma ray logging) from intermediate hole to TD of the well.

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

GAMMA RAY LOG,DIRECTIONAL SURVEY,

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5402 **Anticipated Surface Pressure:** 3116

Anticipated Bottom Hole Temperature(F): 165

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

H2S_Contingiency_Plan_Sheba_Federal_107H__108H__305H__306H__405H__506H____507H_20210304153810.pdf

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Sheba_Federal_Com_305H___Plan_1_11_10_21_20211129163318.pdf
Sheba_Federal_Com_305H___Plan_1_11_10_21_AC_Report_20211129163331.pdf

Other proposed operations facets description:

Geoprog and WBD is attached.

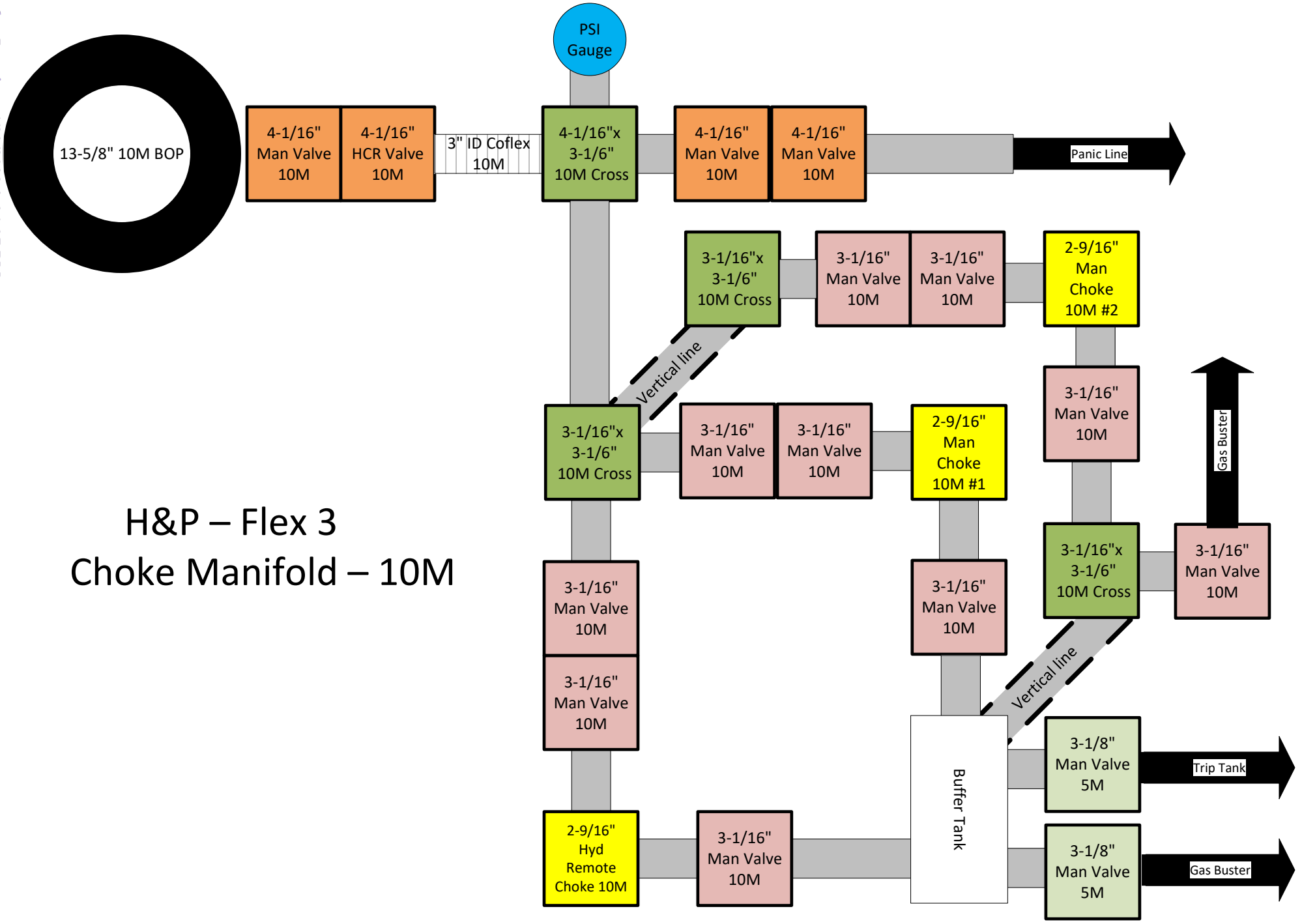
Other proposed operations facets attachment:

CRD_Batch_Setting_Procedures_20200228113732.pdf
CDEV_Multi_Bowl_Procedure_Sheba_Fed_Com_305H_20210304153946.pdf
GEOPROG_Sheba_Fed_305H_PRELIM_20210304154832.pdf
Sheba_Fed_Com_305H_WBD__Proposed__20211202143057.pdf

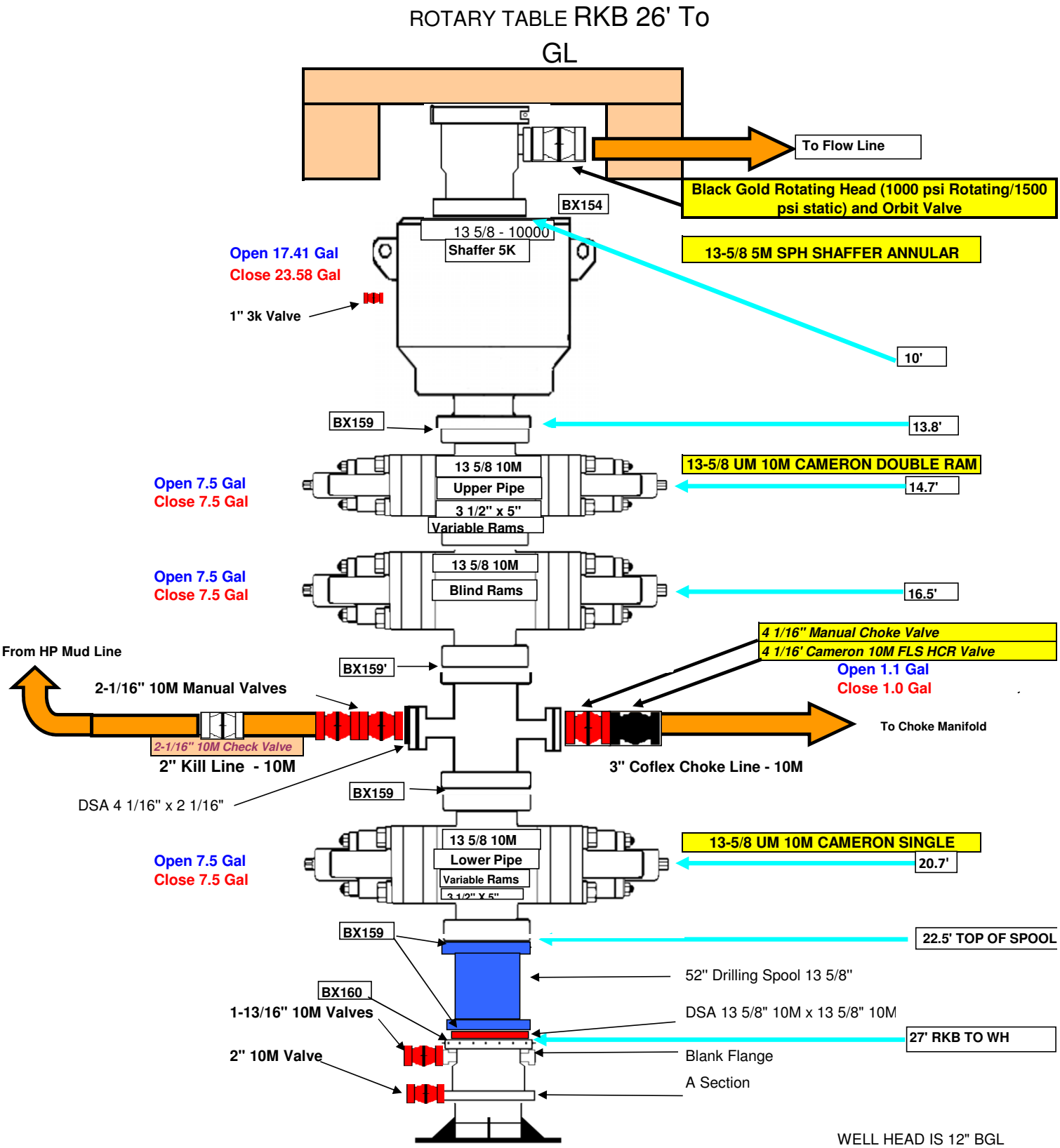
Other Variance attachment:

H_P_Flex_Hose_Specs_Continental_Hose_SN_67255_20200228112930.pdf
CDEV_Well_Control_Plan__20211129163351.pdf
Sheba_305H_Offline_Cementing_Procedure_20211129164037.pdf

H&P – Flex 3
Choke Manifold – 10M



H&P-Flex3


ROTARY TABLE RKB 26' To GL
To Flow Line
Black Gold Rotating Head (1000 psi Rotating/1500 psi static) and Orbit Valve
BX154
13 5/8 - 10000
Shaffer 5K
13-5/8 5M SPH SHAFFER ANNULAR
Open 17.41 Gal
Close 23.58 Gal
1" 3k Valve
10'
BX159
13.8'
13 5/8 10M
Upper Pipe
3 1/2" x 5"
Variable Rams
13-5/8 UM 10M CAMERON DOUBLE RAM
14.7'
Open 7.5 Gal
Close 7.5 Gal
13 5/8 10M
Blind Rams
Open 7.5 Gal
Close 7.5 Gal
16.5'
4 1/16" Manual Choke Valve
4 1/16' Cameron 10M FLS HCR Valve
Open 1.1 Gal
Close 1.0 Gal
From HP Mud Line
BX159'
2-1/16" 10M Manual Valves
To Choke Manifold
2-1/16" 10M Check Valve
2" Kill Line - 10M
3" Coflex Choke Line - 10M
DSA 4 1/16" x 2 1/16"
BX159
13 5/8 10M
Lower Pipe
Variable Rams
3 1/2" X 5"
13-5/8 UM 10M CAMERON SINGLE
20.7'
Open 7.5 Gal
Close 7.5 Gal
BX159
22.5' TOP OF SPOOL
52" Drilling Spool 13 5/8"
BX160
1-13/16" 10M Valves
DSA 13 5/8" 10M x 13 5/8" 10M
27' RKB TO WH
2" 10M Valve
Blank Flange
A Section
WELL HEAD IS 12" BGL

CASING ASSUMPTIONS WORKSHEET:

Centralizer Program:

Surface: - 3 welded bow spring centralizers, one on each of the bottom 3 joints, plus one on the shoe joint (4 minimum)
- No Cement baskets will be run

Production: - 1 welded bow spring centralizer on a stop ring 6' above float shoe
- 1 centralizer every other joint to the top of the tail cement
- 1 centralizer every 4 joints to 500' below the top of the lead cement
- The actual number and placement of centralizers will be determined from hole deviation and potential production zones. Centralizers will be run for maximum practical standoff and through all potential productive zones.

- All casing strings below the conductor shall be tested, prior to drilling out the casing shoe, to 0.22 psi/ft of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the internal yield pressure of the casing. If pressure declines more than 10 percent in 30 minutes, corrective action will be taken.

  No freshly hard banded pipe will be rotated in the surface casing

  - CENTENNIAL RESOURCE DEVELOPOMENT will not employ an air-drill rig for the surface casing. The casing shoe will be tested by drilling 5'-10' out from under the shoe and pressure testing to the maximum expected mud weight equivalent as shown in the mud program listed in the drilling plan.

CASING ASSUMPTIONS WORKSHEET:

Centralizer Program:

Surface: - 3 welded bow spring centralizers, one on each of the bottom 3 joints, plus one on the shoe joint (4 minimum)
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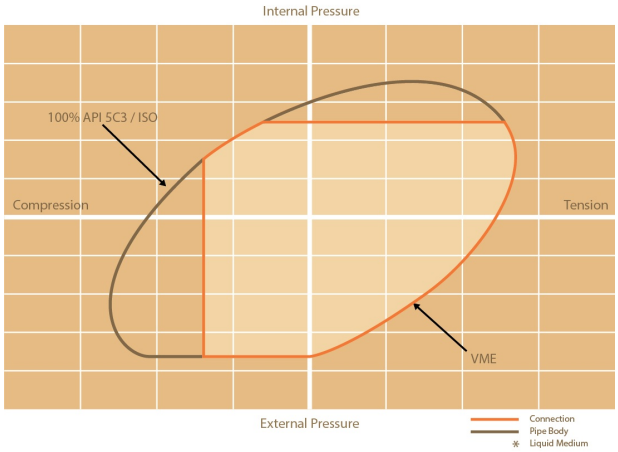
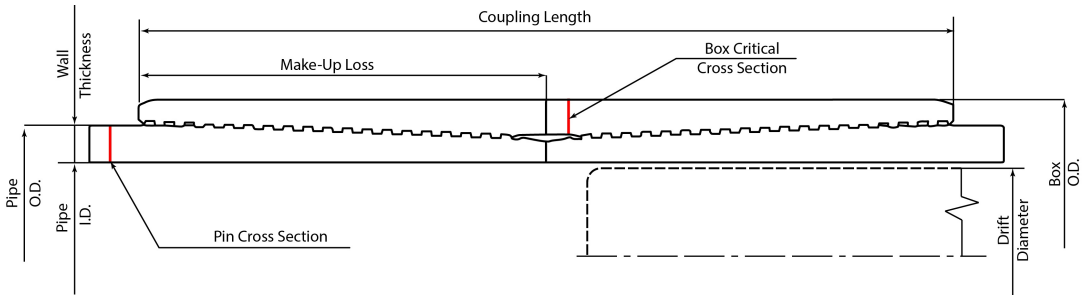
TUBULAR PARAMETERS	
Nominal OD, (inch)	5.500
Wall Thickness, (inch)	0.415
Pipe Grade	T95
Coupling	Regular
Coupling Grade	T95
Drift	Standard

CONNECTION PARAMETERS	
Connection OD (inch)	6.050
Connection ID, (inch)	4.670
Make-Up Loss, (inch)	4.122
Connection Critical Area, (sq inch)	8.722
Yield Strength in Tension, (klbs)	630
Yeld Strength in Compression, (klbs)	630
Tension Efficiency	100%
Compression Efficiency	100%
Min. Internal Yield Pressure, (psi)	12 540
Collapse Pressure, (psi)	12 930
Uniaxial Bending (deg/100ft)	79.0

MAKE-UP TORQUES	
Minimum Make-Up Torque, (ft-lb)	12 200
Optimum Make-Up Torque, (ft-lb)	13 600
Maximum Make-Up Torque, (ft-lb)	14 900
Operating Torque, (ft-lb)	18 500
Yield Torque, (ft-lb)	21 800

PIPE BODY PROPERTIES	
PE Weight, (lbs/ft)	22.54
Nominal Weight, (lbs/ft)	23.00
Nominal ID, (inch)	4.670
Drift Diameter, (inch)	4.545
Nominal Pipe Body Area, (sq inch)	6.630
Yield Strength in Tension, (klbs)	630
Min. Internal Yield Pressure, (psi)	12 540
Collapse Pressure, (psi)	12 930
Minimum Yield Strength, (psi)	95 000
Minimum Tensile Strength, (psi)	105 000





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CASING ASSUMPTIONS WORKSHEET:

Centralizer Program:

Surface: - 3 welded bow spring centralizers, one on each of the bottom 3 joints, plus one on the shoe joint (4 minimum)
- No Cement baskets will be run

Production: - 1 welded bow spring centralizer on a stop ring 6' above float shoe
- 1 centralizer every other joint to the top of the tail cement
- 1 centralizer every 4 joints to 500' below the top of the lead cement
- The actual number and placement of centralizers will be determined from hole deviation and potential production zones. Centralizers will be run for maximum practical standoff and through all potential productive zones.

- All casing strings below the conductor shall be tested, prior to drilling out the casing shoe, to 0.22 psi/ft of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the internal yield pressure of the casing. If pressure declines more than 10 percent in 30 minutes, corrective action will be taken.

  No freshly hard banded pipe will be rotated in the surface casing

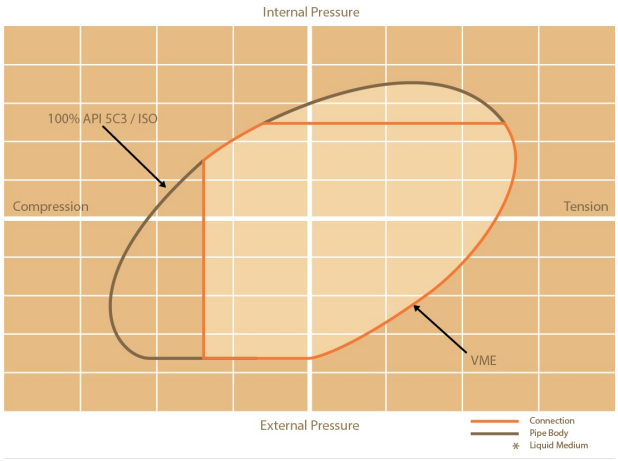
  - CENTENNIAL RESOURCE DEVELOPOMENT will not employ an air-drill rig for the surface casing. The casing shoe will be tested by drilling 5'-10' out from under the shoe and pressure testing to the maximum expected mud weight equivalent as shown in the mud program listed in the drilling plan.

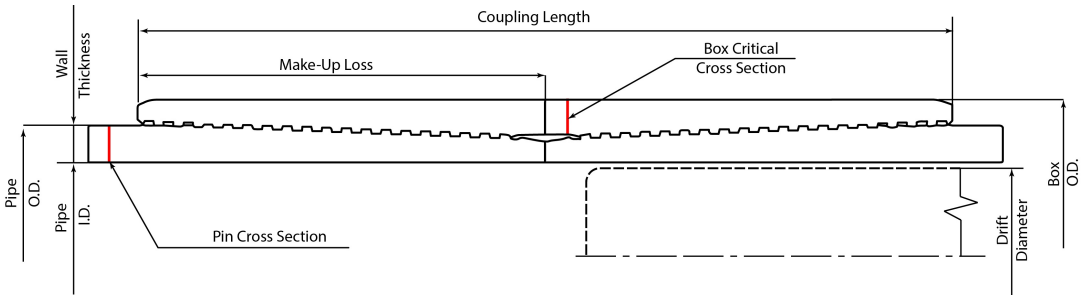
TUBULAR PARAMETERS	
Nominal OD, (inch)	5.500
Wall Thickness, (inch)	0.361
Pipe Grade	P110 CY
Coupling	Regular
Coupling Grade	P110 CY
Drift	Standard

CONNECTION PARAMETERS	
Connection OD (inch)	6.05
Connection ID, (inch)	4.778
Make-Up Loss, (inch)	4.122
Connection Critical Area, (sq inch)	5.828
Yield Strength in Tension, (klbs)	641
Yeld Strength in Compression, (klbs)	641
Tension Efficiency	100%
Compression Efficiency	100%
Min. Internal Yield Pressure, (psi)	12 640
Collapse Pressure, (psi)	11 110
Uniaxial Bending (deg/100ft)	92.0

MAKE-UP TORQUES	
Yield Torque, (ft-lb)	20 600
Minimum Make-Up Torque, (ft-lb)	11 600
Optimum Make-Up Torque, (ft-lb)	12 900
Maximum Make-Up Torque, (ft-lb)	14 100
Operating Torque, (ft-lb)	17 500

PIPE BODY PROPERTIES	
PE Weight, (lbs/ft)	19.81
Nominal Weight, (lbs/ft)	20.00
Nominal ID, (inch)	4.778
Drift Diameter, (inch)	4.653
Nominal Pipe Body Area, (sq inch)	5.828
Yield Strength in Tension, (klbs)	641
Min. Internal Yield Pressure, (psi)	12 640
Collapse Pressure, (psi)	11 110





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CASING ASSUMPTIONS WORKSHEET:

Centralizer Program:

Surface: - 3 welded bow spring centralizers, one on each of the bottom 3 joints, plus one on the shoe joint (4 minimum)
- No Cement baskets will be run

Production: - 1 welded bow spring centralizer on a stop ring 6' above float shoe
- 1 centralizer every other joint to the top of the tail cement
- 1 centralizer every 4 joints to 500' below the top of the lead cement
- The actual number and placement of centralizers will be determined from hole deviation and potential production zones. Centralizers will be run for maximum practical standoff and through all potential productive zones.

- All casing strings below the conductor shall be tested, prior to drilling out the casing shoe, to 0.22 psi/ft of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the internal yield pressure of the casing. If pressure declines more than 10 percent in 30 minutes, corrective action will be taken.

  No freshly hard banded pipe will be rotated in the surface casing

  - CENTENNIAL RESOURCE DEVELOPOMENT will not employ an air-drill rig for the surface casing. The casing shoe will be tested by drilling 5'-10' out from under the shoe and pressure testing to the maximum expected mud weight equivalent as shown in the mud program listed in the drilling plan.

H_2S CONTINGENCY PLAN

FOR

CENTENNIAL RESOURCE PRODUCTION, LLC.

Sheba Federal 107H, 108H, 305H, 306H, 405H, 506H, & 507H

Lea County, New Mexico

02-19-2021
This plan is subject to updating

Centennial Resource Production, LLC.	H_2S Contingency Plan Sheba Federal 107H, 108H, 305H, 306H, 405H, 506H, & 507H	Lea County, New Mexico

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Centennial Resource Production, LLC.	H_2S Contingency Plan Sheba Federal 107H, 108H, 305H, 306H, 405H, 506H, & 507H	Lea County, New Mexico

Section 1.0 – Introduction

I. Purpose

The purpose of this contingency plan (Plan) is to provide Centennial Resource Production, LLC. (Centennial) with an organized plan of action for alerting and protecting Centennial employees, the general public, and any potential first responders prior to any intentional release or immediately following the accidental / unintentional release of a potentially hazardous volume / concentration of Hydrogen Sulfide Gas (H2S).

II. Scope & Applicability

This Plan applies to all planned, unplanned, uncontrolled and/or unauthorized releases of hazardous concentrations of H2S or any associated hazardous byproducts of combustion, occurring at any Centennial owned or operated facilities including but not limited to: wells, flowlines, pipelines, tank batteries, production facilities, SWD facilities, compressor stations, gas processing plants, drilling / completions / workover operations, and any other applicable company owned property.

Section 2.0 - Plan Implementation

I. Activation Requirements

In accordance with the requirements of Bureau of Land Management Onshore Order #6 and NMAC 19.15.11, this Plan shall be activated in advance of any authorized, planned, unplanned, uncontrolled, or unauthorized release of a hazardous volume / concentration of H_2S gas, or SO^2, which could potentially adversely impact the workers, general public or the environment.

II. Emergency Evacuation

In the event of an unplanned, uncontrolled, or unauthorized release of a hazardous volume / concentration of H_2S gas, the first priority is to ensure the safety of the workers and general public. Upon discovery and subsequent determination of an applicable release, which cannot be quickly mitigated, immediately by using 911, notify local authorities to begin the process of alerting the general public, evacuate any residents within the Radius of Exposure (ROE), and limit any general public or employee access to any areas within the ROE of the affected facility.

III. Emergency Response Activities

The purpose of emergency response actions is to take steps to quickly mitigate / stop the ongoing release of the hazardous source of H_2S. Upon discovery of any hazardous release, immediately notify Centennial management to activate the Emergency Response Team (ERT). Once Centennial supervision arrives and assesses the situation, a work plan identifying the proper procedures shall be developed to stop the release.

Section 3.0 - Potential Hazardous Conditions & Response Actions

During a planned or unplanned release of H_2S, there are several hazardous conditions that are presented both to employees, the general public, and emergency responders. These specific hazardous conditions are identified in the tables below.

H2S OPERATING CONDITIONS – RESPONSE ACTIONS TO CONSIDER	✓
H_2S CONDITION 1: POTENTIAL DANGER TO LIFE AND HEALTH –> WARNING SIGN GREEN	
H_2S concentration <10 ppm detected by location monitors	❑
General Actions During Condition 1	❑
Notify Site Supervisor / Centennial Person-in-Charge (PIC) of any observed increase in ambient H_2S concentrations	❑
All personnel check safety equipment is in adequate working order & store in accessible location	❑
Sensitize crews with safety meetings.	❑
Limit visitors and non-essential personnel on location	❑
Continuously monitor H_2S concentrations and check calibration of sensors	❑
Ensure H_2S scavenger is on location.	❑
H_2S CONDITION 2: MODERATE DANGER TO LIFE AND HEALTH → WARNING SIGN YELLOW	
H_2S concentration >10 ppm and < 30 ppm in atmosphere detected by location monitors:	❑
General Actions During Condition 2	❑
Sound H_2S alarm and/or display yellow flag.	❑
Account for on-site personnel	❑
Upon sounding of an area or personal H_2S monitor alarm when 10 ppm is reached, proceed to a safe briefing area upwind of the location immediately (see **MA-4**, **Figure 5-1**).	❑
Don proper respiratory protection.	❑
Alert other affected personnel	❑
If trained and safe to do so undertake measures to control source H2S discharge and eliminate possible ignition sources. Initiate Emergency Shutdown procedures as deemed necessary to correct or control the specific situation.	❑
Account for on-site personnel at safe briefing area.	❑
Stay in safe briefing area if not working to correct the situation.	❑
Keep Site Supervisor / Centennial PIC informed. Notify applicable government agencies **(Appendix A)** If off-site impact; notify any neighbors within Radius of Exposure **(ROE)**, **Fig 5.11**	❑
Continuously monitor H_2S until readings below 10 ppm.	❑
Evacuated area shall not be re-entered except by trained and authorized personnel utilizing appropriate respiratory protection; or until "all clear" sounded by Centennial PIC / Site Supervisor.	

H_2S CONDITION 3: EXTREME DANGER TO LIFE AND HEALTH → WARNING SIGN RED	
> **30 ppm H_2S** concentration in air detected by location monitors: Extreme danger to life	❑
General Actions During Condition 3	❑
Sound H_2S alarm and/or display red flag.	❑
Account for on-site personnel	❑
Move away from H_2S source and get out of the affected area.	❑
Proceed to designated safe briefing area; alert other affected personnel.	❑
Account for personnel at safe briefing area.	❑
If trained and safe to do so undertake measures to control source H2S discharge and eliminate possible ignition sources. Initiate Emergency Shutdown procedures as deemed necessary to correct or control the specific situation.	❑
Notify vehicles or situation and divert all traffic away from location.	❑
Centennial Peron-in-Charge will make appropriate community notifications.	❑
Red warning flag must be on display until the situation has been corrected and the Centennial Person-in-Charge determines it is safe to resume operations under **Condition 1**.	❑
Notify management of the condition and action taken. If H_2S concentration is increasing and steps to correct the situation are not successful – or at any time if well control is questionable – alert all responsible parties for possible activation of the H_2S Contingency Plan. If well control at the surface is lost, determine if situation warrants igniting the well.	❑
If uncontrolled flow at the surface occurs, the Centennial PIC, with approval, if possible, from those coordinating the emergency **(as specified in the site-specific H_2S Contingency Plan)** are responsible for determining if the situation warrants igniting the flow of the uncontrolled well. This decision should be made only as a last resort and in a situation where it is obvious that human life is in danger and there is no hope of controlling the flow under prevailing conditions.	❑
If the flow is ignited, burning H_2S will be converted to sulfur dioxide (SO_2), which is also highly toxic. Do not assume that area is safe after the flow is ignited. If the well is ignited, evacuation of the area is mandatory, because SO_2 will remain in low-lying places under no-wind conditions.	❑
Keep Site Supervisor / Centennial PIC informed. Notify applicable government agencies and local law enforcement **(Appendix A)** If off-site impact; notify any neighbors within the Radius of Exposure **(ROE)**, see example in **Figure 5-11.**	❑
Continuously monitor H_2S until readings fall below 10 ppm.	❑
Evacuated area shall not be re-entered except by trained and authorized personnel utilizing appropriate respiratory protection; or until "all clear" sounded by Centennial PIC / Site Supervisor.	❑
IF ABOVE ACTIONS CANNOT BE ACCOMPLISHED IN TIME TO PREVENT EXPOSURE TO THE PUBLIC	
Alert public (directly or through appropriate government agencies) who may be subject to potentially harmful exposure levels.	❑

Make recommendations to public officials regarding blocking unauthorized access to the unsafe area and assist as appropriate.	❑
Make recommendations to public officials regarding evacuating the public and assist as appropriate.	❑
Monitor ambient air in the area of exposure (after following abatement measures) to determine when it is safe for re-entry.	❑

Section 4.0 - Notification of H_2S Release Event

I. Local & State Law Enforcement

Prior to the planned / controlled release of a hazardous concentration of H_2S gas or any associated byproducts of the combustion of H_2S gas, notify local law enforcement agencies regarding the contents of this plan.

In the event of the discovery of an unplanned/uncontrolled release of a hazardous concentration of H_2S gas or any associated byproducts of combustion, immediately notify local and/or state law enforcement agencies of the situation and ask for their assistance.

II. General Public

In the event of a planned or unplanned release of a hazardous concentration of H_2S gas or any associated byproducts of combustion, notify local law enforcement agencies and ask for their assistance in alerting the general public and limiting access to any public roads that may be impacted by such a release.

III. New Mexico Oil Conservation Division

The Centennial HSE Department will make any applicable notification to the New Mexico OCD regarding any release of a hazardous concentration of H_2S Gas or any associated byproducts of combustion.

IV. New Mexico Environment Department

The Centennial HSE Department will make any applicable notifications to the NMED regarding any release of a hazardous concentration of H_2S gas or any associated byproducts of combustion.

V. **Bureau of Land Management**

The Centennial Regulatory Department will make any applicable notifications to the BLM regarding any release of a hazardous concentration of H_2S gas or any associated byproducts of combustion.

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Section 5.0 - Emergency Contact List

EMERGENCY CONTACT LIST				
CENTENNIAL RESOURCE PRODUCTION, LLC.				
POSITION	**NAME**	**OFFICE**	**CELL**	**ALT PHONE**
Operations				
Operations Superintendent	Cory Lewis	432.305.1009	432.557.4274	
Operations Assistant Superintendent	Josh Graham	432.940.3191	432.940.3191	
Drilling Superintendent	Jason Fitzgerald	432.315.0146	318-347-3916	
Production Foreman	Manual Mata	432.664.0278	575.408.0216	
Drilling Engineer	Ronny Hise	432.315.0144	432.770.4786	
Production Engineer	Brandon Morin	432.315.0140	432.231.7671	
Vice President Operations	Clayton Smith	720.499.1416	361.215.2494	
HSE & Regulatory				
HSE Manager	Derrick Melton	720-499-2294	432-296-8720	
Regulatory Manager	Heidi Kaczor	720.499.1422	303.204.8877	
Air Quality	Montgomery Floyd	432-315-0123	432-425-8321	
Environmental	Jamon Hohensee	432-315-0132	432-241-4283	
HSE Consultant	Adam Hicks		903-426-4556	
Local, State, & Federal Agencies				
Lea County Sheriff		575-396-3611		911
New Mexico State Highway Patrol		505-757-2297		911
Eunice Fire / EMS		575-394-3258		911
Lea County Hospital		575-492-5000		
Standard Safety – Safety Contractor	John Blake	(432) 653-0393	(432) 813-7745	
New Mexico Oil Conservation Division – District 1 Office – Hobbs, NM.		575-393-6161		
New Mexico Environment Department – District III Office – Hobbs, NM		575-397-6910		
New Mexico Oil Conservation Division – Hobbs, NM	24 Hour Emergency	575-393-6161		
Bureau of Land Management – Carlsbad, NM		575-234-5972		
U.S. Fish & Wildlife		502-248-6911		

Section 6.0 – Drilling Location Information

I. Site Safety Information

1. Safe Briefing Area
   a. There shall be two areas that will be designated as "SAFE BRIEFING AREAs". If H_2S is detected in concentrations equal to or in excess of 10 ppm all personnel not assigned emergency duties are to assemble in the designated Safe Briefing area for instructions. These two areas shall be positioned in accessible locations to facilitate the availability of self-contained breathing air devices. The briefing areas shall be positioned no less than 250' from the wellhead and in such locations that at least one briefing area will be up-wind from the well at all times.
2. Wind Indicators
   a. 4 Windsocks will be installed at strategic points on the facility.

3. Danger Signs
    a. A warning sign indicating the possible well conditions will be displayed at the location entrance.

DANGER
POISONOUS GAS
HYDROGEN SULFIDE
DO NOT APPROACH IF AMBER LIGHTS ARE FLASHING

4. H_2S Detectors and Alarms
    a. Continuous monitoring type H_2S detectors, capable of sensing a minimum of 5ppm H_2S in air will be located centrally located at the tanks, heater treater, and combustor. Continuous monitoring type SO_2 detector will also be located at the combustor. The automatic H_2S alarm/flashing light will be located at the site entrance and in front of tank battery.
5. Safety Trailer
    a. A safety trailer equipped with an emergency cascade breathing air system with 2 ea. Work/escape packs, a stretcher, 2 OSHA approved full body harnesses, and a 20# Class ABC fire extinguisher shall be available at the site in close proximity to the safe briefing area. The cascade system shall be able to be deployed to the drill floor when needed to provide safe breathing air to the workers as needed.
6. Well Control Equipment
    a. The location shall have a flare line to a remote automatic ignitor and back up flare gun, placed 150' from the wellhead.
    b. The location shall be equipped with a remotely operated choke system and a mud gas separator.
7. Mud Program
    a. Company shall have a mud program that contains sufficient weight and additives to control H_2S.
8. Metallurgy
    a. All drill strings, casing, tubing, wellhead, BOP, spools, kill lines, choke manifold and lines, and valves shall be suitable for anticipated H_2S volume and pressure.
9. Communication
    a. The location shall be equipped with a means of effective communication such as a cell phones, intercoms, satellite phones or landlines.

II. Directions to Location

From the intersection of highway 18 and highway 128 in Jal, New Mexico, proceed in a northwesterly, then westerly direction along highway 128 approximately 18 miles to the junction of this road and NM County Road 2B to the south; turn left and proceed in a southerly direction approximately 2.0 miles to the lease road for the Solomon Pad. Turn left and proceed to location.

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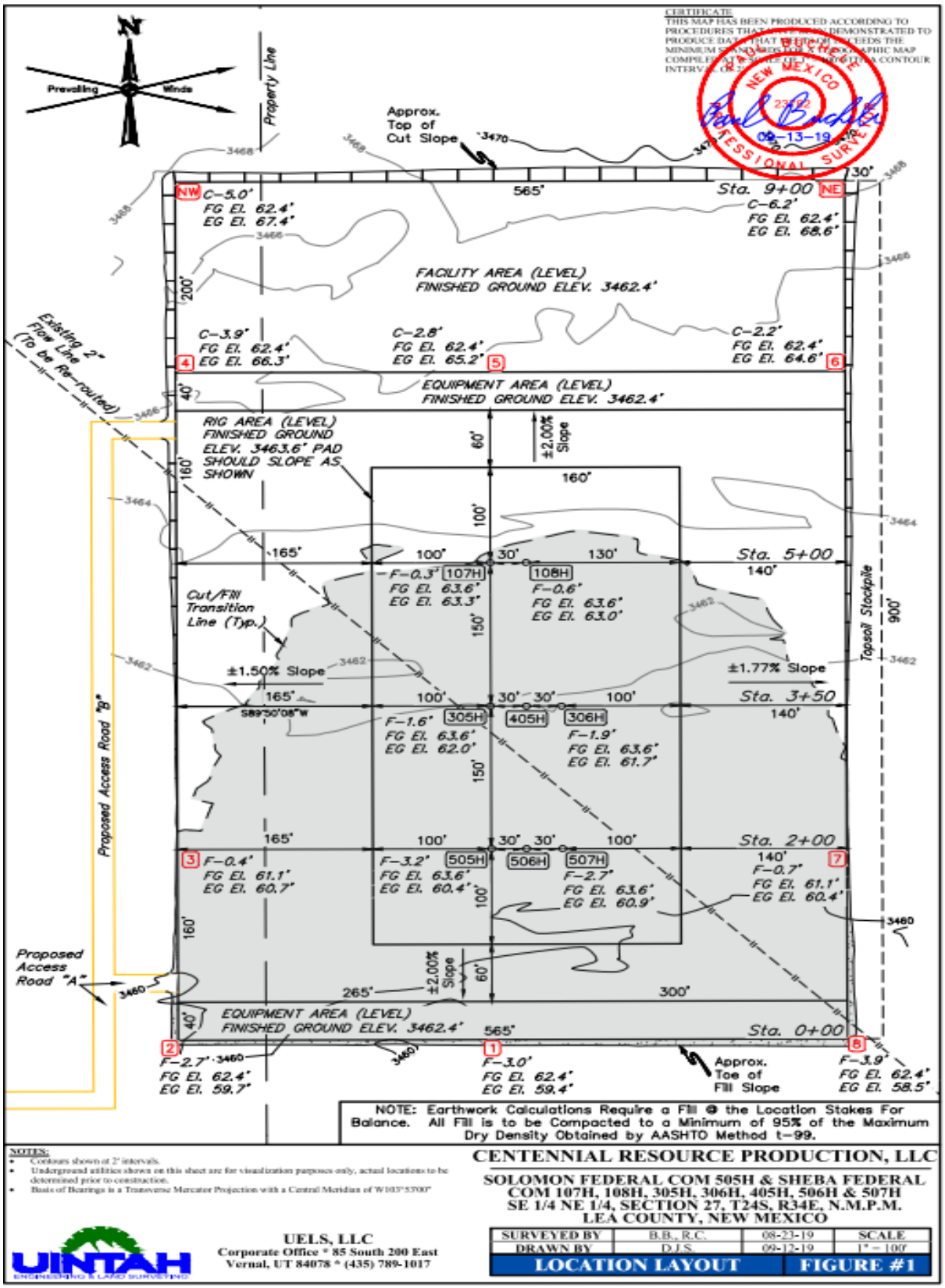
1. Plat of Location



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2. Routes of Ingress & Egress (MAP)

3. Residences in proximity to the 3000' Radius of Exposure (ROE) (MAP)

Map of 3000' ROE Perimeter

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There are no residences or public gathering places with the 3000' ROE

100 PPM, 300 PPM, & 500 PPM Max ROE under worst case scenario

Enter H_2S in PPM	1500	
Enter Gas flow in mcf/day (maximum worst case conditions)	2500	
500 ppm radius of exposure (public road)	**105**	feet
300 ppm radius of exposure	**146**	feet
100 ppm radius of exposure (public area)	**230**	feet

- Location GPS Coordinates ***Lat: 32.189763, Long: -103.45274***

4. Public Roads in proximity of the Radius of Exposure (ROE)

There are no public roads that would be within the 500 PPM ROE. The closest public road is New Mexico Highway 128, which is 1.45 miles from the location. County Road 2B is 2554' from this location.

Section 7.0 – Hazard Communication

I. Physical Characteristics of Hydrogen Sulfide Gas

Hydrogen sulfide (H_2S) is a colorless, poisonous gas that is soluble in water. It can be present in crude oils, condensates, natural gas and wastewater streams.

H_2S is heavier than air with a vapor density of 1.189 (air = 1.0); however, H_2S is most often mixed with other gases. These mixtures of H_2S and other gases can be heavier or lighter than air. If the H_2S-containing mixture is heavier, it can collect in low areas such as ditches, ravines, firewalls, and pits; in storage tanks; and in areas of poor ventilation. Please see physical properties in **Table 7.0.**

With H_2S the sense of smell is rapidly lost allowing lethal concentrations to be accumulated without warning. The toxicity of hydrogen sulfide at varying concentrations is indicated in the **Table 7.1.**

Warning: Do not use the mouth-to-mouth method if a victim ingested or inhaled hydrogen sulfide. Give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Table 7.0. Physical Properties of H_2S

Properties of H2S	Description
Vapor Density > 1 = 1.189 Air = 1	▪ H2S gas is slightly heavier than air, which can cause it to settle in low places and build in concentration. ▪ Produced as a mixture with other gases associated with oil and gas production.
Flammable Range 4.3%-46% 43000 ppm – 460000 ppm	▪ H2S can be extremely flammable / explosive when these concentrations are reached by volume in air.

Although H_2S is primarily a respiratory hazard, it is also flammable and forms an explosive mixture at concentrations of 4.3%–46.0% (40,000ppm – 460,000 ppm) by volume in air.

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H_2S can be encountered when:

- Venting and draining equipment.
- Opening equipment (separators, pumps, and tanks).
- Opening piping connections ("line breaking").
- Gauging and sampling storage tanks.
- Entering confined spaces.
- Working around wastewater pits, skimmers, and treatment facilities.

II. Human Health Hazards - Toxicological Information

Table 7.1. Hazards & Toxicity

Concentration (ppm)	Symptoms/Effects
0.00011-0.00033 ppm	Typical background concentrations
0.01-1.5 ppm	Odor threshold (when rotten egg smell is first noticeable to some). Odor becomes more offensive at 3-5 ppm. Above 30 ppm, odor described as sweet or sickeningly sweet.
2-5 ppm	Prolonged exposure may cause nausea, tearing of the eyes, headaches or loss of sleep. Airway problems (bronchial constriction) in some asthma patients.
20 ppm	Possible fatigue, loss of appetite, headache, irritability, poor memory, dizziness.
50-100 ppm	Slight conjunctivitis ("gas eye") and respiratory tract irritation after 1 hour. May cause digestive upset and loss of appetite.
100 ppm	Coughing, eye irritation, loss of smell after 2-15 minutes (olfactory fatigue). Altered breathing, drowsiness after 15-30 minutes. Throat irritation after 1 hour. Gradual increase in severity of symptoms over several hours. Death may occur after 48 hours.
100-150 ppm	Loss of smell (olfactory fatigue or paralysis).
200-300 ppm	Marked conjunctivitis and respiratory tract irritation after 1 hour. Pulmonary edema may occur from prolonged exposure.

500-700 ppm	Staggering, collapse in 5 minutes. Serious damage to the eyes in 30 minutes. Death after 30-60 minutes.
700-1000 ppm	Rapid unconsciousness, "knockdown" or immediate collapse within 1 to 2 breaths, breathing stops, death within minutes.
1000-2000 ppm	Nearly instant death

III. Environmental Hazards

H_2S and its associated byproducts from combustion presents a serious environmental hazard. Sulphur Dioxide SO_2 is produced as a constituent of flaring H_2S Gas and can present hazards associated, which are similar to H_2S. Although SO_2 is heavier than air, it will be picked up by a breeze and carried downwind at elevated temperatures. Since Sulfur Dioxide is extremely irritating to the eyes and mucous membranes of the upper respiratory tract, it has exceptionally good warning powers in this respect. The following table indicates the toxic nature of the gas. Please see the attached SDS in Appendix B for reference.

SULFUR DIOXIDE TOXICITY		
Concentration		Effects
$\%SO_2$	PPM	
0.0005	3 to 5	Pungent odor-normally a person can detect SO_2 in this range.
0.0012	12	Throat irritation, coughing, and constriction of the chest tearing and smarting of eyes.
0.15	150	So irritating that it can only be endured for a few minutes.
0.05	500	Causes a sense of suffocation, even with first breath.

Section 8.0 - Regulatory Information

I. OSHA & NIOSH Information

II. Table 8.0. OSHA & NIOSH H_2S Information

PEL, IDLH, TLV	Description
NIOSH PEL 10 PPM	▪ PEL is the Permissible Exposure Limit that an employee may be exposed up to 8 hr / day.
OSHA General Industry Ceiling PEL – 20 PPM	▪ The maximum exposure limit, which cannot be exceeded for any length of time.
IDLH 100 PPM	▪ Immediately Dangerous to Life and Health
Centennial PEL 10 PPM	▪ Centennial Policy Regarding H2S for employee safety

III. New Mexico OCD & BLM – H_2S Concentration Threshold Requirements

New Mexico NMAC 19.15.11 and Onshore Order #6 identify two Radii of Exposure (ROE) that identify potential danger to the public and require additional compliance measures. Centennial is required to install safety devices, establish safety procedures and develop a written H_2S contingency plan for sites where the H_2S concentrations are as follows.

Table 8.1. Calculating H_2S Radius of Exposure

H_2S Radius of Exposure	Description	Control and Equipment Requirements
100 ppm	Distance from a release to where the H_2S concentration in the air will dilute below 100ppm	ROE > 50-ft and includes any part of a "public area" (residence, school, business, etc., or any area that can be expected to be populated). ROE > 3,000-ft
500 ppm	Distance from a release to where the H_2S concentration in the air will dilute below 500ppm	ROE > 50-ft and includes any part of a public road (public roads are tax supported roads or any road used for public access or use)

Calculating H_2S Radius of Exposure

The ROE of an H_2S release is calculated to determine if a potentially hazardous volume of H_2S gas at 100 or 500 parts per million (ppm) is within a regulated distance requiring further action. If information about the concentration of H_2S and the potential gas release volume is known, the location of the Muster Areas will be set, and safety measures will be implemented based on the calculated radius of exposure (ROE). NMAC 19.15.11 – Hydrogen Sulfide Safety defines the ROE as the radius constructed with the gas's point of escape as its center and its length calculated by the following Pasquill-Gifford equations:

To determine the extent of the **100 ppm ROE**:

$x = [(1.589)\ (\text{mole fraction } H_2S)(Q)]^{(.6258)}$.

To determine the extent of the **500 ppm ROE**:

$x = [(0.4546)\ (\text{mole fraction } H_2S)(Q)]^{(.6258)}$.

Table 8.2. Calculating H2S Radius of Exposure

ROE Variable	Description
X =	ROE in feet
Q =	**Max volume of gas released determined to be released in cubic feet per day (ft^3/d)** normalized to standard temperature and pressure, 60°F and 14.65 psia
Mole fraction H_2S =	Mole fraction of H_2S in the gaseous mixture released.

The volume used as the escape rate in determining the ROE is specified in the rule as follows:

- The maximum daily volume rate of gas containing H_2S handled by that system element for which the ROE is calculated.

- For existing gas wells, the current adjusted open-flow rate, or the operator's estimate of the well's capacity to flow against zero back-pressure at the wellhead.

New Mexico Oil Conservation Division & BLM Site Requirements under NMAC 19.15.11 & Onshore Order #6

- Two cleared areas will be designated as Safe Briefing Areas. During an emergency, personnel will assemble in one of these areas for instructions from the Centennial Person-in-Charge. Prevailing wind direction should be considered in locating the briefing areas 200' or more on either side of the well head. One area should offset the other at an angle of 45° to 90° with respect to prevailing wind direction to allow for wind shifts during the work period.
- In the event of either an intentional or accidental releases of hydrogen sulfide, safeguards to protect the general public from the harmful effects of hydrogen sulfide must be in place for operations. A summary of the provisions in each of three H_2S ROE cases is included in **Table 8.3**.
    - **CASE 1 -**100 ppm ROE < 50'
    - **CASE 2** - 100 ppm ROE is 50' or greater, but < 3000' and does not penetrate public area.
    - **CASE 3** -100 ppm ROE is 50' or greater and penetrates a public area or 500 ppm ROE includes a public road. Also if 100 ppm ROE > 3000' regardless of public area.

Table 8.3. NMAC 19.15.11 Compliance Requirements Drilling & Production

NMAC 19.15.11 & BLM COMPLIANCE REQUIREMENTS - DRILLING & PRODUCTION			
PROVISION	**CASE 1**	**CASE 2**	**CASE 3**
H_2S Concentration Test	X	X	X
H-9	X	X	X
Training	X	X	X
District Office Notification	X	X	X
Drill Stem Tests Restricted	X*	X*	X
BOP Test	X*	X*	X
Materials		X	X
Warning and Marker		X	X
Security		X	X
Contingency Plan			X
Control and Equipment Safety			X
Monitors		X**	X**
Mud (ph Control or Scavenger)			X*
Wind Indicators		X**	X
Protective Breathing Equipment		X**	X
Choke Manifold, Secondary Remote Control, and Mud-Gas Separator			X
Flare Stacks			X*

Section 9.0 - Training Requirements

Training

The following elements are considered a minimum level of training for personnel assigned to operations who may encounter H_2S as part of routine or maintenance work.

- The hazards, characteristics, and properties of hydrogen sulfide (H_2S) and (SO_2).
- Sources of H_2S and SO_2.

- Proper use of H_2S and SO_2 detection methods used at the workplace.
- Recognition of, and proper response to, the warning signals initiated by H_2S and SO_2 detection systems in use at the workplace.
- Symptoms of H_2S exposure; symptoms of SO_2 exposure
- Rescue techniques and first aid to victims of H_2S and SO_2 exposure.
- Proper use and maintenance of breathing equipment for working in H_2S and SO_2 atmospheres, as appropriate theory and hands-on practice, with demonstrated proficiency (29 *CFR* Part 1910.134).
- Workplace practices and relevant maintenance procedures that have been established to protect personnel from the hazards of H_2S and SO_2.
- Wind direction awareness and routes of egress.
- Confined space and enclosed facility entry procedures (if applicable).
- Emergency response procedures that have been developed for the facility or operations.
- Locations and use of safety equipment.
- Locations of safe briefing areas.

Refresher training will be conducted annually.

Section 10.0 - Personal Protective Equipment

I. Personal H_2S Monitors

All personnel engaged in planned or unplanned work activity to mitigate the release of a hazardous concentration of H_2S shall have on their person a personal H2S monitor.

II. Fixed H_2S Detection and Alarms

- 4 channel H_2S monitor
- 4 wireless H_2S monitors
- H_2S alarm system (Audible/Red strobe)
- Personal gas monitor for each person on location
- Gas sample tubes

III. Flame Resistant Clothing

All personnel engaged in planned or unplanned work activity associated with this Plan shall have on the appropriate level of FRC clothing.

IV. Respiratory Protection

The following respiratory protection equipment shall be available at each drilling location.

- Working cascade system available on rig floor and pit system & 750’ of air line hose
- Four (4) breathing air manifolds
- Four (4) 30-minute rescue packs
- Five (5) work/Escape units
- Five (5) escape units
- One (1) filler hose for the work/escape/rescue units

Supplied air (airline or SCBA) respiratory protection against hydrogen sulfide exposure is required in the following situations:

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- When routine or maintenance work tasks involve exposure to H_2S concentrations of 10 ppm or greater.
- When a fixed location area monitor alarms, and re-entry to the work area is required to complete a job.
- When confined spaces are to be entered without knowledge of H_2S levels present, or if initial measurements are to be taken of H_2S levels.
- During rescue of employees suspected of H_2S overexposure.
- For specific tasks identified with significant exposure potential and outlined in local program guidelines.
- All respiratory equipment for hydrogen sulfide must be of the supplied-air type, equipped with pressure-demand regulators and operated in the pressure-demand mode only. This is the only type of respiratory protection recommended for hydrogen sulfide application. Equipment should be approved by NIOSH/MSHA or other recognized national authority as required. If airline units are used, a five-minute egress bottle should also be carried.
- Gas masks or other air-purifying respirators MUST NEVER BE USED FOR HYDROGEN SULFIDE due to the poor warning properties of the gas.
- Use of respiratory protection should be accompanied by a written respiratory protection program.

Appendix A
H_2S SDS

PRAXAIR

Hydrogen sulfide

Safety Data Sheet E-4611

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 10-15-1979 Revision date: 08-10-2016 Supersedes: 10-15-2013

SECTION 1: Identification

1.1. Product identifier

Product form	:	Substance
Name	:	Hydrogen sulfide
CAS No	:	7783-06-4
Formula	:	H2S
Other means of identification	:	Hydrogen sulfide
Product group	:	Core Products

1.2. Recommended use and restrictions on use

Recommended uses and restrictions	:	Industrial use Use as directed

1.3. Supplier

Praxair Canada inc.
1200 – 1 City Centre Drive
Mississauga - Canada L5B 1M2
T 1-905-803-1600 - F 1-905-803-1682
www.praxair.ca

1.4. Emergency telephone number

Emergency number	:	1-800-363-0042 Call emergency number 24 hours a day only for spills, leaks, fire, exposure, or accidents involving this product. For routine information, contact your supplier or Praxair sales representative.

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

GHS-CA classification

Flam. Gas 1	H220
Liquefied gas	H280
Acute Tox. 2 (Inhalation: gas)	H330
STOT SE 3	H335

2.2. GHS Label elements, including precautionary statements

GHS-CA labelling

Hazard pictograms :

GHS02 GHS04 GHS06 GHS07

Signal word : DANGER

Hazard statements : **EXTREMELY FLAMMABLE GAS**
CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED
FATAL IF INHALED
MAY CAUSE RESPIRATORY IRRITATION
MAY FORM EXPLOSIVE MIXTURES WITH AIR
SYMPTOMS MAY BE DELAYED
EXTENDED EXPOSURE TO GAS REDUCES THE ABILITY TO SMELL SULFIDES

Precautionary statements : Do not handle until all safety precautions have been read and understood
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

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Do not breathe gas
Use and store only outdoors or in a well-ventilated area
Avoid release to the environment
Wear protective gloves, protective clothing, eye protection, respiratory protection, and/or face protection
Leaking gas fire: Do not extinguish, unless leak can be stopped safely
In case of leakage, eliminate all ignition sources
Store locked up
Dispose of contents/container in accordance with container Supplier/owner instructions
Protect from sunlight when ambient temperature exceeds 52°C (125°F)
Close valve after each use and when empty
Do not open valve until connected to equipment prepared for use
When returning cylinder, install leak tight valve outlet cap or plug
Do not depend on odour to detect the presence of gas

2.3. Other hazards

Other hazards not contributing to the classification : Contact with liquid may cause cold burns/frostbite.

2.4. Unknown acute toxicity (GHS-CA)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	CAS No.	% (Vol.)	Common Name (synonyms)
Hydrogen sulfide (Main constituent)	(CAS No) 7783-06-4	100	Hydrogen sulfide (H2S) / Hydrogen sulphide / Sulfur hydride / Sulfureted hydrogen / Dihydrogen sulphide / Hydrogensulfide

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, trained personnel should give oxygen. Call a physician.

First-aid measures after skin contact : The liquid may cause frostbite. For exposure to liquid, immediately warm frostbite area with warm water not to exceed 105°F (41°C). Water temperature should be tolerable to normal skin. Maintain skin warming for at least 15 minutes or until normal coloring and sensation have returned to the affected area. In case of massive exposure, remove clothing while showering with warm water. Seek medical evaluation and treatment as soon as possible.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Contact an ophthalmologist immediately.

First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment : Obtain medical assistance. Treat with corticosteroid spray as soon as possible after inhalation.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Carbon dioxide, Dry chemical, Water spray or fog. Use extinguishing media appropriate for surrounding fire.

5.2. Unsuitable extinguishing media

No additional information available

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5.3. Specific hazards arising from the hazardous product

Fire hazard	:	**EXTREMELY FLAMMABLE GAS**. If venting or leaking gas catches fire, do not extinguish flames. Flammable vapors may spread from leak, creating an explosive reignition hazard. Vapors can be ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharge, or other ignition sources at locations distant from product handling point. Explosive atmospheres may linger. Before entering an area, especially a confined area, check the atmosphere with an appropriate device.
Explosion hazard	:	**EXTREMELY FLAMMABLE GAS**. Forms explosive mixtures with air and oxidizing agents.
Reactivity	:	No reactivity hazard other than the effects described in sub-sections below.
Reactivity in case of fire	:	No reactivity hazard other than the effects described in sub-sections below.

5.4. Special protective equipment and precautions for fire-fighters

Firefighting instructions	:	**DANGER! Toxic, flammable liquefied gas** Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. On-site fire brigades must comply with their provincial and local fire code regulations.
Special protective equipment for fire fighters	:	Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.
Other information	:	Containers are equipped with a pressure relief device. (Exceptions may exist where authorized by TC.).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	**DANGER! Toxic, flammable liquefied gas** . Forms explosive mixtures with air and oxidizing agents. Immediately evacuate all personnel from danger area. Use self-contained breathing apparatus where needed. Remove all sources of ignition if safe to do so. Reduce vapors with fog or fine water spray, taking care not to spread liquid with water. Shut off flow if safe to do so. Ventilate area or move container to a well-ventilated area. Flammable vapors may spread from leak and could explode if reignited by sparks or flames. Explosive atmospheres may linger. Before entering area, especially confined areas, check atmosphere with an appropriate device.

6.2. Methods and materials for containment and cleaning up

Methods for cleaning up	:	Try to stop release. Reduce vapour with fog or fine water spray. Prevent waste from contaminating the surrounding environment. Prevent soil and water pollution. Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

6.3. Reference to other sections

For further information refer to section 8: Exposure controls/personal protection

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Leak-check system with soapy water; never use a flame All piped systems and associated equipment must be grounded Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Use only explosion-proof equipment Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g, wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store only where temperature will not exceed 125°F (52°C). Post "No Smoking/No Open Flames" signs in storage and use areas. There must be no sources of ignition. Separate packages and protect against potential fire and/or explosion damage following appropriate codes and requirements (e.g, NFPA 30, NFPA 55, NFPA 70, and/or NFPA 221 in the U.S.) or according to requirements determined by the Authority Having Jurisdiction (AHJ). Always secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand when the container is not in use. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods. For other precautions in using this product, see section 16

OTHER PRECAUTIONS FOR HANDLING, STORAGE, AND USE: When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Hydrogen sulfide (7783-06-4)		
USA - ACGIH	ACGIH TLV-TWA (ppm)	1 ppm
USA - ACGIH	ACGIH TLV-STEL (ppm)	5 ppm
USA - OSHA	OSHA PEL (Ceiling) (ppm)	20 ppm
Canada (Quebec)	VECD (mg/m³)	21 mg/m³
Canada (Quebec)	VECD (ppm)	15 ppm
Canada (Quebec)	VEMP (mg/m³)	14 mg/m³
Canada (Quebec)	VEMP (ppm)	10 ppm
Alberta	OEL Ceiling (mg/m³)	21 mg/m³
Alberta	OEL Ceiling (ppm)	15 ppm
Alberta	OEL TWA (mg/m³)	14 mg/m³
Alberta	OEL TWA (ppm)	10 ppm
British Columbia	OEL Ceiling (ppm)	10 ppm
Manitoba	OEL STEL (ppm)	5 ppm
Manitoba	OEL TWA (ppm)	1 ppm
New Brunswick	OEL STEL (mg/m³)	21 mg/m³
New Brunswick	OEL STEL (ppm)	15 ppm
New Brunswick	OEL TWA (mg/m³)	14 mg/m³
New Brunswick	OEL TWA (ppm)	10 ppm
New Foundland & Labrador	OEL STEL (ppm)	5 ppm
New Foundland & Labrador	OEL TWA (ppm)	1 ppm
Nova Scotia	OEL STEL (ppm)	5 ppm
Nova Scotia	OEL TWA (ppm)	1 ppm
Nunavut	OEL Ceiling (mg/m³)	28 mg/m³
Nunavut	OEL Ceiling (ppm)	20 ppm
Nunavut	OEL STEL (mg/m³)	21 mg/m³
Nunavut	OEL STEL (ppm)	15 ppm
Nunavut	OEL TWA (mg/m³)	14 mg/m³
Nunavut	OEL TWA (ppm)	10 ppm
Northwest Territories	OEL STEL (ppm)	15 ppm

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Hydrogen sulfide (7783-06-4)		
Northwest Territories	OEL TWA (ppm)	10 ppm
Ontario	OEL STEL (ppm)	15 ppm
Ontario	OEL TWA (ppm)	10 ppm
Prince Edward Island	OEL STEL (ppm)	5 ppm
Prince Edward Island	OEL TWA (ppm)	1 ppm
Québec	VECD (mg/m³)	21 mg/m³
Québec	VECD (ppm)	15 ppm
Québec	VEMP (mg/m³)	14 mg/m³
Québec	VEMP (ppm)	10 ppm
Saskatchewan	OEL STEL (ppm)	15 ppm
Saskatchewan	OEL TWA (ppm)	10 ppm
Yukon	OEL STEL (mg/m³)	27 mg/m³
Yukon	OEL STEL (ppm)	15 ppm
Yukon	OEL TWA (mg/m³)	15 mg/m³
Yukon	OEL TWA (ppm)	10 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Use corrosion-resistant equipment. Use an explosion-proof local exhaust system. Local exhaust and general ventilation must be adequate to meet exposure standards. MECHANICAL (GENERAL): **Inadequate - Use only in a closed system.** Use explosion proof equipment and lighting.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment : Safety glasses. Face shield. Gloves.

Hand protection : Wear work gloves when handling containers. Wear heavy rubber gloves where contact with product may occur.

Eye protection : Wear goggles and a face shield when transfilling or breaking transfer connections. Select in accordance with the current CSA standard Z94.3, "Industrial Eye and Face Protection", and any provincial regulations, local bylaws or guidelines.

Respiratory protection : **Respiratory protection:** Use respirable fume respirator or air supplied respirator when working in confined space or where local exhaust or ventilation does not keep exposure below TLV. Select in accordance with provincial regulations, local bylaws or guidelines. Selection should be based on the current CSA standard Z94.4, "Selection, Care, and Use of Respirators." Respirators should also be approved by NIOSH and MSHA. For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA).

Thermal hazard protection : Wear cold insulating gloves when transfilling or breaking transfer connections. Standard EN 511 - Cold insulating gloves.

Other information : **Other protection** : Safety shoes for general handling at customer sites. Metatarsal shoes and cuffless trousers for cylinder handling at packaging and filling plants. Select in accordance with the current CSA standard Z195, "Protective Foot Wear", and any provincial regulations, local bylaws or guidelines. For working with flammable and oxidizing materials, consider the use of flame resistant anti-static safety clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Gas

Appearance : Colorless gas. Colorless liquid at low temperature or under high pressure.

Molecular mass : 34 g/mol

Colour : Colourless.

Odour : Odour can persist. Poor warning properties at low concentrations. Rotten eggs.

Odour threshold : Odour threshold is subjective and inadequate to warn of overexposure.

pH	:	Not applicable.
pH solution	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Relative evaporation rate (ether=1)	:	Not applicable.
Melting point	:	-86 °C
Freezing point	:	-82.9 °C
Boiling point	:	-60.3 °C
Flash point	:	Not applicable.
Critical temperature	:	100.4 °C
Auto-ignition temperature	:	260 °C
Decomposition temperature	:	No data available
Vapour pressure	:	1880 kPa
Vapour pressure at 50 °C	:	No data available
Critical pressure	:	8940 kPa
Relative vapour density at 20 °C	:	>=
Relative density	:	No data available
Relative density of saturated gas/air mixture	:	No data available
Density	:	No data available
Relative gas density	:	1.2
Solubility	:	Water: 3980 mg/l
Log Pow	:	Not applicable.
Log Kow	:	Not applicable.
Viscosity, kinematic	:	Not applicable.
Viscosity, dynamic	:	Not applicable.
Viscosity, kinematic (calculated value) (40 °C)	:	No data available
Explosive properties	:	Not applicable.
Oxidizing properties	:	None.
Flammability (solid, gas)	:	4.3 - 46 vol %

9.2. Other information

Gas group	:	Liquefied gas
Additional information	:	Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	:	No reactivity hazard other than the effects described in sub-sections below.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	May react violently with oxidants. Can form explosive mixture with air.
Conditions to avoid	:	Avoid moisture in installation systems. Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Incompatible materials	:	Ammonia. Bases. Bromine pentafluoride. Chlorine trifluoride. chromium trioxide. (and heat). Copper. (powdered). Fluorine. Lead. Lead oxide. Mercury. Nitric acid. Nitrogen trifluoride. nitrogen sulfide. Organic compounds. Oxidizing agents. Oxygen difluoride. Rubber. Sodium. (and moisture). Water.
Hazardous decomposition products	:	Thermal decomposition may produce : Sulfur. Hydrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified

Acute toxicity (inhalation) : Inhalation:gas: FATAL IF INHALED.

Hydrogen sulfide (\f)7783-06-4	
LC50 inhalation rat (mg/l)	0.99 mg/l (Exposure time: 1 h)
LC50 inhalation rat (ppm)	356 ppm/4h
ATE CA (gases)	356.00000000 ppmv/4h
ATE CA (vapours)	0.99000000 mg/l/4h
ATE CA (dust,mist)	0.99000000 mg/l/4h

Skin corrosion/irritation : Not classified
pH: Not applicable.

Serious eye damage/irritation : Not classified
pH: Not applicable.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : MAY CAUSE RESPIRATORY IRRITATION.

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : VERY TOXIC TO AQUATIC LIFE.

Hydrogen sulfide (7783-06-4)	
LC50 fish 1	0.0448 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
LC50 fish 2	0.016 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

12.2. Persistence and degradability

Hydrogen sulfide (7783-06-4)	
Persistence and degradability	Not applicable for inorganic gases.

12.3. Bioaccumulative potential

Hydrogen sulfide (7783-06-4)	
BCF fish 1	(no bioaccumulation expected)
Log Pow	Not applicable.
Log Kow	Not applicable.
Bioaccumulative potential	No data available.

12.4. Mobility in soil

Hydrogen sulfide (7783-06-4)	
Mobility in soil	No data available.
Log Pow	Not applicable.
Log Kow	Not applicable.
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.

12.5. Other adverse effects

Other adverse effects : May cause pH changes in aqueous ecological systems.

Effect on the ozone layer : None

Effect on global warming : No known effects from this product

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SECTION 13: Disposal considerations

13.1. Disposal methods

Waste disposal recommendations : Do not attempt to dispose of residual or unused quantities. Return container to supplier.

SECTION 14: Transport information

14.1. Basic shipping description

In accordance with TDG

TDG

UN-No. (TDG)	: UN1053
TDG Primary Hazard Classes	: 2.3 - Class 2.3 - Toxic Gas.
TDG Subsidiary Classes	: 2.1
Proper shipping name	: HYDROGEN SULPHIDE
ERAP Index	: 500
Explosive Limit and Limited Quantity Index	: 0
Passenger Carrying Ship Index	: Forbidden
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: Forbidden

14.3. Air and sea transport

IMDG

UN-No. (IMDG)	: 1053
Proper Shipping Name (IMDG)	: HYDROGEN SULPHIDE
Class (IMDG)	: 2 - Gases
MFAG-No	: 117

IATA

UN-No. (IATA)	: 1053
Proper Shipping Name (IATA)	: Hydrogen sulphide
Class (IATA)	: 2

SECTION 15: Regulatory information

15.1. National regulations

Hydrogen sulfide (7783-06-4)

Listed on the Canadian DSL (Domestic Substances List)

15.2. International regulations

Hydrogen sulfide (7783-06-4)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on INSQ (Mexican national Inventory of Chemical Substances)

SECTION 16: Other information

Date of issue	: 15/10/1979
Revision date	: 10/08/2016
Supersedes	: 15/10/2013

Indication of changes:

Training advice : Users of breathing apparatus must be trained. Ensure operators understand the toxicity hazard. Ensure operators understand the flammability hazard.

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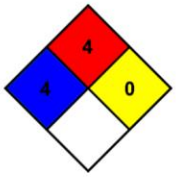
Other information	: When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information The opinions expressed herein are those of qualified experts within Praxair Canada Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use are not within the control of Praxair Canada Inc, it is the user's obligation to determine the conditions of safe use of the product. Praxair Canada Inc, SDSs are furnished on sale or delivery by Praxair Canada Inc, or the independent distributors and suppliers who package and sell our products. To obtain current SDSs for these products, contact your Praxair sales representative, local distributor, or supplier, or download from www.praxair.ca. If you have questions regarding Praxair SDSs, would like the document number and date of the latest SDS, or would like the names of the Praxair suppliers in your area, phone or write Praxair Canada Inc, (Phone: 1-888-257-5149; Address: Praxair Canada Inc, 1 City Centre Drive, Suite 1200, Mississauga, Ontario, L5B 1M2). PRAXAIR and the Flowing Airstream design are trademarks or registered trademarks of Praxair Technology, Inc. in the United States and/or other countries.
NFPA health hazard	: 4 - Very short exposure could cause death or serious residual injury even though prompt medical attention was given.
NFPA fire hazard	: 4 - Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn readily.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health	: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability	: 4 Severe Hazard - Flammable gases, or very volatile flammable liquids with flash points below 73 F, and boiling points below 100 F. Materials may ignite spontaneously with air. (Class IA)
Physical	: 2 Moderate Hazard - Materials that are unstable and may undergo violent chemical changes at normal temperature and pressure with low risk for explosion. Materials may react violently with water or form peroxides upon exposure to air.

SDS Canada (GHS) - Praxair

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Centennial Resource Production, LLC.	H_2S Contingency Plan Sheba Federal 107H, 108H, 305H, 306H, 405H, 506H, & 507H	Lea County, New Mexico

Appendix B
SO_2 SDS

MATHESON
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Safety Data Sheet

Material Name: SULFUR DIOXIDE **SDS ID: MAT22290**

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
SULFUR DIOXIDE
Synonyms
MTG MSDS 80; SULFUROUS ACID ANHYDRIDE; SULFUROUS OXIDE; SULPHUR DIOXIDE; SULFUROUS ANHYDRIDE; FERMENTICIDE LIQUID; SULFUR DIOXIDE(SO2); SULFUR OXIDE; SULFUR OXIDE(SO2)
Chemical Family
inorganic, gas
Product Description
Classification determined in accordance with Compressed Gas Association standards.
Product Use
Industrial and Specialty Gas Applications.
Restrictions on Use
None known.
Details of the supplier of the safety data sheet
MATHESON TRI-GAS, INC.
3 Mountainview Road
Warren, NJ 07059
General Information: 1-800-416-2505
Emergency #: 1-800-424-9300 (CHEMTREC)
Outside the US: 703-527-3887 (Call collect)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
Gases Under Pressure - Liquefied gas
Acute Toxicity - Inhalation - Gas - Category 3
Skin Corrosion/Irritation - Category 1B
Serious Eye Damage/Eye Irritation - Category 1
Simple Asphyxiant
GHS Label Elements
Symbol(s)

Signal Word
Danger
Hazard Statement(s)
Contains gas under pressure; may explode if heated.
Toxic if inhaled.
Causes severe skin burns and eye damage.
May displace oxygen and cause rapid suffocation.
Precautionary Statement(s)
Prevention
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

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Safety Data Sheet

Material Name: SULFUR DIOXIDE **SDS ID: MAT22290**

Wash thoroughly after handling.
Do not breathe dusts or mists.

Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Immediately call a POISON CENTER or doctor.
Specific treatment (see label).

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazards

Contact with liquified gas may cause frostbite.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7446-09-5	Sulfur dioxide	100.0

Section 4 - FIRST AID MEASURES

Inhalation

IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical attention.

Skin

IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115°F; 41-46°C). If warm water is not available, gently wrap affected parts in blankets. DO NOT induce vomiting. Get immediate medical attention.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.

Ingestion

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get immediate medical attention.

Most Important Symptoms/Effects

Acute

Toxic if inhaled, frostbite, suffocation, respiratory tract burns, skin burns, eye burns

Delayed

No information on significant adverse effects.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Note to Physicians

For inhalation, consider oxygen.

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Safety Data Sheet

Material Name: SULFUR DIOXIDE **SDS ID: MAT22290**

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

carbon dioxide, regular dry chemical, Large fires: Use regular foam or flood with fine water spray.

Unsuitable Extinguishing Media

None known.

Special Hazards Arising from the Chemical

Negligible fire hazard.

Hazardous Combustion Products

sulfur oxides

Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Keep unnecessary people away, isolate hazard area and deny entry.

Special Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. Ventilate closed spaces before entering. Evacuation radius: 150 feet. Stop leak if possible without personal risk. Reduce vapors with water spray. Do not get water directly on material.

Environmental Precautions

Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Do not get in eyes, on skin, or on clothing. Do not breathe gas, fumes, vapor, or spray. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Keep only in original container. Avoid release to the environment.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Protect from sunlight.

Store and handle in accordance with all current regulations and standards. Protect from physical damage. Store outside or in a detached building. Keep separated from incompatible substances.

Incompatible Materials

bases, combustible materials, halogens, metal carbide, metal oxides, metals, oxidizing materials, peroxides, reducing agents

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Sulfur dioxide	**7446-09-5**
ACGIH:	0.25 ppm STEL

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Safety Data Sheet

Material Name: SULFUR DIOXIDE **SDS ID: MAT22290**

NIOSH:	2 ppm TWA ; 5 mg/m3 TWA
	5 ppm STEL ; 13 mg/m3 STEL
	100 ppm IDLH
OSHA (US):	5 ppm TWA ; 13 mg/m3 TWA
Mexico:	0.25 ppm STEL [PPT-CT]

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)
There are no biological limit values for any of this product's components.
Engineering Controls
Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.
Individual Protection Measures, such as Personal Protective Equipment
Eye/face protection
Wear splash resistant safety goggles with a faceshield. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin Protection
Wear appropriate chemical resistant clothing. Wear chemical resistant clothing to prevent skin contact.
Respiratory Protection
Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.
Glove Recommendations
Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	colorless gas	**Physical State**	gas
Odor	irritating odor	**Color**	colorless
Odor Threshold	3 - 5 ppm	**pH**	(Acidic in solution)
Melting Point	-73 °C (-99 °F)	**Boiling Point**	-10 °C (14 °F)
Boiling Point Range	Not available	**Freezing point**	Not available
Evaporation Rate	>1 (Butyl acetate = 1)	**Flammability (solid, gas)**	Not available
Autoignition Temperature	Not available	**Flash Point**	(Not flammable)
Lower Explosive Limit	Not available	**Decomposition temperature**	Not available
Upper Explosive Limit	Not available	**Vapor Pressure**	2432 mmHg @ 20 °C
Vapor Density (air=1)	2.26	**Specific Gravity (water=1)**	1.462 at -10 °C

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Safety Data Sheet

Material Name: SULFUR DIOXIDE **SDS ID: MAT22290**

Water Solubility	22.8 % (@ 0 °C)	**Partition coefficient: n-octanol/water**	Not available
Viscosity	Not available	**Kinematic viscosity**	Not available
Solubility (Other)	Not available	**Density**	Not available
Physical Form	liquified gas	**Molecular Formula**	S-O2
Molecular Weight	64.06		

Solvent Solubility
Soluble
alcohol, acetic acid, sulfuric acid, ether, chloroform, Benzene, sulfuryl chloride, nitrobenzenes, Toluene, acetone

Section 10 - STABILITY AND REACTIVITY

Reactivity
No reactivity hazard is expected.
Chemical Stability
Stable at normal temperatures and pressure.
Possibility of Hazardous Reactions
Will not polymerize.
Conditions to Avoid
Minimize contact with material. Containers may rupture or explode if exposed to heat.
Incompatible Materials
bases, combustible materials, halogens, metal carbide, metal oxides, metals, oxidizing materials, peroxides, reducing agents
Hazardous decomposition products
oxides of sulfur

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure
Inhalation
Toxic if inhaled. Causes damage to respiratory system, burns, difficulty breathing
Skin Contact
skin burns
Eye Contact
eye burns
Ingestion
burns, nausea, vomiting, diarrhea, stomach pain
Acute and Chronic Toxicity
Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and the following selected endpoints are published:
Sulfur dioxide (7446-09-5)
Inhalation LC50 Rat 965 - 1168 ppm 4 h
Product Toxicity Data
Acute Toxicity Estimate
No data available.
Immediate Effects

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Safety Data Sheet

Material Name: SULFUR DIOXIDE **SDS ID: MAT22290**

Toxic if inhaled, frostbite, suffocation, respiratory tract burns, skin burns, eye burns

Delayed Effects
No information on significant adverse effects.

Irritation/Corrosivity Data
respiratory tract burns, skin burns, eye burns

Respiratory Sensitization
No data available.

Dermal Sensitization
No data available.

Component Carcinogenicity

Sulfur dioxide	**7446-09-5**
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 54 [1992] (Group 3 (not classifiable))

Germ Cell Mutagenicity
No data available.

Tumorigenic Data
No data available

Reproductive Toxicity
No data available.

Specific Target Organ Toxicity - Single Exposure
No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure
No target organs identified.

Aspiration hazard
Not applicable.

Medical Conditions Aggravated by Exposure
respiratory disorders

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity
No LOLI ecotoxicity data are available for this product's components.

Persistence and Degradability
No data available.

Bioaccumulative Potential
No data available.

Mobility
No data available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose of contents/container in accordance with local/regional/national/international regulations.

Component Waste Numbers
The U.S. EPA has not published waste numbers for this product's components.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
Shipping Name: SULFUR DIOXIDE

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Safety Data Sheet

Material Name: SULFUR DIOXIDE **SDS ID: MAT22290**

Hazard Class: 2.3
UN/NA #: UN1079
Required Label(s): 2.3

IMDG Information:
Shipping Name: SULPHUR DIOXIDE
Hazard Class: 2.3
UN#: UN1079
Required Label(s): 2.3

TDG Information:
Shipping Name: SULFUR DIOXIDE
Hazard Class: 2.3
UN#: UN1079
Required Label(s): 2.3

International Bulk Chemical Code
This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Sulfur dioxide	**7446-09-5**
SARA 302:	500 lb TPQ
OSHA (safety):	1000 lb TQ (Liquid)
SARA 304:	500 lb EPCRA RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories
Gas Under Pressure; Acute toxicity; Skin Corrosion/Irritation; Serious Eye Damage/Eye Irritation; Simple Asphyxiant

U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Sulfur dioxide	**7446-09-5**	Yes	Yes	Yes	Yes	Yes

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

WARNING

This product can expose you to chemicals including Sulfur dioxide , which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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Safety Data Sheet

Material Name: SULFUR DIOXIDE **SDS ID: MAT22290**

Sulfur dioxide	**7446-09-5**
Repro/Dev. Tox	developmental toxicity , 7/29/2011

Component Analysis - Inventory
Sulfur dioxide (7446-09-5)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No

KR - REACH CCA	MX	NZ	PH	TH-TECI	TW, CN	VN (Draft)
No	Yes	Yes	Yes	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

NFPA Ratings
Health: 3 Fire: 0 Instability: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes
SDS update: 02/10/2016

Key / Legend
ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC – European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL) , KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; KR REACH CCA - Korea Registration and Evaluation of Chemical Substances Chemical Control Act; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX – Mexico; Ne- Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL – Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit;

CENTENNIAL RESOURCE DEVELOPMENT, INC

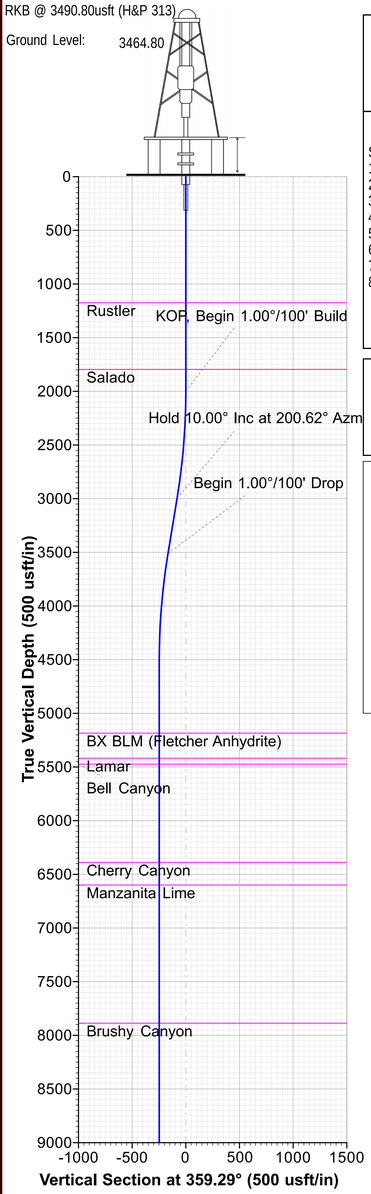
Project: Lea County, NM (NAD83 - UTM Zone 13)
Site: Sheba Federal Com
Well: 305H
Wellbore: OH
Design: Plan 1 11-10-21
Rig: H&P 313

PHOENIX TECHNOLOGY SERVICES

Azimuths to True North
Magnetic North: 6.33°

Magnetic Field
Strength: 47537.9nT
Dip Angle: 59.75°
Date: 1/9/2022
Model: MVHD

RKB @ 3490.80usft (H&P 313)
Ground Level: 3464.80



WELL DETAILS

Ground Level: 3464.80

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	11687920.11	2118847.36	32° 11' 22.058264 N	103° 27' 10.910857 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00		KOP, Begin 1.00°/100' Build
3	3000.00	10.00	200.62	2994.93	-81.47	-30.66	1.00	200.62	-81.08		Hold 10.00° Inc at 200.62° Azm
4	3526.31	10.00	200.62	3513.25	-167.01	-62.84	0.00	0.00	-166.21		Begin 1.00°/100' Drop
5	4526.31	0.00	0.00	4508.18	-248.48	-93.50	1.00	180.00	-247.29		Begin Vertical Hold
6	9805.97	0.00	0.00	9787.84	-248.48	-93.50	0.00	0.00	-247.29		KOP2, Begin 10.00°/100' Build
7	10705.97	90.00	0.00	10360.80	324.48	-93.45	10.00	0.00	325.62		LP, Hold 90.00° Inc at 0.00° Azm
8	17856.55	90.00	0.00	10360.80	7475.06	-92.85	0.00	0.00	7475.64	BHL - Sheba Federal Com 305H	TD at 17856.55

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - Sheba Federal Com 305H	10360.80	7475.06	-92.85	11695392.03	2118647.01	32° 12' 36.025501 N	103° 27' 11.991242 W
FTP - Sheba Federal Com 305H	10360.80	-248.48	-93.50	11687670.35	2118757.46	32° 11' 19.599546 N	103° 27' 11.998800 W

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1174.80	1174.80	Rustler
1795.80	1795.80	Salado
5184.80	5202.93	BX BLM (Fletcher Anhydrite)
5418.80	5436.93	Lamar
5473.80	5491.93	Bell Canyon
6388.80	6406.93	Cherry Canyon
6599.80	6617.93	Manzanita Lime
7886.80	7904.93	Brushy Canyon
9297.80	9315.93	Bone Spring Lime
9325.80	9343.93	Avalon
10340.80	10554.15	First Bone Spring Sand

Map System: Universal Transverse Mercator (US Survey Feet)
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: Zone 13N (108 W to 102 W)

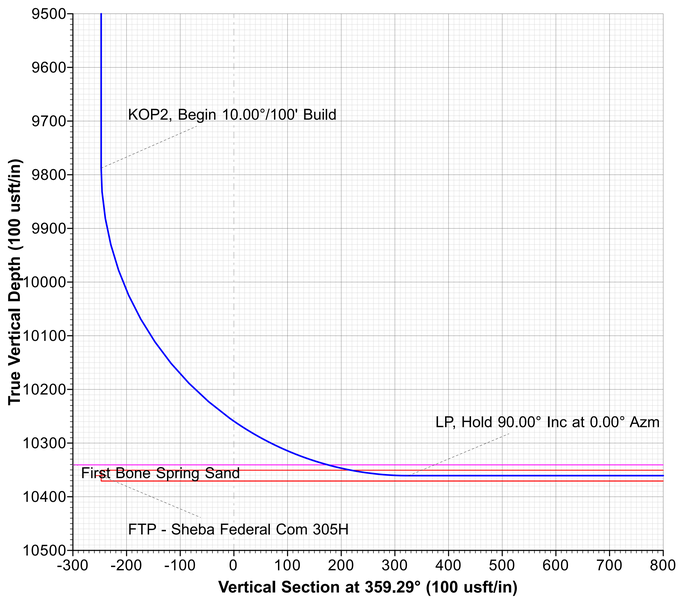
Local Origin: Well 305H, True North

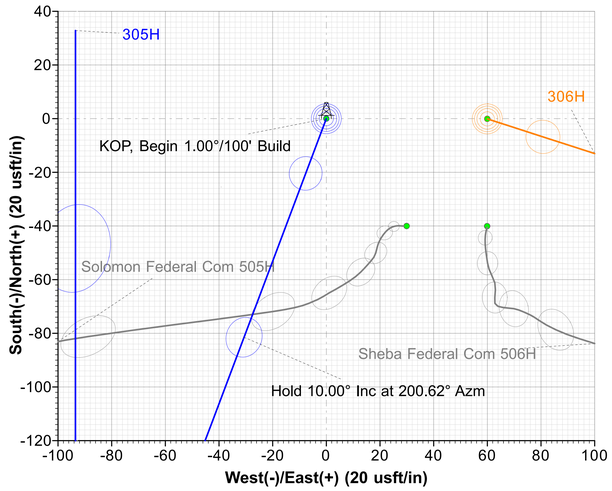
Latitude: 32° 11' 22.058264 N
Longitude: 103° 27' 10.910857 W

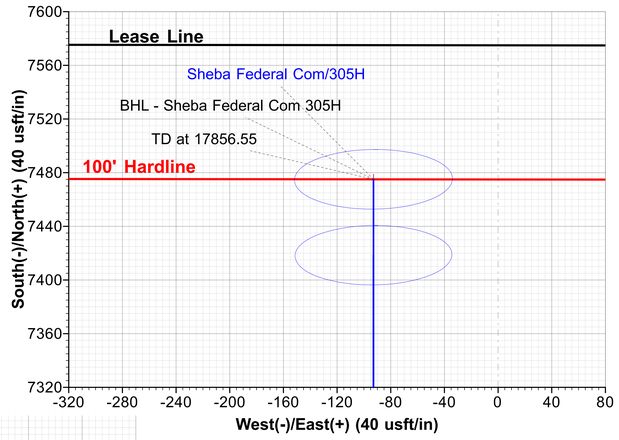
Grid East: 2118847.36
Grid North: 11687920.11
Scale Factor: 1.000

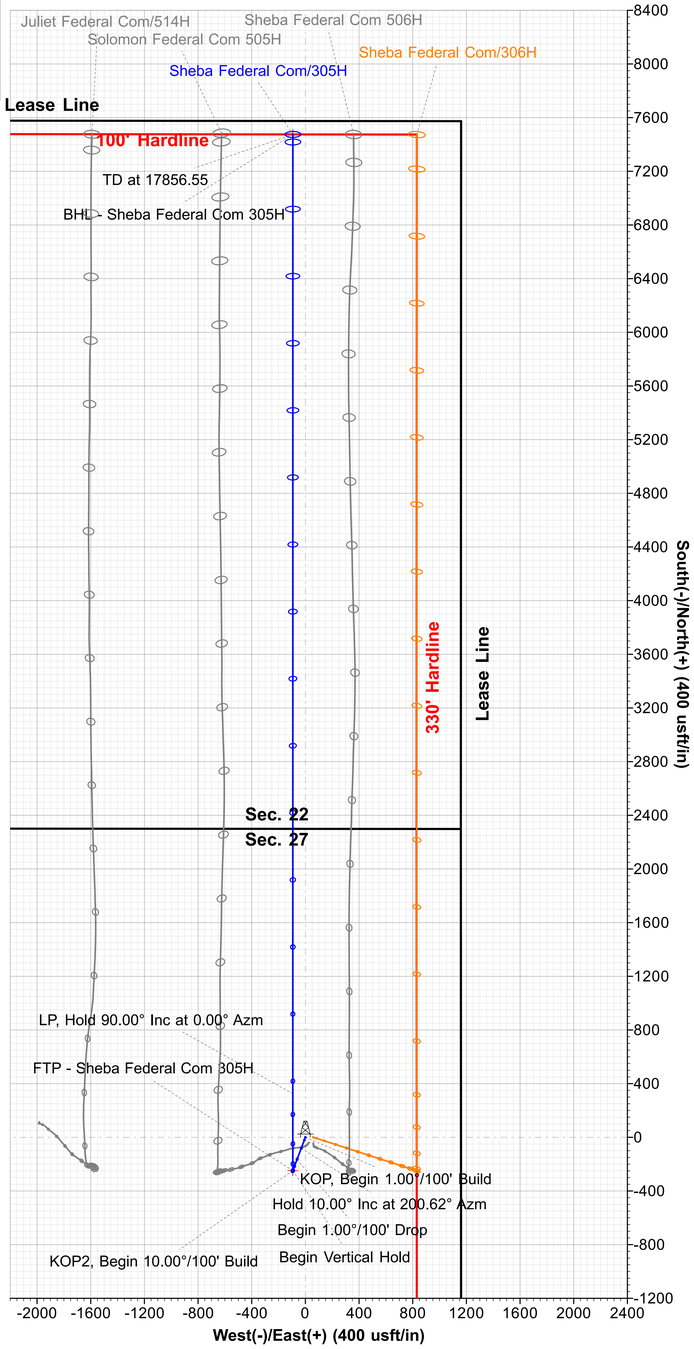
Geomagnetic Model: MVHD
Sample Date: 09-Jan-22
Magnetic Declination: 6.33°
Dip Angle from Horizontal: 59.75°
Magnetic Field Strength: 47537.90514299nT

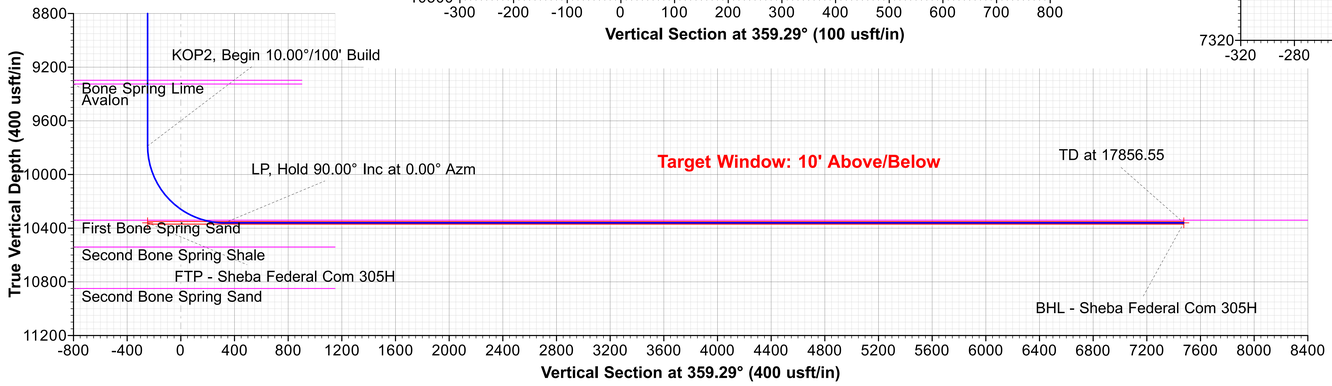
To convert a Magnetic Direction to a Grid Direction, Add 5.51°
To convert a Magnetic Direction to a True Direction, Add 6.33° East
To convert a True Direction to a Grid Direction, Subtract 0.82°











Date: 13:59, November 09 2021

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Centennial Resources Development, Inc.

Lea County, NM (NAD83 - UTM Zone 13)
Sheba Federal Com
305H

OH

Plan: Plan 1 11-10-21

Standard Planning Report

09 November, 2021

CENTENNIAL
RESOURCE DEVELOPMENT, INC

PHOENIX TECHNOLOGY SERVICES

Planning Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 305H
Company:	Centennial Resources Development, Inc.	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site:	Sheba Federal Com	**North Reference:**	True
Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 11-10-21		

Project Lea County, NM (NAD83 - UTM Zone 13)

Map System:	Universal Transverse Mercator (US Survey Fee	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		Using geodetic scale factor

Site Sheba Federal Com

Site Position:		**Northing:**	11,687,920.11 usft	**Latitude:**	32° 11' 22.058264 N
From:	Map	**Easting:**	2,118,847.36 usft	**Longitude:**	103° 27' 10.910857 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well 305H

Well Position	**+N/-S**	0.00 usft	**Northing:**	11,687,920.11 usft	**Latitude:**	32° 11' 22.058264 N
	+E/-W	0.00 usft	**Easting:**	2,118,847.36 usft	**Longitude:**	103° 27' 10.910857 W
Position Uncertainty		1.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,464.80 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	1/9/2022	6.33	59.75	47,537.90514299

Design Plan 1 11-10-21

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	359.29

Plan Survey Tool Program **Date** 11/9/2021

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,856.55	Plan 1 11-10-21 (OH)	MWD+IFR1+MS	
				OWSG MWD + IFR1 + Mult	

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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,000.00	10.00	200.62	2,994.93	-81.47	-30.66	1.00	1.00	0.00	200.62	
3,526.31	10.00	200.62	3,513.25	-167.01	-62.84	0.00	0.00	0.00	0.00	
4,526.31	0.00	0.00	4,508.18	-248.48	-93.50	1.00	-1.00	0.00	180.00	
9,805.97	0.00	0.00	9,787.84	-248.48	-93.50	0.00	0.00	0.00	0.00	
10,705.97	90.00	0.00	10,360.80	324.48	-93.45	10.00	10.00	0.00	0.00	
17,856.55	90.00	0.00	10,360.80	7,475.06	-92.85	0.00	0.00	0.00	0.00	BHL - Sheba Feder

PHOENIX TECHNOLOGY SERVICES

Planning Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 305H
Company:	Centennial Resources Development, Inc.	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site:	Sheba Federal Com	**North Reference:**	True
Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 11-10-21		

Planned Survey

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,174.80	0.00	0.00	1,174.80	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,795.80	0.00	0.00	1,795.80	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 1.00°/100' Build									
2,100.00	1.00	200.62	2,099.99	-0.82	-0.31	-0.81	1.00	1.00	0.00
2,200.00	2.00	200.62	2,199.96	-3.27	-1.23	-3.25	1.00	1.00	0.00
2,300.00	3.00	200.62	2,299.86	-7.35	-2.77	-7.31	1.00	1.00	0.00
2,400.00	4.00	200.62	2,399.68	-13.06	-4.92	-13.00	1.00	1.00	0.00
2,500.00	5.00	200.62	2,499.37	-20.41	-7.68	-20.31	1.00	1.00	0.00
2,600.00	6.00	200.62	2,598.90	-29.38	-11.05	-29.24	1.00	1.00	0.00
2,700.00	7.00	200.62	2,698.26	-39.97	-15.04	-39.78	1.00	1.00	0.00
2,800.00	8.00	200.62	2,797.40	-52.19	-19.64	-51.94	1.00	1.00	0.00
2,900.00	9.00	200.62	2,896.30	-66.02	-24.84	-65.71	1.00	1.00	0.00
3,000.00	10.00	200.62	2,994.93	-81.47	-30.66	-81.08	1.00	1.00	0.00
Hold 10.00° Inc at 200.62° Azm									
3,100.00	10.00	200.62	3,093.41	-97.72	-36.77	-97.26	0.00	0.00	0.00
3,200.00	10.00	200.62	3,191.89	-113.97	-42.89	-113.43	0.00	0.00	0.00
3,300.00	10.00	200.62	3,290.37	-130.23	-49.00	-129.61	0.00	0.00	0.00
3,400.00	10.00	200.62	3,388.85	-146.48	-55.12	-145.78	0.00	0.00	0.00
3,500.00	10.00	200.62	3,487.33	-162.73	-61.23	-161.96	0.00	0.00	0.00
3,526.31	10.00	200.62	3,513.25	-167.01	-62.84	-166.21	0.00	0.00	0.00
Begin 1.00°/100' Drop									
3,600.00	9.26	200.62	3,585.90	-178.55	-67.18	-177.70	1.00	-1.00	0.00
3,700.00	8.26	200.62	3,684.73	-192.80	-72.55	-191.89	1.00	-1.00	0.00
3,800.00	7.26	200.62	3,783.81	-205.45	-77.31	-204.47	1.00	-1.00	0.00
3,900.00	6.26	200.62	3,883.11	-216.47	-81.45	-215.44	1.00	-1.00	0.00
4,000.00	5.26	200.62	3,982.61	-225.87	-84.99	-224.79	1.00	-1.00	0.00
4,100.00	4.26	200.62	4,082.26	-233.64	-87.91	-232.53	1.00	-1.00	0.00
4,200.00	3.26	200.62	4,182.04	-239.78	-90.23	-238.64	1.00	-1.00	0.00
4,300.00	2.26	200.62	4,281.92	-244.29	-91.92	-243.13	1.00	-1.00	0.00
4,400.00	1.26	200.62	4,381.88	-247.17	-93.01	-246.00	1.00	-1.00	0.00
4,500.00	0.26	200.62	4,481.87	-248.42	-93.48	-247.24	1.00	-1.00	0.00
4,526.31	0.00	0.00	4,508.18	-248.48	-93.50	-247.29	1.00	-1.00	0.00
Begin Vertical Hold									
4,600.00	0.00	0.00	4,581.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
4,700.00	0.00	0.00	4,681.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
4,800.00	0.00	0.00	4,781.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
4,900.00	0.00	0.00	4,881.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
5,000.00	0.00	0.00	4,981.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
5,100.00	0.00	0.00	5,081.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
5,200.00	0.00	0.00	5,181.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
5,202.93	0.00	0.00	5,184.80	-248.48	-93.50	-247.29	0.00	0.00	0.00
BX BLM (Fletcher Anhydrite)									
5,300.00	0.00	0.00	5,281.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
5,400.00	0.00	0.00	5,381.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
5,436.93	0.00	0.00	5,418.80	-248.48	-93.50	-247.29	0.00	0.00	0.00
Lamar									
5,491.93	0.00	0.00	5,473.80	-248.48	-93.50	-247.29	0.00	0.00	0.00
Bell Canyon									
5,500.00	0.00	0.00	5,481.87	-248.48	-93.50	-247.29	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Planning Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 305H
Company:	Centennial Resources Development, Inc.	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site:	Sheba Federal Com	**North Reference:**	True
Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 11-10-21		

Planned Survey

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)
5,600.00	0.00	0.00	5,581.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
5,700.00	0.00	0.00	5,681.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
5,800.00	0.00	0.00	5,781.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
5,900.00	0.00	0.00	5,881.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
6,000.00	0.00	0.00	5,981.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
6,100.00	0.00	0.00	6,081.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
6,200.00	0.00	0.00	6,181.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
6,300.00	0.00	0.00	6,281.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
6,400.00	0.00	0.00	6,381.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
6,406.93	0.00	0.00	6,388.80	-248.48	-93.50	-247.29	0.00	0.00	0.00
Cherry Canyon									
6,500.00	0.00	0.00	6,481.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
6,600.00	0.00	0.00	6,581.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
6,617.93	0.00	0.00	6,599.80	-248.48	-93.50	-247.29	0.00	0.00	0.00
Manzanita Lime									
6,700.00	0.00	0.00	6,681.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
6,800.00	0.00	0.00	6,781.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
6,900.00	0.00	0.00	6,881.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
7,000.00	0.00	0.00	6,981.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
7,100.00	0.00	0.00	7,081.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
7,200.00	0.00	0.00	7,181.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
7,300.00	0.00	0.00	7,281.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
7,400.00	0.00	0.00	7,381.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
7,500.00	0.00	0.00	7,481.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
7,600.00	0.00	0.00	7,581.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
7,700.00	0.00	0.00	7,681.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
7,800.00	0.00	0.00	7,781.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
7,900.00	0.00	0.00	7,881.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
7,904.93	0.00	0.00	7,886.80	-248.48	-93.50	-247.29	0.00	0.00	0.00
Brushy Canyon									
8,000.00	0.00	0.00	7,981.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
8,100.00	0.00	0.00	8,081.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
8,200.00	0.00	0.00	8,181.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
8,300.00	0.00	0.00	8,281.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
8,400.00	0.00	0.00	8,381.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
8,500.00	0.00	0.00	8,481.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
8,600.00	0.00	0.00	8,581.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
8,700.00	0.00	0.00	8,681.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
8,800.00	0.00	0.00	8,781.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
8,900.00	0.00	0.00	8,881.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
9,000.00	0.00	0.00	8,981.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
9,100.00	0.00	0.00	9,081.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
9,200.00	0.00	0.00	9,181.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
9,300.00	0.00	0.00	9,281.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
9,315.93	0.00	0.00	9,297.80	-248.48	-93.50	-247.29	0.00	0.00	0.00
Bone Spring Lime									
9,343.93	0.00	0.00	9,325.80	-248.48	-93.50	-247.29	0.00	0.00	0.00
Avalon									
9,400.00	0.00	0.00	9,381.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
9,500.00	0.00	0.00	9,481.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
9,600.00	0.00	0.00	9,581.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
9,700.00	0.00	0.00	9,681.87	-248.48	-93.50	-247.29	0.00	0.00	0.00
9,800.00	0.00	0.00	9,781.87	-248.48	-93.50	-247.29	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Planning Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 305H
Company:	Centennial Resources Development, Inc.	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site:	Sheba Federal Com	**North Reference:**	True
Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 11-10-21		

Planned Survey

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)
9,805.97	0.00	0.00	9,787.84	-248.48	-93.50	-247.29	0.00	0.00	0.00
KOP2, Begin 10.00°/100' Build									
9,900.00	9.40	0.00	9,881.44	-240.78	-93.50	-239.60	10.00	10.00	0.00
10,000.00	19.40	0.00	9,978.18	-215.94	-93.49	-214.76	10.00	10.00	0.00
10,100.00	29.40	0.00	10,069.13	-174.67	-93.49	-173.50	10.00	10.00	0.00
10,200.00	39.40	0.00	10,151.53	-118.24	-93.49	-117.07	10.00	10.00	0.00
10,300.00	49.40	0.00	10,222.89	-48.36	-93.48	-47.20	10.00	10.00	0.00
10,400.00	59.40	0.00	10,281.02	32.85	-93.47	34.00	10.00	10.00	0.00
10,500.00	69.40	0.00	10,324.17	122.92	-93.47	124.07	10.00	10.00	0.00
10,554.15	74.82	0.00	10,340.80	174.43	-93.46	175.58	10.00	10.00	0.00
First Bone Spring Sand									
10,600.00	79.40	0.00	10,351.03	219.11	-93.46	220.26	10.00	10.00	0.00
10,700.00	89.40	0.00	10,360.77	318.51	-93.45	319.64	10.00	10.00	0.00
10,705.97	90.00	0.00	10,360.80	324.48	-93.45	325.62	10.00	10.00	0.00
LP, Hold 90.00° Inc at 0.00° Azm									
10,800.00	90.00	0.00	10,360.80	418.51	-93.44	419.64	0.00	0.00	0.00
10,900.00	90.00	0.00	10,360.80	518.51	-93.43	519.63	0.00	0.00	0.00
11,000.00	90.00	0.00	10,360.80	618.51	-93.42	619.62	0.00	0.00	0.00
11,100.00	90.00	0.00	10,360.80	718.51	-93.42	719.61	0.00	0.00	0.00
11,200.00	90.00	0.00	10,360.80	818.51	-93.41	819.61	0.00	0.00	0.00
11,300.00	90.00	0.00	10,360.80	918.51	-93.40	919.60	0.00	0.00	0.00
11,400.00	90.00	0.00	10,360.80	1,018.51	-93.39	1,019.59	0.00	0.00	0.00
11,500.00	90.00	0.00	10,360.80	1,118.51	-93.38	1,119.58	0.00	0.00	0.00
11,600.00	90.00	0.00	10,360.80	1,218.51	-93.37	1,219.57	0.00	0.00	0.00
11,700.00	90.00	0.00	10,360.80	1,318.51	-93.37	1,319.57	0.00	0.00	0.00
11,800.00	90.00	0.00	10,360.80	1,418.51	-93.36	1,419.56	0.00	0.00	0.00
11,900.00	90.00	0.00	10,360.80	1,518.51	-93.35	1,519.55	0.00	0.00	0.00
12,000.00	90.00	0.00	10,360.80	1,618.51	-93.34	1,619.54	0.00	0.00	0.00
12,100.00	90.00	0.00	10,360.80	1,718.51	-93.33	1,719.54	0.00	0.00	0.00
12,200.00	90.00	0.00	10,360.80	1,818.51	-93.32	1,819.53	0.00	0.00	0.00
12,300.00	90.00	0.00	10,360.80	1,918.51	-93.31	1,919.52	0.00	0.00	0.00
12,400.00	90.00	0.00	10,360.80	2,018.51	-93.31	2,019.51	0.00	0.00	0.00
12,500.00	90.00	0.00	10,360.80	2,118.51	-93.30	2,119.50	0.00	0.00	0.00
12,600.00	90.00	0.00	10,360.80	2,218.51	-93.29	2,219.50	0.00	0.00	0.00
12,700.00	90.00	0.00	10,360.80	2,318.51	-93.28	2,319.49	0.00	0.00	0.00
12,800.00	90.00	0.00	10,360.80	2,418.51	-93.27	2,419.48	0.00	0.00	0.00
12,900.00	90.00	0.00	10,360.80	2,518.51	-93.26	2,519.47	0.00	0.00	0.00
13,000.00	90.00	0.00	10,360.80	2,618.51	-93.26	2,619.46	0.00	0.00	0.00
13,100.00	90.00	0.00	10,360.80	2,718.51	-93.25	2,719.46	0.00	0.00	0.00
13,200.00	90.00	0.00	10,360.80	2,818.51	-93.24	2,819.45	0.00	0.00	0.00
13,300.00	90.00	0.00	10,360.80	2,918.51	-93.23	2,919.44	0.00	0.00	0.00
13,400.00	90.00	0.00	10,360.80	3,018.51	-93.22	3,019.43	0.00	0.00	0.00
13,500.00	90.00	0.00	10,360.80	3,118.51	-93.21	3,119.43	0.00	0.00	0.00
13,600.00	90.00	0.00	10,360.80	3,218.51	-93.21	3,219.42	0.00	0.00	0.00
13,700.00	90.00	0.00	10,360.80	3,318.51	-93.20	3,319.41	0.00	0.00	0.00
13,800.00	90.00	0.00	10,360.80	3,418.51	-93.19	3,419.40	0.00	0.00	0.00
13,900.00	90.00	0.00	10,360.80	3,518.51	-93.18	3,519.39	0.00	0.00	0.00
14,000.00	90.00	0.00	10,360.80	3,618.51	-93.17	3,619.39	0.00	0.00	0.00
14,100.00	90.00	0.00	10,360.80	3,718.51	-93.16	3,719.38	0.00	0.00	0.00
14,200.00	90.00	0.00	10,360.80	3,818.51	-93.15	3,819.37	0.00	0.00	0.00
14,300.00	90.00	0.00	10,360.80	3,918.51	-93.15	3,919.36	0.00	0.00	0.00
14,400.00	90.00	0.00	10,360.80	4,018.51	-93.14	4,019.36	0.00	0.00	0.00
14,500.00	90.00	0.00	10,360.80	4,118.51	-93.13	4,119.35	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Planning Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 305H
Company:	Centennial Resources Development, Inc.	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site:	Sheba Federal Com	**North Reference:**	True
Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 11-10-21		

Planned Survey

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)
14,600.00	90.00	0.00	10,360.80	4,218.51	-93.12	4,219.34	0.00	0.00	0.00
14,700.00	90.00	0.00	10,360.80	4,318.51	-93.11	4,319.33	0.00	0.00	0.00
14,800.00	90.00	0.00	10,360.80	4,418.51	-93.10	4,419.32	0.00	0.00	0.00
14,900.00	90.00	0.00	10,360.80	4,518.51	-93.10	4,519.32	0.00	0.00	0.00
15,000.00	90.00	0.00	10,360.80	4,618.51	-93.09	4,619.31	0.00	0.00	0.00
15,100.00	90.00	0.00	10,360.80	4,718.51	-93.08	4,719.30	0.00	0.00	0.00
15,200.00	90.00	0.00	10,360.80	4,818.51	-93.07	4,819.29	0.00	0.00	0.00
15,300.00	90.00	0.00	10,360.80	4,918.51	-93.06	4,919.28	0.00	0.00	0.00
15,400.00	90.00	0.00	10,360.80	5,018.51	-93.05	5,019.28	0.00	0.00	0.00
15,500.00	90.00	0.00	10,360.80	5,118.51	-93.05	5,119.27	0.00	0.00	0.00
15,600.00	90.00	0.00	10,360.80	5,218.51	-93.04	5,219.26	0.00	0.00	0.00
15,700.00	90.00	0.00	10,360.80	5,318.51	-93.03	5,319.25	0.00	0.00	0.00
15,800.00	90.00	0.00	10,360.80	5,418.51	-93.02	5,419.25	0.00	0.00	0.00
15,900.00	90.00	0.00	10,360.80	5,518.51	-93.01	5,519.24	0.00	0.00	0.00
16,000.00	90.00	0.00	10,360.80	5,618.51	-93.00	5,619.23	0.00	0.00	0.00
16,100.00	90.00	0.00	10,360.80	5,718.51	-93.00	5,719.22	0.00	0.00	0.00
16,200.00	90.00	0.00	10,360.80	5,818.51	-92.99	5,819.21	0.00	0.00	0.00
16,300.00	90.00	0.00	10,360.80	5,918.51	-92.98	5,919.21	0.00	0.00	0.00
16,400.00	90.00	0.00	10,360.80	6,018.51	-92.97	6,019.20	0.00	0.00	0.00
16,500.00	90.00	0.00	10,360.80	6,118.51	-92.96	6,119.19	0.00	0.00	0.00
16,600.00	90.00	0.00	10,360.80	6,218.51	-92.95	6,219.18	0.00	0.00	0.00
16,700.00	90.00	0.00	10,360.80	6,318.51	-92.94	6,319.18	0.00	0.00	0.00
16,800.00	90.00	0.00	10,360.80	6,418.51	-92.94	6,419.17	0.00	0.00	0.00
16,900.00	90.00	0.00	10,360.80	6,518.51	-92.93	6,519.16	0.00	0.00	0.00
17,000.00	90.00	0.00	10,360.80	6,618.51	-92.92	6,619.15	0.00	0.00	0.00
17,100.00	90.00	0.00	10,360.80	6,718.51	-92.91	6,719.14	0.00	0.00	0.00
17,200.00	90.00	0.00	10,360.80	6,818.51	-92.90	6,819.14	0.00	0.00	0.00
17,300.00	90.00	0.00	10,360.80	6,918.51	-92.89	6,919.13	0.00	0.00	0.00
17,400.00	90.00	0.00	10,360.80	7,018.51	-92.89	7,019.12	0.00	0.00	0.00
17,500.00	90.00	0.00	10,360.80	7,118.51	-92.88	7,119.11	0.00	0.00	0.00
17,600.00	90.00	0.00	10,360.80	7,218.51	-92.87	7,219.11	0.00	0.00	0.00
17,700.00	90.00	0.00	10,360.80	7,318.51	-92.86	7,319.10	0.00	0.00	0.00
17,800.00	90.00	0.00	10,360.80	7,418.51	-92.85	7,419.09	0.00	0.00	0.00
17,856.55	90.00	0.00	10,360.80	7,475.06	-92.85	7,475.64	0.00	0.00	0.00
TD at 17856.55									

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
BHL - Sheba Federal - plan hits target center - Rectangle (sides W0.00 H7,723.53 D20.00)	0.00	0.00	10,360.80	7,475.06	-92.85	11,695,392.03	2,118,647.01	32° 12' 36.025501 N	3° 27' 11.991242 W
FTP - Sheba Federal - plan misses target center by 237.35usft at 10258.46usft MD (10194.74 TVD, -78.90 N, -93.48 E) - Point	0.00	0.00	10,360.80	-248.48	-93.50	11,687,670.35	2,118,757.46	32° 11' 19.599546 N	3° 27' 11.998800 W

PHOENIX TECHNOLOGY SERVICES

Planning Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 305H
Company:	Centennial Resources Development, Inc.	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site:	Sheba Federal Com	**North Reference:**	True
Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 11-10-21		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,174.80	1,174.80	Rustler		0.00	359.29
1,795.80	1,795.80	Salado		0.00	359.29
5,202.93	5,184.80	BX BLM (Fletcher Anhydrite)		0.00	359.29
5,436.93	5,418.80	Lamar		0.00	359.29
5,491.93	5,473.80	Bell Canyon		0.00	359.29
6,406.93	6,388.80	Cherry Canyon		0.00	359.29
6,617.93	6,599.80	Manzanita Lime		0.00	359.29
7,904.93	7,886.80	Brushy Canyon		0.00	359.29
9,315.93	9,297.80	Bone Spring Lime		0.00	359.29
9,343.93	9,325.80	Avalon		0.00	359.29
10,554.15	10,340.80	First Bone Spring Sand		0.00	359.29

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,000.00	2,000.00	0.00	0.00	KOP, Begin 1.00°/100' Build
3,000.00	2,994.93	-81.47	-30.66	Hold 10.00° Inc at 200.62° Azm
3,526.31	3,513.25	-167.01	-62.84	Begin 1.00°/100' Drop
4,526.31	4,508.18	-248.48	-93.50	Begin Vertical Hold
9,805.97	9,787.84	-248.48	-93.50	KOP2, Begin 10.00°/100' Build
10,705.97	10,360.80	324.48	-93.45	LP, Hold 90.00° Inc at 0.00° Azm
17,856.55	10,360.80	7,475.06	-92.85	TD at 17856.55

PHOENIX
TECHNOLOGY SERVICES

Centennial Resources Development, Inc.

Lea County, NM (NAD83 - UTM Zone 13)
Sheba Federal Com
305H

OH
Plan 1 11-10-21

Anticollision Report

09 November, 2021

CENTENNIAL
RESOURCE DEVELOPMENT, INC

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Reference Plan 1 11-10-21

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum centre distance of 50,000.00usft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 11/9/2021

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	17,856.55	Plan 1 11-10-21 (OH)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Juliet Federal Com						
514H - OH / 68320 - Surveys (H&P 313)	7,117.21	7,138.42	1,466.10	1,437.32	50.946	CC, ES
514H - OH / 68320 - Surveys (H&P 313)	17,856.55	18,652.00	1,686.15	1,562.28	13.613	SF
Sheba Federal Com						
306H - OH - Plan 1 11-10-21	2,000.00	1,999.10	59.99	48.81	5.363	CC, ES
306H - OH - Plan 1 11-10-21	2,100.00	2,098.11	61.11	49.71	5.360	SF
Sheba/Solomon Location						
Sheba Federal Com 506H - OH / 68321 - Surveys (H&P 2	100.00	95.66	72.20	70.00	32.887	CC
Sheba Federal Com 506H - OH / 68321 - Surveys (H&P 2	400.00	395.38	73.17	68.55	15.860	ES
Sheba Federal Com 506H - OH / 68321 - Surveys (H&P 2	17,855.90	18,747.00	991.36	860.93	7.601	SF
Solomon Federal Com 505H - OH / 68322 - Surveys (H&	2,834.96	2,826.55	29.84	13.23	1.796	CC, ES, SF

Offset Design: Juliet Federal Com - 514H - OH / 68320 - Surveys (H&P 313)

Offset Site Error: 0.00 usft

Survey Program: 185-MWD+IFR1+MS **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Rule Assigned: Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	2.50	1.00	1.00	-86.76	112.02	-1,980.46	1,983.62				
100.00	100.00	93.74	96.24	1.09	1.15	-86.76	112.17	-1,980.54	1,983.71	1,981.48	2.24	886.244	
200.00	200.00	189.93	192.43	1.60	1.54	-86.75	112.62	-1,980.79	1,984.00	1,980.87	3.13	633.730	
300.00	300.00	287.11	289.60	2.01	1.96	-86.73	113.36	-1,981.19	1,984.46	1,980.51	3.95	502.658	
400.00	400.00	386.61	389.10	2.35	2.31	-86.71	114.08	-1,981.70	1,985.01	1,980.40	4.61	430.526	
500.00	500.00	489.84	492.33	2.65	2.60	-86.70	114.30	-1,982.20	1,985.51	1,980.30	5.21	381.297	
600.00	600.00	594.13	596.62	2.93	2.85	-86.70	114.18	-1,982.47	1,985.76	1,980.01	5.75	345.506	
700.00	700.00	694.68	697.17	3.18	3.08	-86.71	113.87	-1,982.63	1,985.90	1,979.65	6.24	317.998	
800.00	800.00	794.22	796.71	3.41	3.30	-86.72	113.51	-1,982.80	1,986.05	1,979.34	6.71	295.852	
900.00	900.00	895.76	898.25	3.64	3.51	-86.75	112.76	-1,982.99	1,986.19	1,979.05	7.15	277.831	
1,000.00	1,000.00	993.03	995.52	3.85	3.71	-86.77	112.06	-1,983.15	1,986.32	1,978.77	7.55	262.980	
1,100.00	1,100.00	1,090.53	1,093.00	4.05	3.89	-86.79	111.22	-1,983.50	1,986.63	1,978.72	7.91	251.055	
1,200.00	1,200.00	1,197.09	1,199.57	4.24	4.17	-86.82	110.05	-1,983.77	1,986.82	1,978.47	8.35	237.901	
1,300.00	1,300.00	1,295.54	1,298.01	4.43	4.38	-86.86	109.00	-1,983.88	1,986.87	1,978.15	8.72	227.875	
1,400.00	1,400.00	1,395.24	1,397.70	4.61	4.60	-86.88	108.05	-1,984.04	1,986.98	1,977.91	9.07	219.109	
1,500.00	1,500.00	1,492.73	1,495.19	4.78	4.81	-86.90	107.31	-1,984.25	1,987.16	1,977.75	9.41	211.191	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Juliet Federal Com - 514H - OH / 68320 - Surveys (H&P 313)

Offset Site Error: 0.00 usft

Survey Program: 185-MWD+IFR1+MS

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,600.00	1,600.00	1,592.55	1,595.01	4.95	5.03	-86.93	106.55	-1,984.54	1,987.40	1,977.65	9.75	203.847	
1,700.00	1,700.00	1,690.57	1,693.02	5.12	5.24	-86.95	105.78	-1,984.87	1,987.70	1,977.62	10.08	197.189	
1,800.00	1,800.00	1,787.61	1,790.06	5.28	5.46	-86.97	105.15	-1,985.32	1,988.13	1,977.72	10.41	190.944	
1,900.00	1,900.00	1,915.06	1,917.50	5.44	5.80	-86.99	104.33	-1,985.71	1,988.53	1,977.73	10.80	184.148	
2,000.00	2,000.00	2,096.60	2,098.90	5.59	6.30	-87.06	101.69	-1,979.54	1,984.61	1,973.28	11.33	175.156	
2,100.00	2,099.99	2,188.82	2,191.01	5.69	6.37	72.36	100.31	-1,975.21	1,979.58	1,968.03	11.54	171.486	
2,200.00	2,199.96	2,317.53	2,319.56	5.81	6.49	72.47	98.53	-1,968.96	1,973.99	1,962.19	11.80	167.329	
2,300.00	2,299.86	2,484.17	2,485.52	5.95	6.76	72.61	92.77	-1,955.45	1,964.05	1,951.68	12.37	158.823	
2,400.00	2,399.68	2,579.50	2,580.36	6.10	7.01	72.77	88.38	-1,946.78	1,952.89	1,940.23	12.66	154.256	
2,500.00	2,499.37	2,686.79	2,686.97	6.28	7.31	72.92	81.32	-1,937.13	1,941.22	1,928.24	12.98	149.603	
2,600.00	2,598.90	2,788.32	2,787.61	6.48	7.66	73.05	71.75	-1,927.69	1,928.56	1,915.23	13.33	144.687	
2,700.00	2,698.26	2,905.31	2,903.54	6.70	8.01	73.26	60.78	-1,916.44	1,915.10	1,901.44	13.66	140.190	
2,800.00	2,797.40	3,075.83	3,071.77	6.95	8.67	73.59	43.71	-1,894.55	1,897.30	1,883.07	14.23	133.324	
2,900.00	2,896.30	3,172.26	3,166.73	7.21	9.00	73.91	33.58	-1,881.21	1,878.60	1,864.01	14.59	128.783	
3,000.00	2,994.93	3,268.46	3,261.38	7.50	9.35	74.25	22.46	-1,868.07	1,859.54	1,844.55	14.99	124.079	
3,100.00	3,093.41	3,363.86	3,354.95	7.80	9.72	74.36	8.90	-1,855.33	1,840.36	1,824.96	15.40	119.476	
3,200.00	3,191.89	3,463.18	3,452.29	8.12	10.08	74.46	-5.73	-1,842.17	1,821.25	1,805.47	15.79	115.378	
3,300.00	3,290.37	3,557.32	3,544.52	8.45	10.42	74.54	-19.94	-1,829.77	1,802.19	1,786.03	16.16	111.548	
3,400.00	3,388.85	3,655.55	3,640.76	8.79	10.79	74.62	-34.93	-1,816.98	1,783.27	1,766.72	16.54	107.783	
3,500.00	3,487.33	3,753.11	3,736.35	9.14	11.17	74.70	-49.72	-1,804.26	1,764.35	1,747.40	16.94	104.134	
3,526.31	3,513.25	3,776.91	3,759.67	9.22	11.26	74.72	-53.32	-1,801.17	1,759.39	1,742.36	17.03	103.334	
3,600.00	3,585.90	3,842.11	3,823.62	9.46	11.51	74.64	-62.99	-1,792.87	1,745.82	1,728.53	17.28	101.009	
3,700.00	3,684.73	3,928.17	3,908.15	9.82	11.85	74.51	-75.18	-1,782.35	1,728.34	1,710.68	17.66	97.860	
3,800.00	3,783.81	4,018.46	3,996.99	10.18	12.20	74.37	-87.38	-1,771.82	1,711.95	1,693.90	18.05	94.825	
3,900.00	3,883.11	4,105.95	4,083.15	10.53	12.54	74.18	-99.04	-1,762.06	1,696.54	1,678.10	18.44	92.019	
4,000.00	3,982.61	4,195.21	4,171.15	10.88	12.89	73.97	-110.69	-1,752.69	1,682.27	1,663.45	18.82	89.395	
4,100.00	4,082.26	4,318.01	4,292.40	11.22	13.37	73.71	-124.84	-1,739.46	1,668.41	1,649.11	19.31	86.419	
4,200.00	4,182.04	4,416.41	4,389.66	11.54	13.82	73.50	-133.94	-1,727.61	1,653.89	1,634.02	19.87	83.252	
4,300.00	4,281.92	4,511.87	4,484.08	11.85	14.27	73.25	-142.34	-1,716.29	1,640.07	1,619.65	20.42	80.311	
4,400.00	4,381.88	4,623.15	4,594.12	12.13	14.70	72.93	-151.77	-1,702.74	1,626.47	1,605.57	20.90	77.830	
4,500.00	4,481.87	4,723.35	4,693.16	12.37	15.08	72.57	-160.31	-1,690.14	1,612.99	1,591.67	21.32	75.654	
4,526.31	4,508.18	4,749.04	4,718.55	12.39	15.18	-86.91	-162.50	-1,686.90	1,609.53	1,588.12	21.41	75.186	
4,600.00	4,581.87	4,821.27	4,789.95	12.41	15.46	-87.12	-168.64	-1,677.82	1,599.93	1,578.26	21.66	73.850	
4,700.00	4,681.87	4,921.12	4,888.64	12.47	15.84	-87.40	-177.10	-1,665.28	1,586.93	1,564.88	22.05	71.975	
4,800.00	4,781.87	5,024.24	4,990.53	12.52	16.25	-87.71	-186.11	-1,652.15	1,573.80	1,551.35	22.45	70.110	
4,900.00	4,881.87	5,113.56	5,078.75	12.58	16.60	-87.98	-194.04	-1,640.65	1,560.58	1,537.77	22.81	68.414	
5,000.00	4,981.87	5,180.00	5,144.48	12.64	16.87	-88.20	-200.19	-1,633.14	1,548.96	1,525.86	23.11	67.035	
5,100.00	5,081.87	5,268.49	5,232.17	12.70	17.23	-88.49	-208.09	-1,624.36	1,538.75	1,515.30	23.45	65.621	
5,200.00	5,181.87	5,350.00	5,313.09	12.76	17.54	-88.73	-214.62	-1,617.08	1,529.59	1,505.85	23.74	64.424	
5,300.00	5,281.87	5,434.14	5,396.76	12.82	17.87	-88.95	-220.62	-1,610.46	1,521.56	1,497.51	24.05	63.264	
5,400.00	5,381.87	5,523.83	5,486.05	12.88	18.20	-89.15	-226.17	-1,604.15	1,514.40	1,490.04	24.37	62.150	
5,500.00	5,481.87	5,621.29	5,583.15	12.94	18.56	-89.36	-231.65	-1,597.67	1,507.67	1,482.97	24.70	61.038	
5,600.00	5,581.87	5,720.11	5,681.62	13.00	18.91	-89.54	-236.52	-1,591.09	1,500.96	1,475.92	25.04	59.932	
5,700.00	5,681.87	5,814.98	5,776.24	13.06	19.21	-89.65	-239.41	-1,584.94	1,494.45	1,469.06	25.39	58.856	
5,800.00	5,781.87	5,896.68	5,857.79	13.12	19.44	-89.70	-240.57	-1,580.15	1,488.61	1,462.90	25.71	57.904	
5,900.00	5,881.87	5,984.75	5,945.77	13.18	19.65	-89.69	-240.47	-1,576.25	1,484.16	1,458.11	26.05	56.974	
6,000.00	5,981.87	6,086.90	6,047.82	13.24	19.86	-89.66	-239.81	-1,571.70	1,479.70	1,453.27	26.43	55.989	
6,100.00	6,081.87	6,169.67	6,130.52	13.30	20.00	-89.64	-239.21	-1,568.25	1,475.59	1,448.87	26.72	55.225	
6,200.00	6,181.87	6,245.20	6,206.03	13.36	20.10	-89.61	-238.39	-1,566.54	1,473.27	1,446.31	26.96	54.637	
6,300.00	6,281.87	6,343.86	6,304.67	13.42	20.16	-89.56	-237.08	-1,564.90	1,471.62	1,444.38	27.24	54.022	
6,400.00	6,381.87	6,437.27	6,398.05	13.49	20.18	-89.49	-235.45	-1,563.69	1,470.34	1,442.87	27.48	53.513	
6,500.00	6,481.87	6,537.69	6,498.44	13.55	20.22	-89.42	-233.52	-1,562.56	1,469.23	1,441.47	27.76	52.934	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Juliet Federal Com - 514H - OH / 68320 - Surveys (H&P 313)

Offset Site Error: 0.00 usft

Survey Program: 185-MWD+IFR1+MS

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,600.00	6,581.87	6,635.09	6,595.82	13.61	20.25	-89.34	-231.68	-1,561.45	1,468.12	1,440.11	28.01	52.421	
6,700.00	6,681.87	6,727.38	6,688.10	13.67	20.23	-89.29	-230.38	-1,560.83	1,467.46	1,439.28	28.18	52.067	
6,800.00	6,781.87	6,824.13	6,784.84	13.74	20.18	-89.24	-228.93	-1,560.54	1,467.18	1,438.85	28.33	51.792	
6,900.00	6,881.87	6,925.00	6,885.69	13.80	20.10	-89.17	-227.12	-1,560.31	1,466.98	1,438.51	28.47	51.535	
7,000.00	6,981.87	7,028.63	6,989.31	13.86	20.04	-89.10	-225.32	-1,559.89	1,466.59	1,437.97	28.62	51.235	
7,100.00	7,081.87	7,123.52	7,084.18	13.93	19.99	-89.03	-223.76	-1,559.40	1,466.11	1,437.35	28.76	50.977	
7,117.21	7,099.08	7,138.42	7,099.08	13.94	19.98	-89.03	-223.54	-1,559.38	1,466.10	1,437.32	28.78	50.946	CC, ES
7,200.00	7,181.87	7,211.99	7,172.64	13.99	19.89	-88.99	-222.57	-1,559.63	1,466.39	1,437.56	28.82	50.877	
7,300.00	7,281.87	7,306.26	7,266.91	14.05	19.74	-88.95	-221.61	-1,560.45	1,467.28	1,438.46	28.82	50.910	
7,400.00	7,381.87	7,404.55	7,365.18	14.12	19.60	-88.90	-220.33	-1,561.46	1,468.33	1,439.51	28.83	50.938	
7,500.00	7,481.87	7,501.11	7,461.72	14.18	19.48	-88.85	-219.00	-1,562.65	1,469.59	1,440.72	28.86	50.918	
7,600.00	7,581.87	7,597.01	7,557.60	14.24	19.34	-88.80	-217.66	-1,564.06	1,471.08	1,442.22	28.87	50.961	
7,700.00	7,681.87	7,694.19	7,654.76	14.31	19.16	-88.75	-216.26	-1,565.76	1,472.87	1,444.04	28.83	51.088	
7,800.00	7,781.87	7,796.13	7,756.67	14.37	18.97	-88.68	-214.51	-1,567.57	1,474.68	1,445.89	28.79	51.224	
7,900.00	7,881.87	7,894.15	7,854.67	14.44	18.82	-88.64	-213.45	-1,569.20	1,476.37	1,447.60	28.77	51.312	
8,000.00	7,981.87	7,988.00	7,948.50	14.50	18.70	-88.60	-212.42	-1,571.10	1,478.42	1,449.65	28.77	51.381	
8,100.00	8,081.87	8,088.65	8,049.11	14.57	18.55	-88.56	-211.20	-1,573.41	1,480.75	1,452.00	28.74	51.513	
8,200.00	8,181.87	8,190.01	8,150.44	14.63	18.37	-88.51	-210.02	-1,575.54	1,482.87	1,454.18	28.69	51.684	
8,300.00	8,281.87	8,290.00	8,250.40	14.70	18.25	-88.48	-209.17	-1,577.64	1,485.00	1,456.32	28.68	51.781	
8,400.00	8,381.87	8,390.19	8,350.57	14.76	18.15	-88.47	-208.68	-1,579.74	1,487.11	1,458.43	28.68	51.851	
8,500.00	8,481.87	8,493.98	8,454.34	14.83	18.03	-88.46	-208.53	-1,581.81	1,489.10	1,460.46	28.64	51.989	
8,600.00	8,581.87	8,596.57	8,556.91	14.90	17.90	-88.46	-208.46	-1,583.61	1,490.86	1,462.26	28.60	52.137	
8,700.00	8,681.87	8,694.28	8,654.61	14.96	17.79	-88.46	-208.36	-1,585.31	1,492.60	1,464.05	28.55	52.275	
8,800.00	8,781.87	8,790.73	8,751.04	15.03	17.67	-88.46	-208.23	-1,587.19	1,494.55	1,466.04	28.51	52.421	
8,900.00	8,881.87	8,889.25	8,849.54	15.09	17.54	-88.45	-207.98	-1,589.28	1,496.68	1,468.21	28.47	52.576	
9,000.00	8,981.87	8,992.62	8,952.88	15.16	17.43	-88.44	-207.79	-1,591.37	1,498.71	1,470.27	28.44	52.698	
9,100.00	9,081.87	9,092.79	9,053.04	15.23	17.38	-88.44	-207.64	-1,593.30	1,500.63	1,472.16	28.47	52.702	
9,200.00	9,181.87	9,191.24	9,151.47	15.29	17.32	-88.43	-207.44	-1,595.20	1,502.57	1,474.07	28.49	52.733	
9,300.00	9,281.87	9,287.10	9,247.30	15.36	17.22	-88.43	-207.31	-1,597.30	1,504.76	1,476.28	28.48	52.842	
9,400.00	9,381.87	9,387.66	9,347.84	15.43	17.13	-88.44	-207.44	-1,599.62	1,507.06	1,478.61	28.45	52.968	
9,500.00	9,481.87	9,487.55	9,447.71	15.50	17.06	-88.45	-207.72	-1,601.83	1,509.27	1,480.83	28.44	53.077	
9,600.00	9,581.87	9,583.71	9,543.83	15.56	17.02	-88.48	-208.48	-1,604.15	1,511.67	1,483.24	28.43	53.174	
9,700.00	9,681.87	9,681.98	9,642.06	15.63	17.00	-88.53	-209.73	-1,606.74	1,514.26	1,485.84	28.43	53.264	
9,800.00	9,781.87	9,777.89	9,737.92	15.70	17.00	-88.60	-211.31	-1,609.37	1,516.96	1,488.52	28.44	53.333	
9,805.97	9,787.84	9,783.38	9,743.41	15.71	17.01	-88.60	-211.42	-1,609.53	1,517.13	1,488.69	28.44	53.337	
9,850.00	9,831.82	9,826.00	9,786.00	15.72	17.01	-88.57	-212.29	-1,610.85	1,518.44	1,490.00	28.43	53.404	
9,900.00	9,881.44	9,868.18	9,828.15	15.84	17.01	-88.65	-213.15	-1,612.28	1,519.97	1,491.55	28.42	53.491	
9,950.00	9,930.35	9,911.84	9,871.77	15.97	17.01	-88.85	-213.92	-1,613.89	1,521.62	1,493.23	28.39	53.596	
10,000.00	9,978.18	9,970.90	9,930.79	16.08	16.99	-89.36	-214.57	-1,616.02	1,523.26	1,494.91	28.35	53.726	
10,050.00	10,024.56	10,031.31	9,991.18	16.18	16.95	-90.07	-214.42	-1,617.59	1,524.56	1,496.25	28.31	53.847	
10,100.00	10,069.13	10,083.80	10,043.66	16.27	16.90	-90.82	-214.01	-1,618.61	1,525.84	1,497.56	28.28	53.952	
10,150.00	10,111.56	10,127.48	10,087.33	16.35	16.86	-91.51	-213.59	-1,619.29	1,527.40	1,499.14	28.25	54.063	
10,200.00	10,151.53	10,162.09	10,121.93	16.42	16.82	-92.05	-213.19	-1,619.93	1,529.68	1,501.45	28.23	54.190	
10,250.00	10,188.74	10,194.45	10,154.28	16.47	16.78	-92.53	-212.75	-1,620.64	1,532.89	1,504.68	28.21	54.339	
10,300.00	10,222.89	10,226.18	10,185.99	16.51	16.74	-92.95	-212.28	-1,621.43	1,537.16	1,508.96	28.20	54.512	
10,350.00	10,253.73	10,255.90	10,215.71	16.54	16.70	-93.26	-211.81	-1,622.21	1,542.60	1,514.40	28.20	54.705	
10,400.00	10,281.02	10,282.39	10,242.17	16.56	16.67	-93.40	-211.36	-1,622.95	1,549.33	1,521.12	28.21	54.918	
10,450.00	10,304.56	10,300.00	10,259.78	16.57	16.65	-93.15	-211.06	-1,623.45	1,557.49	1,529.25	28.25	55.141	
10,500.00	10,324.17	10,320.98	10,280.74	16.58	16.63	-92.87	-210.70	-1,624.08	1,567.16	1,538.87	28.29	55.397	
10,550.00	10,339.70	10,334.03	10,293.78	16.58	16.61	-92.18	-210.49	-1,624.51	1,578.39	1,550.04	28.35	55.666	
10,600.00	10,351.03	10,343.66	10,303.41	16.58	16.60	-91.20	-210.35	-1,624.84	1,591.18	1,562.74	28.44	55.954	
10,650.00	10,358.07	10,349.84	10,309.59	16.58	16.59	-89.94	-210.26	-1,625.06	1,605.46	1,576.92	28.54	56.260	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Juliet Federal Com - 514H - OH / 68320 - Surveys (H&P 313)

Offset Site Error: 0.00 usft

Survey Program: 185-MWD+IFR1+MS

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,700.00	10,360.77	10,352.55	10,312.29	16.58	16.59	-88.39	-210.22	-1,625.16	1,621.13	1,592.48	28.65	56.582	
10,705.97	10,360.80	10,352.64	10,312.38	16.58	16.59	-88.19	-210.22	-1,625.17	1,623.09	1,594.42	28.66	56.623	
10,800.00	10,360.80	10,353.68	10,313.42	16.60	16.59	-88.23	-210.21	-1,625.20	1,656.45	1,627.53	28.92	57.279	
10,900.00	10,360.80	10,354.77	10,314.51	16.63	16.59	-88.27	-210.19	-1,625.24	1,696.94	1,667.71	29.23	58.059	
11,000.00	10,360.80	10,355.85	10,315.59	16.66	16.59	-88.31	-210.18	-1,625.28	1,742.23	1,712.67	29.56	58.945	
11,100.00	10,360.80	12,096.00	11,214.45	16.69	25.39	-119.60	923.14	-1,595.87	1,740.10	1,700.26	39.84	43.678	
11,200.00	10,360.80	12,191.00	11,213.25	16.74	25.47	-119.77	1,017.34	-1,583.93	1,728.54	1,687.73	40.81	42.352	
11,300.00	10,360.80	12,211.71	11,212.67	16.79	25.49	-119.77	1,037.99	-1,582.50	1,719.71	1,678.36	41.35	41.594	
11,400.00	10,360.80	12,286.00	11,210.32	16.86	25.56	-119.76	1,112.16	-1,579.15	1,714.04	1,671.81	42.24	40.580	
11,500.00	10,360.80	12,405.07	11,206.82	16.96	25.66	-119.76	1,231.03	-1,573.19	1,708.29	1,665.12	43.17	39.575	
11,600.00	10,360.80	12,475.00	11,204.92	17.09	25.71	-119.76	1,300.83	-1,569.49	1,702.42	1,658.55	43.87	38.803	
11,700.00	10,360.80	12,558.60	11,202.78	17.30	25.78	-119.75	1,384.34	-1,566.29	1,697.87	1,653.25	44.63	38.046	
11,800.00	10,360.80	12,644.88	11,200.76	17.59	25.86	-119.73	1,470.56	-1,564.03	1,694.44	1,649.04	45.41	37.316	
11,900.00	10,360.80	12,725.93	11,198.82	17.97	25.93	-119.70	1,551.58	-1,562.75	1,691.90	1,645.71	46.19	36.631	
11,998.60	10,360.80	12,791.61	11,197.37	18.40	26.00	-119.66	1,617.24	-1,562.66	1,690.78	1,643.86	46.92	36.038	
12,000.00	10,360.80	12,792.41	11,197.35	18.41	26.00	-119.65	1,618.04	-1,562.67	1,690.78	1,643.85	46.93	36.030	
12,100.00	10,360.80	12,854.00	11,195.89	18.90	26.08	-119.58	1,679.59	-1,564.48	1,692.09	1,644.44	47.65	35.510	
12,200.00	10,360.80	12,981.12	11,192.73	19.42	26.26	-119.43	1,806.61	-1,567.96	1,693.17	1,644.36	48.81	34.692	
12,300.00	10,360.80	13,060.25	11,190.84	19.97	26.38	-119.33	1,885.69	-1,570.32	1,694.57	1,644.92	49.66	34.126	
12,400.00	10,360.80	13,152.35	11,189.22	20.53	26.54	-119.24	1,977.72	-1,573.46	1,696.70	1,646.11	50.59	33.538	
12,500.00	10,360.80	13,235.21	11,188.11	21.11	26.70	-119.15	2,060.50	-1,576.86	1,699.64	1,648.16	51.48	33.014	
12,600.00	10,360.80	13,359.89	11,186.34	21.71	26.99	-119.02	2,185.08	-1,581.52	1,702.19	1,649.52	52.68	32.315	
12,700.00	10,360.80	13,463.25	11,184.74	22.31	27.28	-118.92	2,288.39	-1,584.51	1,703.98	1,650.23	53.76	31.697	
12,800.00	10,360.80	13,578.52	11,182.88	22.93	27.67	-118.82	2,403.60	-1,587.63	1,705.62	1,650.67	54.95	31.038	
12,900.00	10,360.80	13,670.94	11,181.29	23.56	28.02	-118.74	2,495.98	-1,589.28	1,706.39	1,650.38	56.02	30.463	
13,000.00	10,360.80	13,792.52	11,179.02	24.19	28.55	-118.63	2,617.50	-1,592.15	1,707.68	1,650.35	57.32	29.791	
13,078.81	10,360.80	13,872.47	11,177.39	24.70	28.92	-118.57	2,697.44	-1,592.99	1,707.64	1,649.40	58.24	29.319	
13,100.00	10,360.80	13,893.21	11,176.96	24.83	29.02	-118.55	2,718.17	-1,593.22	1,707.64	1,649.16	58.48	29.198	
13,200.00	10,360.80	13,965.29	11,175.66	25.48	29.37	-118.49	2,790.22	-1,594.60	1,708.47	1,649.04	59.43	28.747	
13,300.00	10,360.80	14,085.89	11,173.49	26.14	29.99	-118.38	2,910.77	-1,597.76	1,710.01	1,649.23	60.78	28.133	
13,400.00	10,360.80	14,200.37	11,171.43	26.80	30.60	-118.30	3,025.22	-1,598.97	1,710.10	1,648.00	62.10	27.537	
13,500.00	10,360.80	14,301.93	11,169.51	27.47	31.16	-118.24	3,126.76	-1,599.09	1,709.31	1,645.97	63.34	26.988	
13,527.77	10,360.80	14,321.70	11,169.20	27.66	31.28	-118.23	3,146.53	-1,599.20	1,709.24	1,645.63	63.61	26.870	
13,600.00	10,360.80	14,377.89	11,168.67	28.14	31.60	-118.20	3,202.70	-1,599.88	1,709.67	1,645.30	64.36	26.563	
13,700.00	10,360.80	14,497.47	11,166.82	28.82	32.29	-118.13	3,322.27	-1,600.98	1,709.70	1,643.92	65.78	25.990	
13,738.01	10,360.80	14,531.88	11,166.41	29.08	32.49	-118.11	3,356.67	-1,601.15	1,709.66	1,643.43	66.23	25.814	
13,800.00	10,360.80	14,577.89	11,166.15	29.50	32.77	-118.10	3,402.69	-1,601.43	1,709.87	1,642.99	66.87	25.569	
13,900.00	10,360.80	14,652.00	11,165.73	30.19	33.24	-118.05	3,476.75	-1,603.65	1,712.06	1,644.15	67.91	25.210	
14,000.00	10,360.80	14,757.59	11,165.25	30.88	33.93	-117.98	3,582.27	-1,607.44	1,715.07	1,645.79	69.28	24.757	
14,100.00	10,360.80	14,845.68	11,164.72	31.57	34.47	-117.92	3,670.31	-1,610.41	1,717.74	1,647.30	70.44	24.385	
14,200.00	10,360.80	15,029.04	11,163.41	32.27	35.68	-117.87	3,853.64	-1,611.03	1,717.37	1,644.78	72.59	23.659	
14,300.00	10,360.80	15,101.84	11,162.95	32.97	36.16	-117.87	3,926.43	-1,610.21	1,716.10	1,642.43	73.66	23.296	
14,330.96	10,360.80	15,125.00	11,162.89	33.18	36.31	-117.87	3,949.60	-1,610.19	1,716.03	1,642.03	74.00	23.189	
14,400.00	10,360.80	15,184.70	11,162.88	33.67	36.69	-117.86	4,009.30	-1,610.40	1,716.24	1,641.41	74.83	22.935	
14,500.00	10,360.80	15,262.31	11,163.12	34.37	37.20	-117.86	4,086.90	-1,611.17	1,717.32	1,641.38	75.94	22.614	
14,600.00	10,360.80	15,406.37	11,162.97	35.08	38.18	-117.81	4,230.92	-1,613.97	1,719.48	1,641.73	77.76	22.114	
14,650.55	10,360.80	15,444.64	11,162.60	35.44	38.45	-117.80	4,269.19	-1,613.98	1,719.27	1,640.94	78.33	21.950	
14,700.00	10,360.80	15,480.01	11,162.29	35.79	38.70	-117.78	4,304.55	-1,614.30	1,719.47	1,640.61	78.86	21.804	
14,800.00	10,360.80	15,580.56	11,161.80	36.50	39.37	-117.75	4,405.10	-1,615.78	1,720.56	1,640.34	80.22	21.447	
14,900.00	10,360.80	15,716.13	11,160.89	37.22	40.27	-117.72	4,540.66	-1,615.84	1,720.28	1,638.34	81.94	20.994	
15,000.00	10,360.80	15,821.01	11,159.36	37.93	40.97	-117.69	4,645.52	-1,614.75	1,718.69	1,635.34	83.35	20.620	
15,100.00	10,360.80	15,911.90	11,158.15	38.65	41.57	-117.66	4,736.40	-1,614.09	1,717.43	1,632.80	84.63	20.294	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Juliet Federal Com - 514H - OH / 68320 - Surveys (H&P 313)

Offset Site Error: 0.00 usft

Survey Program: 185-MWD+IFR1+MS **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,200.00	10,360.80	16,009.64	11,156.64	39.37	42.23	-117.62	4,834.13	-1,613.85	1,716.50	1,630.53	85.97	19.966	
15,300.00	10,360.80	16,107.83	11,155.34	40.09	42.89	-117.59	4,932.31	-1,613.50	1,715.58	1,628.25	87.33	19.645	
15,400.00	10,360.80	16,215.21	11,153.91	40.81	43.62	-117.55	5,039.68	-1,613.34	1,714.86	1,626.07	88.79	19.314	
15,500.00	10,360.80	16,333.63	11,152.71	41.54	44.44	-117.54	5,158.08	-1,611.41	1,712.93	1,622.56	90.37	18.954	
15,600.00	10,360.80	16,442.52	11,151.89	42.26	45.18	-117.56	5,266.93	-1,608.68	1,710.36	1,618.50	91.86	18.619	
15,700.00	10,360.80	16,506.97	11,151.57	42.99	45.64	-117.57	5,331.36	-1,607.43	1,708.47	1,615.56	92.92	18.387	
15,732.77	10,360.80	16,526.87	11,151.51	43.23	45.78	-117.57	5,351.26	-1,607.38	1,708.35	1,615.11	93.24	18.322	
15,800.00	10,360.80	16,580.82	11,151.39	43.72	46.16	-117.56	5,405.21	-1,607.81	1,708.74	1,614.69	94.05	18.169	
15,900.00	10,360.80	16,695.16	11,151.18	44.45	46.97	-117.54	5,519.55	-1,608.72	1,709.41	1,613.79	95.62	17.877	
16,000.00	10,360.80	16,814.68	11,150.02	45.18	47.79	-117.51	5,639.06	-1,608.27	1,708.60	1,611.36	97.24	17.571	
16,100.00	10,360.80	16,897.77	11,149.77	45.91	48.37	-117.52	5,722.14	-1,607.61	1,707.79	1,609.31	98.48	17.342	
16,200.00	10,360.80	17,088.15	11,146.92	46.64	49.74	-117.51	5,912.38	-1,602.14	1,704.21	1,603.38	100.83	16.902	
16,300.00	10,360.80	17,160.83	11,145.70	47.38	50.26	-117.53	5,984.96	-1,598.65	1,699.27	1,597.25	102.02	16.656	
16,400.00	10,360.80	17,224.92	11,145.08	48.11	50.72	-117.54	6,049.03	-1,596.96	1,696.47	1,593.37	103.10	16.455	
16,500.00	10,360.80	17,304.00	11,144.49	48.85	51.30	-117.53	6,128.10	-1,596.49	1,695.54	1,591.22	104.32	16.254	
16,509.42	10,360.80	17,304.00	11,144.49	48.92	51.30	-117.53	6,128.10	-1,596.49	1,695.51	1,591.17	104.35	16.249	
16,600.00	10,360.80	17,374.37	11,144.33	49.59	51.80	-117.52	6,198.47	-1,597.06	1,696.07	1,590.66	105.41	16.090	
16,700.00	10,360.80	17,507.93	11,144.38	50.32	52.75	-117.51	6,332.03	-1,597.73	1,696.63	1,589.39	107.24	15.821	
16,800.00	10,360.80	17,608.06	11,143.91	51.06	53.46	-117.50	6,432.15	-1,596.97	1,695.75	1,587.07	108.68	15.603	
16,900.00	10,360.80	17,695.61	11,143.64	51.80	54.08	-117.50	6,519.70	-1,596.70	1,695.34	1,585.36	109.98	15.415	
16,912.16	10,360.80	17,706.71	11,143.62	51.89	54.16	-117.50	6,530.79	-1,596.70	1,695.33	1,585.19	110.14	15.392	
17,000.00	10,360.80	17,778.00	11,143.72	52.54	54.67	-117.50	6,602.09	-1,596.81	1,695.56	1,584.34	111.22	15.246	
17,100.00	10,360.80	17,872.00	11,143.83	53.28	55.34	-117.49	6,696.08	-1,597.91	1,696.66	1,584.07	112.59	15.070	
17,200.00	10,360.80	18,009.25	11,143.35	54.02	56.34	-117.47	6,833.33	-1,597.85	1,696.31	1,581.82	114.50	14.816	
17,300.00	10,360.80	18,100.44	11,142.52	54.76	57.00	-117.45	6,924.51	-1,597.81	1,695.84	1,580.00	115.85	14.639	
17,400.00	10,360.80	18,210.65	11,141.12	55.50	57.79	-117.41	7,034.71	-1,597.84	1,695.30	1,577.90	117.40	14.440	
17,500.00	10,360.80	18,313.44	11,139.79	56.25	58.53	-117.38	7,137.49	-1,597.15	1,694.12	1,575.23	118.88	14.250	
17,600.00	10,360.80	18,433.28	11,138.24	56.99	59.39	-117.35	7,257.31	-1,595.94	1,692.67	1,572.12	120.55	14.041	
17,700.00	10,360.80	18,549.83	11,136.66	57.73	60.22	-117.35	7,373.81	-1,592.87	1,689.69	1,567.51	122.18	13.830	
17,800.00	10,360.80	18,631.98	11,135.60	58.48	60.81	-117.35	7,455.93	-1,590.94	1,687.00	1,563.55	123.45	13.665	
17,856.55	10,360.80	18,652.00	11,135.35	58.90	60.96	-117.35	7,475.94	-1,590.57	1,686.15	1,562.28	123.86	13.613 SF	

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Sheba Federal Com - 306H - OH - Plan 1 11-10-21 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+MS — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.90	1.00	1.00	90.07	-0.07	59.99	60.00				
100.00	100.00	99.10	100.00	1.09	1.08	90.07	-0.07	59.99	59.99	57.82	2.17	27.655	
200.00	200.00	199.10	200.00	1.60	1.59	90.07	-0.07	59.99	59.99	56.80	3.19	18.782	
300.00	300.00	299.10	300.00	2.01	2.01	90.07	-0.07	59.99	59.99	55.98	4.02	14.933	
400.00	400.00	399.10	400.00	2.35	2.35	90.07	-0.07	59.99	59.99	55.29	4.70	12.754	
500.00	500.00	499.10	500.00	2.65	2.65	90.07	-0.07	59.99	59.99	54.69	5.31	11.304	
600.00	600.00	599.10	600.00	2.93	2.93	90.07	-0.07	59.99	59.99	54.14	5.85	10.250	
700.00	700.00	699.10	700.00	3.18	3.18	90.07	-0.07	59.99	59.99	53.64	6.36	9.438	
800.00	800.00	799.10	800.00	3.41	3.41	90.07	-0.07	59.99	59.99	53.17	6.83	8.788	
900.00	900.00	899.10	900.00	3.64	3.63	90.07	-0.07	59.99	59.99	52.72	7.27	8.252	
1,000.00	1,000.00	999.10	1,000.00	3.85	3.84	90.07	-0.07	59.99	59.99	52.30	7.69	7.800	
1,100.00	1,100.00	1,099.10	1,100.00	4.05	4.05	90.07	-0.07	59.99	59.99	51.90	8.09	7.412	
1,200.00	1,200.00	1,199.10	1,200.00	4.24	4.24	90.07	-0.07	59.99	59.99	51.51	8.48	7.074	
1,300.00	1,300.00	1,299.10	1,300.00	4.43	4.43	90.07	-0.07	59.99	59.99	51.14	8.85	6.776	
1,400.00	1,400.00	1,399.10	1,400.00	4.61	4.61	90.07	-0.07	59.99	59.99	50.78	9.21	6.511	
1,500.00	1,500.00	1,499.10	1,500.00	4.78	4.78	90.07	-0.07	59.99	59.99	50.43	9.56	6.273	
1,600.00	1,600.00	1,599.10	1,600.00	4.95	4.95	90.07	-0.07	59.99	59.99	50.09	9.90	6.057	
1,700.00	1,700.00	1,699.10	1,700.00	5.12	5.12	90.07	-0.07	59.99	59.99	49.76	10.24	5.861	
1,800.00	1,800.00	1,799.10	1,800.00	5.28	5.28	90.07	-0.07	59.99	59.99	49.43	10.56	5.681	
1,900.00	1,900.00	1,899.10	1,900.00	5.44	5.44	90.07	-0.07	59.99	59.99	49.12	10.88	5.516	
2,000.00	2,000.00	1,999.10	2,000.00	5.59	5.59	90.07	-0.07	59.99	59.99	48.81	11.19	5.363	CC, ES
2,100.00	2,099.99	2,098.11	2,099.00	5.69	5.71	-111.06	-0.33	60.79	61.11	49.71	11.40	5.360	SF
2,200.00	2,199.96	2,197.01	2,197.87	5.81	5.84	-112.46	-1.12	63.22	64.51	52.88	11.63	5.545	
2,300.00	2,299.86	2,295.73	2,296.50	5.95	5.99	-114.49	-2.42	67.25	70.27	58.39	11.88	5.914	
2,400.00	2,399.68	2,394.17	2,394.76	6.10	6.15	-116.81	-4.24	72.89	78.46	66.31	12.15	6.459	
2,500.00	2,499.37	2,492.24	2,492.54	6.28	6.33	-119.15	-6.58	80.10	89.12	76.69	12.43	7.170	
2,600.00	2,598.90	2,589.86	2,589.72	6.48	6.54	-121.32	-9.41	88.86	102.30	89.57	12.74	8.032	
2,700.00	2,698.26	2,686.93	2,686.18	6.70	6.76	-123.24	-12.73	99.13	117.99	104.93	13.06	9.032	
2,800.00	2,797.40	2,783.37	2,781.83	6.95	7.00	-124.88	-16.53	110.87	136.18	122.77	13.41	10.153	
2,900.00	2,896.30	2,879.09	2,876.55	7.21	7.26	-126.26	-20.78	124.04	156.85	143.06	13.79	11.378	
3,000.00	2,994.93	2,974.03	2,970.25	7.50	7.53	-127.40	-25.49	138.58	179.96	165.78	14.18	12.691	
3,100.00	3,093.41	3,070.21	3,064.98	7.80	7.83	-128.43	-30.61	154.42	204.61	190.00	14.61	14.006	
3,200.00	3,191.89	3,167.06	3,160.35	8.12	8.14	-129.24	-35.78	170.42	229.36	214.30	15.06	15.228	
3,300.00	3,290.37	3,263.90	3,255.72	8.45	8.46	-129.89	-40.96	186.42	254.15	238.62	15.53	16.363	
3,400.00	3,388.85	3,360.74	3,351.09	8.79	8.79	-130.43	-46.13	202.42	278.96	262.95	16.02	17.416	
3,500.00	3,487.33	3,457.58	3,446.46	9.14	9.13	-130.88	-51.31	218.42	303.79	287.28	16.52	18.393	
3,526.31	3,513.25	3,483.06	3,471.56	9.22	9.22	-130.99	-52.67	222.63	310.33	293.70	16.63	18.658	
3,600.00	3,585.90	3,554.51	3,541.92	9.46	9.47	-131.34	-56.48	234.43	328.34	311.35	16.99	19.330	
3,700.00	3,684.73	3,651.71	3,637.64	9.82	9.83	-131.58	-61.68	250.49	351.81	334.31	17.50	20.104	
3,800.00	3,783.81	3,749.18	3,733.63	10.18	10.20	-131.60	-66.89	266.60	374.15	356.13	18.02	20.759	
3,900.00	3,883.11	3,846.88	3,829.84	10.53	10.57	-131.43	-72.11	282.74	395.37	376.82	18.55	21.314	
4,000.00	3,982.61	3,944.78	3,926.26	10.88	10.95	-131.11	-77.34	298.92	415.48	396.40	19.08	21.778	
4,100.00	4,082.26	4,042.85	4,022.84	11.22	11.33	-130.64	-82.58	315.12	434.50	414.89	19.60	22.163	
4,200.00	4,182.04	4,141.06	4,119.56	11.54	11.72	-130.05	-87.82	331.35	452.46	432.33	20.13	22.479	
4,300.00	4,281.92	4,239.39	4,216.39	11.85	12.11	-129.34	-93.08	347.59	469.40	448.75	20.65	22.736	
4,400.00	4,381.88	4,337.80	4,313.30	12.13	12.51	-128.52	-98.34	363.85	485.36	464.21	21.15	22.945	
4,500.00	4,481.87	4,436.26	4,410.27	12.37	12.91	-127.59	-103.60	380.12	500.39	478.75	21.64	23.121	
4,526.31	4,508.18	4,462.17	4,435.79	12.39	13.02	73.29	-104.98	384.40	504.20	482.46	21.74	23.190	
4,600.00	4,581.87	4,534.74	4,507.25	12.41	13.32	74.09	-108.86	396.39	514.83	492.81	22.02	23.376	
4,700.00	4,681.87	4,633.22	4,604.24	12.47	13.73	75.13	-114.12	412.66	529.41	506.97	22.44	23.593	
4,800.00	4,781.87	4,731.70	4,701.22	12.52	14.14	76.12	-119.38	428.93	544.15	521.28	22.87	23.793	
4,900.00	4,881.87	4,830.18	4,798.20	12.58	14.55	77.05	-124.64	445.20	559.05	535.74	23.31	23.983	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Sheba Federal Com - 306H - OH - Plan 1 11-10-21

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+IFR1+MS

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,981.87	4,928.66	4,895.19	12.64	14.96	77.94	-129.91	461.48	574.08	550.32	23.76	24.164	
5,100.00	5,081.87	5,027.14	4,992.17	12.70	15.38	78.78	-135.17	477.75	589.24	565.03	24.21	24.335	
5,200.00	5,181.87	5,125.62	5,089.16	12.76	15.80	79.58	-140.43	494.02	604.52	579.84	24.68	24.498	
5,300.00	5,281.87	5,224.10	5,186.14	12.82	16.22	80.34	-145.69	510.29	619.91	594.76	25.15	24.653	
5,400.00	5,381.87	5,322.58	5,283.13	12.88	16.64	81.06	-150.95	526.56	635.40	609.78	25.62	24.801	
5,500.00	5,481.87	5,421.06	5,380.11	12.94	17.06	81.75	-156.21	542.83	650.98	624.88	26.10	24.942	
5,600.00	5,581.87	5,519.54	5,477.10	13.00	17.49	82.41	-161.48	559.10	666.66	640.07	26.58	25.077	
5,700.00	5,681.87	5,618.02	5,574.08	13.06	17.91	83.03	-166.74	575.38	682.41	655.34	27.07	25.206	
5,800.00	5,781.87	5,716.51	5,671.07	13.12	18.34	83.63	-172.00	591.65	698.25	670.68	27.57	25.329	
5,900.00	5,881.87	5,814.99	5,768.05	13.18	18.77	84.20	-177.26	607.92	714.15	686.08	28.06	25.447	
6,000.00	5,981.87	5,913.47	5,865.04	13.24	19.20	84.75	-182.52	624.19	730.12	701.55	28.56	25.561	
6,100.00	6,081.87	6,011.95	5,962.02	13.30	19.63	85.27	-187.79	640.46	746.15	717.08	29.07	25.670	
6,200.00	6,181.87	6,110.43	6,059.01	13.36	20.06	85.77	-193.05	656.73	762.24	732.67	29.57	25.774	
6,300.00	6,281.87	6,208.91	6,155.99	13.42	20.49	86.26	-198.31	673.00	778.39	748.30	30.08	25.875	
6,400.00	6,381.87	6,307.39	6,252.97	13.49	20.92	86.72	-203.57	689.28	794.58	763.99	30.59	25.972	
6,500.00	6,481.87	6,405.87	6,349.96	13.55	21.35	87.16	-208.83	705.55	810.83	779.72	31.11	26.065	
6,600.00	6,581.87	6,504.35	6,446.94	13.61	21.79	87.59	-214.10	721.82	827.12	795.49	31.62	26.156	
6,700.00	6,681.87	6,602.83	6,543.93	13.67	22.22	87.99	-219.36	738.09	843.45	811.31	32.14	26.243	
6,800.00	6,781.87	6,708.13	6,647.66	13.74	22.67	88.41	-224.92	755.30	859.66	826.99	32.67	26.311	
6,900.00	6,881.87	6,823.40	6,761.53	13.80	23.16	88.81	-230.43	772.35	874.35	841.10	33.25	26.297	
7,000.00	6,981.87	6,939.36	6,876.41	13.86	23.65	89.14	-235.27	787.29	887.18	853.37	33.81	26.243	
7,100.00	7,081.87	7,055.91	6,992.19	13.93	24.12	89.42	-239.40	800.08	898.12	863.77	34.34	26.153	
7,200.00	7,181.87	7,172.96	7,108.71	13.99	24.58	89.64	-242.83	810.67	907.14	872.29	34.85	26.032	
7,300.00	7,281.87	7,290.43	7,225.84	14.05	25.01	89.81	-245.53	819.02	914.24	878.92	35.32	25.883	
7,400.00	7,381.87	7,408.21	7,343.45	14.12	25.42	89.94	-247.49	825.09	919.39	883.63	35.76	25.711	
7,500.00	7,481.87	7,526.20	7,461.37	14.18	25.78	90.01	-248.71	828.87	922.59	886.45	36.14	25.527	
7,600.00	7,581.87	7,644.30	7,579.46	14.24	26.03	90.04	-249.19	830.34	923.84	887.42	36.41	25.371	
7,700.00	7,681.87	7,746.71	7,681.87	14.31	26.06	90.04	-249.19	830.36	923.85	887.33	36.52	25.298	
7,800.00	7,781.87	7,846.71	7,781.87	14.37	26.09	90.04	-249.19	830.36	923.85	887.23	36.63	25.224	
7,900.00	7,881.87	7,946.71	7,881.87	14.44	26.12	90.04	-249.19	830.36	923.85	887.12	36.73	25.149	
8,000.00	7,981.87	8,046.71	7,981.87	14.50	26.15	90.04	-249.19	830.36	923.85	887.01	36.84	25.075	
8,100.00	8,081.87	8,146.71	8,081.87	14.57	26.18	90.04	-249.19	830.36	923.85	886.90	36.95	25.000	
8,200.00	8,181.87	8,246.71	8,181.87	14.63	26.21	90.04	-249.19	830.36	923.85	886.79	37.06	24.926	
8,300.00	8,281.87	8,346.71	8,281.87	14.70	26.24	90.04	-249.19	830.36	923.85	886.68	37.17	24.853	
8,400.00	8,381.87	8,446.71	8,381.87	14.76	26.27	90.04	-249.19	830.36	923.85	886.57	37.28	24.779	
8,500.00	8,481.87	8,546.71	8,481.87	14.83	26.30	90.04	-249.19	830.36	923.85	886.46	37.39	24.706	
8,600.00	8,581.87	8,646.71	8,581.87	14.90	26.33	90.04	-249.19	830.36	923.85	886.35	37.51	24.633	
8,700.00	8,681.87	8,746.71	8,681.87	14.96	26.36	90.04	-249.19	830.36	923.85	886.24	37.62	24.560	
8,800.00	8,781.87	8,846.71	8,781.87	15.03	26.39	90.04	-249.19	830.36	923.85	886.13	37.73	24.488	
8,900.00	8,881.87	8,946.71	8,881.87	15.09	26.42	90.04	-249.19	830.36	923.85	886.01	37.84	24.415	
9,000.00	8,981.87	9,046.71	8,981.87	15.16	26.46	90.04	-249.19	830.36	923.85	885.90	37.95	24.343	
9,100.00	9,081.87	9,146.71	9,081.87	15.23	26.49	90.04	-249.19	830.36	923.85	885.79	38.06	24.272	
9,200.00	9,181.87	9,246.71	9,181.87	15.29	26.52	90.04	-249.19	830.36	923.85	885.68	38.18	24.200	
9,300.00	9,281.87	9,346.71	9,281.87	15.36	26.55	90.04	-249.19	830.36	923.85	885.56	38.29	24.129	
9,400.00	9,381.87	9,446.71	9,381.87	15.43	26.59	90.04	-249.19	830.36	923.85	885.45	38.40	24.058	
9,500.00	9,481.87	9,546.71	9,481.87	15.50	26.62	90.04	-249.19	830.36	923.85	885.34	38.51	23.988	
9,600.00	9,581.87	9,646.71	9,581.87	15.56	26.65	90.04	-249.19	830.36	923.85	885.23	38.63	23.917	
9,700.00	9,681.87	9,746.71	9,681.87	15.63	26.68	90.04	-249.19	830.36	923.85	885.11	38.74	23.847	
9,800.00	9,781.87	9,846.71	9,781.87	15.70	26.72	90.04	-249.19	830.36	923.85	884.99	38.86	23.775	
9,805.97	9,787.84	9,852.68	9,787.84	15.71	26.72	90.04	-249.19	830.36	923.85	884.99	38.87	23.770	
9,807.05	9,788.92	9,853.76	9,788.92	15.71	26.72	90.04	-249.19	830.36	923.85	884.99	38.87	23.770	
9,850.00	9,831.82	9,896.66	9,831.82	15.72	26.73	90.14	-249.19	830.36	923.86	884.95	38.91	23.746	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Sheba Federal Com - 306H - OH - Plan 1 11-10-21

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+IFR1+MS

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,900.00	9,881.44	9,946.29	9,881.44	15.84	26.75	90.51	-249.19	830.36	923.89	884.93	38.96	23.712	
9,950.00	9,930.35	9,995.20	9,930.35	15.97	26.77	91.12	-249.19	830.36	924.04	885.01	39.03	23.675	
10,000.00	9,978.18	10,045.19	9,980.32	16.08	26.76	91.91	-247.91	830.36	924.41	885.32	39.09	23.648	
10,050.00	10,024.56	10,096.86	10,031.65	16.18	26.73	92.71	-242.13	830.36	924.96	885.84	39.13	23.640	
10,100.00	10,069.13	10,149.91	10,083.59	16.27	26.69	93.50	-231.41	830.36	925.70	886.56	39.14	23.649	
10,150.00	10,111.56	10,204.41	10,135.68	16.35	26.64	94.27	-215.45	830.36	926.60	887.46	39.14	23.673	
10,200.00	10,151.53	10,260.44	10,187.39	16.42	26.59	95.02	-193.96	830.36	927.64	888.51	39.12	23.711	
10,250.00	10,188.74	10,318.04	10,238.11	16.47	26.54	95.75	-166.71	830.36	928.78	889.69	39.09	23.759	
10,300.00	10,222.89	10,377.24	10,287.12	16.51	26.48	96.43	-133.54	830.37	929.99	890.94	39.05	23.816	
10,350.00	10,253.73	10,438.05	10,333.62	16.54	26.43	97.07	-94.40	830.37	931.22	892.21	39.00	23.877	
10,400.00	10,281.02	10,500.42	10,376.74	16.56	26.39	97.66	-49.37	830.37	932.42	893.47	38.95	23.937	
10,450.00	10,304.56	10,564.28	10,415.54	16.57	26.36	98.18	1.30	830.38	933.56	894.65	38.91	23.994	
10,500.00	10,324.17	10,629.49	10,449.10	16.58	26.33	98.62	57.17	830.38	934.57	895.70	38.87	24.042	
10,550.00	10,339.70	10,695.87	10,476.51	16.58	26.33	98.98	117.58	830.39	935.42	896.57	38.85	24.079	
10,600.00	10,351.03	10,763.18	10,497.00	16.58	26.34	99.24	181.66	830.39	936.06	897.22	38.84	24.100	
10,650.00	10,358.07	10,831.16	10,509.91	16.58	26.37	99.41	248.36	830.40	936.47	897.62	38.85	24.105	
10,700.00	10,360.77	10,899.49	10,514.85	16.58	26.42	99.47	316.47	830.40	936.62	897.74	38.88	24.091	
10,705.97	10,360.80	10,907.66	10,514.90	16.58	26.42	99.47	324.64	830.40	936.62	897.73	38.88	24.089	
10,706.41	10,360.80	10,907.86	10,514.90	16.58	26.42	99.47	324.84	830.40	936.62	897.73	38.88	24.088	
10,800.00	10,360.80	11,001.45	10,514.90	16.60	26.52	99.47	418.43	830.41	936.62	897.56	39.06	23.980	
10,900.00	10,360.80	11,101.45	10,514.90	16.63	26.65	99.47	518.43	830.42	936.62	897.30	39.32	23.821	
11,000.00	10,360.80	11,201.45	10,514.90	16.66	26.80	99.47	618.43	830.43	936.62	896.98	39.64	23.628	
11,100.00	10,360.80	11,301.45	10,514.90	16.69	26.96	99.47	718.43	830.44	936.62	896.60	40.02	23.405	
11,200.00	10,360.80	11,401.45	10,514.90	16.74	27.15	99.47	818.43	830.45	936.62	896.17	40.45	23.154	
11,300.00	10,360.80	11,501.45	10,514.90	16.79	27.36	99.47	918.43	830.45	936.62	895.68	40.94	22.879	
11,400.00	10,360.80	11,601.45	10,514.90	16.86	27.58	99.47	1,018.43	830.46	936.62	895.14	41.47	22.583	
11,500.00	10,360.80	11,701.45	10,514.90	16.96	27.83	99.47	1,118.43	830.47	936.62	894.56	42.06	22.269	
11,600.00	10,360.80	11,801.45	10,514.90	17.09	28.09	99.47	1,218.43	830.48	936.62	893.93	42.69	21.941	
11,700.00	10,360.80	11,901.45	10,514.90	17.30	28.37	99.47	1,318.43	830.49	936.62	893.26	43.36	21.600	
11,800.00	10,360.80	12,001.45	10,514.90	17.59	28.66	99.47	1,418.43	830.50	936.62	892.54	44.07	21.251	
11,900.00	10,360.80	12,101.45	10,514.90	17.97	28.98	99.47	1,518.43	830.51	936.62	891.79	44.83	20.894	
12,000.00	10,360.80	12,201.45	10,514.90	18.41	29.30	99.47	1,618.43	830.51	936.62	891.00	45.62	20.532	
12,100.00	10,360.80	12,301.45	10,514.90	18.90	29.65	99.47	1,718.43	830.52	936.62	890.18	46.44	20.168	
12,200.00	10,360.80	12,401.45	10,514.90	19.42	30.01	99.47	1,818.43	830.53	936.62	889.32	47.30	19.803	
12,300.00	10,360.80	12,501.45	10,514.90	19.97	30.38	99.47	1,918.43	830.54	936.62	888.43	48.19	19.438	
12,400.00	10,360.80	12,601.45	10,514.90	20.53	30.77	99.47	2,018.43	830.55	936.62	887.52	49.10	19.075	
12,500.00	10,360.80	12,701.45	10,514.90	21.11	31.17	99.47	2,118.43	830.56	936.62	886.57	50.05	18.714	
12,600.00	10,360.80	12,801.45	10,514.90	21.71	31.58	99.47	2,218.43	830.56	936.62	885.60	51.02	18.358	
12,700.00	10,360.80	12,901.45	10,514.90	22.31	32.01	99.47	2,318.43	830.57	936.62	884.60	52.02	18.006	
12,800.00	10,360.80	13,001.45	10,514.90	22.93	32.44	99.47	2,418.43	830.58	936.62	883.58	53.04	17.660	
12,900.00	10,360.80	13,101.45	10,514.90	23.56	32.89	99.47	2,518.43	830.59	936.62	882.54	54.08	17.319	
13,000.00	10,360.80	13,201.45	10,514.90	24.19	33.35	99.47	2,618.43	830.60	936.62	881.48	55.14	16.985	
13,100.00	10,360.80	13,301.45	10,514.90	24.83	33.83	99.47	2,718.43	830.61	936.62	880.39	56.23	16.658	
13,200.00	10,360.80	13,401.45	10,514.90	25.48	34.31	99.47	2,818.43	830.62	936.62	879.29	57.33	16.337	
13,300.00	10,360.80	13,501.45	10,514.90	26.14	34.80	99.47	2,918.43	830.62	936.62	878.17	58.45	16.024	
13,400.00	10,360.80	13,601.45	10,514.90	26.80	35.30	99.47	3,018.43	830.63	936.62	877.03	59.59	15.718	
13,500.00	10,360.80	13,701.45	10,514.90	27.47	35.81	99.47	3,118.43	830.64	936.62	875.88	60.74	15.420	
13,600.00	10,360.80	13,801.45	10,514.90	28.14	36.33	99.47	3,218.43	830.65	936.62	874.71	61.91	15.128	
13,700.00	10,360.80	13,901.45	10,514.90	28.82	36.86	99.47	3,318.43	830.66	936.62	873.52	63.09	14.845	
13,800.00	10,360.80	14,001.45	10,514.90	29.50	37.40	99.47	3,418.43	830.67	936.62	872.33	64.29	14.568	
13,900.00	10,360.80	14,101.45	10,514.90	30.19	37.94	99.47	3,518.43	830.68	936.62	871.12	65.50	14.299	
14,000.00	10,360.80	14,201.45	10,514.90	30.88	38.49	99.47	3,618.43	830.68	936.62	869.89	66.73	14.037	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Sheba Federal Com - 306H - OH - Plan 1 11-10-21

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+IFR1+MS

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.00	10,360.80	14,301.45	10,514.90	31.57	39.05	99.47	3,718.43	830.69	936.62	868.66	67.96	13.782	
14,200.00	10,360.80	14,401.45	10,514.90	32.27	39.61	99.47	3,818.43	830.70	936.62	867.41	69.21	13.534	
14,300.00	10,360.80	14,501.45	10,514.90	32.97	40.19	99.47	3,918.43	830.71	936.62	866.16	70.46	13.293	
14,400.00	10,360.80	14,601.45	10,514.90	33.67	40.76	99.47	4,018.43	830.72	936.62	864.89	71.73	13.058	
14,500.00	10,360.80	14,701.45	10,514.90	34.37	41.35	99.47	4,118.43	830.73	936.62	863.62	73.00	12.830	
14,600.00	10,360.80	14,801.45	10,514.90	35.08	41.94	99.47	4,218.43	830.73	936.62	862.33	74.29	12.608	
14,700.00	10,360.80	14,901.45	10,514.90	35.79	42.53	99.47	4,318.43	830.74	936.62	861.04	75.58	12.392	
14,800.00	10,360.80	15,001.45	10,514.90	36.50	43.14	99.47	4,418.43	830.75	936.62	859.73	76.89	12.182	
14,900.00	10,360.80	15,101.45	10,514.90	37.22	43.74	99.47	4,518.43	830.76	936.62	858.42	78.20	11.978	
15,000.00	10,360.80	15,201.45	10,514.90	37.93	44.35	99.47	4,618.43	830.77	936.62	857.11	79.51	11.779	
15,100.00	10,360.80	15,301.45	10,514.90	38.65	44.97	99.47	4,718.43	830.78	936.62	855.78	80.84	11.586	
15,200.00	10,360.80	15,401.45	10,514.90	39.37	45.59	99.47	4,818.43	830.79	936.62	854.45	82.17	11.399	
15,300.00	10,360.80	15,501.45	10,514.90	40.09	46.21	99.47	4,918.43	830.79	936.62	853.11	83.51	11.216	
15,400.00	10,360.80	15,601.45	10,514.90	40.81	46.84	99.47	5,018.43	830.80	936.62	851.77	84.85	11.038	
15,500.00	10,360.80	15,701.45	10,514.90	41.54	47.47	99.47	5,118.43	830.81	936.62	850.42	86.20	10.865	
15,600.00	10,360.80	15,801.45	10,514.90	42.26	48.11	99.47	5,218.43	830.82	936.62	849.06	87.56	10.697	
15,700.00	10,360.80	15,901.45	10,514.90	42.99	48.75	99.47	5,318.43	830.83	936.62	847.70	88.92	10.533	
15,800.00	10,360.80	16,001.45	10,514.90	43.72	49.39	99.47	5,418.43	830.84	936.62	846.33	90.29	10.374	
15,900.00	10,360.80	16,101.45	10,514.90	44.45	50.04	99.47	5,518.43	830.84	936.62	844.96	91.66	10.219	
16,000.00	10,360.80	16,201.45	10,514.90	45.18	50.69	99.47	5,618.43	830.85	936.62	843.59	93.03	10.068	
16,100.00	10,360.80	16,301.45	10,514.90	45.91	51.34	99.47	5,718.43	830.86	936.62	842.21	94.41	9.920	
16,200.00	10,360.80	16,401.45	10,514.90	46.64	52.00	99.47	5,818.43	830.87	936.62	840.82	95.80	9.777	
16,300.00	10,360.80	16,501.45	10,514.90	47.38	52.66	99.47	5,918.43	830.88	936.62	839.43	97.19	9.637	
16,400.00	10,360.80	16,601.45	10,514.90	48.11	53.32	99.47	6,018.43	830.89	936.62	838.04	98.58	9.501	
16,500.00	10,360.80	16,701.45	10,514.90	48.85	53.99	99.47	6,118.43	830.90	936.62	836.64	99.98	9.368	
16,600.00	10,360.80	16,801.45	10,514.90	49.59	54.65	99.47	6,218.43	830.90	936.62	835.24	101.38	9.239	
16,700.00	10,360.80	16,901.45	10,514.90	50.32	55.32	99.47	6,318.43	830.91	936.62	833.83	102.79	9.112	
16,800.00	10,360.80	17,001.45	10,514.90	51.06	56.00	99.47	6,418.43	830.92	936.62	832.43	104.19	8.989	
16,900.00	10,360.80	17,101.45	10,514.90	51.80	56.67	99.47	6,518.43	830.93	936.62	831.01	105.61	8.869	
17,000.00	10,360.80	17,201.45	10,514.90	52.54	57.35	99.47	6,618.43	830.94	936.62	829.60	107.02	8.752	
17,100.00	10,360.80	17,301.45	10,514.90	53.28	58.03	99.47	6,718.43	830.95	936.62	828.18	108.44	8.637	
17,200.00	10,360.80	17,401.45	10,514.90	54.02	58.71	99.47	6,818.43	830.96	936.62	826.76	109.86	8.526	
17,300.00	10,360.80	17,501.45	10,514.90	54.76	59.39	99.47	6,918.43	830.96	936.62	825.34	111.28	8.417	
17,400.00	10,360.80	17,601.45	10,514.90	55.50	60.08	99.47	7,018.43	830.97	936.62	823.91	112.71	8.310	
17,500.00	10,360.80	17,701.45	10,514.90	56.25	60.76	99.47	7,118.43	830.98	936.62	822.48	114.14	8.206	
17,600.00	10,360.80	17,801.45	10,514.90	56.99	61.45	99.47	7,218.43	830.99	936.62	821.05	115.57	8.104	
17,700.00	10,360.80	17,901.45	10,514.90	57.73	62.14	99.47	7,318.43	831.00	936.62	819.62	117.00	8.005	
17,800.00	10,360.80	18,001.45	10,514.90	58.48	62.84	99.47	7,418.43	831.01	936.62	818.18	118.44	7.908	
17,805.97	10,360.80	18,007.42	10,514.90	58.52	62.88	99.47	7,424.40	831.01	936.62	818.10	118.52	7.902	
17,856.55	10,360.80	18,057.05	10,514.90	58.90	63.22	99.47	7,474.03	831.01	936.62	817.38	119.24	7.855	

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Sheba/Solomon Location - Sheba Federal Com 506H - OH / 68321 - Surveys (H&P 296)

Offset Site Error: 0.00 usft

Survey Program: 136-MWD+IFR1+MS **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	4.20	1.00	1.00	123.75	-40.06	59.95	72.22				
100.00	100.00	95.66	99.86	1.09	1.11	123.90	-40.27	59.93	72.20	70.00	2.20	32.887 CC	
200.00	200.00	195.65	199.85	1.60	1.50	124.32	-40.84	59.83	72.44	69.36	3.09	23.475	
300.00	300.00	295.54	299.74	2.01	1.96	124.90	-41.59	59.61	72.68	68.75	3.93	18.517	
400.00	400.00	395.38	399.57	2.35	2.34	125.73	-42.73	59.39	73.17	68.55	4.61	15.860 ES	
500.00	500.00	495.27	499.45	2.65	2.69	126.67	-44.09	59.23	73.84	68.61	5.22	14.136	
600.00	600.00	595.11	599.28	2.93	3.02	127.61	-45.58	59.16	74.68	68.90	5.78	12.913	
700.00	700.00	694.85	699.01	3.18	3.39	128.58	-47.28	59.26	75.82	69.45	6.36	11.913	
800.00	800.00	794.77	798.91	3.41	3.73	129.65	-49.27	59.45	77.22	70.33	6.89	11.200	
900.00	900.00	894.67	898.79	3.64	4.04	130.64	-51.24	59.69	78.68	71.30	7.38	10.658	
1,000.00	1,000.00	994.39	998.48	3.85	4.34	131.69	-53.46	60.01	80.38	72.52	7.86	10.229	
1,100.00	1,100.00	1,093.86	1,097.91	4.05	4.62	132.73	-56.01	60.64	82.58	74.26	8.31	9.933	
1,200.00	1,200.00	1,193.75	1,197.76	4.24	4.93	133.52	-58.63	61.73	85.16	76.36	8.80	9.672	
1,300.00	1,300.00	1,293.98	1,297.96	4.43	5.23	134.25	-61.14	62.77	87.65	78.37	9.28	9.444	
1,400.00	1,400.00	1,394.31	1,398.24	4.61	5.54	135.42	-63.94	63.01	89.78	80.05	9.73	9.223	
1,500.00	1,500.00	1,494.33	1,498.22	4.78	5.84	136.83	-66.90	62.76	91.75	81.58	10.18	9.015	
1,600.00	1,600.00	1,594.75	1,598.62	4.95	6.13	137.67	-69.04	62.90	93.41	82.80	10.61	8.802	
1,700.00	1,700.00	1,694.45	1,698.30	5.12	6.37	137.46	-70.03	64.27	95.07	84.05	11.02	8.628	
1,800.00	1,800.00	1,794.48	1,798.31	5.28	6.55	136.68	-70.46	66.45	96.86	85.46	11.41	8.492	
1,900.00	1,900.00	1,894.68	1,898.48	5.44	6.71	135.85	-70.65	68.57	98.46	86.69	11.77	8.364	
2,000.00	2,000.00	1,994.49	1,998.27	5.59	6.87	135.16	-70.94	70.54	100.06	87.92	12.14	8.240	
2,100.00	2,099.99	2,094.22	2,097.98	5.69	7.07	-66.42	-71.62	72.54	101.61	89.14	12.47	8.150	
2,200.00	2,199.96	2,193.76	2,197.49	5.81	7.29	-68.18	-72.49	74.56	102.67	89.88	12.80	8.024	
2,300.00	2,299.86	2,291.71	2,295.39	5.95	7.55	-70.81	-73.90	77.35	104.25	91.11	13.14	7.931	
2,400.00	2,399.68	2,388.40	2,391.93	6.10	7.91	-74.09	-76.91	82.03	108.15	94.57	13.58	7.961	
2,500.00	2,499.37	2,485.01	2,488.17	6.28	8.31	-78.54	-80.38	89.64	114.86	100.82	14.04	8.181	
2,600.00	2,598.90	2,581.23	2,583.79	6.48	8.68	-83.80	-83.73	99.79	124.37	109.96	14.41	8.629	
2,700.00	2,698.26	2,677.08	2,678.78	6.70	9.03	-89.12	-87.48	112.06	137.08	122.37	14.71	9.319	
2,800.00	2,797.40	2,773.12	2,773.73	6.95	9.36	-93.73	-92.66	125.44	152.47	137.50	14.97	10.188	
2,900.00	2,896.30	2,870.33	2,869.66	7.21	9.71	-97.69	-99.22	139.69	169.95	154.71	15.24	11.154	
3,000.00	2,994.93	2,966.57	2,964.54	7.50	10.08	-100.77	-107.58	153.51	188.48	172.93	15.54	12.125	
3,100.00	3,093.41	3,061.54	3,057.89	7.80	10.47	-103.38	-116.92	168.30	209.01	193.13	15.88	13.166	
3,200.00	3,191.89	3,159.72	3,154.24	8.12	10.87	-105.47	-127.13	184.13	230.50	214.24	16.26	14.180	
3,300.00	3,290.37	3,260.08	3,252.88	8.45	11.27	-107.15	-137.87	199.25	251.18	234.52	16.66	15.075	
3,400.00	3,388.85	3,359.37	3,350.62	8.79	11.67	-108.62	-148.24	213.33	271.16	254.09	17.07	15.889	
3,500.00	3,487.33	3,459.92	3,449.69	9.14	12.07	-109.94	-158.53	226.97	290.68	273.20	17.48	16.626	
3,526.31	3,513.25	3,486.61	3,476.03	9.22	12.18	-110.26	-161.23	230.41	295.66	278.08	17.58	16.820	
3,600.00	3,585.90	3,561.49	3,549.96	9.46	12.48	-111.18	-168.75	239.63	309.06	291.19	17.87	17.297	
3,700.00	3,684.73	3,658.11	3,645.36	9.82	12.87	-111.97	-178.68	251.25	326.49	308.22	18.28	17.865	
3,800.00	3,783.81	3,757.91	3,743.85	10.18	13.28	-112.43	-189.01	263.58	343.62	324.88	18.73	18.343	
3,900.00	3,883.11	3,852.58	3,837.32	10.53	13.67	-112.67	-198.32	275.43	360.26	341.09	19.17	18.792	
4,000.00	3,982.61	3,962.72	3,946.27	10.88	14.22	-112.85	-207.65	288.44	375.64	355.83	19.80	18.967	
4,100.00	4,082.26	4,068.81	4,051.77	11.22	14.78	-113.24	-213.50	297.95	387.59	367.16	20.43	18.970	
4,200.00	4,182.04	4,169.28	4,151.77	11.54	15.17	-113.37	-218.95	305.99	397.92	377.02	20.90	19.042	
4,300.00	4,281.92	4,270.33	4,252.32	11.85	15.55	-113.16	-225.08	313.91	407.37	386.02	21.35	19.079	
4,400.00	4,381.88	4,377.02	4,358.59	12.13	15.94	-112.79	-230.95	321.17	415.15	393.33	21.82	19.024	
4,500.00	4,481.87	4,485.44	4,466.81	12.37	16.36	-112.39	-235.36	326.18	420.13	397.85	22.28	18.854	
4,526.31	4,508.18	4,513.40	4,494.74	12.39	16.47	88.33	-236.19	327.15	421.04	398.67	22.38	18.815	
4,600.00	4,581.87	4,587.74	4,569.02	12.41	16.72	88.59	-238.06	329.44	423.26	400.64	22.62	18.710	
4,700.00	4,681.87	4,685.15	4,666.34	12.47	17.03	88.95	-240.67	332.66	426.51	403.55	22.97	18.571	
4,800.00	4,781.87	4,784.38	4,765.45	12.52	17.35	89.37	-243.74	336.53	430.37	407.04	23.33	18.450	
4,900.00	4,881.87	4,893.19	4,874.16	12.58	17.71	89.80	-246.95	339.88	433.45	409.76	23.68	18.301	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Sheba/Solomon Location - Sheba Federal Com 506H - OH / 68321 - Surveys (H&P 296)

Offset Site Error: 0.00 usft

Survey Program: 136-MWD+IFR1+MS

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,981.87	4,994.32	4,975.26	12.64	18.02	90.07	-249.00	341.34	434.89	410.90	23.99	18.131	
5,100.00	5,081.87	5,091.22	5,072.12	12.70	18.30	90.35	-251.15	343.12	436.74	412.45	24.29	17.980	
5,200.00	5,181.87	5,191.62	5,172.46	12.76	18.60	90.66	-253.55	345.34	438.97	414.35	24.61	17.834	
5,300.00	5,281.87	5,299.25	5,280.07	12.82	18.88	90.87	-255.16	346.72	440.27	415.38	24.89	17.691	
5,400.00	5,381.87	5,405.46	5,386.28	12.88	18.89	90.90	-255.40	346.30	439.88	414.95	24.92	17.650	
5,500.00	5,481.87	5,507.25	5,488.06	12.94	18.71	90.83	-254.81	345.08	438.67	413.83	24.84	17.657	
5,600.00	5,581.87	5,607.68	5,588.48	13.00	18.57	90.79	-254.47	343.60	437.19	412.42	24.77	17.647	
5,700.00	5,681.87	5,708.75	5,689.53	13.06	18.45	90.79	-254.48	341.96	435.56	410.86	24.70	17.632	
5,800.00	5,781.87	5,807.74	5,788.51	13.12	18.34	90.81	-254.60	340.33	433.92	409.27	24.65	17.606	
5,900.00	5,881.87	5,907.89	5,888.65	13.18	18.24	90.81	-254.61	338.77	432.36	407.77	24.59	17.585	
6,000.00	5,981.87	6,007.44	5,988.19	13.24	18.13	90.82	-254.63	337.28	430.86	406.33	24.54	17.560	
6,100.00	6,081.87	6,108.35	6,089.08	13.30	18.05	90.86	-254.92	335.67	429.27	404.78	24.49	17.530	
6,200.00	6,181.87	6,208.59	6,189.31	13.36	17.98	90.91	-255.23	333.97	427.58	403.14	24.44	17.492	
6,300.00	6,281.87	6,309.33	6,290.03	13.42	17.90	90.95	-255.53	332.09	425.72	401.33	24.40	17.450	
6,400.00	6,381.87	6,409.95	6,390.63	13.49	17.81	90.97	-255.65	330.14	423.79	399.44	24.35	17.406	
6,500.00	6,481.87	6,510.86	6,491.52	13.55	17.71	90.99	-255.76	327.86	421.53	397.23	24.30	17.350	
6,600.00	6,581.87	6,610.97	6,591.60	13.61	17.63	91.04	-256.07	325.61	419.29	395.03	24.25	17.288	
6,700.00	6,681.87	6,711.37	6,691.97	13.67	17.55	91.07	-256.24	323.16	416.86	392.64	24.21	17.217	
6,800.00	6,781.87	6,806.31	6,786.88	13.74	17.47	91.11	-256.49	321.19	414.79	390.57	24.22	17.126	
6,850.71	6,832.57	6,852.00	6,832.58	13.77	17.44	91.09	-256.36	320.88	414.45	390.21	24.24	17.097	
6,900.00	6,881.87	6,893.93	6,874.50	13.80	17.50	91.06	-256.15	321.23	414.86	390.50	24.36	17.033	
7,000.00	6,981.87	6,984.19	6,964.71	13.86	17.70	91.01	-255.83	324.36	418.28	393.63	24.64	16.973	
7,100.00	7,081.87	7,084.77	7,065.21	13.93	17.96	90.95	-255.48	328.38	422.27	397.27	25.00	16.893	
7,200.00	7,181.87	7,185.37	7,165.72	13.99	18.12	90.85	-254.77	332.33	426.18	400.87	25.31	16.841	
7,300.00	7,281.87	7,286.81	7,267.10	14.05	18.28	90.78	-254.30	336.00	429.79	404.17	25.62	16.776	
7,400.00	7,381.87	7,387.49	7,367.72	14.12	18.44	90.71	-253.81	339.34	433.10	407.17	25.93	16.703	
7,500.00	7,481.87	7,488.36	7,468.54	14.18	18.60	90.60	-253.07	342.57	436.29	410.06	26.24	16.630	
7,600.00	7,581.87	7,590.48	7,570.61	14.24	18.75	90.52	-252.47	345.47	439.13	412.59	26.54	16.547	
7,700.00	7,681.87	7,689.49	7,669.59	14.31	18.90	90.43	-251.82	348.03	441.71	414.88	26.84	16.458	
7,800.00	7,781.87	7,790.43	7,770.49	14.37	19.04	90.33	-251.05	350.80	444.45	417.31	27.14	16.378	
7,900.00	7,881.87	7,892.00	7,872.02	14.44	19.19	90.24	-250.35	353.22	446.83	419.39	27.44	16.287	
8,000.00	7,981.87	7,993.88	7,973.88	14.50	19.34	90.18	-249.87	355.25	448.82	421.09	27.73	16.185	
8,100.00	8,081.87	8,095.10	8,075.09	14.57	19.44	90.07	-248.99	356.91	450.46	422.47	28.00	16.090	
8,200.00	8,181.87	8,196.51	8,176.48	14.63	19.52	89.94	-248.01	358.32	451.85	423.60	28.24	15.998	
8,300.00	8,281.87	8,300.20	8,280.16	14.70	19.58	89.87	-247.44	359.09	452.59	424.13	28.46	15.900	
8,400.00	8,381.87	8,402.06	8,382.02	14.76	19.55	89.80	-246.87	359.24	452.74	424.15	28.59	15.834	
8,500.00	8,481.87	8,503.42	8,483.39	14.83	19.48	89.78	-246.71	359.08	452.58	423.96	28.62	15.812	
8,600.00	8,581.87	8,605.74	8,585.70	14.90	19.39	89.78	-246.71	358.49	452.01	423.41	28.60	15.805	
8,700.00	8,681.87	8,708.10	8,688.05	14.96	19.26	89.73	-246.34	357.33	450.87	422.32	28.55	15.793	
8,800.00	8,781.87	8,810.32	8,790.26	15.03	19.12	89.67	-245.91	355.69	449.27	420.79	28.49	15.771	
8,900.00	8,881.87	8,910.43	8,890.35	15.09	18.98	89.64	-245.68	353.70	447.29	418.86	28.43	15.735	
9,000.00	8,981.87	9,012.24	8,992.14	15.16	18.85	89.60	-245.38	351.68	445.30	416.94	28.36	15.701	
9,100.00	9,081.87	9,112.88	9,092.75	15.23	18.72	89.59	-245.27	349.20	442.84	414.54	28.30	15.649	
9,200.00	9,181.87	9,212.64	9,192.48	15.29	18.62	89.61	-245.47	346.77	440.41	412.16	28.25	15.591	
9,300.00	9,281.87	9,314.13	9,293.93	15.36	18.55	89.69	-246.14	344.19	437.86	409.66	28.20	15.526	
9,400.00	9,381.87	9,418.29	9,398.04	15.43	18.46	89.76	-246.68	340.84	434.64	406.50	28.14	15.443	
9,500.00	9,481.87	9,519.93	9,499.60	15.50	18.34	89.77	-246.74	336.85	430.71	402.63	28.08	15.339	
9,600.00	9,581.87	9,619.53	9,599.12	15.56	18.25	89.84	-247.27	332.74	426.59	398.56	28.03	15.219	
9,700.00	9,681.87	9,717.00	9,696.51	15.63	18.20	90.01	-248.55	329.23	422.98	394.97	28.01	15.102	
9,800.00	9,781.87	9,821.72	9,801.13	15.70	18.15	90.17	-249.72	324.75	418.69	390.71	27.98	14.964	
9,805.97	9,787.84	9,827.43	9,806.83	15.71	18.15	90.18	-249.78	324.49	418.42	390.44	27.98	14.955	
9,850.00	9,831.82	9,869.43	9,848.79	15.72	18.12	90.64	-250.16	322.67	416.53	388.57	27.96	14.896	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Sheba/Solomon Location - Sheba Federal Com 506H - OH / 68321 - Surveys (H&P 296)

Offset Site Error: 0.00 usft

Survey Program: 136-MWD+IFR1+MS

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,900.00	9,881.44	9,913.04	9,892.37	15.84	18.13	91.58	-250.63	321.09	414.84	386.80	28.04	14.795	
9,934.77	9,915.55	9,940.14	9,919.46	15.93	18.16	92.42	-251.17	320.58	414.45	386.28	28.17	14.713	
9,950.00	9,930.35	9,951.86	9,931.17	15.97	18.17	92.84	-251.48	320.50	414.53	386.30	28.23	14.682	
10,000.00	9,978.18	9,989.61	9,968.90	16.08	18.22	94.37	-252.78	320.80	416.03	387.55	28.48	14.605	
10,050.00	10,024.56	10,038.09	10,017.32	16.18	18.35	96.79	-254.90	321.52	419.05	390.18	28.87	14.514	
10,100.00	10,069.13	10,084.12	10,063.30	16.27	18.48	99.44	-257.24	321.84	423.50	394.19	29.31	14.450	
10,150.00	10,111.56	10,127.50	10,106.62	16.35	18.57	102.08	-259.46	321.89	430.04	400.35	29.69	14.486	
10,200.00	10,151.53	10,168.48	10,147.56	16.42	18.67	104.58	-261.30	321.77	439.23	409.10	30.13	14.580	
10,250.00	10,188.74	10,205.45	10,184.50	16.47	18.76	106.64	-262.71	321.58	451.58	420.96	30.62	14.747	
10,300.00	10,222.89	10,239.35	10,218.38	16.51	18.85	108.23	-263.69	321.48	467.52	436.37	31.15	15.009	
10,350.00	10,253.73	10,270.43	10,249.46	16.54	18.93	109.28	-264.34	321.45	487.20	455.52	31.68	15.379	
10,400.00	10,281.02	10,298.44	10,277.47	16.56	19.00	109.67	-264.70	321.48	510.62	478.43	32.19	15.864	
10,450.00	10,304.56	10,322.28	10,301.31	16.57	19.06	109.22	-264.87	321.54	537.65	505.00	32.65	16.466	
10,500.00	10,324.17	10,341.44	10,320.47	16.58	19.10	107.77	-265.00	321.58	568.11	535.05	33.06	17.184	
10,550.00	10,339.70	10,356.48	10,335.50	16.58	19.13	105.23	-265.11	321.61	601.66	568.26	33.41	18.010	
10,600.00	10,351.03	10,367.29	10,346.32	16.58	19.16	101.50	-265.20	321.63	637.87	604.18	33.69	18.932	
10,650.00	10,358.07	10,373.83	10,352.85	16.58	19.17	96.44	-265.26	321.64	676.26	642.34	33.92	19.936	
10,700.00	10,360.77	10,376.07	10,355.09	16.58	19.18	90.06	-265.28	321.64	716.33	682.23	34.10	21.006	
10,705.97	10,360.80	10,376.05	10,355.07	16.58	19.18	89.21	-265.28	321.64	721.21	687.09	34.12	21.137	
10,800.00	10,360.80	10,375.24	10,354.27	16.60	19.18	89.10	-265.27	321.64	799.93	765.57	34.36	23.280	
10,900.00	10,360.80	10,374.40	10,353.42	16.63	19.17	88.98	-265.26	321.64	886.92	852.39	34.54	25.680	
11,000.00	10,360.80	10,373.56	10,352.58	16.66	19.17	88.87	-265.25	321.64	976.41	941.75	34.66	28.174	
11,100.00	10,360.80	11,976.00	11,269.71	16.69	26.86	155.21	706.95	326.41	1,001.25	949.46	51.80	19.330	
11,200.00	10,360.80	12,072.00	11,270.85	16.74	26.88	155.20	802.94	327.18	1,002.67	950.37	52.30	19.172	
11,300.00	10,360.80	12,171.98	11,272.45	16.79	26.90	155.21	902.90	327.65	1,004.30	951.47	52.83	19.008	
11,400.00	10,360.80	12,282.99	11,273.62	16.86	26.94	155.23	1,013.91	327.91	1,005.36	951.97	53.40	18.829	
11,500.00	10,360.80	12,396.07	11,273.29	16.96	26.97	155.22	1,126.98	327.77	1,005.03	951.03	54.00	18.611	
11,600.00	10,360.80	12,507.12	11,272.15	17.09	27.02	155.24	1,238.03	326.90	1,003.77	949.10	54.67	18.360	
11,700.00	10,360.80	12,617.78	11,269.17	17.30	27.07	155.19	1,348.65	326.54	1,001.19	945.82	55.37	18.082	
11,800.00	10,360.80	12,710.15	11,266.51	17.59	27.11	155.15	1,440.97	326.11	998.38	942.29	56.10	17.797	
11,900.00	10,360.80	12,811.10	11,264.27	17.97	27.16	155.11	1,541.90	325.88	996.28	939.42	56.86	17.521	
12,000.00	10,360.80	12,921.84	11,260.96	18.41	27.23	155.05	1,652.59	325.52	993.43	935.75	57.67	17.225	
12,100.00	10,360.80	13,009.21	11,257.77	18.90	27.29	154.92	1,739.89	326.42	990.56	932.12	58.44	16.949	
12,200.00	10,360.80	13,110.65	11,254.50	19.42	27.37	154.74	1,841.26	328.35	988.45	929.19	59.26	16.680	
12,300.00	10,360.80	13,204.89	11,251.51	19.97	27.45	154.57	1,935.43	330.16	986.40	926.32	60.08	16.419	
12,400.00	10,360.80	13,304.76	11,248.34	20.53	27.54	154.35	2,035.22	332.92	984.72	923.79	60.93	16.162	
12,484.05	10,360.80	13,372.10	11,246.82	21.02	27.62	154.22	2,102.52	334.70	983.98	922.38	61.60	15.975	
12,500.00	10,360.80	13,384.76	11,246.71	21.11	27.63	154.20	2,115.18	334.98	984.00	922.28	61.72	15.942	
12,600.00	10,360.80	13,474.99	11,246.56	21.71	27.74	154.07	2,205.37	337.29	984.96	922.37	62.59	15.736	
12,700.00	10,360.80	13,569.15	11,246.53	22.31	27.88	153.89	2,299.46	340.89	986.60	923.13	63.48	15.543	
12,800.00	10,360.80	13,668.17	11,247.30	22.93	28.06	153.75	2,398.43	343.90	988.64	924.22	64.42	15.346	
12,900.00	10,360.80	13,775.10	11,248.00	23.56	28.31	153.62	2,505.32	346.68	990.38	924.91	65.47	15.127	
13,000.00	10,360.80	13,881.53	11,247.25	24.19	28.63	153.40	2,611.68	350.58	991.38	924.87	66.51	14.906	
13,100.00	10,360.80	13,980.58	11,246.47	24.83	28.98	153.22	2,710.67	353.69	992.08	924.57	67.51	14.695	
13,200.00	10,360.80	14,069.33	11,246.54	25.48	29.34	153.09	2,799.39	356.23	993.44	925.00	68.44	14.516	
13,300.00	10,360.80	14,172.06	11,247.12	26.14	29.81	152.96	2,902.07	359.10	995.20	925.68	69.52	14.314	
13,400.00	10,360.80	14,269.64	11,247.54	26.80	30.30	152.82	2,999.61	362.03	996.96	926.39	70.57	14.127	
13,500.00	10,360.80	14,366.07	11,248.32	27.47	30.81	152.69	3,095.98	365.09	999.12	927.50	71.62	13.951	
13,600.00	10,360.80	14,477.61	11,248.72	28.14	31.44	152.55	3,207.49	368.07	1,000.65	927.79	72.86	13.735	
13,700.00	10,360.80	14,575.33	11,249.29	28.82	32.01	152.50	3,305.20	369.31	1,001.75	927.78	73.97	13.542	
13,800.00	10,360.80	14,689.11	11,250.45	29.50	32.70	152.48	3,418.97	370.39	1,003.19	927.87	75.32	13.319	
13,900.00	10,360.80	14,814.91	11,248.61	30.19	33.49	152.50	3,544.74	369.07	1,001.28	924.44	76.84	13.031	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Sheba/Solomon Location - Sheba Federal Com 506H - OH / 68321 - Surveys (H&P 296)

Offset Site Error: 0.00 usft

Survey Program: 136-MWD+IFR1+MS

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,000.00	10,360.80	14,914.67	11,246.84	30.88	34.13	152.57	3,644.46	366.68	998.60	920.53	78.07	12.791	
14,100.00	10,360.80	15,019.22	11,244.80	31.57	34.80	152.64	3,748.96	364.26	995.80	916.43	79.37	12.547	
14,200.00	10,360.80	15,126.30	11,242.30	32.27	35.50	152.73	3,855.96	361.15	992.39	911.68	80.71	12.296	
14,300.00	10,360.80	15,228.40	11,239.60	32.97	36.17	152.87	3,957.95	357.22	988.27	906.25	82.02	12.049	
14,400.00	10,360.80	15,312.97	11,237.93	33.67	36.73	152.95	4,042.46	354.71	985.14	902.03	83.11	11.854	
14,500.00	10,360.80	15,419.13	11,236.08	34.37	37.45	153.03	4,148.58	352.24	982.53	898.06	84.48	11.631	
14,600.00	10,360.80	15,526.13	11,232.36	35.08	38.17	153.03	4,255.50	350.34	978.59	892.73	85.86	11.398	
14,700.00	10,360.80	15,608.76	11,230.71	35.79	38.73	153.09	4,338.09	348.42	975.75	888.80	86.94	11.223	
14,800.00	10,360.80	15,697.07	11,230.53	36.50	39.33	153.21	4,426.36	346.12	974.38	886.27	88.10	11.060	
14,900.00	10,360.80	15,791.00	11,231.47	37.22	39.97	153.38	4,520.24	343.22	973.88	884.53	89.35	10.900	
14,931.07	10,360.80	15,820.32	11,231.89	37.44	40.17	153.44	4,549.55	342.33	973.85	884.11	89.74	10.852	
15,000.00	10,360.80	15,885.15	11,232.83	37.93	40.62	153.55	4,614.36	340.75	973.99	883.39	90.60	10.750	
15,100.00	10,360.80	15,981.22	11,235.07	38.65	41.28	153.75	4,710.35	337.99	974.80	882.89	91.90	10.607	
15,200.00	10,360.80	16,104.27	11,235.86	39.37	42.13	153.97	4,833.34	334.32	973.97	880.30	93.67	10.398	
15,300.00	10,360.80	16,199.47	11,234.84	40.09	42.81	153.99	4,928.52	333.36	972.57	877.63	94.93	10.245	
15,400.00	10,360.80	16,295.58	11,234.77	40.81	43.49	154.06	5,024.63	332.15	971.94	875.72	96.22	10.101	
15,500.00	10,360.80	16,395.70	11,234.90	41.54	44.19	154.17	5,124.73	330.05	971.13	873.54	97.59	9.951	
15,600.00	10,360.80	16,491.65	11,235.30	42.26	44.86	154.27	5,220.66	328.41	970.77	871.87	98.89	9.816	
15,700.00	10,360.80	16,613.39	11,235.25	42.99	45.72	154.39	5,342.38	326.13	970.01	869.36	100.65	9.637	
15,800.00	10,360.80	16,721.00	11,232.63	43.72	46.49	154.45	5,449.92	323.79	966.86	864.70	102.16	9.464	
15,900.00	10,360.80	16,791.40	11,231.74	44.45	46.99	154.50	5,520.31	322.48	964.98	861.93	103.05	9.364	
15,905.58	10,360.80	16,795.15	11,231.76	44.49	47.02	154.50	5,524.05	322.45	964.97	861.88	103.09	9.360	
16,000.00	10,360.80	16,867.94	11,233.04	45.18	47.54	154.55	5,596.84	322.18	966.26	862.27	103.99	9.292	
16,100.00	10,360.80	16,958.08	11,235.99	45.91	48.19	154.63	5,686.92	322.02	969.12	863.93	105.18	9.214	
16,200.00	10,360.80	17,057.17	11,240.04	46.64	48.90	154.77	5,785.93	321.35	972.52	865.95	106.57	9.125	
16,300.00	10,360.80	17,158.37	11,243.02	47.38	49.63	154.77	5,887.08	322.64	975.72	867.74	107.98	9.036	
16,400.00	10,360.80	17,246.39	11,245.96	48.11	50.26	154.79	5,975.04	323.72	979.30	870.19	109.11	8.975	
16,500.00	10,360.80	17,362.67	11,251.39	48.85	51.10	154.85	6,091.17	325.22	984.26	873.35	110.91	8.874	
16,600.00	10,360.80	17,513.68	11,249.16	49.59	52.18	154.62	6,242.10	328.43	983.52	870.18	113.34	8.678	
16,700.00	10,360.80	17,605.40	11,245.40	50.32	52.84	154.34	6,333.68	331.94	981.46	866.93	114.53	8.569	
16,800.00	10,360.80	17,691.76	11,242.63	51.06	53.46	154.05	6,419.89	336.20	980.71	865.10	115.60	8.484	
16,900.00	10,360.80	17,795.42	11,239.49	51.80	54.21	153.69	6,523.36	341.62	980.28	863.30	116.98	8.380	
16,973.36	10,360.80	17,864.01	11,237.60	52.34	54.70	153.46	6,591.83	345.05	980.10	862.23	117.86	8.315	
17,000.00	10,360.80	17,886.23	11,237.11	52.54	54.86	153.39	6,614.03	346.11	980.15	862.01	118.14	8.297	
17,100.00	10,360.80	17,968.00	11,236.99	53.28	55.46	153.22	6,695.73	349.23	981.69	862.56	119.13	8.240	
17,200.00	10,360.80	18,075.85	11,237.50	54.02	56.24	153.05	6,803.52	352.88	983.64	862.95	120.70	8.150	
17,300.00	10,360.80	18,164.22	11,237.90	54.76	56.88	152.88	6,891.81	356.31	985.80	863.99	121.82	8.093	
17,400.00	10,360.80	18,265.30	11,238.88	55.50	57.62	152.72	6,992.83	359.90	988.28	865.05	123.23	8.020	
17,500.00	10,360.80	18,349.00	11,241.65	56.25	58.23	152.72	7,076.46	361.34	991.96	867.68	124.28	7.982	
17,600.00	10,360.80	18,486.90	11,244.69	56.99	59.24	152.79	7,214.32	361.53	993.86	867.22	126.64	7.848	
17,700.00	10,360.80	18,601.04	11,245.02	57.73	60.08	152.84	7,328.45	360.76	993.84	865.46	128.38	7.741	
17,800.00	10,360.80	18,708.79	11,243.64	58.48	60.87	152.86	7,436.18	359.63	992.20	862.23	129.97	7.634	
17,855.90	10,360.80	18,747.00	11,243.06	58.89	61.15	152.87	7,474.39	359.27	991.36	860.93	130.43	7.601	SF
17,856.55	10,360.80	18,747.00	11,243.06	58.90	61.15	152.87	7,474.39	359.27	991.36	860.94	130.42	7.601	

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Sheba/Solomon Location - Solomon Federal Com 505H - OH / 68322 - Surveys (H&P 296)

Offset Site Error: 0.00 usft

Survey Program: 156-MWD+IFR1+MS

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	4.40	1.00	1.00	143.20	-40.03	29.95	50.19				
100.00	100.00	95.86	100.26	1.09	1.13	143.59	-40.03	29.52	49.74	47.53	2.22	22.452	
200.00	200.00	196.12	200.51	1.60	1.45	144.81	-40.00	28.21	48.95	45.91	3.04	16.109	
300.00	300.00	296.01	300.39	2.01	1.75	146.39	-39.94	26.55	47.96	44.25	3.71	12.922	
400.00	400.00	395.78	400.15	2.35	2.03	148.03	-40.20	25.10	47.39	43.11	4.28	11.077	
500.00	500.00	495.65	500.01	2.65	2.30	149.62	-40.72	23.87	47.19	42.42	4.77	9.885	
504.09	504.09	499.74	504.09	2.67	2.31	149.69	-40.74	23.82	47.19	42.40	4.79	9.846	
600.00	600.00	595.54	599.88	2.93	2.55	151.13	-41.46	22.86	47.34	42.13	5.22	9.077	
700.00	700.00	695.45	699.79	3.18	2.86	152.46	-42.26	22.03	47.65	41.96	5.70	8.367	
800.00	800.00	795.38	799.71	3.41	3.19	153.89	-43.28	21.21	48.20	42.01	6.19	7.789	
900.00	900.00	895.22	899.54	3.64	3.50	155.36	-44.47	20.40	48.93	42.28	6.66	7.352	
1,000.00	1,000.00	995.03	999.34	3.85	3.81	156.98	-46.07	19.58	50.06	42.96	7.11	7.045	
1,100.00	1,100.00	1,094.82	1,099.11	4.05	4.08	158.47	-48.00	18.93	51.60	44.08	7.52	6.862	
1,200.00	1,200.00	1,194.92	1,199.19	4.24	4.39	159.71	-49.92	18.46	53.23	45.24	8.00	6.657	
1,300.00	1,300.00	1,295.10	1,299.35	4.43	4.68	161.07	-51.63	17.71	54.59	46.15	8.44	6.470	
1,400.00	1,400.00	1,395.25	1,399.48	4.61	4.98	162.69	-53.13	16.56	55.65	46.79	8.86	6.282	
1,500.00	1,500.00	1,495.21	1,499.42	4.78	5.28	164.30	-54.52	15.33	56.63	47.36	9.27	6.107	
1,600.00	1,600.00	1,595.19	1,599.39	4.95	5.58	165.90	-55.92	14.05	57.66	47.98	9.69	5.954	
1,700.00	1,700.00	1,695.07	1,699.24	5.12	5.88	167.75	-57.50	12.49	58.85	48.75	10.10	5.827	
1,800.00	1,800.00	1,795.06	1,799.19	5.28	6.19	170.07	-59.27	10.38	60.18	49.66	10.52	5.720	
1,900.00	1,900.00	1,895.11	1,899.20	5.44	6.50	172.62	-60.97	7.90	61.49	50.54	10.95	5.618	
2,000.00	2,000.00	1,995.10	1,999.14	5.59	6.81	175.24	-62.60	5.21	62.82	51.45	11.37	5.524	
2,100.00	2,099.99	2,095.16	2,099.15	5.69	7.11	-23.16	-64.15	2.50	63.40	51.66	11.74	5.400	
2,200.00	2,199.96	2,195.22	2,199.17	5.81	7.41	-21.84	-65.49	0.09	62.24	50.14	12.10	5.143	
2,300.00	2,299.86	2,295.21	2,299.13	5.95	7.71	-21.43	-66.80	-1.94	59.46	47.01	12.45	4.777	
2,400.00	2,399.68	2,394.94	2,398.81	6.10	8.01	-20.72	-68.10	-4.84	55.04	42.23	12.82	4.295	
2,500.00	2,499.37	2,494.69	2,498.43	6.28	8.36	-18.56	-69.85	-9.49	49.49	36.22	13.27	3.731	
2,600.00	2,598.90	2,594.31	2,597.77	6.48	8.77	-12.80	-71.39	-16.85	42.42	28.51	13.92	3.048	
2,700.00	2,698.26	2,693.39	2,696.31	6.70	9.23	-0.74	-72.89	-26.94	35.06	20.11	14.95	2.345	
2,800.00	2,797.40	2,792.10	2,794.18	6.95	9.69	21.06	-74.62	-39.69	30.26	13.98	16.28	1.859	
2,834.96	2,832.01	2,826.55	2,828.28	7.04	9.84	30.65	-75.26	-44.57	29.84	13.23	16.61	1.796	CC, ES, SF
2,900.00	2,896.30	2,890.61	2,891.62	7.21	10.08	49.03	-76.46	-54.05	31.37	14.63	16.74	1.874	
3,000.00	2,994.93	2,988.87	2,988.65	7.50	10.46	72.49	-78.47	-69.44	39.41	23.29	16.12	2.445	
3,100.00	3,093.41	3,086.71	3,085.07	7.80	10.84	86.81	-80.81	-85.89	52.62	37.02	15.60	3.374	
3,200.00	3,191.89	3,184.76	3,181.44	8.12	11.23	94.18	-83.76	-103.72	68.72	53.21	15.51	4.429	
3,300.00	3,290.37	3,283.66	3,278.42	8.45	11.64	97.49	-88.40	-122.51	85.41	69.68	15.73	5.429	
3,400.00	3,388.85	3,381.57	3,374.22	8.79	12.06	98.78	-94.43	-141.83	102.19	86.14	16.06	6.364	
3,500.00	3,487.33	3,479.13	3,469.48	9.14	12.49	99.43	-100.50	-162.01	119.78	103.37	16.42	7.296	
3,526.31	3,513.25	3,505.00	3,494.72	9.22	12.60	99.60	-102.00	-167.42	124.52	108.02	16.50	7.547	
3,600.00	3,585.90	3,577.55	3,565.61	9.46	12.91	100.10	-105.93	-182.39	137.69	120.93	16.76	8.215	
3,700.00	3,684.73	3,678.42	3,664.53	9.82	13.38	100.77	-110.33	-201.62	154.50	137.29	17.21	8.975	
3,800.00	3,783.81	3,779.06	3,763.54	10.18	13.84	101.11	-114.48	-219.12	169.69	152.02	17.67	9.601	
3,900.00	3,883.11	3,880.11	3,863.07	10.53	14.27	100.75	-119.58	-235.81	183.34	165.19	18.15	10.101	
4,000.00	3,982.61	3,978.63	3,960.13	10.88	14.69	99.89	-124.98	-251.87	196.30	177.65	18.65	10.527	
4,100.00	4,082.26	4,076.16	4,056.02	11.22	15.11	98.50	-130.58	-268.77	209.80	190.61	19.20	10.928	
4,200.00	4,182.04	4,176.97	4,155.02	11.54	15.55	96.53	-137.35	-286.48	223.02	203.17	19.85	11.238	
4,300.00	4,281.92	4,278.99	4,255.44	11.85	16.01	94.47	-144.19	-303.19	235.28	214.75	20.53	11.459	
4,400.00	4,381.88	4,380.79	4,356.08	12.13	16.49	92.76	-149.53	-317.45	246.12	224.91	21.21	11.603	
4,500.00	4,481.87	4,480.64	4,454.92	12.37	16.93	90.97	-154.33	-330.84	256.75	234.86	21.89	11.728	
4,526.31	4,508.18	4,507.22	4,481.24	12.39	17.04	-68.90	-155.57	-334.30	259.50	237.45	22.05	11.766	
4,600.00	4,581.87	4,584.42	4,557.78	12.41	17.36	-70.37	-159.22	-343.73	266.77	244.23	22.54	11.836	
4,700.00	4,681.87	4,687.54	4,660.14	12.47	17.80	-72.32	-165.23	-354.66	274.97	251.75	23.22	11.841	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Sheba/Solomon Location - Solomon Federal Com 505H - OH / 68322 - Surveys (H&P 296)

Offset Site Error: 0.00 usft

Survey Program: 156-MWD+IFR1+MS

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,800.00	4,781.87	4,784.66	4,756.31	12.52	18.24	-74.57	-173.44	-365.40	283.23	259.27	23.96	11.821	
4,900.00	4,881.87	4,877.21	4,847.68	12.58	18.65	-76.84	-182.12	-377.27	293.43	268.72	24.71	11.875	
5,000.00	4,981.87	4,968.61	4,937.69	12.64	19.05	-78.87	-189.90	-391.09	306.50	281.05	25.45	12.044	
5,100.00	5,081.87	5,063.21	5,030.65	12.70	19.47	-80.69	-197.06	-407.10	321.89	295.70	26.19	12.291	
5,200.00	5,181.87	5,161.64	5,127.42	12.76	19.90	-82.20	-203.22	-423.99	337.99	311.08	26.91	12.559	
5,300.00	5,281.87	5,263.73	5,227.99	12.82	20.35	-83.39	-208.23	-440.83	353.79	326.17	27.61	12.813	
5,400.00	5,381.87	5,366.68	5,329.64	12.88	20.78	-84.39	-212.82	-456.48	368.45	340.17	28.27	13.031	
5,500.00	5,481.87	5,468.50	5,430.30	12.94	21.24	-85.32	-217.57	-471.02	382.28	353.33	28.95	13.206	
5,600.00	5,581.87	5,563.76	5,524.51	13.00	21.68	-86.18	-222.35	-484.30	395.85	366.27	29.58	13.381	
5,700.00	5,681.87	5,654.18	5,613.64	13.06	22.10	-86.97	-227.02	-498.78	411.55	381.36	30.19	13.632	
5,800.00	5,781.87	5,750.43	5,708.29	13.12	22.53	-87.79	-232.17	-515.46	428.64	397.81	30.83	13.905	
5,900.00	5,881.87	5,854.03	5,810.32	13.18	22.99	-88.43	-236.42	-532.95	445.40	413.93	31.47	14.152	
6,000.00	5,981.87	5,960.49	5,915.48	13.24	23.44	-88.86	-239.39	-549.22	460.62	428.53	32.09	14.353	
6,100.00	6,081.87	6,060.76	6,014.73	13.30	23.86	-89.15	-241.49	-563.35	474.68	442.03	32.65	14.540	
6,200.00	6,181.87	6,164.95	6,117.89	13.36	24.29	-89.45	-243.80	-577.79	488.52	455.31	33.21	14.711	
6,300.00	6,281.87	6,284.00	6,236.15	13.42	24.79	-89.67	-245.63	-591.26	499.87	466.06	33.81	14.784	
6,400.00	6,381.87	6,392.96	6,344.74	13.49	25.24	-89.81	-246.84	-600.12	507.99	473.64	34.35	14.789	
6,500.00	6,481.87	6,497.05	6,448.55	13.55	25.62	-89.98	-248.27	-607.51	515.09	480.27	34.82	14.792	
6,600.00	6,581.87	6,610.38	6,561.73	13.61	26.02	-90.10	-249.42	-613.33	520.22	484.95	35.27	14.751	
6,700.00	6,681.87	6,716.11	6,667.41	13.67	26.37	-90.21	-250.43	-616.54	523.24	487.58	35.67	14.669	
6,800.00	6,781.87	6,814.88	6,766.13	13.74	26.67	-90.32	-251.45	-619.33	526.07	490.01	36.06	14.590	
6,900.00	6,881.87	6,913.81	6,865.01	13.80	26.97	-90.44	-252.49	-622.41	529.20	492.75	36.45	14.519	
7,000.00	6,981.87	7,011.95	6,963.08	13.86	27.27	-90.52	-253.32	-625.65	532.51	495.67	36.85	14.453	
7,100.00	7,081.87	7,111.89	7,062.95	13.93	27.58	-90.62	-254.30	-629.24	536.11	498.87	37.24	14.394	
7,200.00	7,181.87	7,210.66	7,161.66	13.99	27.89	-90.73	-255.35	-632.77	539.69	502.05	37.65	14.335	
7,300.00	7,281.87	7,308.52	7,259.44	14.05	28.21	-90.83	-256.35	-636.60	543.63	505.57	38.06	14.284	
7,400.00	7,381.87	7,412.39	7,363.22	14.12	28.53	-90.92	-257.25	-640.61	547.50	509.04	38.46	14.237	
7,500.00	7,481.87	7,536.25	7,487.07	14.18	28.59	-90.89	-257.03	-641.87	548.47	509.97	38.49	14.248	
7,600.00	7,581.87	7,634.25	7,585.06	14.24	28.43	-90.82	-256.29	-641.16	547.73	509.27	38.46	14.241	
7,700.00	7,681.87	7,733.46	7,684.26	14.31	28.30	-90.72	-255.37	-640.65	547.20	508.76	38.44	14.235	
7,800.00	7,781.87	7,832.40	7,783.21	14.37	28.19	-90.64	-254.57	-640.34	546.88	508.42	38.46	14.220	
7,899.60	7,881.47	7,930.67	7,881.47	14.44	28.13	-90.56	-253.82	-640.17	546.70	508.18	38.52	14.192	
7,900.00	7,881.87	7,931.06	7,881.85	14.44	28.13	-90.56	-253.82	-640.17	546.70	508.18	38.52	14.192	
8,000.00	7,981.87	8,028.16	7,978.95	14.50	28.17	-90.51	-253.30	-640.45	546.99	508.29	38.70	14.134	
8,100.00	8,081.87	8,125.56	8,076.35	14.57	28.33	-90.47	-252.99	-641.19	547.74	508.77	38.98	14.053	
8,200.00	8,181.87	8,222.21	8,172.99	14.63	28.55	-90.45	-252.83	-642.44	549.03	509.73	39.30	13.969	
8,300.00	8,281.87	8,319.78	8,270.55	14.70	28.79	-90.46	-252.86	-644.32	550.95	511.30	39.65	13.895	
8,400.00	8,381.87	8,419.33	8,370.07	14.76	29.05	-90.45	-252.80	-646.39	553.03	513.03	40.00	13.825	
8,500.00	8,481.87	8,518.65	8,469.37	14.83	29.32	-90.45	-252.86	-648.57	555.23	514.87	40.36	13.757	
8,600.00	8,581.87	8,626.13	8,576.83	14.90	29.59	-90.47	-253.03	-650.59	557.14	516.46	40.67	13.697	
8,700.00	8,681.87	8,744.59	8,695.28	14.96	29.63	-90.45	-252.84	-649.81	556.49	515.80	40.69	13.676	
8,800.00	8,781.87	8,841.38	8,792.05	15.03	29.43	-90.38	-252.13	-647.59	554.20	513.60	40.61	13.648	
8,900.00	8,881.87	8,936.76	8,887.41	15.09	29.24	-90.30	-251.34	-646.25	552.79	512.26	40.53	13.639	
9,000.00	8,981.87	9,034.58	8,985.22	15.16	29.06	-90.25	-250.88	-645.48	552.00	511.54	40.46	13.643	
9,100.00	9,081.87	9,134.00	9,084.64	15.23	28.90	-90.22	-250.62	-644.92	551.44	511.04	40.39	13.652	
9,174.62	9,156.48	9,205.84	9,156.48	15.28	28.89	-90.22	-250.59	-644.73	551.24	510.79	40.45	13.629	
9,200.00	9,181.87	9,230.25	9,180.90	15.29	28.89	-90.23	-250.66	-644.75	551.26	510.79	40.47	13.622	
9,300.00	9,281.87	9,327.91	9,278.55	15.36	29.05	-90.29	-251.27	-645.15	551.67	510.97	40.69	13.557	
9,400.00	9,381.87	9,428.72	9,379.36	15.43	29.22	-90.40	-252.32	-645.59	552.12	511.21	40.91	13.497	
9,500.00	9,481.87	9,521.56	9,472.18	15.50	29.41	-90.55	-253.82	-646.61	553.23	512.04	41.18	13.433	
9,600.00	9,581.87	9,617.09	9,567.66	15.56	29.66	-90.74	-255.66	-648.78	555.51	513.99	41.53	13.377	
9,700.00	9,681.87	9,734.96	9,685.51	15.63	29.84	-90.91	-257.27	-649.95	556.54	514.87	41.67	13.356	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Sheba/Solomon Location - Solomon Federal Com 505H - OH / 68322 - Surveys (H&P 296)

Offset Site Error: 0.00 usft

Survey Program: 156-MWD+IFR1+MS

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,800.00	9,781.87	9,845.86	9,796.39	15.70	29.73	-90.95	-257.64	-647.65	554.42	512.87	41.55	13.344	
9,805.97	9,787.84	9,851.81	9,802.33	15.71	29.72	-90.95	-257.67	-647.50	554.27	512.72	41.54	13.343	
9,850.00	9,831.82	9,894.00	9,844.51	15.72	29.63	-91.26	-257.99	-646.39	553.16	511.65	41.50	13.328	
9,900.00	9,881.44	9,939.12	9,889.61	15.84	29.61	-91.96	-258.50	-645.46	552.31	510.71	41.60	13.277	
9,927.03	9,908.00	9,962.47	9,912.96	15.91	29.59	-92.46	-258.82	-645.17	552.18	510.50	41.68	13.247	
9,950.00	9,930.35	9,982.11	9,932.60	15.97	29.58	-92.94	-259.13	-645.03	552.28	510.52	41.77	13.222	
10,000.00	9,978.18	10,025.99	9,976.47	16.08	29.64	-94.24	-259.81	-644.98	553.23	511.17	42.06	13.154	
10,050.00	10,024.56	10,068.95	10,019.43	16.18	29.70	-95.73	-260.33	-645.20	555.32	512.92	42.40	13.097	
10,100.00	10,069.13	10,110.45	10,060.92	16.27	29.79	-97.32	-260.70	-645.65	558.88	516.08	42.80	13.058	
10,150.00	10,111.56	10,150.09	10,100.55	16.35	29.89	-98.92	-260.96	-646.29	564.29	521.07	43.22	13.057	
10,200.00	10,151.53	10,187.16	10,137.62	16.42	29.99	-100.40	-261.13	-647.08	571.91	528.28	43.62	13.110	
10,250.00	10,188.74	10,220.62	10,171.07	16.47	30.09	-101.59	-261.25	-648.00	582.16	538.16	44.01	13.229	
10,300.00	10,222.89	10,251.34	10,201.77	16.51	30.18	-102.44	-261.34	-649.04	595.36	551.03	44.33	13.431	
10,350.00	10,253.73	10,280.55	10,230.95	16.54	30.26	-102.99	-261.41	-650.20	611.68	567.11	44.57	13.725	
10,400.00	10,281.02	10,312.40	10,262.79	16.56	30.35	-103.52	-261.41	-651.37	631.01	586.30	44.71	14.115	
10,450.00	10,304.56	10,340.21	10,290.57	16.57	30.43	-103.44	-261.32	-652.23	653.32	608.56	44.76	14.597	
10,500.00	10,324.17	10,363.69	10,314.05	16.58	30.49	-102.66	-261.17	-652.83	678.61	633.89	44.72	15.173	
10,550.00	10,339.70	10,381.70	10,332.06	16.58	30.52	-100.99	-261.03	-653.21	706.78	662.18	44.60	15.847	
10,600.00	10,351.03	10,394.80	10,345.15	16.58	30.54	-98.38	-260.92	-653.47	737.61	693.19	44.42	16.607	
10,650.00	10,358.07	10,403.17	10,353.53	16.58	30.56	-94.81	-260.84	-653.61	770.78	726.59	44.19	17.443	
10,700.00	10,360.77	10,406.73	10,357.08	16.58	30.56	-90.24	-260.80	-653.67	805.90	761.96	43.94	18.342	
10,705.97	10,360.80	10,406.83	10,357.18	16.58	30.56	-89.63	-260.80	-653.67	810.20	766.29	43.91	18.453	
10,800.00	10,360.80	10,407.84	10,358.19	16.60	30.56	-89.73	-260.79	-653.69	880.53	837.13	43.40	20.287	
10,900.00	10,360.80	10,408.93	10,359.28	16.63	30.56	-89.84	-260.78	-653.71	959.80	916.93	42.86	22.392	
11,000.00	10,360.80	11,856.89	11,227.86	16.66	32.53	-148.03	616.64	-634.69	1,022.14	973.26	48.87	20.914	
11,100.00	10,360.80	11,961.16	11,229.63	16.69	32.73	-148.19	720.84	-632.32	1,022.40	973.30	49.09	20.825	
11,200.00	10,360.80	12,064.36	11,228.38	16.74	32.95	-148.10	824.03	-633.48	1,021.97	972.64	49.33	20.718	
11,300.00	10,360.80	12,179.30	11,225.98	16.79	33.16	-147.98	938.94	-634.51	1,020.67	971.19	49.48	20.628	
11,400.00	10,360.80	12,282.76	11,222.90	16.86	33.37	-147.86	1,042.35	-635.09	1,018.44	968.68	49.76	20.467	
11,500.00	10,360.80	12,387.60	11,219.35	16.96	33.61	-147.70	1,147.12	-636.09	1,016.10	966.03	50.07	20.293	
11,600.00	10,360.80	12,499.39	11,215.28	17.09	33.88	-147.64	1,258.83	-634.91	1,012.43	962.01	50.42	20.079	
11,700.00	10,360.80	12,585.43	11,213.03	17.30	34.10	-147.68	1,344.80	-632.55	1,008.82	957.84	50.98	19.790	
11,800.00	10,360.80	12,671.23	11,213.28	17.59	34.31	-147.81	1,430.56	-629.90	1,007.35	955.75	51.60	19.523	
11,900.00	10,360.80	12,774.60	11,212.54	17.97	34.58	-147.90	1,533.90	-627.65	1,005.57	953.38	52.19	19.266	
12,000.00	10,360.80	12,869.05	11,212.61	18.41	34.84	-147.99	1,628.33	-625.91	1,004.64	951.82	52.82	19.020	
12,100.00	10,360.80	12,961.51	11,212.24	18.90	35.11	-148.04	1,720.78	-624.45	1,003.51	950.04	53.48	18.766	
12,107.71	10,360.80	12,966.99	11,212.28	18.94	35.13	-148.05	1,726.26	-624.36	1,003.50	949.97	53.53	18.747	
12,200.00	10,360.80	13,042.68	11,214.25	19.42	35.35	-148.17	1,801.92	-623.11	1,004.65	950.46	54.20	18.538	
12,300.00	10,360.80	13,167.09	11,216.39	19.97	35.74	-148.37	1,926.27	-620.20	1,004.84	949.86	54.98	18.277	
12,400.00	10,360.80	13,286.97	11,216.05	20.53	36.14	-148.52	2,046.10	-616.99	1,003.22	947.47	55.76	17.993	
12,500.00	10,360.80	13,396.33	11,213.87	21.11	36.52	-148.62	2,155.39	-613.57	999.89	943.33	56.56	17.678	
12,600.00	10,360.80	13,500.88	11,211.11	21.71	36.90	-148.70	2,259.85	-610.18	995.95	938.56	57.39	17.355	
12,700.00	10,360.80	13,596.73	11,208.48	22.31	37.25	-148.77	2,355.61	-607.25	992.02	933.80	58.23	17.037	
12,800.00	10,360.80	13,697.92	11,205.19	22.93	37.65	-148.77	2,456.73	-605.17	988.18	929.09	59.08	16.725	
12,900.00	10,360.80	13,791.68	11,201.68	23.56	38.02	-148.70	2,550.42	-604.53	984.63	924.71	59.92	16.432	
13,000.00	10,360.80	13,885.61	11,198.32	24.19	38.41	-148.59	2,644.29	-604.74	981.69	920.92	60.77	16.155	
13,100.00	10,360.80	13,973.00	11,195.33	24.83	38.78	-148.44	2,731.62	-605.87	979.49	917.90	61.59	15.904	
13,200.00	10,360.80	14,068.00	11,192.58	25.48	39.19	-148.24	2,826.56	-608.06	978.25	915.80	62.44	15.666	
13,300.00	10,360.80	14,163.00	11,190.27	26.14	39.61	-148.02	2,921.48	-611.06	977.85	914.54	63.31	15.445	
13,400.00	10,360.80	14,273.17	11,187.12	26.80	40.11	-147.76	3,031.55	-614.43	977.05	912.78	64.27	15.203	
13,500.00	10,360.80	14,379.08	11,183.17	27.47	40.61	-147.47	3,137.33	-617.65	975.54	910.32	65.22	14.957	
13,600.00	10,360.80	14,491.99	11,177.02	28.14	41.15	-147.08	3,250.00	-621.65	972.86	906.65	66.21	14.694	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Sheba/Solomon Location - Solomon Federal Com 505H - OH / 68322 - Surveys (H&P 296)

Offset Site Error: 0.00 usft

Survey Program: 156-MWD+IFR1+MS

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,700.00	10,360.80	14,599.01	11,171.53	28.82	41.69	-146.84	3,356.87	-622.99	969.24	902.01	67.23	14.416	
13,800.00	10,360.80	14,684.72	11,168.03	29.50	42.12	-146.74	3,442.51	-622.59	965.64	897.44	68.19	14.160	
13,900.00	10,360.80	14,767.21	11,166.95	30.19	42.53	-146.72	3,524.99	-622.38	964.36	895.20	69.16	13.944	
14,000.00	10,360.80	14,868.56	11,165.66	30.88	43.04	-146.64	3,626.33	-623.14	963.71	893.45	70.25	13.718	
14,100.00	10,360.80	14,971.08	11,163.59	31.57	43.57	-146.51	3,728.82	-624.36	962.68	891.34	71.35	13.493	
14,200.00	10,360.80	15,074.30	11,161.71	32.27	44.10	-146.41	3,832.03	-625.08	961.55	889.08	72.47	13.267	
14,300.00	10,360.80	15,168.73	11,159.78	32.97	44.60	-146.32	3,926.43	-625.65	960.20	886.67	73.54	13.057	
14,362.99	10,360.80	15,223.85	11,159.09	33.41	44.89	-146.26	3,981.55	-626.28	959.95	885.77	74.17	12.942	
14,400.00	10,360.80	15,256.41	11,158.92	33.67	45.07	-146.24	4,014.10	-626.66	960.03	885.48	74.55	12.877	
14,500.00	10,360.80	15,344.36	11,159.48	34.37	45.54	-146.21	4,102.05	-627.54	961.13	885.54	75.59	12.715	
14,600.00	10,360.80	15,435.00	11,161.41	35.08	46.03	-146.23	4,192.65	-628.40	963.41	886.74	76.67	12.566	
14,700.00	10,360.80	15,538.73	11,164.02	35.79	46.60	-146.26	4,296.34	-629.64	966.19	888.27	77.92	12.400	
14,800.00	10,360.80	15,640.90	11,165.24	36.50	47.17	-146.22	4,398.50	-631.25	968.05	888.91	79.14	12.232	
14,900.00	10,360.80	15,760.16	11,165.96	37.22	47.84	-146.12	4,517.73	-633.66	969.79	889.21	80.57	12.036	
15,000.00	10,360.80	15,865.03	11,164.20	37.93	48.44	-145.97	4,622.56	-635.51	969.38	887.55	81.82	11.847	
15,100.00	10,360.80	15,964.09	11,162.41	38.65	49.01	-145.82	4,721.59	-637.50	969.01	886.01	83.00	11.675	
15,200.00	10,360.80	16,067.26	11,160.77	39.37	49.62	-145.69	4,824.74	-639.05	968.55	884.30	84.25	11.496	
15,300.00	10,360.80	16,172.98	11,158.74	40.09	50.24	-145.56	4,930.43	-640.21	967.59	882.04	85.54	11.311	
15,400.00	10,360.80	16,273.94	11,156.24	40.81	50.84	-145.41	5,031.35	-641.54	966.30	879.52	86.78	11.136	
15,500.00	10,360.80	16,378.87	11,153.39	41.54	51.47	-145.24	5,136.23	-643.10	964.92	876.86	88.06	10.957	
15,600.00	10,360.80	16,494.32	11,149.62	42.26	52.17	-145.12	5,251.61	-642.93	962.14	872.65	89.49	10.751	
15,700.00	10,360.80	16,596.86	11,145.66	42.99	52.79	-145.03	5,354.08	-641.94	958.43	867.63	90.80	10.556	
15,800.00	10,360.80	16,681.65	11,143.66	43.72	53.31	-145.06	5,438.82	-640.03	955.25	863.31	91.94	10.390	
15,900.00	10,360.80	16,767.44	11,143.69	44.45	53.84	-145.14	5,524.59	-638.43	954.17	861.06	93.11	10.248	
16,000.00	10,360.80	16,862.97	11,144.09	45.18	54.42	-145.22	5,620.10	-636.94	953.63	859.23	94.40	10.102	
16,014.81	10,360.80	16,876.23	11,144.16	45.29	54.50	-145.23	5,633.36	-636.82	953.62	859.04	94.58	10.082	
16,100.00	10,360.80	16,956.76	11,144.69	45.91	55.00	-145.26	5,713.89	-636.58	953.94	858.28	95.66	9.973	
16,200.00	10,360.80	17,056.13	11,144.98	46.64	55.62	-145.25	5,813.26	-636.97	954.40	857.42	96.98	9.841	
16,300.00	10,360.80	17,150.32	11,145.51	47.38	56.21	-145.24	5,907.45	-637.48	955.18	856.96	98.23	9.724	
16,400.00	10,360.80	17,243.38	11,146.32	48.11	56.80	-145.20	6,000.49	-638.91	956.78	857.33	99.45	9.621	
16,500.00	10,360.80	17,349.89	11,147.34	48.85	57.48	-145.14	6,106.98	-640.88	958.64	857.75	100.89	9.502	
16,600.00	10,360.80	17,462.59	11,147.97	49.59	58.20	-145.17	6,219.68	-640.75	959.02	856.56	102.46	9.360	
16,700.00	10,360.80	17,566.36	11,148.00	50.32	58.87	-145.20	6,323.45	-640.03	958.65	854.76	103.89	9.227	
16,800.00	10,360.80	17,665.86	11,148.00	51.06	59.51	-145.25	6,422.94	-639.13	958.14	852.87	105.27	9.101	
16,900.00	10,360.80	17,762.45	11,148.17	51.80	60.13	-145.29	6,519.52	-638.37	957.84	851.23	106.61	8.984	
16,914.53	10,360.80	17,776.00	11,148.23	51.91	60.22	-145.30	6,533.08	-638.26	957.83	851.03	106.80	8.969	
17,000.00	10,360.80	17,853.97	11,148.89	52.54	60.72	-145.34	6,611.04	-637.82	958.15	850.28	107.87	8.882	
17,100.00	10,360.80	17,946.18	11,150.45	53.28	61.32	-145.41	6,703.23	-637.50	959.35	850.21	109.15	8.790	
17,200.00	10,360.80	18,077.40	11,151.60	54.02	62.18	-145.51	6,834.44	-636.10	959.52	848.43	111.09	8.637	
17,300.00	10,360.80	18,178.94	11,150.48	54.76	62.84	-145.55	6,935.95	-634.52	957.73	845.20	112.53	8.511	
17,400.00	10,360.80	18,275.82	11,149.55	55.50	63.48	-145.60	7,032.82	-633.01	956.07	842.17	113.90	8.394	
17,500.00	10,360.80	18,372.21	11,149.22	56.25	64.11	-145.67	7,129.19	-631.27	954.77	839.50	115.27	8.283	
17,600.00	10,360.80	18,468.25	11,149.41	56.99	64.75	-145.77	7,225.21	-629.38	953.84	837.18	116.65	8.177	
17,700.00	10,360.80	18,563.85	11,150.20	57.73	65.38	-145.89	7,320.79	-627.52	953.43	835.39	118.03	8.078	
17,800.00	10,360.80	18,662.48	11,151.24	58.48	66.04	-146.02	7,419.40	-625.60	953.22	833.75	119.47	7.979	
17,856.55	10,360.80	18,719.02	11,151.92	58.90	66.41	-146.10	7,475.92	-624.50	953.17	832.87	120.30	7.923	

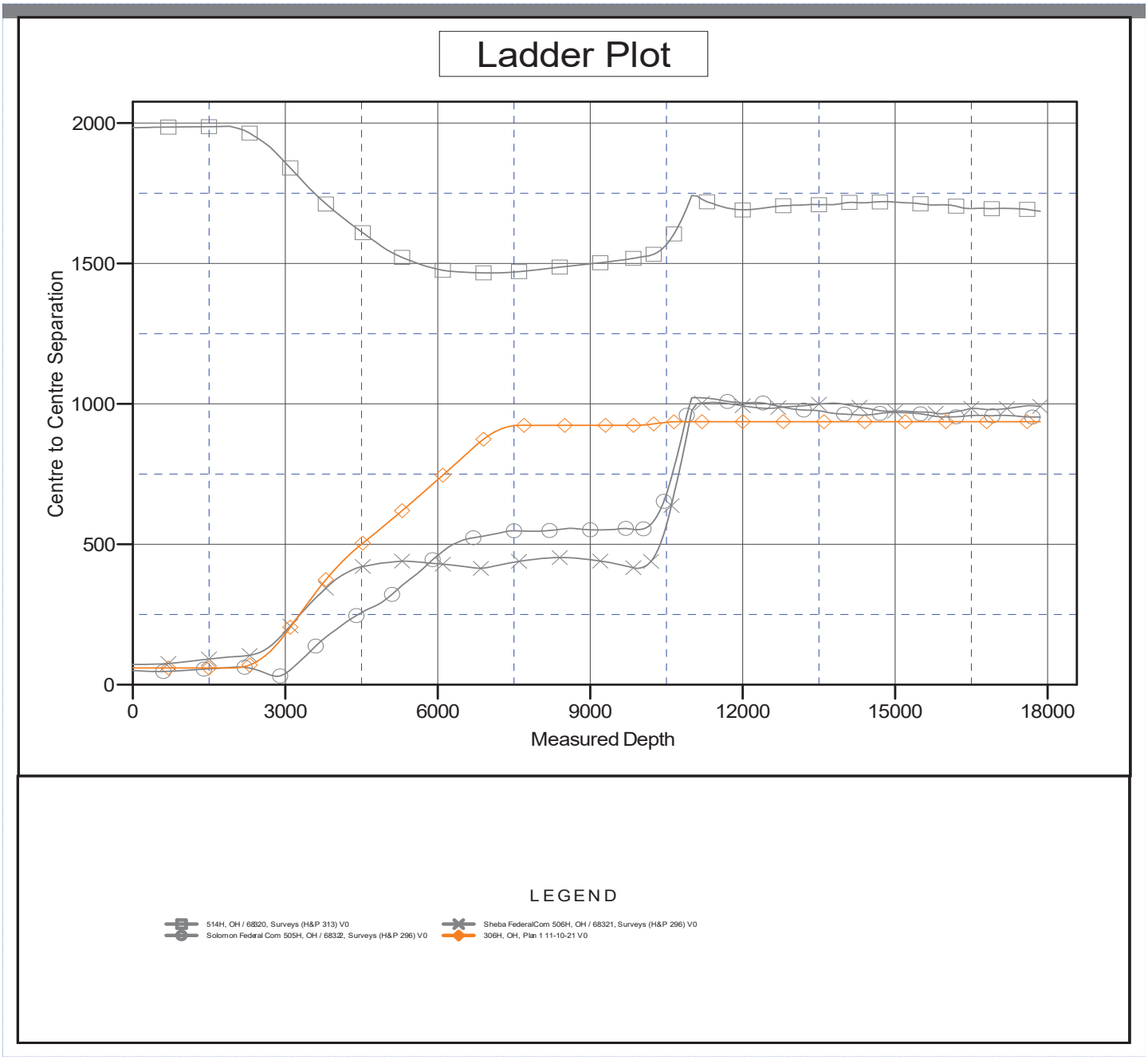
PHOENIX TECHNOLOGY SERVICES

Anticollision Report

CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to RKB @ 3490.80usft (H&P 313)
Offset Depths are relative to Offset Datum
Central Meridian is 105° 0' 0.000000 W
Coordinates are relative to: 305H
Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 13N
Grid Convergence at Surface is: 0.82°



PHOENIX TECHNOLOGY SERVICES

Anticollision Report

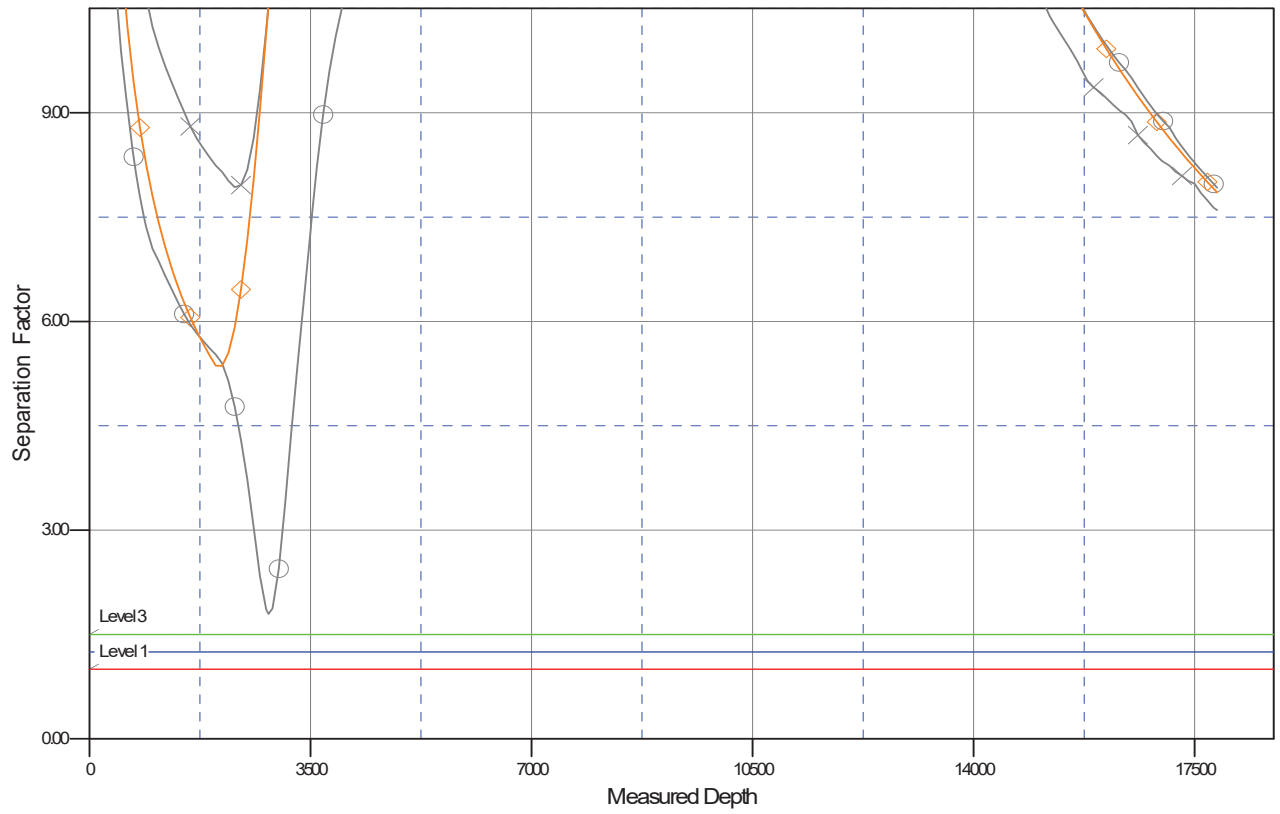
CENTENNIAL RESOURCE DEVELOPMENT, INC

Company:	Centennial Resources Development, Inc.	**Local Co-ordinate Reference:**	Well 305H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	**TVD Reference:**	RKB @ 3490.80usft (H&P 313)
Reference Site:	Sheba Federal Com	**MD Reference:**	RKB @ 3490.80usft (H&P 313)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	305H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 11-10-21	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to RKB @ 3490.80usft (H&P 313)
Offset Depths are relative to Offset Datum
Central Meridian is 105° 0' 0.000000 W

Coordinates are relative to: 305H
Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 13N
Grid Convergence at Surface is: 0.82°

Separation Factor Plot



LEGEND

514H, OH / 68320, Surveys (H&P 313) V0
Solomon Federal Com 505H, OH / 68322, Surveys (H&P 296) V0
Sheba FederalCom 506H, OH / 68321, Surveys (H&P 296) V0
306H, OH, Plan 1 11-10-21 V0

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Centennial Resource Development
New Mexico Multi-Well Pad Drilling
Batch Setting Procedures

➢ Avalon and Bone Springs Formations

13-3/8" Surface Casing - CRD intends to preset 13-3/8" casing to a depth approved in the APD. 17-1/2" Surface Holes will be batch drilled by a Surface Preset rig. Appropriate notifications will be made prior to spudding the well, running and cementing casing and prior to skidding to the rig to the next well on pad.

1. Drill 17-1/2" Surface hole to Approved Depth with Surface Preset Rig and perform wellbore cleanup cycles. Trip out and rack back drilling BHA.
2. Run and land 13-3/8" 54.5# J55 BTC casing to depth approved in APD.
3. Cement 13-3/8" casing with cement to surface and floats holding.
4. Cut / Dress 20" Conductor and 13-3/8" casing as needed, weld on Cameron Multi-bowl system with baseplate supported by 20" conductor (see Illustration 1-1 Below). Weld performed per Cameron weld procedure.
5. Test Weld to 70% of 13-3/8" casing collapse or ~ 790psi.
6. Install nightcap with Pressure Gauge on wellhead. Nightcap is shown on final wellhead Stack up Illustration #2-2 page 3.
7. Skid Rig to adjacent well to drill Surface hole.
8. Surface casing test will be performed by the Big Rig in order to allow ample time for Cement to develop 500psi compressive strength. Casing test to 0.22 psi/ft or 1500 psi whichever is greater - not to exceed 70% casing burst.

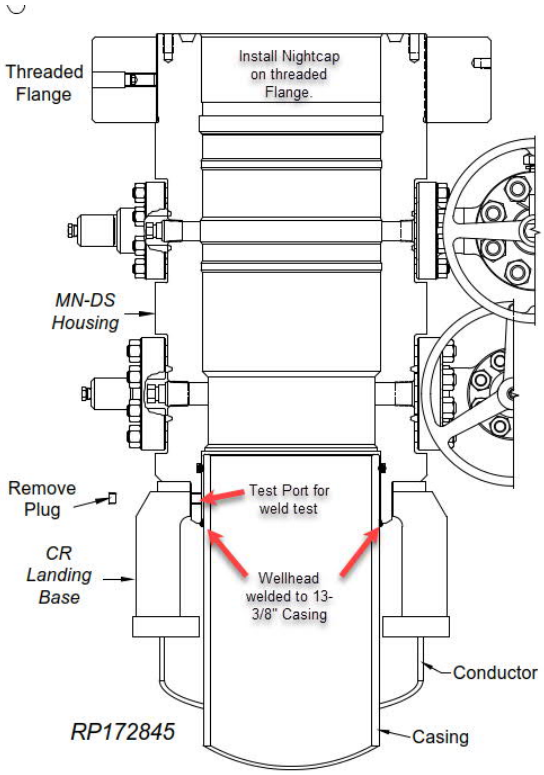


Illustration 1-1

- Intermediate and Production Casing – For all subsequent Intermediate and Production Casing Strings, the Big Rig will remove the nightcap and install and test BOPE. Prior to drill out the 13-3/8" Casing will be tested to 0.22psi/ft or 1500psi whichever is greater. The well will be drilled below 13-3/8" to its intended final TD in the Avalon or Bonesprings formations. Batch drilling will not be executed for casing strings below the 13-3/8". Appropriate notifications will be made prior Testing BOPE, and prior to running/cementing all casing strings. The

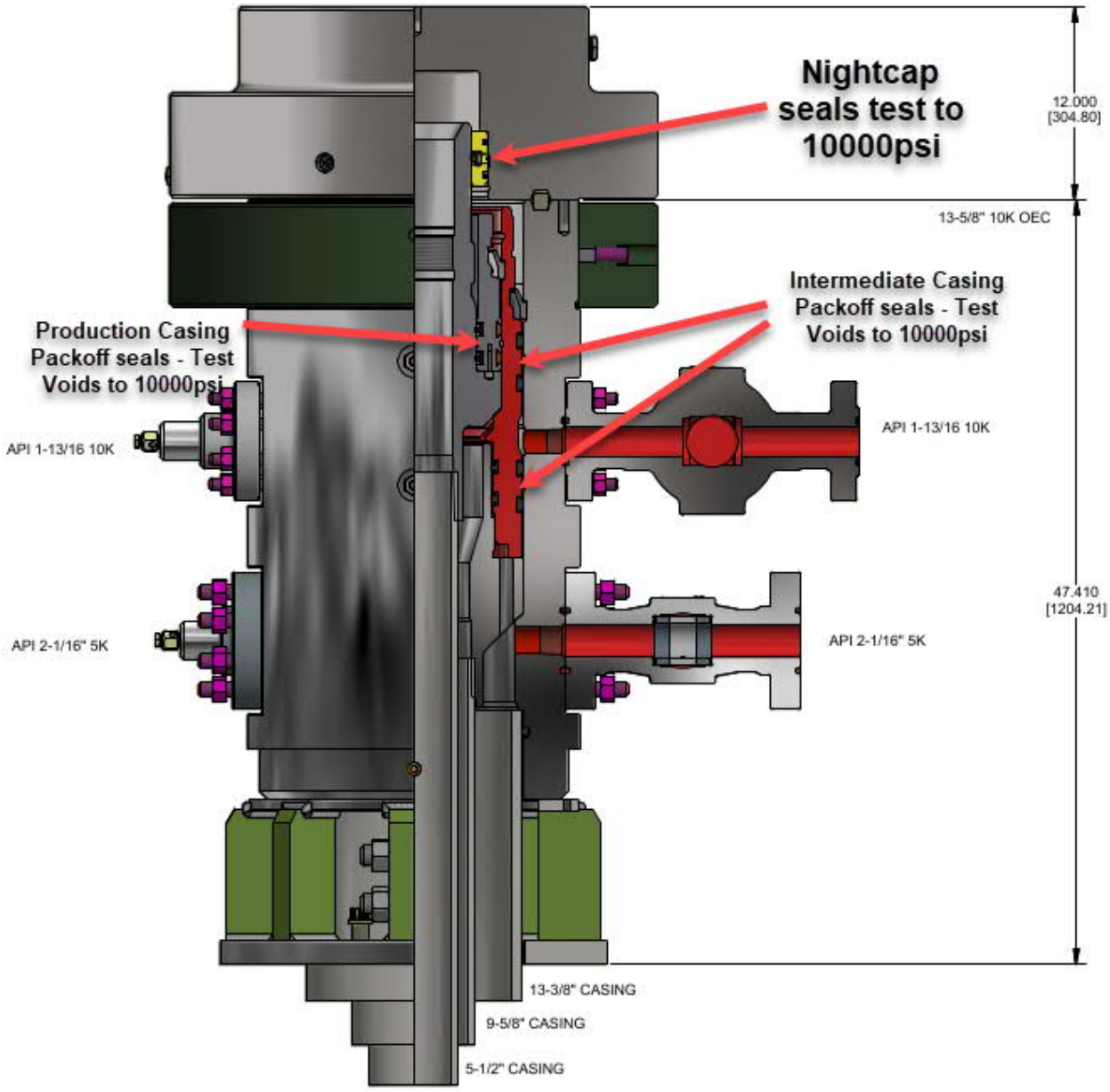
➢ Wolfcamp Formations

13-3/8" Surface Casing - CRD intends to preset 13-3/8" casing to a depth approved in the APD. Surface Holes will be batch set by a Surface Preset rig. Appropriate notifications will be made prior to spudding the well, running and cementing casing and prior to skidding to the rig to the next well on pad.

1. Drill 17-1/2" Surface hole to Approved Depth with Surface Preset Rig and perform wellbore cleanup cycles. Trip out and rack back drilling BHA.
2. Run and land 13-3/8" 54.5# J55 BTC casing to depth approved in APD.
3. Cement 13-3/8" casing with cement to surface and floats holding.
4. Cut / Dress 20" Conductor and 13-3/8" casing as needed, weld on Cameron Multi-bowl system with baseplate supported by 20" conductor (see Illustration 1-1). Weld performed per Cameron weld procedure.
5. Test Weld to 70% of 13-3/8" casing collapse or ~ 790psi.
6. Install nightcap with Pressure Gauge on wellhead. Nightcap is shown on final wellhead Stack up Illustration #2-2 on page 3.
7. Subsequent casing test will be performed by the Big Rig in order to allow ample time for Cement to develop 500psi compressive strength. Casing test to 0.22 psi/ft or 1500 psi whichever is greater - not to exceed 70% casing burst.

Intermediate Casing – CRD intends to Batch set all intermediate casing strings to a depth approved in the APD, typically set 100' above KOP in the 3rd Bonesprings Carbonate. For the last intermediate section drilled on pad, the associated production interval will immediately follow. Appropriate notifications will be made prior Testing BOPE, and prior to running/cementing all casing strings.

1. Big Rig will remove the nightcap and install and test BOPE.
2. Test Surface casing per COA WOC timing (.22 psi/ft or 1500 psi whichever is greater) - not to exceed 70% casing burst. Cement must have achieved 500psi compressive strength prior to test.
3. Install wear bushing then drill out 13-3/8" shoe-track plus 20' and conduct FIT to minimum of the MW equivalent anticipated to control the formation pressure to the next casing point.
4. Drill Intermediate hole to approved casing point. Trip out of hole with BHA to run Casing.
5. Remove wear bushing then run and land Intermediate Casing with mandrel hanger in wellhead.
6. Cement casing to surface with floats holding.
7. Washout stack then run wash tool in wellhead and wash hanger and pack-off setting area.
8. Install pack-off and test void to 10000 psi for 15 minutes. Nightcap shown on final wellhead stack up illustration 2-2 on page 3.
9. Test casing per COA WOC timing (.22 psi/ft or 1500 psi whichever is greater) - not to exceed 70% casing burst. Cement must have achieved 500psi compressive strength prior to test.
10. Install nightcap – skid rig to adjacent well to drill Intermediate hole.



WITH CAP

Illustration 2-2

Production Casing – CRD intends to Batch set all Production casings, except for the last intermediate hole. In this case the production interval will immediately follow the intermediate section on that well. Appropriate notifications will be made prior Testing BOPE, and prior to running/cementing all casing strings.

1. Big Rig will remove the nightcap and install and test BOPE.
2. Install wear bushing then drill Intermediate shoe-track plus 20' and conduct FIT to minimum MW equivalent to control the formation pressure to TD of well.
3. Drill Vertical hole to KOP – Trip out for Curve BHA.
4. Drill Curve, landing in production interval – Trip for Lateral BHA.

5. Drill Lateral / Production hole to Permitted BHL, perform cleanup cycles and trip out to run 5-1/2" Production Casing.
6. Remove wear bushing then run 5-1/2" production casing to TD landing casing mandrel in wellhead.
7. Cement 5-1/2" Production string to surface with floats holding.
8. Run in with wash tool and wash wellhead area – install pack-off and test void to 10000psi for 15 minutes.
9. Install BPV in 5-1/2" mandrel hanger – Nipple down BOPE and install nightcap.
10. Test nightcap void to 10000psi for 30 minutes per illustration 2-2 page 3.
11. Skid rig to adjacent well on pad to drill production hole.

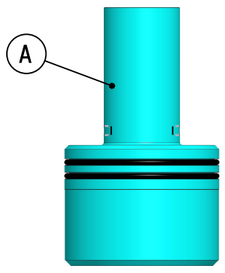
Sheba Fed Com 305H

Centennial Drilling Plan for 3-Casing String Bone Spring

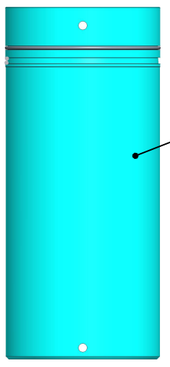
13-3/8" x 9-5/8" x 5-1/2" Casing Design

1. Drill 17-1/2" surface hole to Total Depth with Spudder Rig and perform wellbore cleanup cycles.
2. Run and land 13-3/8" casing to Depth.
3. Cement 13-3/8" casing – cement to surface.
4. Cut / Dress Conductor and 13-3/8" casing as needed, weld on Multi-bowl system with baseplate supported by 20" conductor.
5. Test Weld to 70% of 13-3/8" casing collapse. Place nightcap with Pressure Gauge on wellhead and test seals to 70% of Casing Collapse.
6. Bleed Pressure if necessary and remove nightcap. Nipple up and test BOPE with test plug per Onshore Order 2.
7. Test casing per COA WOC timing (.22 psi/ft or 1500 psi whichever is greater) - not to exceed 70% casing burst. Cement must have achieved 500psi compressive strength prior to test.
8. Install wear bushing then drill out 13-3/8" shoe-track plus 20' and conduct FIT to minimum of the MW equivalent anticipated to control the formation pressure to the next casing point.
9. Drill 12-1/4" Intermediate hole to 9-5/8" casing point.
10. Remove wear bushing then run and land 9-5/8" Intermediate Casing with mandrel hanger in wellhead.
11. Cement 9-5/8 casing – cement to surface.
12. Washout stack then run wash tool in wellhead and wash hanger and pack-off setting area.
13. Install pack-off and test to 5000 psi for 15 minutes.
    a. Test casing per COA WOC timing (.22 psi/ft or 1500 psi whichever is greater) - not to exceed 70% casing burst. Cement must have achieved 500psi compressive strength prior to test.
14. Install wear bushing then drill out 9-5/8" shoe-track plus 20' and conduct FIT to minimum MW equivalent to control the formation pressure to TD of well.
15. Drill 8-3/4" Vertical hole to KOP – Trip out for Curve BHA.
16. Drill 8-3/4" Curve, landing in production interval – Trip for Lateral BHA.
17. Drill 8-1/2" Lateral to Permitted BHL, perform cleanup cycles and trip out to run 5-1/2" Production Casing.
18. Remove wear bushing then run 5-1/2" production casing to TD landing casing mandrel in wellhead.
19. Cement 5-1/2" Production string to surface.
20. Run in with wash tool and wash wellhead area – install pack-off and test to 5000psi for 15 minutes.
21. Install BPV in 5-1/2" mandrel hanger – Nipple down BOPE and install nightcap.
22. Test nightcap void to 5000psi for 30 minutes.

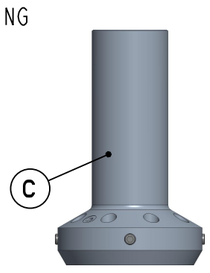
CENTENNIAL
RESOURCE DEVELOPMENT, INC

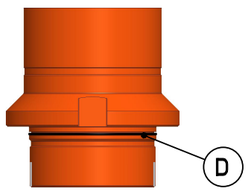


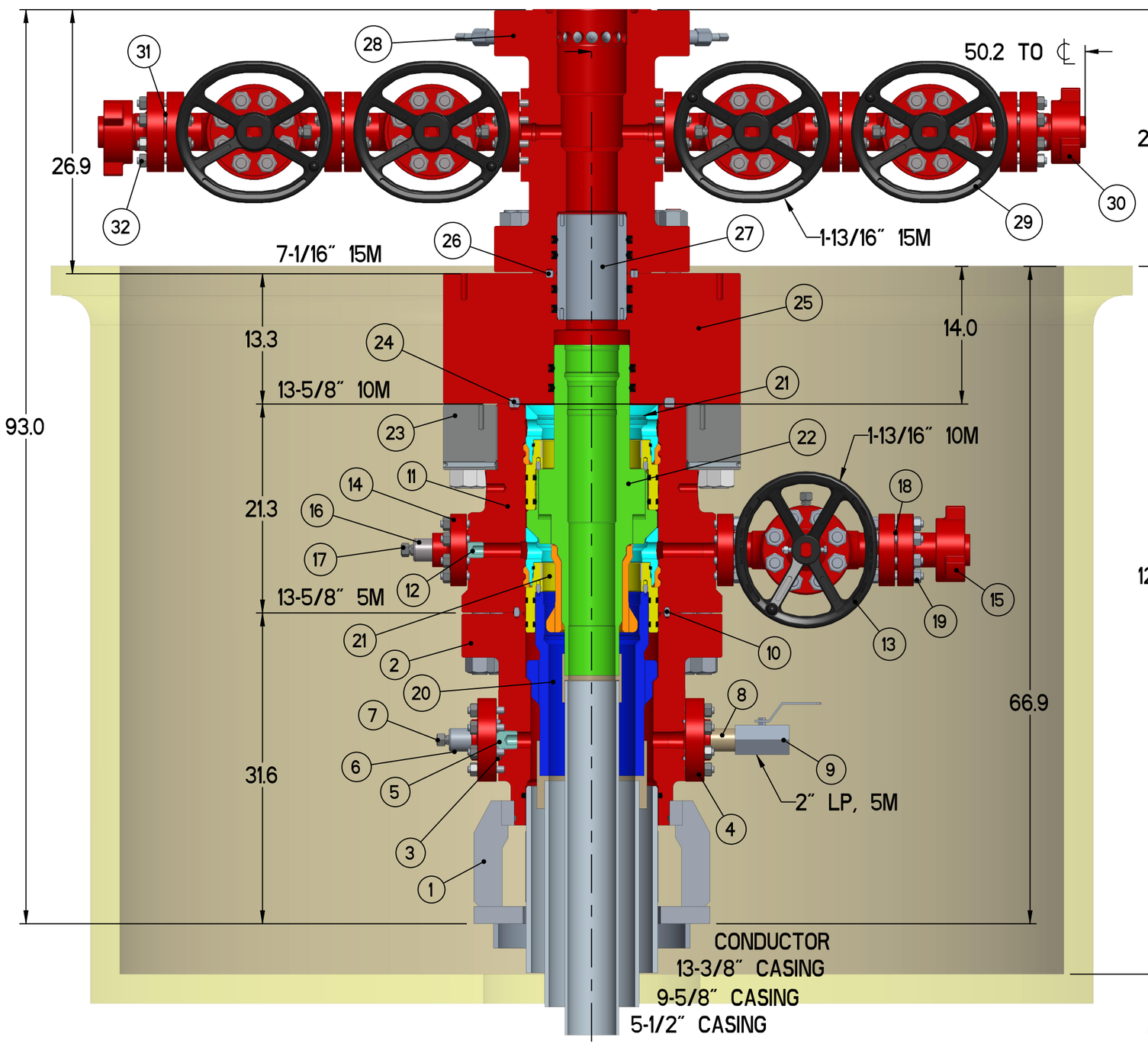
1st STAGE
10K TEST PLUG
(INITIAL TEST)

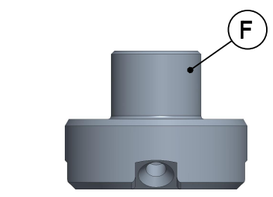


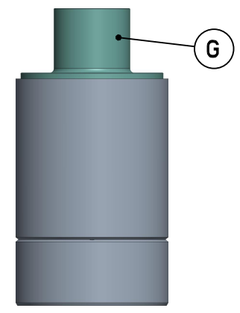
1st STAGE
WEAR BUSHING

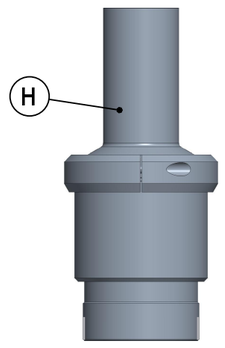


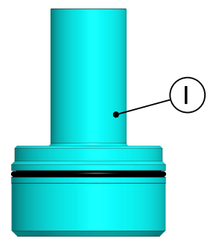




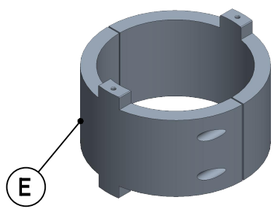


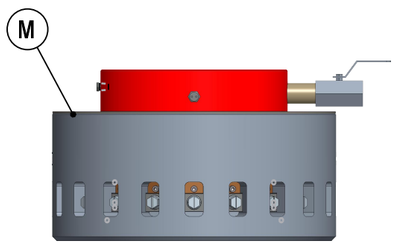


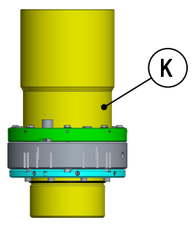


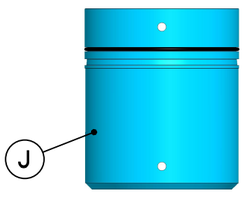


2nd STAGE
10K TEST PLUG
(AFTER INT HANGER SET)









2nd STAGE
WEAR BUSHING
(AFTER INT HANGER SET)

NOTE:
1. ALL DIMENSIONS ARE APPROXIMATE.

ITEM	PARTS DESCRIPTION	PART NUMBERS
1	LANDING BASE ASSEMBLY 24.00 X 18.00 X 1.75	LB-1338CSGX24-03
2	CASING HEAD CC-22 13-5/8 5M X 13-3/8 SOW	CC-CH135X1338SOWSV-00-2
3	RING GASKET OVAL R-24	RG-R24MS
4	COMPANION FLANGE 2-1/16 5000 X 2 LP	CF-25X2LP-2-00-OS
5	VALVE REMOVAL PLUG 10000 PSI	VRP-1900-6A-DD-OS
6	BULLPLUG 2 LP X 1/2 LP	BP-2X12XXH
7	GREASE FITTING 1/2 NPT	GF-12-4140
8	NIPPLE SEAMLESS 2 NPTX 2 NPT X 6.00	NIP-2X6XXH
9	BALL VALVE 2 LP 5000 PSI	B/V-25-CS-OS
10	RING GASKET BX-160	RG-BX160MS
11	INTERMEDIATE HEAD CFB-T 13-5/8 5M X 13-5/8 10M RSF	CFB-IHT135X1310SV-00-2
12	VALVE REMOVAL PLUG 10000 PSI	VRP-1660-6A-DD-OS
13	GATE VALVE 1-13/16 10000 FLANGED	175G-52SB100-LE-OS
14	COMPANION FLANGE 1-13/16 10M X 2 LP	CF-13410X2LP-2-OS
15	FLANGE ADAPTER 1-13/16 10M X 2 FIG 1502	AF-13410X21502-01-2-OS
16	BULLPLUG 2 LP X 1/2 LP	BP-2X12XXH
17	GREASE FITTING 1/2 NPT	GF-12-4140
18	RING GASKET BX-151	RG-BX151MS
19	STUD AND NUT SET 3/4 10UNC X 5-1/4 FULL	S-B7-34X514 / N-2H-34
20	CSG HGR MANDREL CFB 13-5/8 X 9-5/8 PIN BTM	CFB-CHL13X958LC-04
21	PACKOFF BUSHING CFB 13-5/8 X 11.500	CFB-PB13X11050-01-2
22	CSG HGR CFB 13-5/8 X 5-1/2 PIN BTM	CFB-CHU13X512TCBCBPV-00-2
23	THREADED FLANGE RING RSF 13-5/8 10M	RSF-TF1310X1950A-00-2
24	RING GASKET BX-159	RG-BX159MS
25	PACKOFF FLANGE FS 13-5/8 10M X 7-1/16 15M	FS-AF1310X715X758X7-00-3
26	RING GASKET BX-156	RG-BX156MS
27	SEAL-OFF NIPPLE SLICK OD 7.07 X 5.25	SN-707X525-00-3
28	TBG HEAD CTCM-15 7-1/16 15M X 7-1/16 15M	CTCM-TH715X715SVFS7-00-2
29	GATE VALVE 1-13/16 15000 FLANGED	175G-52SB150-T25-3-OS
30	ADAPTER FLANGE 1-13/16 15M X 2 FIG 1502	AF-13415X21502-01-3-OS
31	RING GASKET BX-151	RG-BX151MS
32	STUD AND NUT SET 7/8 9UNC X 6	S-B7-78X6-BSL1 / N-2H-78-BSL1
ITEM	RENTAL TOOLS - PARTS DESCRIPTION	PART NUMBERS
A	RENTAL TEST PLUG CFB 13-5/8 X 4-1/2 IF	L-CFB-TP13X412IF-03
B	RENTAL BORE PROTECTOR CFB 13-5/8	L-CFB-BP13X12053-3075-01
C	RENTAL RETRIEVING TOOL 13-5/8 X 4-1/2 IF	L-CC-RT13-00
D	RENTAL RUNNING TOOL CFB 13-5/8	L-CFB-RT9750AX958BC-00
E	RENTAL TORQUE SLEEVE CFB 13.44X 11.62 X 9.12	L-CFB-RT-TS13-00
F	RENTAL WASH-OUT TOOL 13-5/8 X 4-1/2 IF	L-MW-WT13X412-00
G	RENTAL WASHOUT TOOL CFB 13-5/8 X4-1/2 IF	L-CFB-WT13X412IF-01
H	RENTAL RUNNING AND RETRIEVING TOOL CFB	L-CFB-RT10125AX412IF-00
I	RENTAL TEST PLUG CFB 13-5/8 4-1/2 IF	L-CFB-TP13X412IF-04
J	RENTAL BORE PROTECTOR CFB 13-5/8	L-CFB-BP13X9056-1575-00
K	RENTAL RUNNING TOOL CFB-RT-TT FOR 11 / 13 HGR	CFB-RT-TT512AX512TCBC-00
L	RENTAL THREADED SHOULDER RING RSF	L-RSF-SR1310BX-00-2
M	RSF CAPPING FLANGE	RSF-CF1310BX0ECX9CPX2LP-00

CENTENNIAL RESOURCE PRODUCTION, LLC
13-3/8" X 9-5/8" X 5-1/2" , 15M
CFB-T WELLHEAD SYSTEM
QUOTE: HOU - 151185

DWN	CB	12/16/19	
CHK			
APPR			
	BY	DATE	

Stream Flo
Worldwide Expertise - Global Strength

DRAWING NUMBER
WH-20235

REF: | COMMONSPACE | PROJ: X | MODEL: WH-20235-BOM | DWG: WH-20235-BOM

GEOLOGIC PROG

CENTENNIAL RESOURCE DEVELOPMENT, LLC

			WELL NAME	Sheba Fed Com 305H		11/2/2020	
			AREA	Solomon	API		
			HZ TARGET	First Bone Spring Sand	WI %		
			LAT LENGTH	7,700	AFE#		
			TRRC PERMIT		COUNTY	Lea	
	TWNP	RNG	SECTION	FOOTAGE	COMMENT		
SHL	24S	34E	27	2189' FNL, 1130' FEL	On lease. Drill S to N.		
FTP/PP	24S	34E	27	2548' FNL, 1254' FEL			
LTP	24S	34E	22	100' FNL, 1254' FEL			
BHL	24S	34E	22	100' FNL, 1254' FEL			
			GROUND LEVEL	3,462' RIG KB	26'	KB ELEV	3,488'
GEOLOGIST	Isabel Harper		isabel.harper@cdevinc.com		(303) 589-8841		
LOGGING	No open hole logging. MWD GR from drill out of surface casing to TD.						
MUDLOGGING	Standard mud logging and mud gas detection. Mud loggers on from drill out of surface casing to TD.						

FORMATION	TVD	SSTVD	THICKNESS	FINAL MD	FINAL TVD	DELTA
Rustler	1,172'	2,316'	621'			
Salado	1,793'	1,695'	3,389'			
BX BLM (Fletcher Anhydrite)	5,182'	-1,694'	234'			
Lamar	5,416'	-1,928'	55'			
Bell Canyon	5,471'	-1,983'	915'			
Cherry Canyon	6,386'	-2,898'	211'			
Manzanita Lime	6,597'	-3,109'	1,287'			
Brushy Canyon	7,884'	-4,396'	1,411'			
Bone Spring Lime	9,295'	-5,807'	28'			
Avalon	9,323'	-5,835'	1,015'			
First Bone Spring Sand	10,338'	-6,850'	200'			
Second Bone Spring Shale	10,538'	-7,050'	309'			
Second Bone Spring Sand	10,847'	-7,359'	1,049'			
Third Bone Spring Carbonate	11,359'	-7,871'	939'			
Third Bone Spring Sand	11,896'	-8,408'	402'			
Wolfcamp	12,298'	-8,810'				
Target Top at 0' VS	10,339'	-6,851'	39'			
Target Base at 0' VS	10,378'	-6,890'				
HZ TARGET AT 0' VS	10,358'	-6,870'				

TARGET: KBTVD = 10358' at VS, INC = 90.0 deg
Target Window +10/-10'

COMMENT:

GEOLOGIC PROG

OFFSET TYPE WELLS

CENTENNIAL RESOURCE DEVELOPMENT, LLC

DRILLING WELL	Sheba Fed Com 305H		11/2/2020		
HZ TARGET	First Bone Spring Sand		AREA	Solomon	
PRIMARY TYPE LOG			SECONDARY TYPE LOG		
Madera 'B' 8706 JV-P Com 1			Solomon Fed Com		
30-025-30179			30-025-45375		
LOCATION	24S 34E Sec22/ 660' FSL 1650' FWL		LOCATION	24S 34E Sec22/	
DISTANCE	4014' NW of projected FTP		DISTANCE	2732' N of projected FTP	
DIRECTION SURVEY	No		DIRECTION SURVEY	Yes	
KB ELEV	3,531'		KB ELEV	3,518'	

FORMATION	TVD	SSTVD	DELTA	TVD	SSTVD	DELTA
Rustler	1,157'	2,374'	621'			
Salado	1,778'	1,753'	3,389'			
BX BLM (Fletcher Anhydrite)	5,167'	-1,636'	234'	5,159'	-1,641'	286'
Lamar	5,401'	-1,870'	55'	5,445'	-1,927'	61'
Bell Canyon	5,456'	-1,925'	915'	5,506'	-1,988'	906'
Cherry Canyon	6,371'	-2,840'	211'	6,412'	-2,894'	224'
Manzanita Lime	6,582'	-3,051'	1,287'	6,636'	-3,118'	1,301'
Brushy Canyon	7,869'	-4,338'	1,411'	7,937'	-4,419'	1,404'
Bone Spring Lime	9,280'	-5,749'	28'	9,341'	-5,823'	26'
Avalon	9,308'	-5,777'	1,015'	9,367'	-5,849'	962'
First Bone Spring Sand	10,323'	-6,792'	200'	10,329'	-6,811'	221'
Second Bone Spring Shale	10,523'	-6,992'	309'	10,550'	-7,032'	263'
Second Bone Spring Sand	10,832'	-7,301'	1,049'	10,813'	-7,295'	1,122'
Third Bone Spring Carbonate	11,344'	-7,813'	939'	11,381'	-7,863'	914'
Third Bone Spring Sand	11,881'	-8,350'	402'	11,935'	-8,417'	360'
Wolfcamp	12,283'	-8,752'		12,295'	-8,777'	
Reservoir Top	10,325'	-6,794'	39'	10,330'	-6,812'	38'
Reservoir Base	10,364'	-6,833'		10,368'	-6,850'	

Comments

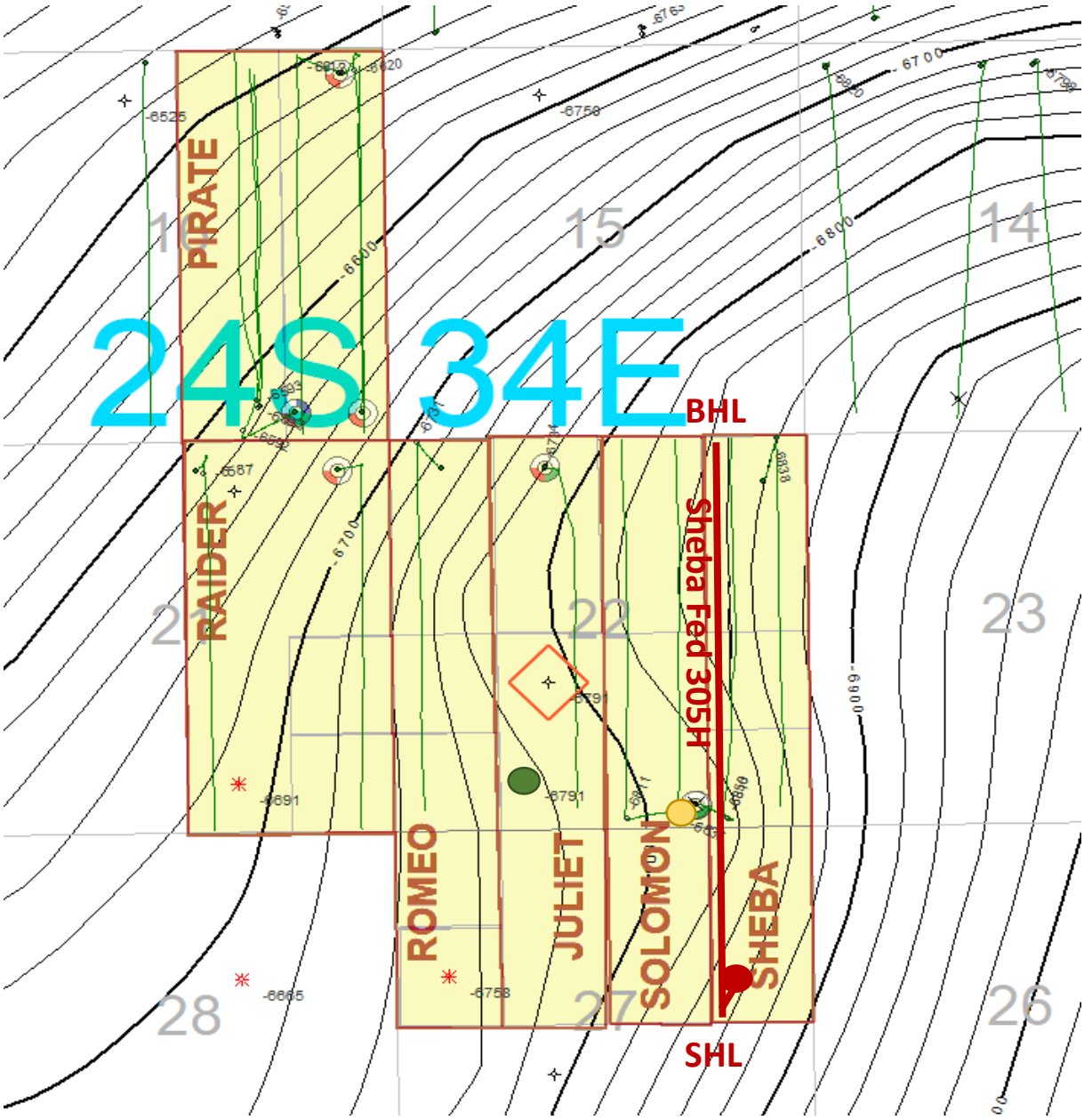
GEOLOGIC PROG

OFFSET TYPE WELLS

CENTENNIAL RESOURCE DEVELOPMENT, LLC

	DRILLING WELL	Sheba Fed Com 305H		11/2/2020
	HZ TARGET	First Bone Spring Sand	AREA	Solomon
	PRIMARY TYPE LOG			SECONDARY TYPE LOG
	Madera 'B' 8706 JV-P Com 1			Solomon Fed Com
	30-025-30179			30-025-45375
LOCATION	24S 34E Sec22/ 660' FSL 1650' FWL			24S 34E Sec22/
DISTANCE	4014' NW of projected FTP			2732' N of projected FTP
DIRECTION SURVEY	No			Yes
KB ELEV	3,531'			3,518'

LOCATION & FBSG SAND STRUCTURE MAP



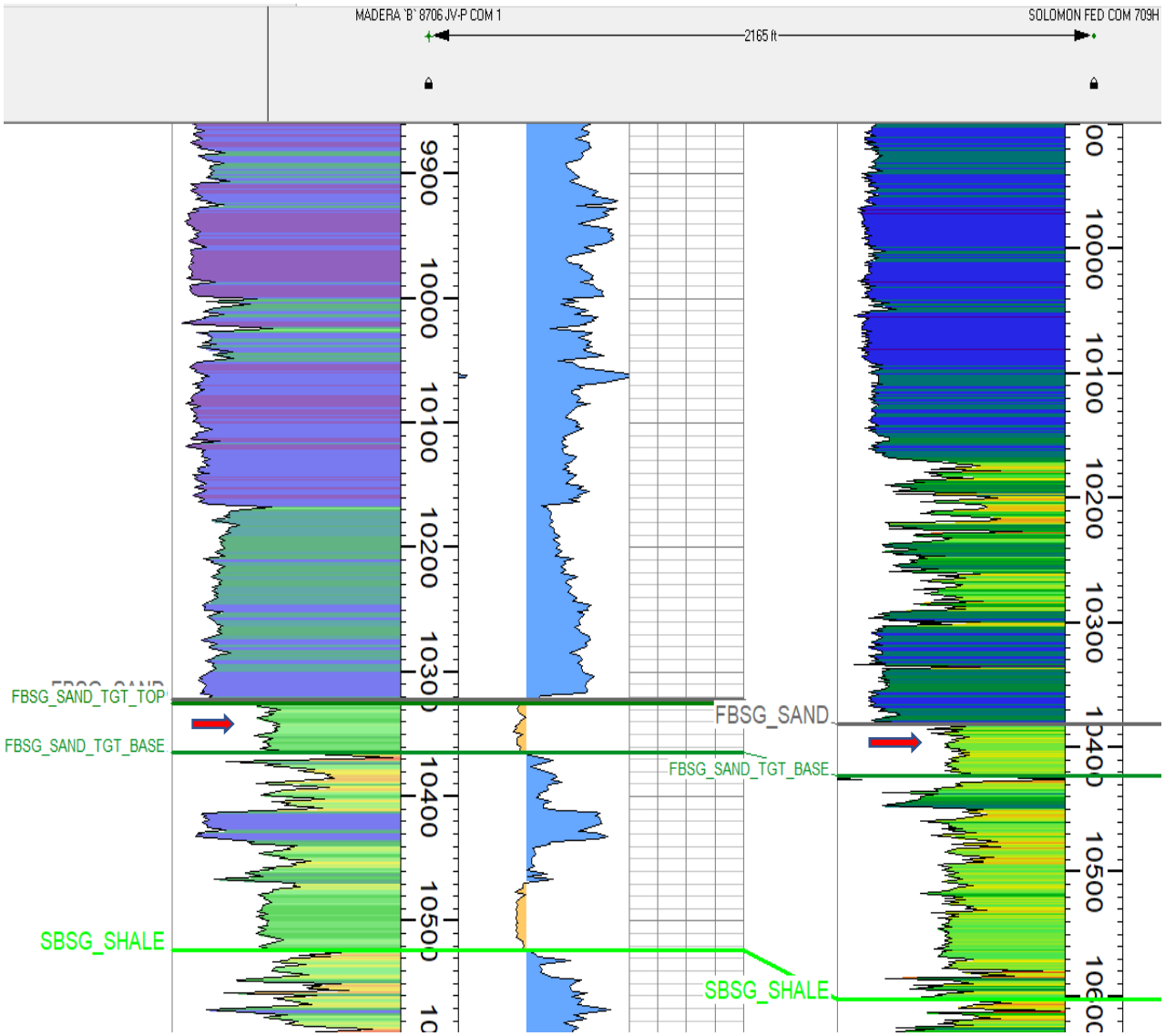
GEOLOGIC PROG

OFFSET TYPE SECTION

CENTENNIAL RESOURCE DEVELOPMENT, LLC

DRILLING WELL	Sheba Fed Com 305H			11/2/2020
HZ TARGET	First Bone Spring Sand		AREA	First Bone Spring Sand
	PRIMARY TYPE LOG			SECONDARY TYPE LOG
	Madera 'B' 8706 JV-P Com 1			Solomon Fed Com
	30-025-30179			30-025-45375
LOCATION	24S 34E Sec22/ 660' FSL 1650' FWL			24S 34E Sec22/
DISTANCE	4014' NW of projected FTP			2732' N of projected FTP
DIRECTION SURVEY	No			Yes
KB ELEV	3,531'			3,518'

Type Log and Target Zone



GEOLOGIC PROG

GEOPHYSICAL DATA
POTENTIAL GEOHAZARDS
SEISMIC DISPLAYS

GEOLOGIC PROG

MUD LOG DISTRIBUTION DETAILS

CENTENNIAL RESOURCE DEVELOPMENT, LLC	WELL NAME	Sheba Fed Com 305H		11/2/2020
	AREA	Solomon	API	
	HZ TARGET	First Bone Spring Sand	WI %	
	LAT LENGTH	7700	AFE#	
	TRRC PERMIT		COUNTY	Lea
GEOLOGIST	Isabel Harper	isabel.harper@cdevinc.com		(303) 589-8841

Mud Logging Company		
None		
Contact 1	email	phone
Contact 2	email	phone
Contact 3	email	phone

Daily distribution data requirements and protocol

geodata@cdevinc.com; joe.woodske@cdevinc.com; drilling@cdevinc.com; dawn.billesbach@cdevinc.com, Andrew.welshhans@cdevinc.com; liam.kaltenback@cdevinc.com; nick.daniele@cdevinc.com;Isabel.Harper@cdevinc.com

Daily email distribution list

Final distribution data requirements

Final distribution list

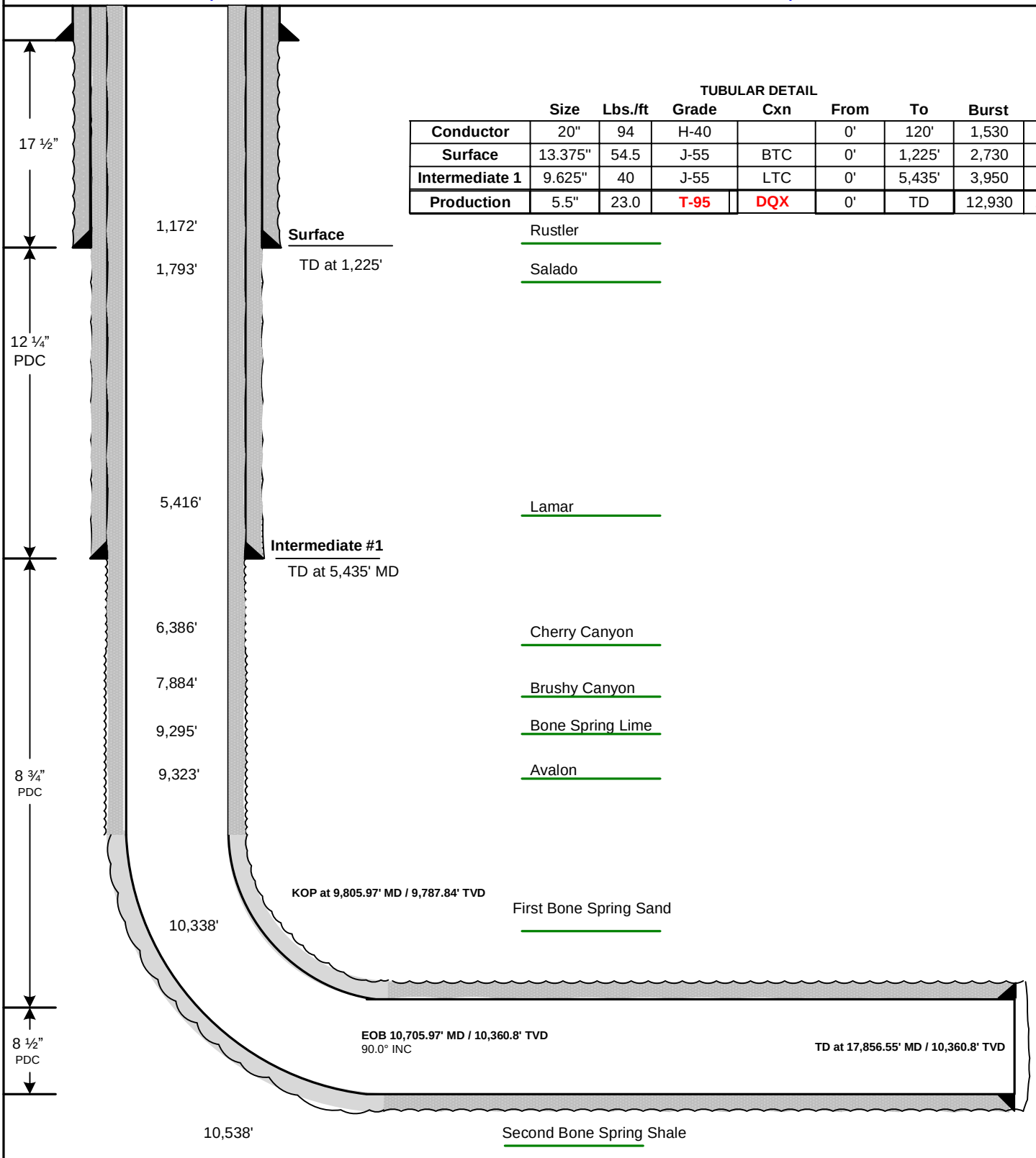
Contact Information	Reports	Hard Copies	Digital data	Cuttings
Centennial Resource Development, c/o Joe Woodske, 1001 17th street, Suite 1800,	email final set	2 copies of 5" MD Vertical, 2 copies of 5" Horizontal and	email final set	
SCAL, Inc., 2613 South County Road 1257, Midland, TX 79706				**No Dried Samples to be Collected**
MWD Only: Centennial Resource Development, c/o Sarah Ferreyros, 1001 17th street, Suite	email final set	2 copies of the 5" MD vertical logs 2 copies of the 5"	email final set	

Project Geologist:	Isabel Harper	**Production:**	Brandon Morin
Operations Geologist:	Liam Kaltenback	**Surface Land:**	Bailey Joplim
Drilling:	Ronny Hise	**Mineral Land:**	Gavin Smith

CENTENNIAL | WBD

Well : Sheba Federal Com 305H
Area : Solomon **FM tgt:** 1st BSS
County : Lea **State** : NM
Location : Lot H Section 27, T24S, R34E; 2,299' FNL & 1,160' FEL
BHL : Lot A, Section 22, T24S, R34E; 100' FNL & 1,254' FEL
KB Elev : 3,488' MSL **KB** : 26' AGL **GL Elev** : 3,462' MSL

CENTENNIAL RESOURCE DEVELOPMENT, INC



TUBULAR DETAIL

	Size	Lbs./ft	Grade	Cxn	From	To	Burst	Cllps
Conductor	20"	94	H-40		0'	120'	1,530	520
Surface	13.375"	54.5	J-55	BTC	0'	1,225'	2,730	1,130
Intermediate 1	9.625"	40	J-55	LTC	0'	5,435'	3,950	2,570
Production	5.5"	23.0	T-95	DQX	0'	TD	12,930	12,540

Continental ContiTech

CONTITECH RUBBER Industrial Kft.	No:QC-DB- 210/ 2014
	Page: 9 / 113

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE		CERT. N°:	504
PURCHASER:	ContiTech Oil & Marine Corp.	P.O. N°:	4500409659
CONTITECH RUBBER order N°: 538236	HOSE TYPE: 3" ID	Choke and Kill Hose	
HOSE SERIAL N°: 67255	NOMINAL / ACTUAL LENGTH:	10,67 m / 10,77 m	
W.P. 68,9 MPa 10000 psi	T.P. 103,4 MPa 15000 psi	Duration: 60 min.	

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 20 MPa

COUPLINGS Type	Serial N°		Quality	Heat N°
3" coupling with	9251	9254	AISI 4130	A0579N
4 1/16" 10K API b.w. Flange end			AISI 4130	035608

Not Designed For Well Testing

API Spec 16 C

Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.

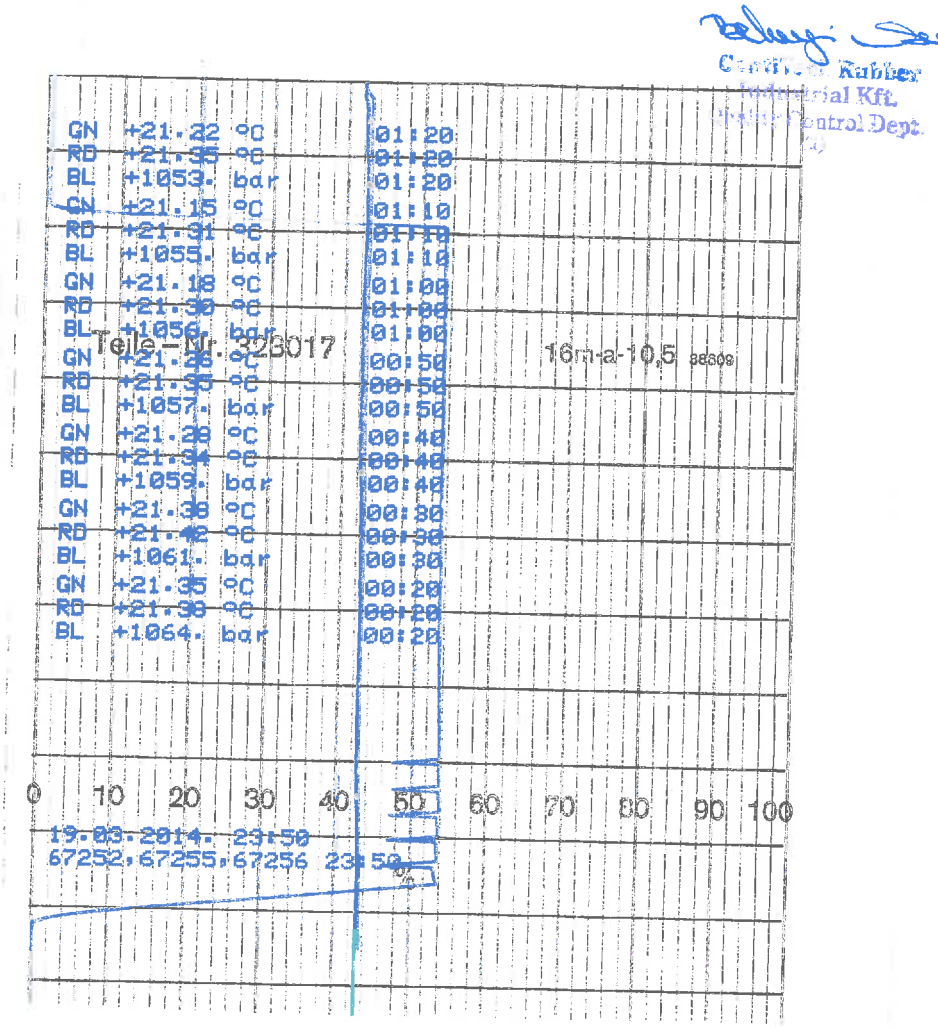
COUNTRY OF ORIGIN HUNGARY/EU

Date:	Inspector	Quality Control
20. March 2014.		ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

ContiTech Rubber Industrial Kft. | Budapesti út 10. H-6728 Szeged | H-6701 P.O.Box 152 Szeged, Hungary
Phone: +36 62 566 737 | Fax: +36 62 566 738 | e-mail: info@fluid.contitech.hu | Internet: www.contitech-rubber.hu; www.contitech.hu
The Court of Csongrád County as Registry Court | Registry Court No: Cg.06-09-002502 | EU VAT No: HU11087209
Bank: [illegible] 14220108-26830003

ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE No: 501, 504, 505

Page: 1 / 1



Hose Data Sheet

CRI Order No.	538236
Customer	ContiTech Oil & Marine Corp.
Customer Order No	4500409659
Item No.	1
Hose Type	Flexible Hose
Standard	**API SPEC 16 C**
Inside dia in inches	3
Length	35 ft
Type of coupling one end	FLANGE 4.1/16" 10K API SPEC 6A TYPE 6BX FLANGE C/W BX155 R.GR.SOUR
Type of coupling other end	FLANGE 4.1/16" 10K API SPEC 6A TYPE 6BX FLANGE C/W BX155 R.GR.SOUR
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	No
Lifting collar	No
Element C	No
Safety chain	No
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

Centennial Resource Development - Well Control Plan

A. Component and Preventer Compatibility Table

Component	OD (inches)	Preventer	RWP
Drillpipe	5	Upper VBR: 3.5 – 5.5 Lower VBR: 3.5 – 5.5	10M
Heavyweight Drillpipe	5	Upper VBR: 3.5 – 5.5 Lower VBR: 3.5 – 5.5	10M
Drill collars and MWD tools	6 ¾	Annular	5M
Mud Motor	6 ¾	Annular	5M
Production Casing	5-1/2	Upper VBR: 3.5 – 5.5 Lower VBR: 3.5 – 5.5	10M
All	0 – 13 5/8	Annular	5M
Open-hole	-	Blind rams	10M

VBR = Variable Bore Rams

RWP = Rated Working Pressure

MWD = Measurement While Drilling (directional tools)

B. Well Control Procedures

I. General Procedures While Drilling:

1. Sound alarm (alert crew).
2. Space out drill-string.
3. Shut down pumps and stop rotary.
4. Open HCR
5. Shut-in well – utilizing upper VBRs.
6. Close choke
7. Confirm shut-in.
8. Notify rig manager and Centennial company representative.
9. Call Centennial drilling engineer
10. Read and record
    - I. Shut-in drillpipe pressure (SIDPP) and shut-in casing pressure (SCIP).
    - II. Pit gain
    - III. Time
11. Regroup, identify forward plan

II. General Procedure While Tripping

1. Sound alarm (alert crew).
2. Stab full opening safety valve and close
3. Space out drillstring.
4. Open HCR
5. Shut-in well – utilizing upper VBRs
6. Close choke
7. Confirm shut-in.
8. Notify rig manager and Centennial company representative.
9. Call Centennial drilling engineer
10. Read and record:
    I. SIDPP AND SICP
    II. Pit gain
    III. Time
11. Regroup and identify forward plan.

III. General Procedure While Running Casing

1. Sound alarm (alert crew)
2. Stab full opening safety valve and close
3. Space out string.
4. Open HCR
5. Shut-in well – utilizing upper VBRs.
6. Close choke
7. Confirm shut-in.
8. Notify rig manager and Centennial company representative.
9. Call Centennial drilling engineer
10. Read and record:
    I. SIDPP AND SICP
    II. Pit gain
    III. Time
11. Regroup and identify forward plan.

IV. General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Open HCR
3. Shut-in with blind rams
4. Close choke
5. Confirm shut-in
6. Notify rig manager and Centennial company representative.
7. Call Centennial drilling engineer
8. Read and record:
    I. SIDPP AND SICP
    II. Pit gain
    III. Time
9. Regroup and identify forward plan.

V. General Procedures While Pulling BHA Thru BOP Stack

1. **Prior to pulling last joint of drillpipe thru stack**:
   - I. Perform flow check, if flowing
     - a. Sound alarm, alert crew
     - b. Stab full opening safety valve and close
     - c. Space out drillstring with tool joint just beneath the upper pipe ram.
     - d. Open HCR
     - e. Shut-in utilizing upper VBRs
     - f. Close choke
     - g. Confirm shut-in
     - h. Notify rig manager and Centennial company representative.
     - i. Call Centennial drilling engineer
     - j. Read and record:
       - i. SIDPP and SICP
       - ii. Pit gain
       - iii. Time
   - II. Regroup and identify forward plan

2. **With BHA in the BOP stack and compatible ram preventer and pipe combo immediately available**:
   - a. Sound alarm, alert crew
   - b. Stab full opening safety valve and close
   - c. Space out drillstring with tool joint just beneath the upper pipe ram.
   - d. Open HCR
   - e. Shut-in utilizing upper VBRs
   - f. Close choke
   - g. Confirm shut-in
   - h. Notify rig manager and Centennial company representative.
   - i. Call Centennial drilling engineer
   - j. Read and record:
     - i. SIDPP and SICP
     - ii. Pit gain
     - iii. Time
   - II. Regroup and identify forward plan

3. **With BHA in the BOP stack and no compatible ram preventer and pipe combo immediately availiable**:
    I. Sound alarm, alert crew.
    II. If possible to pick up high enough, pull string clear of the stack and follow Open Hole (III) scenario.
    III. If impossible to pick up high enough to pull the string clear of the stack:
        a. Stab crossover, make up one joint/stand of drill pipe and full opening safety valve and close.
        b. Space out drillstring with tool joint just beneath the upper pipe ram.
        c. Open HCR
        d. Shut-in utilizing upper VBRs.
        e. Close choke
        f. Confirm shut-in
        g. Notify rig manager and Centennial company representative.
        h. Call Centennial drilling engineer
        i. Read and record:
            i. SIDPP and SICP
            ii. Pit gain
            iii. Time
    IV. Regroup and identify forward plan.

** **If annular is used to shut-in well and pressure builds to OR is expected to get to 50% of RWP, confirm space-out and swap to upper VBRs for shut-in.**

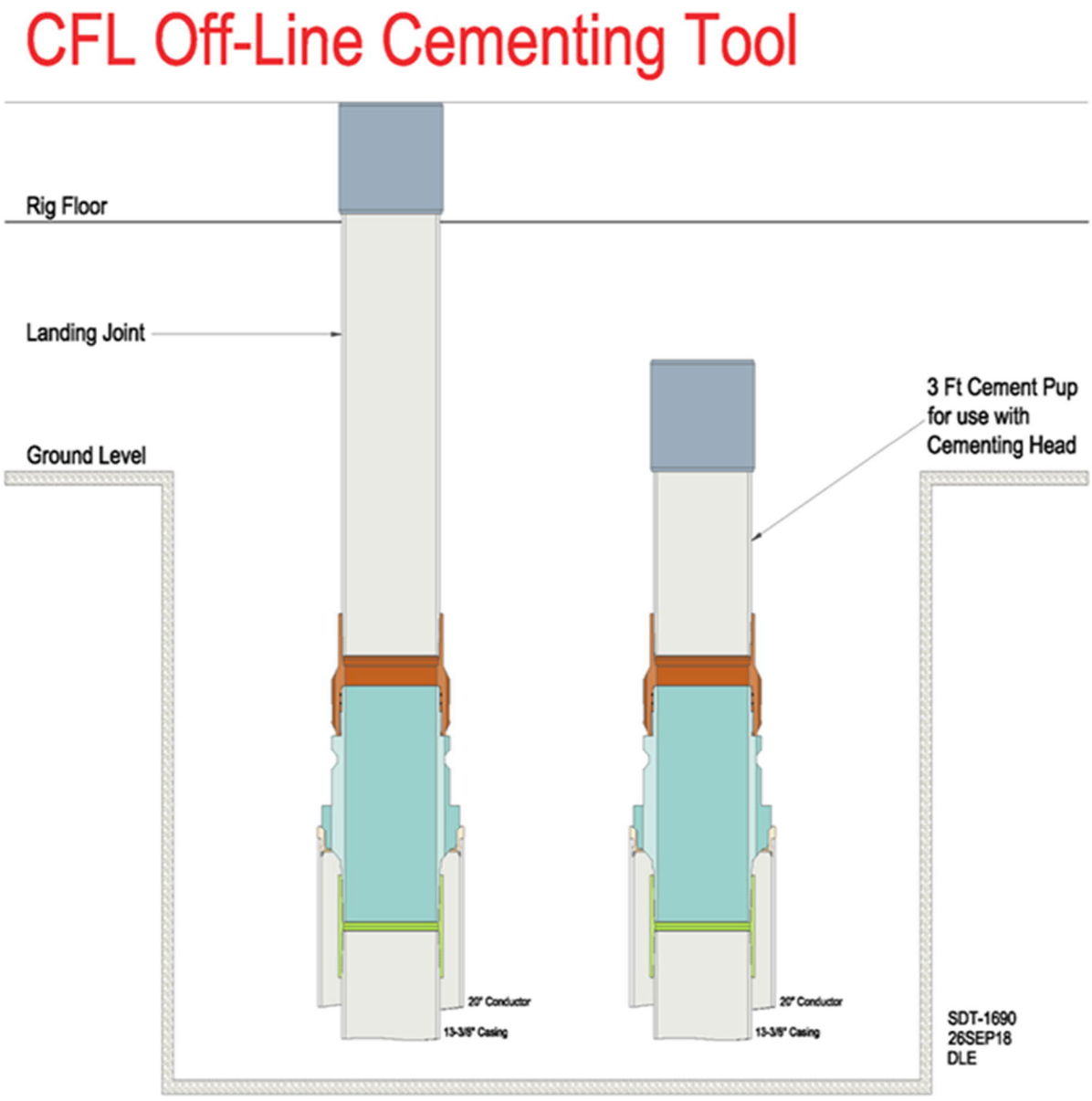
Sheba Federal Com 305H

Centennial Offline Cementing Procedure

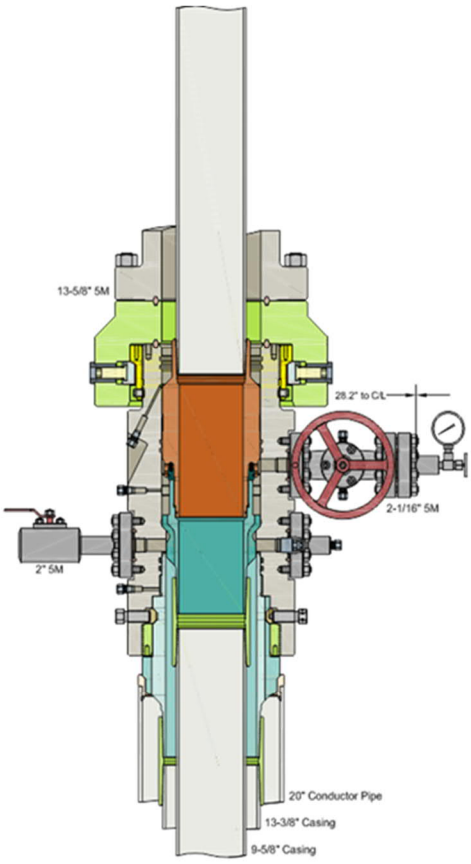
13-3/8" & 9-5/8" Casing

1. Drill hole to Total Depth with Rig and perform wellbore cleanup cycles.
2. Run and casing to Depth.
3. Land casing with mandrel
4. Circulate 1.5 csg capacity.
5. Flow test – Confirm well is static.
6. Set Annular packoff and pressure test. Test to 5k.
7. Nipple down BOP and install cap flange.
8. Skid rig to next well on pad
9. Remove cap flange (confirm well is static before removal)
    a. If well is not static use the casing outlet valves to kill well
    b. Drillers method will be used in well control event
    c. High pressure return line will be rigged up to lower casing valve and run to choke manifold to control annular pressure
    d. Kill mud will be circulated once influx is circulated out of hole
    e. Confirm well is static and remove cap flange to start offline cement operations
10. Install offline cement tool.
11. Rig up cementers.
12. Circulate bottoms up with cement truck
13. Commence planned cement job, take returns through the annulus wellhead valve
14. After plug is bumped confirm floats hold and well is static
15. Rig down cementers and equipment
16. Install night cap with pressure gauge to monitor.
17. Will only offline surface and intermediate casing.

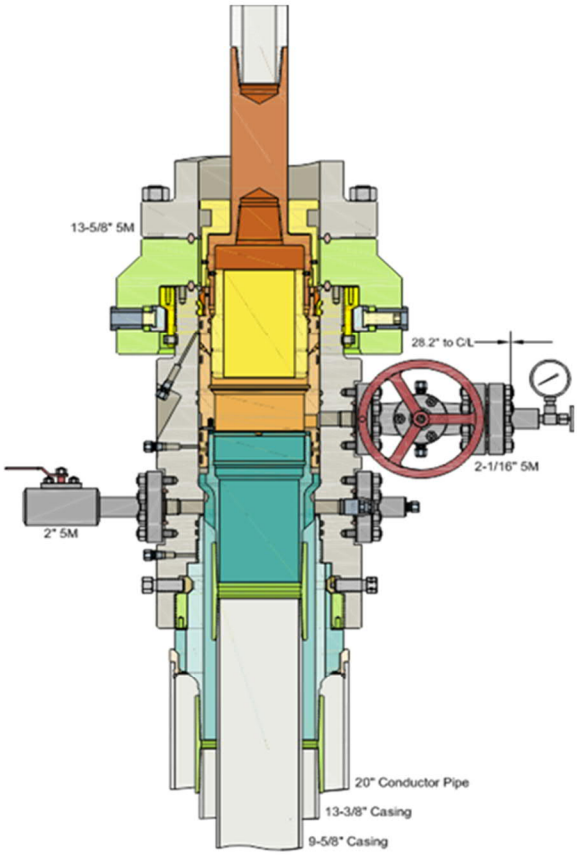
13 3/8" Surface job



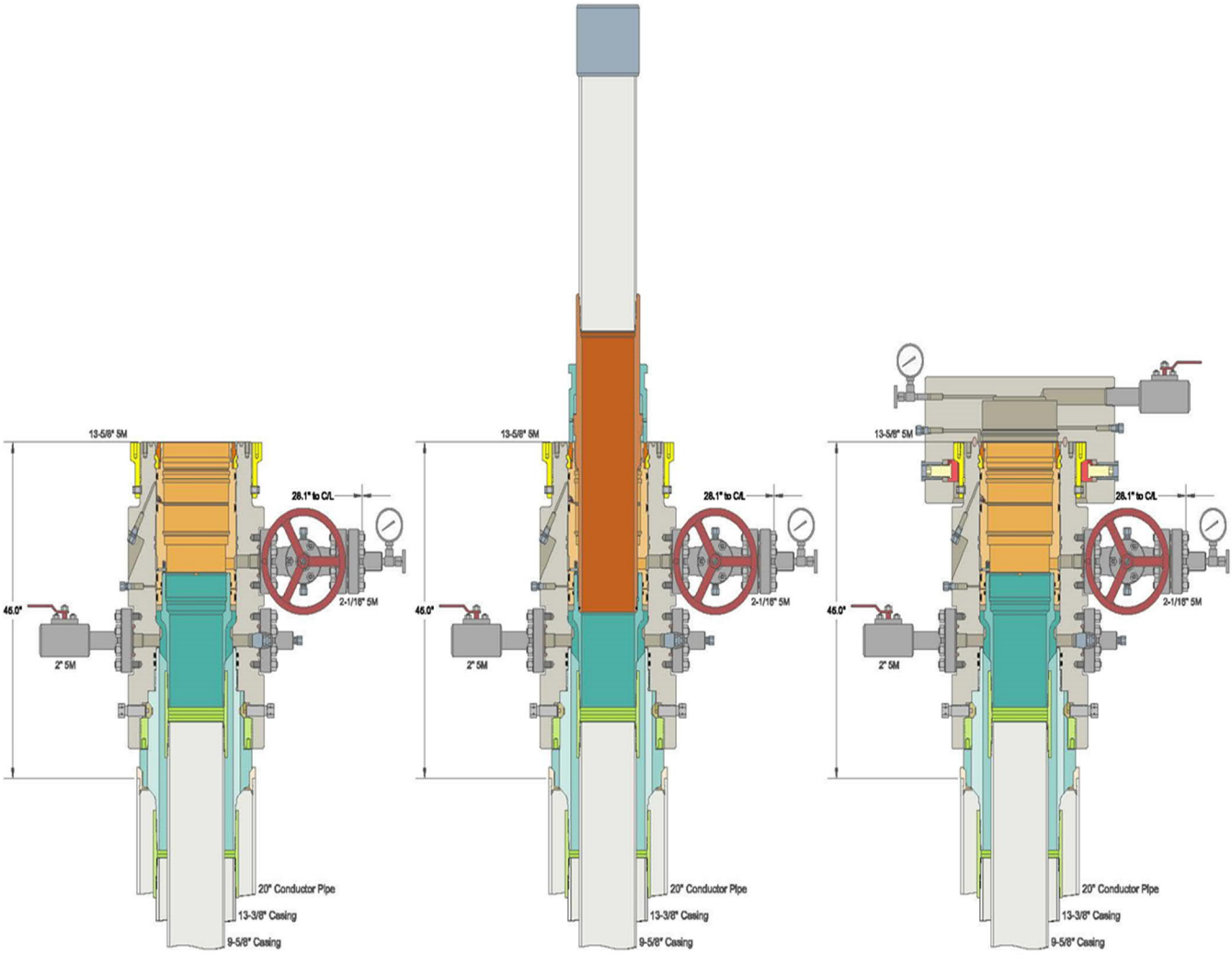
9 5/8” Intermediate Job



Run 9-5/8” Casing
Land Casing on 9-5/8” Mandrel Hanger
Cement 9-5/8” Casing
Retrieve Running Tool



Run 13-5/8” Packoff
Test Upper and Lower Seals
Engage Lockring
Retrieve Running Tool


13-5/8" 5M
28.1" to C/L
2-1/16" 5M
46.0°
2" 5M
20" Conductor Pipe
13-3/8" Casing
9-5/8" Casing
13-5/8" 5M
28.1" to C/L
2-1/16" 5M
46.0°
2" 5M
20" Conductor Pipe
13-3/8" Casing
9-5/8" Casing
13-5/8" 5M
28.1" to C/L
2-1/16" 5M
46.0°
2" 5M
20" Conductor Pipe
13-3/8" Casing
9-5/8" Casing

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

SUPO Data Report
03/02/2022

APD ID: 10400070418 **Submission Date:** 03/04/2021

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Well Type: OIL WELL **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:

Sheba_305H_Existing_Roads_20211130143647.pdf

Existing Road Purpose: ACCESS **Row(s) Exist?** YES

ROW ID(s)

ID:

Do the existing roads need to be improved? YES

Existing Road Improvement Description: - The operator will improve or maintain existing road in a condition the same as or better than before operations begin. The operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures o the entire access route such as cattle guards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use. We will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. BLM written approval will be acquired before application of surfactants, binding agents, or the dust suppression chemicals on roadways.

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Sheba_305H_Existing_Wells_20211130143908.pdf

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Well will produce from existing facility on existing drill pad

Production Facilities map:

Sheba_305H_Location_Layout_Plats_20211130144336.pdf
Sheba_305H_Flow_Diagram_20211130144341.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: OTHER

Describe type: Private

Water source use type: STIMULATION

Source latitude: **Source longitude:**

Source datum:

Water source permit type: PRIVATE CONTRACT

Water source transport method: PIPELINE

Source land ownership: PRIVATE

Source transportation land ownership: PRIVATE

Water source volume (barrels): 35000 **Source volume (acre-feet):** 4.51125837

Source volume (gal): 1470000

Water source and transportation map:

Water_Source_and_Transportation_Map_20200226150053.pdf

Water source comments: Existing frac ponds in NWSE Sec 16, T24S-R34E

New water well? N

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

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:**

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: Concho Caliche Pit in the SENW of Sec. 6, T25S, 35E

Construction Materials source location attachment:

Caliche_Source_and_Route_Map_20200226150354.pdf

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: drill cuttings (12261 cubic feet/well)

Amount of waste: 12261 gallons

Waste disposal frequency : One Time Only

Safe containment description: Drill cuttings will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility

Safe containmant attachment:

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

Disposal type description:

Disposal location description: NMOCD approved disposal facility (Sundance or R360 Environmental)

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Waste type: DRILLING

Waste content description: Brine water based drilling fluid

Amount of waste: 1500 barrels

Waste disposal frequency : Monthly

Safe containment description: steel tanks with plastic-lined containment berms

Safe containmant attachment:

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

Disposal type description:

Disposal location description: state approved disposal facility (Sundance services or R360 Environmental)

Waste type: DRILLING

Waste content description: Fresh water based drilling fluid

Amount of waste: 1500 barrels

Waste disposal frequency : Weekly

Safe containment description: Steel tanks with plastic-lined containment berms

Safe containmant attachment:

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

Disposal type description:

Disposal location description: NMOCD approved disposal facility, Any public disposal (SWD).

Waste type: SEWAGE

Waste content description: Grey water/human waste

Amount of waste: 5000 gallons

Waste disposal frequency : Weekly

Safe containment description: Approved waste storage tanks with containment

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Using water fleet to process sewage; the disposal fluid will go to any public disposal, state approved disposal facility

Waste type: GARBAGE

Waste content description: General trash/garbage

Amount of waste: 5000 pounds

Waste disposal frequency : Weekly

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Safe containment description: Enclosed trash trailer (Lea County Landfill, outside of Eunice)

Safe containmant attachment:

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

Disposal type description: Commercial

Disposal location description: state approved disposal 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? Y

Description of cuttings location Drill cuttings will be properly disposed of into a steel tank and taken to an NMOCD approved disposal facility.

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?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities attachment:

Comments:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Section 9 - Well Site Layout

Well Site Layout Diagram:

Sheba_305H_Location_Layout_Plats_20211130144618.pdf

Comments: Existing well pad

Section 10 - Plans for Surface Reclamation

Type of disturbance: No New Surface Disturbance **Multiple Well Pad Name:** Solomon/Sheba Federal

Multiple Well Pad Number: 1

Recontouring attachment:

Reclamation_Plat_20200227141337.pdf

Drainage/Erosion control construction: Drainage and erosion will be constantly monitored to prevent compromising the well site integrity, and to protect the surrounding native topography.

Drainage/Erosion control reclamation: Upon reclamation, well site will be returned to its native contour. Water breaks will be added if needed, to prevent unnatural erosion and loss of vegetation.

Well pad proposed disturbance (acres):

Road proposed disturbance (acres):

Powerline proposed disturbance (acres):

Pipeline proposed disturbance (acres):

Other proposed disturbance (acres):

Total proposed disturbance: 0

Well pad interim reclamation (acres): 0

Road interim reclamation (acres): 0

Powerline interim reclamation (acres): 0

Pipeline interim reclamation (acres): 0

Other interim reclamation (acres): 0

Total interim reclamation: 0

Well pad long term disturbance (acres): 0

Road long term disturbance (acres): 0

Powerline long term disturbance (acres): 0

Pipeline long term disturbance (acres): 0

Other long term disturbance (acres): 0

Total long term disturbance: 0

Disturbance Comments:

Reconstruction method: Come back in with heavy equipment, remove caliche in the reclamation area, and replace with native topsoil. Reconstruction of pad will occur once all wells on location have been drilled and completed.

Topsoil redistribution: Surface disturbance will be limited to well site surveyed dimensions. Topsoil will be stored along the East edge of the pad site.

Soil treatment: Native soils will be used in the initial construction of the well pad. Pad will be compacted using fresh water, dust control measures will be implemented as needed.

Existing Vegetation at the well pad: Mesquite, shrubs, and grass (needle-grass, burro grass, dropseed). Surface disturbance will be limited to well site surveyed dimensions. Topsoil will be stored along the East edge of the pad site.

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Mesquite, shrubs, and grass (needle-grass, burro grass, dropseed). Will be windrowed to the edge of the disturbance and be utilized as a barrier from water run-off.

Existing Vegetation Community at the road attachment:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Existing Vegetation Community at the pipeline: Mesquite, shrubs, and grass (needle-grass, burro grass, dropseed).

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: Mesquite, shrubs, and grass (needle-grass, burro grass, dropseed).

Existing Vegetation Community at other disturbances attachment:

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 Management

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: Montgomery **Last Name:** Floyd

Phone: (432)425-8321 **Email:** montgomery.floyd@cdevinc.com

Seedbed prep: Prepare a 3-5 inch deep seedbed. with the top 3-4 inches consisting of topsoil.

Seed BMP: Seeding will be done in the proper season, and monitored for the re-establishment of native vegetation.

Seed method: Broadcast

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Weed treatment plan description: Spray for noxious weeds and bare ground as needed.

Weed treatment plan attachment:

Monitoring plan description: All disturbed areas will be closely monitored for any primary or secondary noxious weeds. Should any be found, chemical spraying in accordance with state regulations will be implemented.
Monitoring plan attachment:

Success standards: No primary or secondary noxious weeds will be allowed. Vegetation will be returned to its native standard.
Pit closure description: No open pits will be constructed.

Pit closure attachment:

Section 11 - Surface Ownership

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: EXISTING ACCESS ROAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

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:**

Fee Owner: Quail Ranch, LLC

Phone: (432)688-6631

Fee Owner Address: One Concho Center, 600 W. Illinois Ave.
Email: sspillers@concho.com

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: AGREEMENT

Surface Access Agreement Need description: Lea, NM County Clerk Book: 2144, Page 514

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Fee Owner: Fee Owner Depercated **Fee Owner Address:**

Phone: (999)999-9999 **Email:** none@aol.com

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: AGREEMENT

Surface Access Agreement Need description: Quail Ranch LLC for portion of well pad

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Section 12 - Other Information

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

ROW Type(s):

ROW Applications

SUPO Additional Information:

Use a previously conducted onsite? Y

Previous Onsite information: On-site performed by BLM NRS McKenna Ryder 9/5/19

Other SUPO Attachment

Sheba_Fed_27_SENE_1_SUPO_20211130145008.pdf

PROCEED IN A WESTERLY, THEN NORTHWESTERLY, THEN WESTERLY DIRECTION FROM JAL, NEW MEXICO ALONG NM-128 APPROXIMATELY 18.0 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY, THEN SOUTHEASTERLY, THEN SOUTHERLY DIRECTION APPROXIMATELY 1.2 MILES JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; CONTINUE IN A SOUTHERLY, THEN EASTERLY DIRECTION APPROXIMATELY 0.7 MILES TO THE JUNCTION OF THIS ROAD AND THE EXISTING ACCESS ROAD TO THE EAST; CONTINUE IN AN EASTERLY, THEN NORTHERLY, THEN EASTERLY DIRECTION APPROXIMATELY 0.2 MILES TO THE EXISTING WELL LOCATION.

TOTAL DISTANCE FROM JAL, NEW MEXICO TO THE EXISTING LOCATION IS APPROXIMATELY 20.1 MILES.

REV: 3 10-28-21 D.J.S. (UPDATE TO EXISTING PAD)

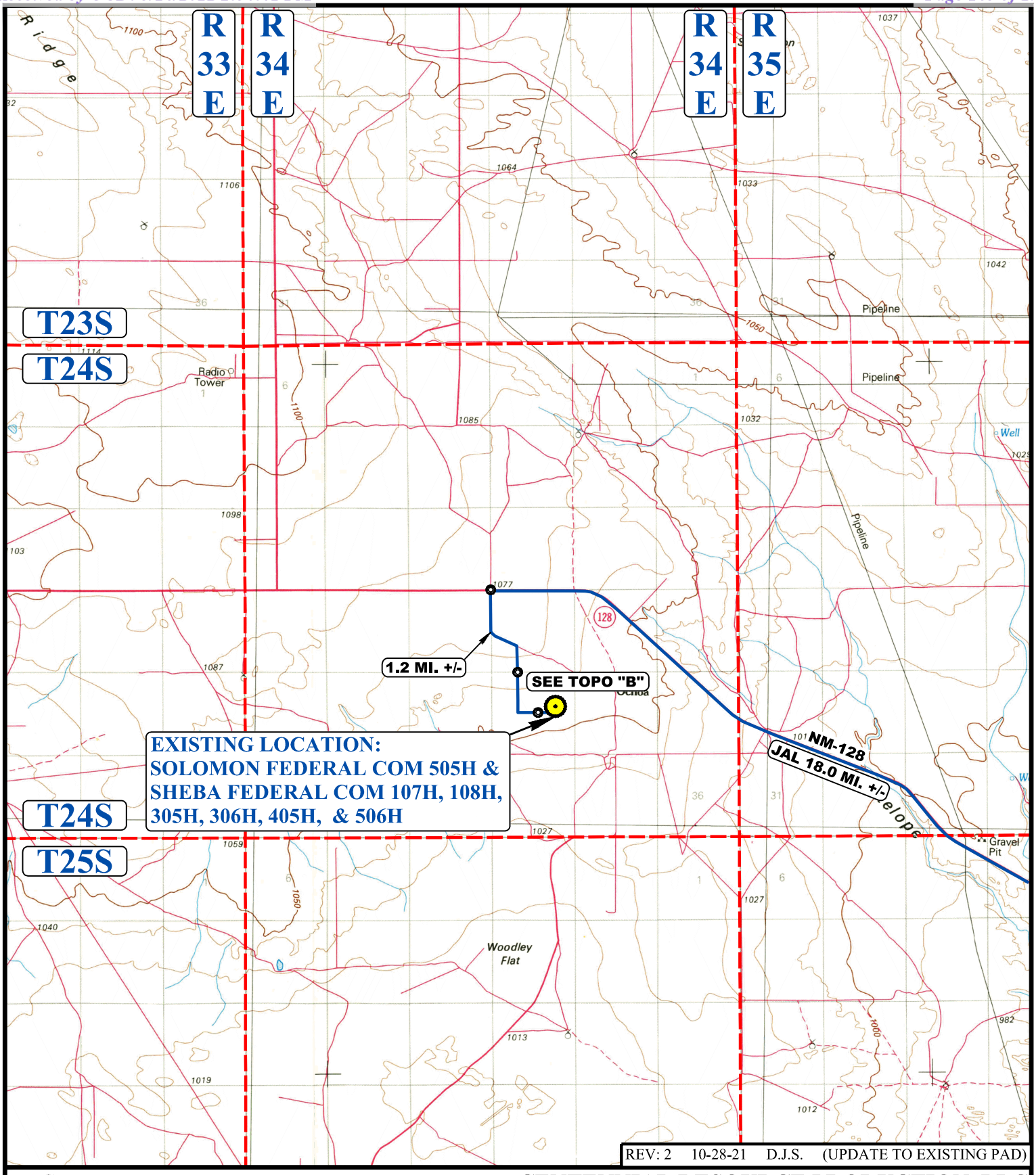
CENTENNIAL RESOURCE PRODUCTION, LLC

SOLOMON FEDERAL COM 505H & SHEBA FEDERAL COM 107H, 108H, 305H, 306H, 405H, & 506H
SE 1/4 NE 1/4, SECTION 27, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	B.B., R.C.	08-23-19	
DRAWN BY	S.T.O.	09-12-19	

ROAD DESCRIPTION

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



REV: 2 10-28-21 D.J.S. (UPDATE TO EXISTING PAD)

LEGEND:

EXISTING LOCATION

N

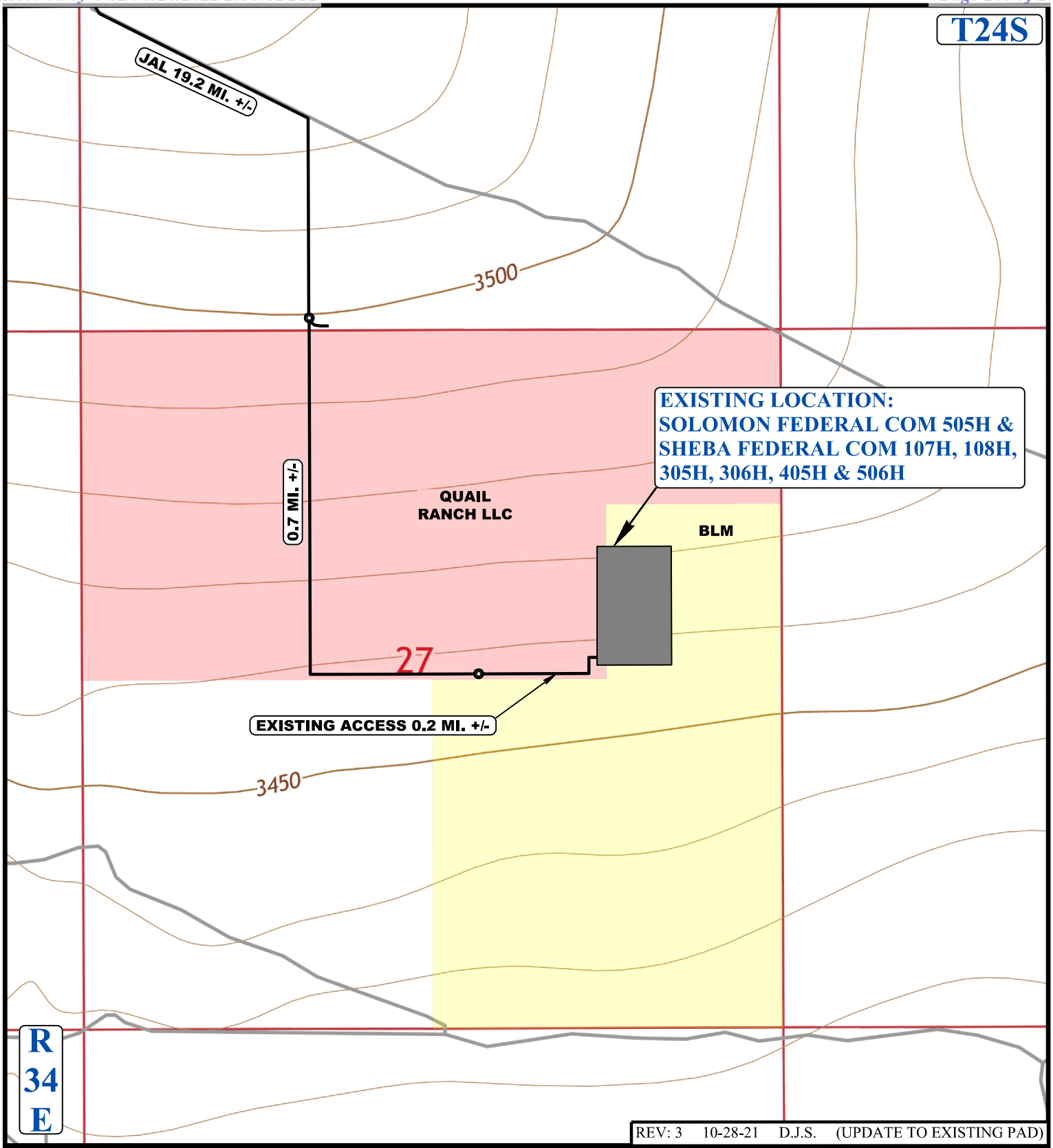
CENTENNIAL RESOURCE PRODUCTION, LLC

SOLOMON FEDERAL COM 505H & SHEBA FEDERAL
COM 107H, 108H, 305H, 306H, 405H, & 506H
SE 1/4 NE 1/4, SECTION 27, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	B.B., R.C.	08-23-19	SCALE
DRAWN BY	S.T.O.	09-12-19	1 : 100,000
ACCESS ROAD MAP			TOPO A

UINTAH ENGINEERING & LAND SURVEYING

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



REV: 3 10-28-21 D.J.S. (UPDATE TO EXISTING PAD)

NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

LEGEND:

EXISTING ROAD

N

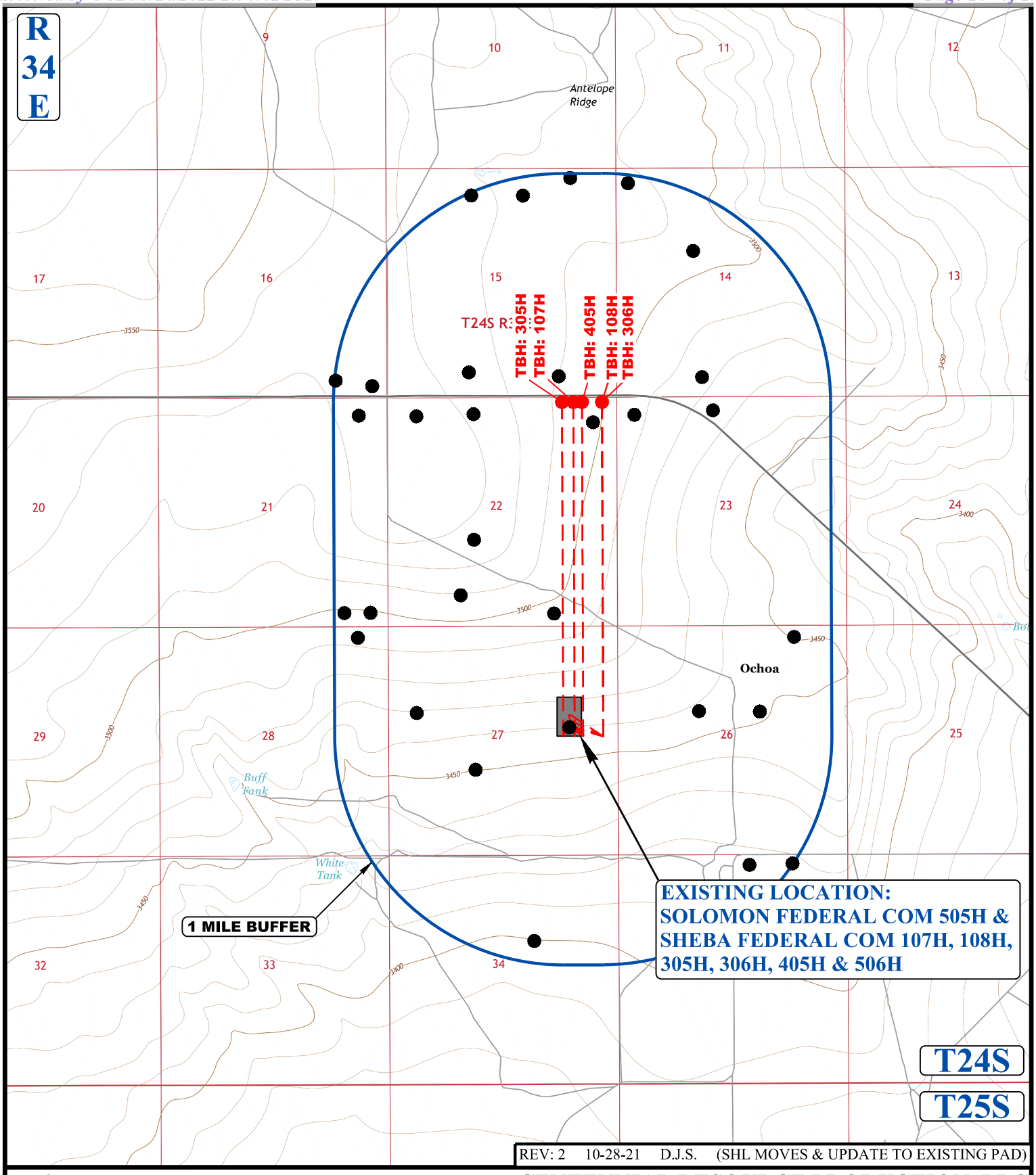
CENTENNIAL RESOURCE PRODUCTION, LLC

SOLOMON FEDERAL COM 505H & SHEBA FEDERAL COM 107H, 108H, 305H, 306H, 405H, & 506H
SE 1/4 NE 1/4, SECTION 27, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	B.B., R.C.	08-23-19	SCALE
DRAWN BY	S.T.O.	09-12-19	1 : 12,000
ACCESS ROAD MAP			TOPO B

UINTAH ENGINEERING & LAND SURVEYING

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



REV: 2 10-28-21 D.J.S. (SHL MOVES & UPDATE TO EXISTING PAD)

LEGEND:

● EXISTING WELLS

N

CENTENNIAL RESOURCE PRODUCTION, LLC

SOLOMON FEDERAL COM 505H & SHEBA FEDERAL COM 107H, 108H, 305H, 306H, 405H, & 506H
SE 1/4 NE 1/4, SECTION 27, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	B.B., R.C.	08-23-19	SCALE
DRAWN BY	S.T.O.	09-12-19	1 : 36,000
WELL PROXIMITY MAP			TOPO C

UINTAH ENGINEERING & LAND SURVEYING

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

JULIET FEDERAL COM 503H, 504H & SOLOMON FEDERAL COM 505H ON EXISTING JULIET FEDERAL COM 1H

SUPPLEMENTAL OIL & GAS SPREADSHEET TO TOPO "C"

DATE: 02-13-20 S.T.O.

OBJECTID	API	OPERATOR	WELL NAME	WELL TYPE	WELL STATUS	UNIT LETTER-SECTION-TOWNSHIP-RANGE	NAD 83 LATITUDE	NAD 83 LONGITUDE
96265	30-025-42448	OWL SWD OPERATING LLC	MADERA SWD #001	Salt Water Disposal	Active	N-14-24S-34E	32.21148421	-103.44286420
29008	30-025-27572	STRATA PRODUCTION CO	BUCKEYE #001	Oil	Plugged (site released)	C-15-24S-34E	32.22302250	-103.45999150
97	30-025-45462	MARATHON OIL PERMIAN LLC	FLOWMASTER 15 FB FEE #016H	Oil	New	N-15-24S-34E	32.21200950	-103.45940230
118	30-025-45461	MARATHON OIL PERMIAN LLC	FLOWMASTER 15 WD FEE #012H	Gas	New	N-15-24S-34E	32.21200886	-103.45930510
138	30-025-44684	MARATHON OIL PERMIAN LLC	FLOWMASTER FEE 24 34 15 TB #010H	Oil	New	N-15-24S-34E	32.21190551	-103.46027630
139	30-025-44687	MARATHON OIL PERMIAN LLC	FLOWMASTER FEE 24 34 15 WA #014H	Oil	Active	N-15-24S-34E	32.21190496	-103.46017920
145	30-025-45460	MARATHON OIL PERMIAN LLC	FLOWMASTER 15 WB FEE #011H	Gas	New	N-15-24S-34E	32.21201081	-103.45963400
146	30-025-45463	MARATHON OIL PERMIAN LLC	FLOWMASTER 15 AV FEE #017H	Oil	New	N-15-24S-34E	32.21201020	-103.45949930
1404	30-025-44689	MARATHON OIL PERMIAN LLC	FLOWMASTER 15 WXY FEE #002H	Oil	Active	N-15-24S-34E	32.21190550	-103.46027630
63405	30-025-45965	MARATHON OIL PERMIAN LLC	FLOWMASTER 15 FB FEE #015H	Oil	Active	N-15-24S-34E	32.21190671	-103.46037340
66929	30-025-46000	MARATHON OIL PERMIAN LLC	WILL KANE 15 WXY FEE #010H	Gas	Active	O-15-24S-34E	32.21170309	-103.45357800
66945	30-025-45997	MARATHON OIL PERMIAN LLC	WILL KANE 15 WA FEE #006H	Oil	Active	O-15-24S-34E	32.21170365	-103.45367500
66946	30-025-45999	MARATHON OIL PERMIAN LLC	WILL KANE 15 WXY FEE #003H	Oil	Active	O-15-24S-34E	32.21170462	-103.45377180
66944	30-025-45998	MARATHON OIL PERMIAN LLC	WILL KANE 15 WA FEE #011H	Oil	Active	P-15-24S-34E	32.21170261	-103.45348100
99921	30-025-45380	EOG RESOURCES INC	JOLLY ROGER 16 STATE #708H	Oil	Active	N-16-24S-34E	32.21200450	-103.47698430
102603	30-025-45379	EOG RESOURCES INC	JOLLY ROGER 16 STATE #707H	Oil	Active	N-16-24S-34E	32.21200470	-103.47709100
1576	30-025-40566	CENTENNIAL RESOURCE PRODUCTION LLC	PIRATE STATE #001H	Oil	Active	O-16-24S-34E	32.21158600	-103.47171020
1615	30-025-43917	CENTENNIAL RESOURCE PRODUCTION LLC	PIRATE STATE #101H	Oil	Active	P-16-24S-34E	32.21130300	-103.46745800
1623	30-025-44426	CENTENNIAL RESOURCE PRODUCTION LLC	PIRATE STATE #301H	Oil	Active	P-16-24S-34E	32.21133500	-103.47020400
1546	30-025-43408	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #101H	Oil	Active	A-21-24S-34E	32.20919490	-103.46850280
1620	30-025-43401	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL #301H	Oil	Active	B-21-24S-34E	32.20920340	-103.47431920
80563	30-025-08494	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	Plugged (site released)	B-21-24S-34E	32.20850750	-103.47277070
7664	30-025-46428	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #702H	Oil	New	O-21-24S-34E	32.19661800	-103.47186700
9823	30-025-46427	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #701H	Oil	New	O-21-24S-34E	32.19661900	-103.47196400
61398	30-025-28641	CIMAREX ENERGY CO. OF COLORADO	VACA RIDGE 21 FEDERAL COM #001	Gas	Plugged (site released)	O-21-24S-34E	32.19761660	-103.47274780
7665	30-025-46429	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #703H	Oil	New	P-21-24S-34E	32.19661400	-103.46769700
17384	30-025-46301	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #503H	Oil	New	P-21-24S-34E	32.19661600	-103.46963700
23892	30-025-46299	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL #501H	Oil	New	P-21-24S-34E	32.19661600	-103.46983100
23893	30-025-46300	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #502H	Oil	New	P-21-24S-34E	32.19661600	-103.46973400
54010	30-025-46362	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #704H	Oil	New	P-21-24S-34E	32.19661400	-103.46760000
1595	30-025-43358	CENTENNIAL RESOURCE PRODUCTION LLC	SHEBA FEDERAL COM #001H	Oil	Active	A-22-24S-34E	32.20858750	-103.45101130
1650	30-025-43414	CENTENNIAL RESOURCE PRODUCTION LLC	SOLOMON FEDERAL COM #001H	Oil	New	B-22-24S-34E	32.20918930	-103.45477590
1552	30-025-45577	CENTENNIAL RESOURCE PRODUCTION LLC	SOLOMON FEDERAL COM #505H	Oil	New	C-22-24S-34E	32.20918800	-103.45931000
1556	30-025-45554	CENTENNIAL RESOURCE PRODUCTION LLC	JULIET FEDERAL COM #503H	Oil	New	C-22-24S-34E	32.20919100	-103.46191900
1574	30-025-43385	CENTENNIAL RESOURCE PRODUCTION LLC	JULIET FEDERAL COM #001H	Oil	Active	C-22-24S-34E	32.20919210	-103.45996790
1636	30-025-45576	CENTENNIAL RESOURCE PRODUCTION LLC	JULIET FEDERAL COM #504H	Oil	New	C-22-24S-34E	32.20919000	-103.46182200
1555	30-025-45557	CENTENNIAL RESOURCE PRODUCTION LLC	ROMEO FEDERAL COM #705H	Oil	New	D-22-24S-34E	32.20919200	-103.46374900
1598	30-025-45556	CENTENNIAL RESOURCE PRODUCTION LLC	ROMEO FEDERAL COM #706H	Oil	New	D-22-24S-34E	32.20919200	-103.46365200
1642	30-025-45555	CENTENNIAL RESOURCE PRODUCTION LLC	JULIET FEDERAL COM #707H	Oil	New	D-22-24S-34E	32.20919200	-103.46355400
1651	30-025-42999	CENTENNIAL RESOURCE PRODUCTION LLC	ROMEO FEDERAL COM #001H	Oil	Active	D-22-24S-34E	32.20919210	-103.46423440
82319	30-025-28235	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	Plugged (site released)	K-22-24S-34E	32.20123670	-103.45995330
82643	30-025-30179	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	Plugged (site released)	N-22-24S-34E	32.19760510	-103.46101380
1541	30-025-45404	CENTENNIAL RESOURCE PRODUCTION LLC	SHEBA FEDERAL COM #506H	Oil	New	O-22-24S-34E	32.19660600	-103.45505300
1568	30-025-45374	CENTENNIAL RESOURCE PRODUCTION LLC	SHEBA FEDERAL COM #711H	Oil	Active	O-22-24S-34E	32.19660500	-103.45395400
1575	30-025-45405	CENTENNIAL RESOURCE PRODUCTION LLC	SHEBA FEDERAL COM #507H	Oil	New	O-22-24S-34E	32.19660600	-103.45495500
1604	30-025-45376	CENTENNIAL RESOURCE PRODUCTION LLC	SOLOMON FEDERAL COM #710H	Oil	Active	O-22-24S-34E	32.19660500	-103.45405100
1639	30-025-45375	CENTENNIAL RESOURCE PRODUCTION LLC	SOLOMON FEDERAL COM #709H	Oil	Active	O-22-24S-34E	32.19660500	-103.45414800
36790	30-025-46514	MATADOR PRODUCTION COMPANY	BRAD LUMMIS COM #122H	Oil	New	C-23-24S-34E	32.20946740	-103.44205830
43126	30-025-45441	MATADOR PRODUCTION COMPANY	BRAD LUMMIS COM #212H	Oil	Active	C-23-24S-34E	32.20945160	-103.44219270
43235	30-025-45440	MATADOR PRODUCTION COMPANY	BRAD LUMMIS COM #112H	Oil	New	C-23-24S-34E	32.20940110	-103.44211600
43102	30-025-45709	MATADOR PRODUCTION COMPANY	BRAD LUMMIS FEDERAL COM #221H	Oil	New	D-23-24S-34E	32.20911030	-103.44790930
43144	30-025-45513	MATADOR PRODUCTION COMPANY	BRAD LUMMIS FEDERAL COM #201H	Oil	New	D-23-24S-34E	32.20910250	-103.44781280
43146	30-025-45580	MATADOR PRODUCTION COMPANY	BRAD LUMMIS FEDERAL COM #131H	Oil	New	D-23-24S-34E	32.20909460	-103.44771620
43166	30-025-45581	MATADOR PRODUCTION COMPANY	BRAD LUMMIS FEDERAL COM #211H	Oil	Active	D-23-24S-34E	32.20907900	-103.44752290
43185	30-025-45511	MATADOR PRODUCTION COMPANY	BRAD LUMMIS FEDERAL COM #111H	Oil	Active	D-23-24S-34E	32.20919230	-103.44790010
45482	30-025-45512	MATADOR PRODUCTION COMPANY	BRAD LUMMIS FEDERAL COM #121H	Oil	New	D-23-24S-34E	32.20908680	-103.44761960
74548	30-025-46354	EOG RESOURCES INC	KESTREL 26 FEDERAL #702H	Oil	New	M-26-24S-34E	32.18246200	-103.44609640
85799	30-025-29917	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Gas	Plugged (site released)	E-27-24S-34E	32.19034960	-103.46420290
91224	30-025-28321	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	Plugged (site released)	K-27-24S-34E	32.18671420	-103.45993040
63442	30-025-45939	EOG RESOURCES INC	PEREGRINE 27 FEDERAL COM #311H	Oil	New	M-27-24S-34E	32.18350790	-103.46470040
63361	30-025-46105	EOG RESOURCES INC	PEREGRINE 27 FEDERAL COM #707H	Oil	New	O-27-24S-34E	32.18198700	-103.45526230
63339	30-025-46108	EOG RESOURCES INC	PEREGRINE 27 FEDERAL COM #710H	Oil	New	P-27-24S-34E	32.18181950	-103.45189810
63363	30-025-46107	EOG RESOURCES INC	PEREGRINE 27 FEDERAL COM #709H	Oil	New	P-27-24S-34E	32.18181950	-103.45200470

JULIET FEDERAL COM 503H, 504H & SOLOMON FEDERAL COM 505H ON EXISTING JULIET FEDERAL COM 1H

SUPPLEMENTAL OIL & GAS SPREADSHEET TO TOPO "C"

DATE: 02-13-20 S.T.O.

OBJECTID	API	OPERATOR	WELL NAME	WELL TYPE	WELL STATUS	UNIT LETTER-SECTION-TOWNSHIP-RANGE	NAD 83 LATITUDE	NAD 83 LONGITUDE
63365	30-025-46106	EOG RESOURCES INC	PEREGRINE 27 FEDERAL COM #708H	Oil	New	P-27-24S-34E	32.18181960	-103.45211140
99688	30-025-44875	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #314H	Oil	New	A-28-24S-34E	32.19524100	-103.46850600
99813	30-025-44874	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #313H	Oil	New	A-28-24S-34E	32.19524110	-103.46861270
103309	30-025-44930	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #715H	Oil	New	A-28-24S-34E	32.19524090	-103.46839930
99796	30-025-44929	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #712H	Oil	New	B-28-24S-34E	32.19524390	-103.47159960
99917	30-025-44873	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #308H	Oil	New	B-28-24S-34E	32.19524590	-103.47488510
99919	30-025-44928	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #711H	Oil	New	B-28-24S-34E	32.19524390	-103.47170620
102602	30-025-44926	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #309H	Oil	New	B-28-24S-34E	32.19524670	-103.47477840
103308	30-025-44927	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #710H	Oil	New	B-28-24S-34E	32.19524400	-103.47181290
99687	30-025-44872	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #707H	Oil	New	C-28-24S-34E	32.19524680	-103.47499170
99812	30-025-44871	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #706H	Oil	New	C-28-24S-34E	32.19524900	-103.47749650
99916	30-025-44870	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #705H	Oil	New	C-28-24S-34E	32.19524910	-103.47760310
103305	30-025-44869	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #704H	Oil	New	C-28-24S-34E	32.19524920	-103.47770980
102787	30-025-28488	EOG RESOURCES INC	PITCHFORK RANCH 28 FEDERAL COM #001	Gas	Active	G-28-24S-34E	32.19035720	-103.47274020
102847	30-025-27826	EOG RESOURCES INC	MADERA 28 FEDERAL COM #001	Gas	Active	N-28-24S-34E	32.18309780	-103.47696690
103009	30-025-29862	EOG RESOURCES INC	MADERA 28 FEDERAL COM #002	Gas	Plugged (site released)	N-28-24S-34E	32.18309780	-103.47625730
103281	30-025-29926	EOG RESOURCES INC	MADERA 33 FEDERAL COM #004	Gas	Plugged (site released)	J-33-24S-34E	32.17310330	-103.47270200
112204	30-025-28596	JOHNNY G JONES	MOORE 34 COM #001	Oil	Plugged (site released)	G-34-24S-34E	32.17582320	-103.45564270
99734	30-025-28002	EOG RESOURCES INC	PITCHFORK 34 FEDERAL COM #001	Gas	Active	L-34-24S-34E	32.17219160	-103.46417240

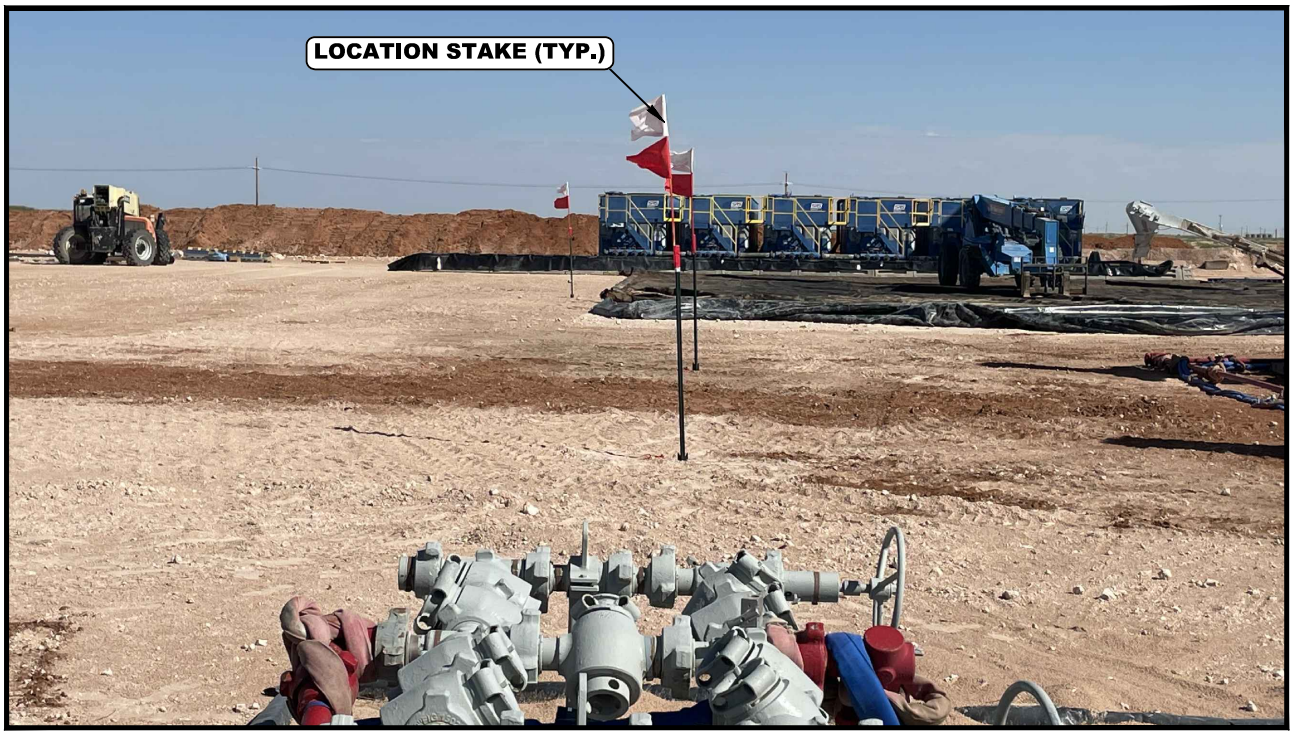


PHOTO: VIEW OF LOCATION STAKES CAMERA ANGLE: EASTERLY

PHOTO: VIEW OF EXISTING PAD CAMERA ANGLE: NORTHERLY

REV: 2 10-28-21 D.J.S. (UPDATE PHOTOS)

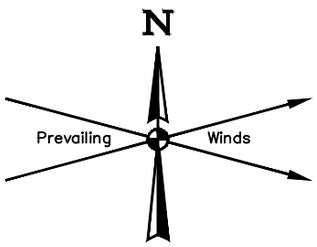
CENTENNIAL RESOURCE PRODUCTION, LLC

SOLOMON FEDERAL COM 505H & SHEBA FEDERAL COM 107H, 108H, 305H, 306H, 405H, & 506H
SE 1/4 NE 1/4, SECTION 27, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

UINTAH ENGINEERING & LAND SURVEYING

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

TAKEN BY	B.B., R.C.	08-23-19	
DRAWN BY	S.T.O.	09-12-19	
LOCATION PHOTOS			PHOTO



PAUL BUCHELE
NEW MEXICO
23782
10-28-21
PROFESSIONAL SURVEYOR

Edge of Existing Pad
Existing Separator
Existing Flare
Existing Tank Containment
Existing Stairs
Existing Lact
Existing Electrical Panel
Existing Electrical Panel
Existing Power Pole (Typ.)
Existing Lact
Existing Power Line
OHP
Existing Anchor (Typ.)
Existing Tanks (Typ.)
Existing Stairs
698'
659'
Existing Tank Containment
Access Road
30'
30'
FUTURE
305H
405H
306H
107H
41'
30'
20'
264'
Existing 505H Well Head
30'
30'
40'
10'
200'
FUTURE
108H
Existing 506H Well Head
199'
300'

NOTES:
- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.

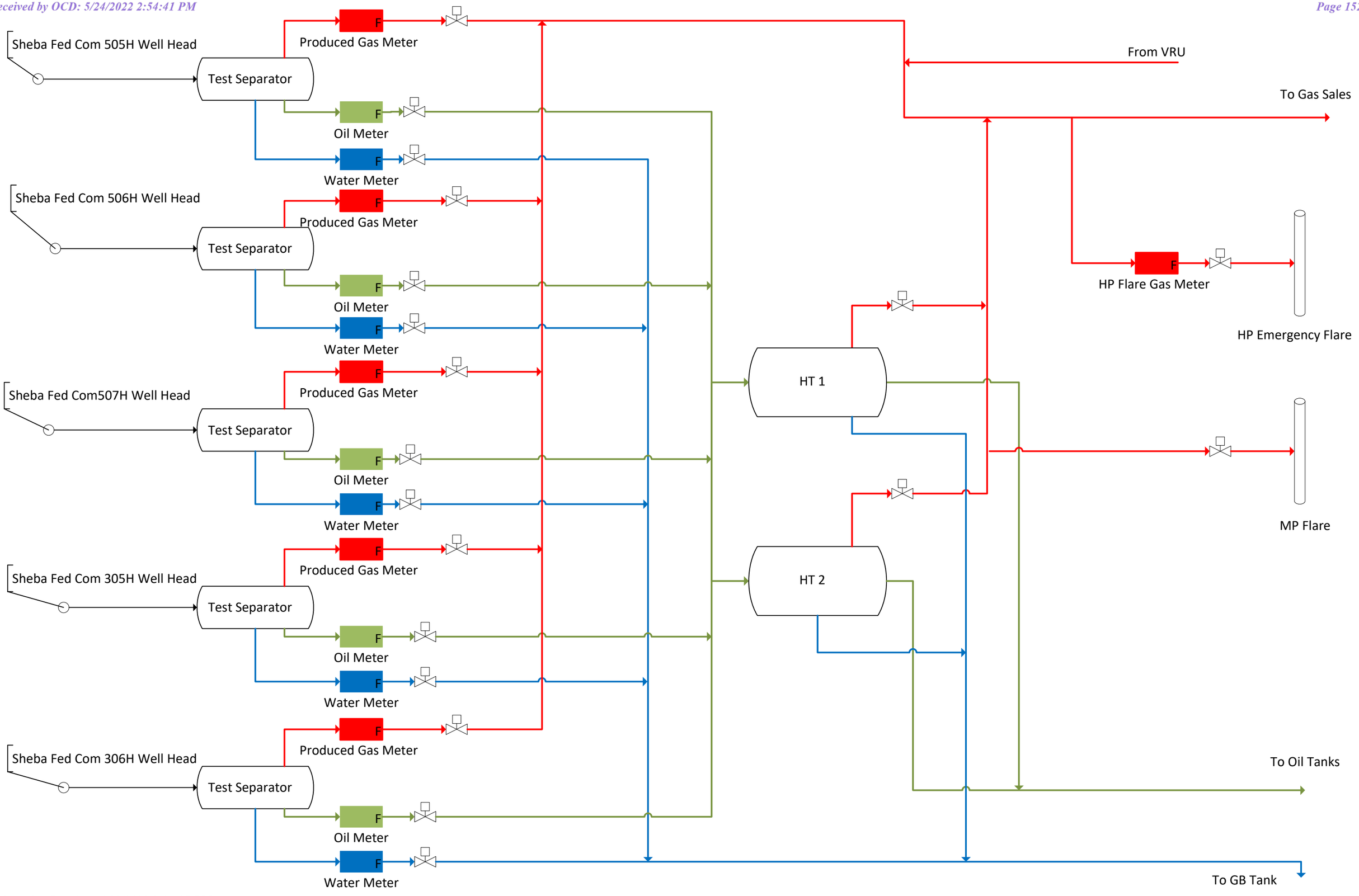
CENTENNIAL RESOURCE PRODUCTION, LLC

SOLOMON FEDERAL COM 505H & SHEBA FEDERAL COM 107H, 108H, 305H, 306H, 405H & 506H
SE 1/4 NE 1/4, SECTION 27, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	R.C., M.D.	10-23-21	SCALE
DRAWN BY	D.J.S.	10-28-21	1" = 100'

AS-BUILT SITE PLAN

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017


Sheba Fed Com 505H Well Head
Test Separator
F
Produced Gas Meter
F
Oil Meter
F
Water Meter
Sheba Fed Com 506H Well Head
Test Separator
F
Produced Gas Meter
F
Oil Meter
F
Water Meter
Sheba Fed Com507H Well Head
Test Separator
F
Produced Gas Meter
F
Oil Meter
F
Water Meter
Sheba Fed Com 305H Well Head
Test Separator
F
Produced Gas Meter
F
Oil Meter
F
Water Meter
Sheba Fed Com 306H Well Head
Test Separator
F
Produced Gas Meter
F
Oil Meter
F
Water Meter
HT 1
HT 2
From VRU
To Gas Sales
F
HP Flare Gas Meter
HP Emergency Flare
MP Flare
To Oil Tanks
To GB Tank

Water Meter

To GB Tank

F

VRU Gas Meter

VRU

LP Flare

From Water Header

WT

WT

WT

Gun Barrel Tank

OT

OT

OT

From Oil Header

LACT1

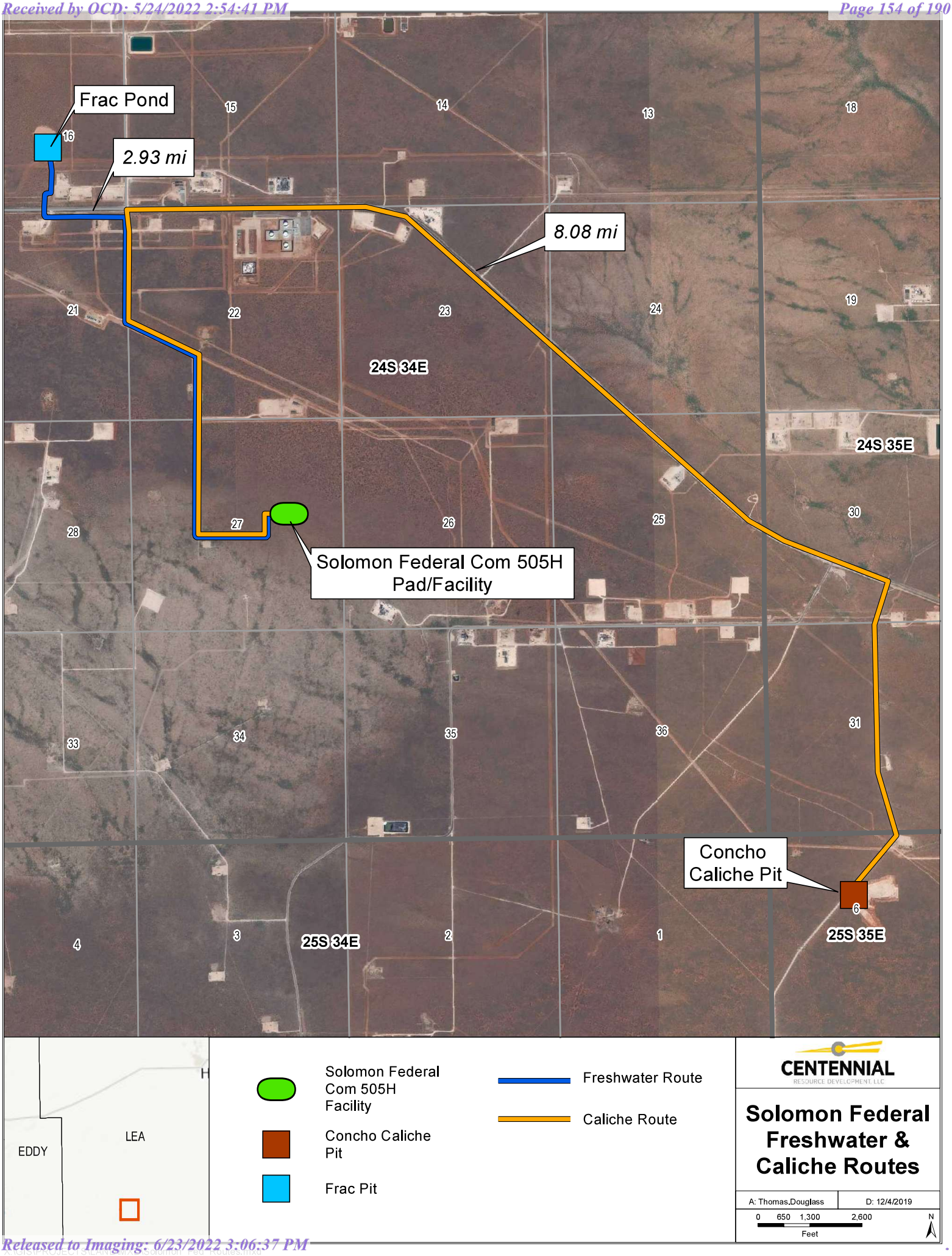
To Oil Pipeline

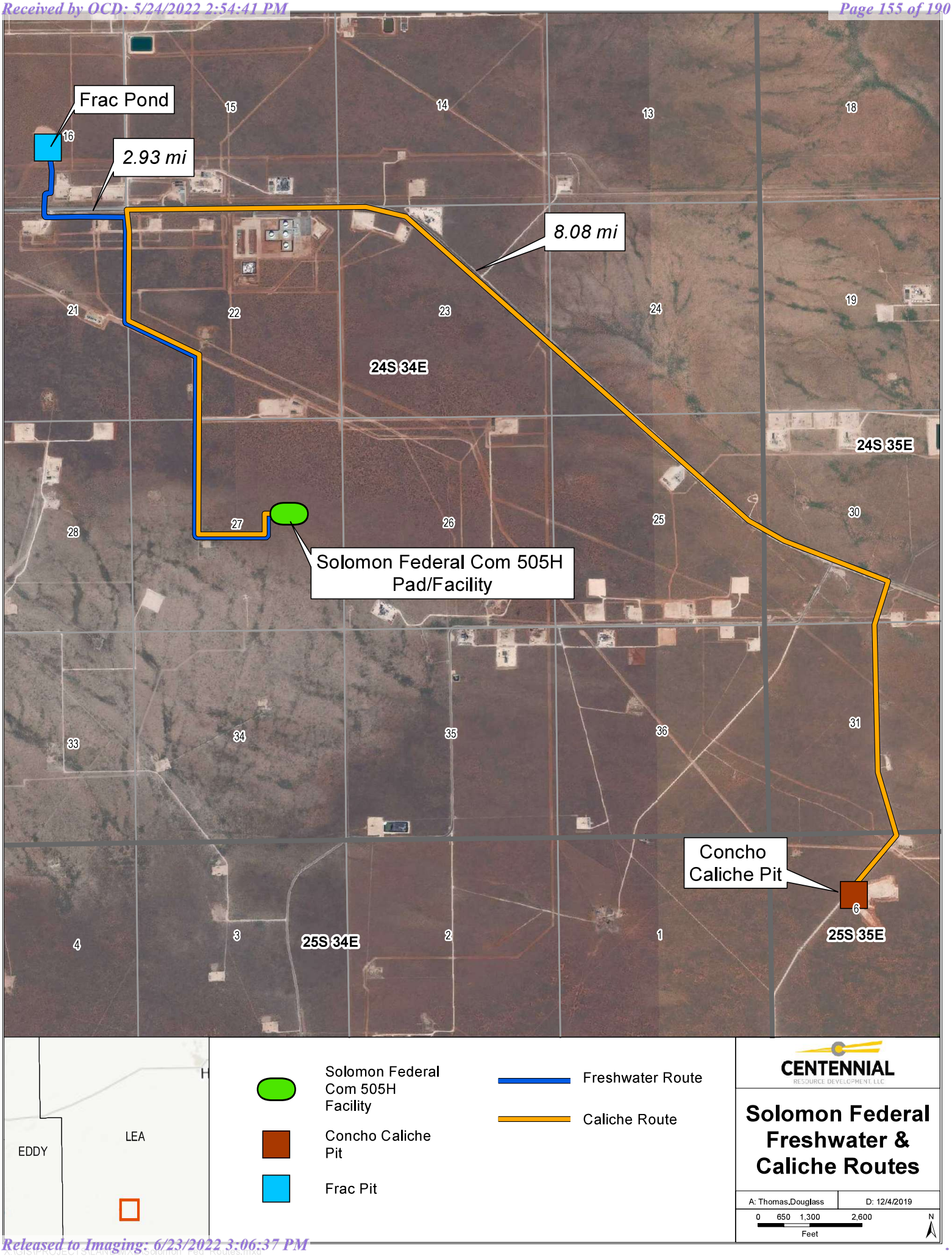
To SWD

F

Water Meter

P1


Frac Pond
2.93 mi
8.08 mi
Solomon Federal Com 505H
Pad/Facility
Concho
Caliche Pit
24S 34E
24S 35E
25S 34E
25S 35E
15
14
13
18
16
21
22
23
24
19
27
26
25
30
28
33
34
35
36
31
4
3
2
1
6
LEA
EDDY
Solomon Federal
Com 505H
Facility
Concho Caliche
Pit
Frac Pit
Freshwater Route
Caliche Route
CENTENNIAL
RESOURCE DEVELOPMENT, LLC
Solomon Federal
Freshwater &
Caliche Routes
A: Thomas.Douglass
D: 12/4/2019
0 650 1,300 2,600
Feet
N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LEA
EDDY
Solomon Federal
Com 505H
Facility
Concho Caliche
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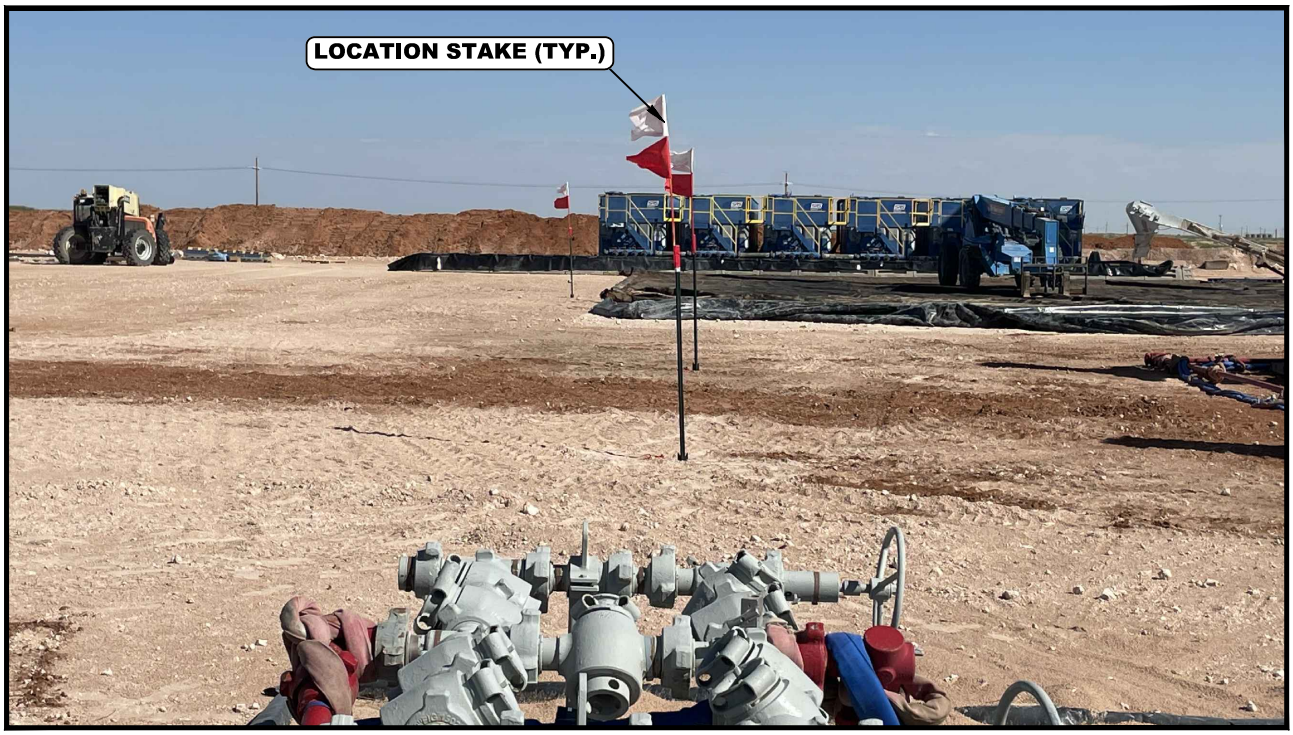

PHOTO: VIEW OF LOCATION STAKES CAMERA ANGLE: EASTERLY

PHOTO: VIEW OF EXISTING PAD CAMERA ANGLE: NORTHERLY

REV: 2 10-28-21 D.J.S. (UPDATE PHOTOS)

CENTENNIAL RESOURCE PRODUCTION, LLC

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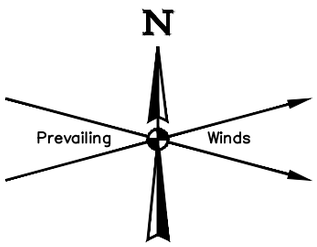
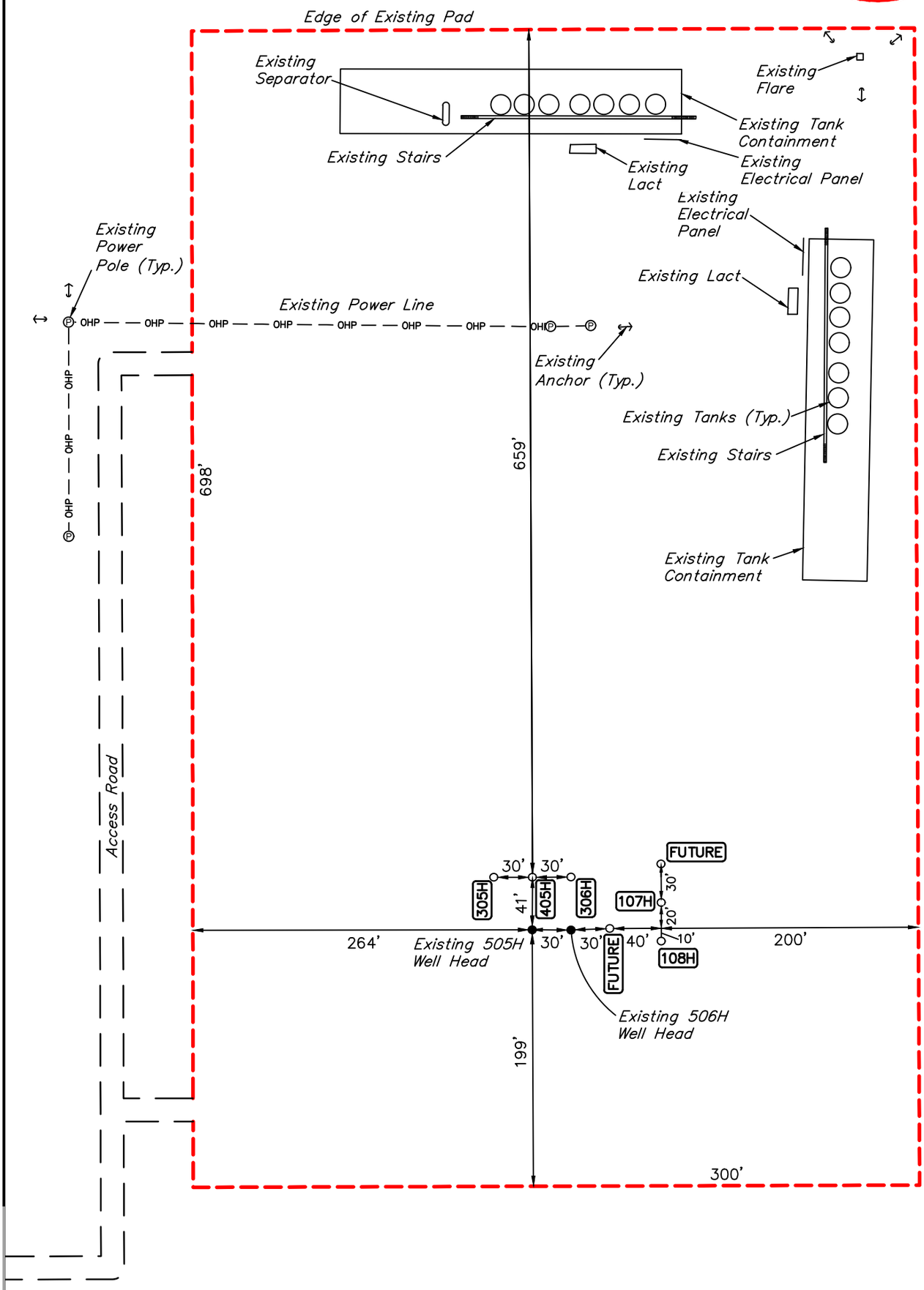
SE 1/4 NE 1/4, SECTION 27, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

UINTAH ENGINEERING & LAND SURVEYING

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

TAKEN BY	B.B., R.C.	08-23-19	
DRAWN BY	S.T.O.	09-12-19	
LOCATION PHOTOS			PHOTO





NOTES:

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LEA COUNTY, NEW MEXICO

SURVEYED BY	R.C., M.D.	10-23-21	SCALE
DRAWN BY	D.J.S.	10-28-21	1" = 100'

AS-BUILT SITE PLAN

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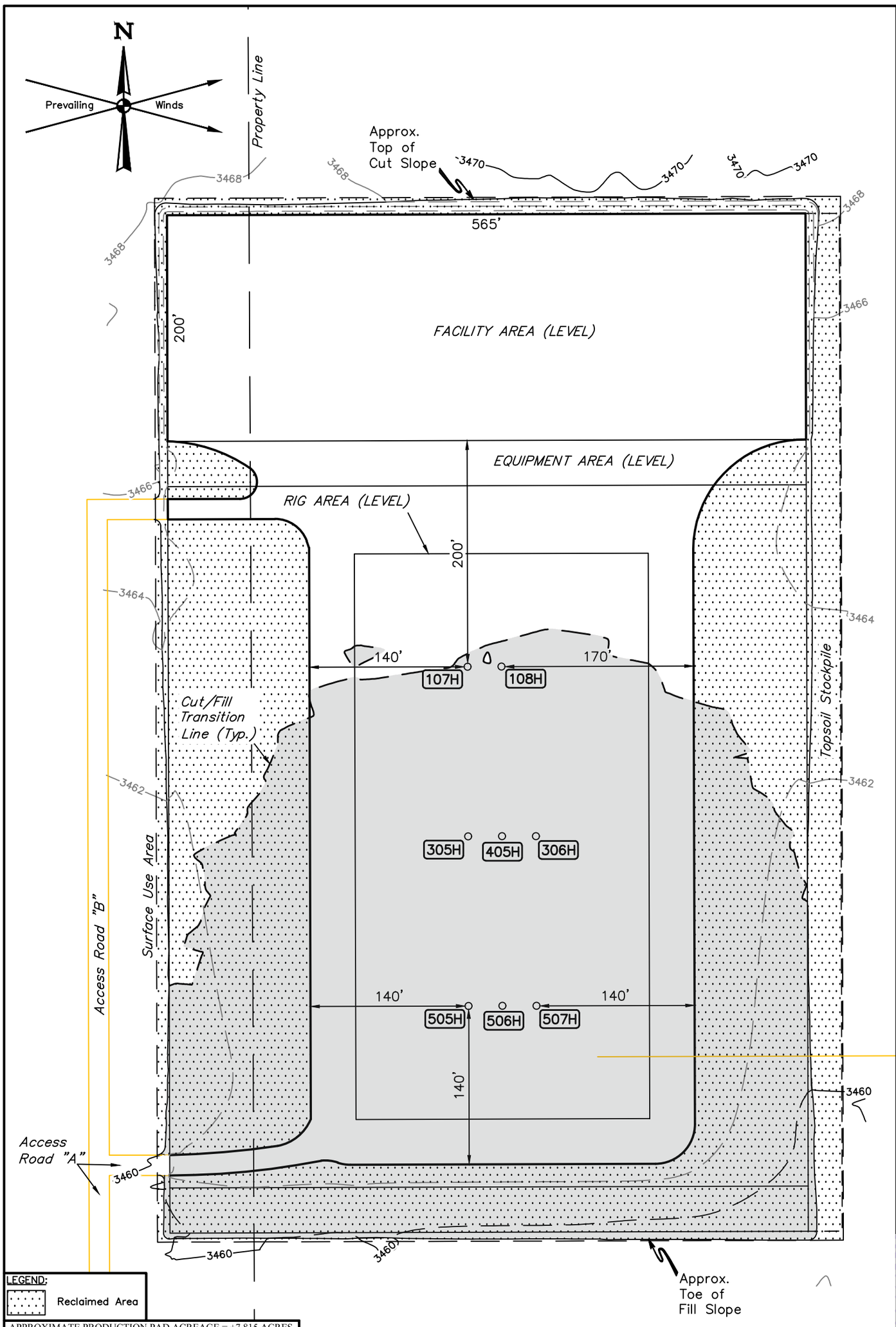

LEGEND:

Reclaimed Area

APPROXIMATE PRODUCTION PAD ACREAGE = ±7.815 ACRES
APPROXIMATE RECLAIMED AREA ACREAGE = ±5.047 ACRES
TOTAL ACREAGE = ±12.862 ACRES

NOTES:

- Contours shown at 2' intervals.

CENTENNIAL RESOURCE PRODUCTION, LLC

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SURVEYED BY	B.B., R.C.	08-23-19	SCALE
DRAWN BY	D.J.S.	09-12-19	1" = 100'

RECLAMATION DIAGRAM | **FIGURE #4**

UINTAH ENGINEERING & LAND SURVEYING

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SOLOMON FEDERAL COM 505H & SHEBA FED COM 506H, 507H, 306H & 305H

SURFACE USE PLAN

EXISTING ROADS

- The operator will improve or maintain existing road in a condition the same as or better than before operations begin. The operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures o the entire access route such as cattle guards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use. We will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. BLM written approval will be acquired before application of surfactants, binding agents, or the dust suppression chemicals on roadways.

DIRECTIONS

- PROCEED IN A WESTERLY, THEN NORTHWESTERLY, THEN WESTERLY DIRECTION FROM JAL, NEW MEXICO ALONG NM-128 APPROXIMATELY 18.0 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY, THEN SOUTHEASTERLY, THEN SOUTHERLY DIRECTION APPROXIMATELY 1.2 MILES JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; CONTINUE IN A SOUTHERLY, THEN EASTERLY DIRECTION APPROXIMATELY 0.7 MILES TO THE JUNCTION OF THIS ROAD AND THE EXISTING ACCESS ROAD TO THE EAST; CONTINUE IN AN EASTERLY, THEN NORTHERLY, THEN EASTERLY DIRECTION APPROXIMATELY 0.2 MILES TO THE EXISTING WELL LOCATION.

  TOTAL DISTANCE FROM JAL, NEW MEXICO TO THE EXISTING LOCATION IS APPROXIMATELY 20.1 MILES.

NEW OR RECONSTRUCTED ACCESS ROADS

- There will be approximately 1,662.41' of new road construction for the well pad and facilities. (Already reviewed and approved with the Solomon 505H and Sheba 506H APDs.)
- Road Width: The access roads shall have a driving surface that creates the smallest possible surface disturbance and does not exceed 65'. (see "Access Road ROW" plat attached)
- Maximum Grade: 8%
- Crown Design: Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2%. The road shall conform to cross section and plans for typical road construction found in the BLM Gold Book.
- Ditch Design: Ditching will be constructed on both sides of road.
- Cattle guards: None suggested.
- Major Cuts and Fills: 2:1 during drilling and completions. Cuts and fills taken back to 3:1 at interim.
- Type of surfacing Material: Caliche.

LOCATION OF EXISTING WELLS

- 1-mile radius map and well details attached.

LOCATION OF EXISTING AND/OR PROPOSED PRODUCTION FACILITIES

- Facilities:
  - Production facility will be located on the NE4 of Sec. 27, T24S-R34E, on the north side of the drill pad, where oil and gas sales will take place. The facility is approximately 550' x 200'.
  - A gas pipeline will be built from the facility to an existing sales receipt point in the SE4 of Sec. 22 T24S-R34E.
  - Open vent exhaust stacks will be modified to prevent birds or bats from entering, discourage perching, roosting and nesting.
  - Facility will have a secondary containment 1.5 times the holding capacity of largest storage tank.

- All above ground structures will be painted non-reflective shale green for blending with the environment.
- The tank battery will be connected to the existing water gathering system in the field for permanent water disposal.

LOCATION AND TYPES OF WATER

- Existing frac ponds in NWSE Sec 16, T24S-R34E will be utilized for fresh water and the source for recycled water is TBD.
- Fresh water will be obtained from a private water source.
- Temporary expanding water surface line will be used to transport water for drilling and completion operations from the pipeline to the Solomon location along existing lease road. a total of approx. 15,470' from the well location to the existing frac pond in Sec 16.

CONSTRUCTION MATERIAL

- Caliche will be hauled from the existing Concho pit located in the SENW Sec 6, T25S, R35E. Pit has been identified for use in the attached exhibit.
- Any native caliche on the proposed site can be used by "flipping" the location and using all native soils.
  - Notification shall be given to the BLM two working days prior to commencing construction of access road and /or well pad.

METHODS FOR HANDLING WASTE

- Drilling fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility.
- Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.
- Human waste and grey water will be properly contained and disposed of properly at a state approve disposal facility.
- After drilling and completion operations, trash, chemicals, salts frac sand and other waste material will be removed and disposed of properly at a state approved disposal facility.

- The well will be drilled utilizing a closed loop system. Drill cuttings will be properly disposed of into steel tank and taken to an NMOCD approved disposal facility.

ANCILLARY FACILITIES

- None

WELL SITE LAYOUT

- Well Site Plat
  - Exterior well pad dimensions are 565' x 900'.
  - Interior well pad dimensions from point of entry (well head) of the westernmost well are N-700', S-240', W-234', E-320'. The length to the east includes 30' spacing for next well on multi-well pad.
  - Top soil placement is on the east side of pad. Interim reclamation is planned to be completed upon completion of well and evaluation of best management practices.

PROPOSED PAD CUT & FILL

- Cut and fill: will be minimal.

RIG LAYOUT (ATTACHED BELOW)

PLANS FOR SURFACE RECLAMATION

Reclamation Objectives

- The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.
- The long-term objective of final reclamation is to return the land to a condition similar to what existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site

stability, visual quality, hydrological functioning, and vegetative productivity.
- The BLM will be notified at least 3 days prior to commencement of any reclamation procedures.
- If circumstances allow, interim reclamation and/or final reclamation actions will be completed. We will gain written permission from the BLM if more time is needed.

Reclamation will be performed by using the following procedures:

Interim Reclamation Procedures

- Within 6 months, Centennial will contact BLM Surface Management Specialists to devise the best strategies to reduce the size of the location. Current plans for interim reclamation include reducing the pad size to approximately 7.815 acres from the proposed size of 12.862 acres. the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not require for production. A plan will be submitted showing where interim reclamation will be completed to allow for safe operations, protection of the environment outside of drilled well, and following best Management practices found in the BLM “Gold Book”.
- In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
- 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 res-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Notice: Constructed slopes may be much steeper during drilling but will be recontoured to the above ratios during interim reclamation.
- Topsoil will be evenly re-spread 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 (BLM#2), free of noxious weeds, will be used.
- Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area.
- The interim reclamation will be monitored periodically to ensure that vegetation has reestablished.

Final Reclamation (well pad, buried pipelines, and powerlines, etc.)

- Prior to final reclamation procedures, the well pad, road and surrounding area will be cleared of material, trash, and equipment.
- All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
- All disturbed areas, including roads, pipelines, pads, production facilities and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends in distinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.
- After all the disturbed areas have been properly prepared; the areas will be seeded with the proper BLM see mixture (BLM #2), free of noxious weeds.
- Proper erosion control methods will be used on the entire area to control erosion, runoff and siltation of the surrounding areas.

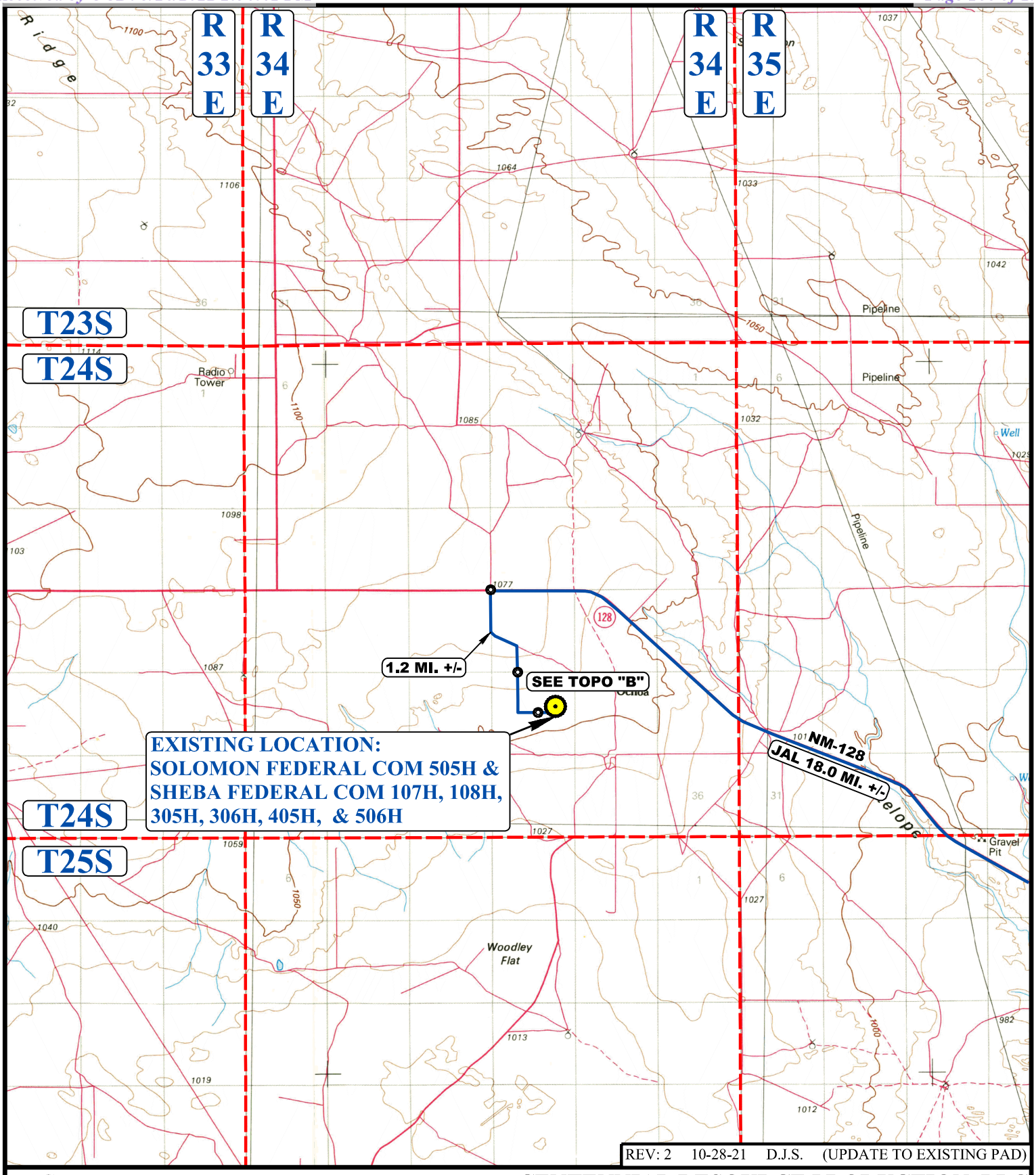
SURFACE OWNERSHIP

- Well pad is on Federal surface, road is on private surface.

OTHER INFORMATION

- On-site performed by BLM NRS McKenna Ryder 9/5/19.
- Erosion / Drainage: Drainage control system shall be constructed on the entire length of road using any of the following: ditches, side hill out-sloping and in-sloping, lead-off ditched, culvert installation, or low water crossings.

- Enclosure fencing will be installed around open cellar to prevent livestock or large wildlife from being trapped after installation, or low water crossings.
- Enclosure fencing will be installed around open cellar to prevent livestock or large wildlife from being trapped after installation. Fencing will remain in place while no activity is present and until backfilling takes place.
- Terrain: Landscape is flat
- Soil: Sandy loam
- Vegetation: Vegetation present in surrounding area includes mesquite, shrubs, and grass (needle-grass, burro grass, dropseed).
- Wildlife: This area will be subject to Lesser Prairie Chicken timing stipulations during the periods of March 1- June 15th.
- Surface Water: No surface water concerns.
- Cave Karst: Low Karst area with no cave or visual signs of caves found.
- Watershed Protection: The entire perimeter of the well pad will be bermed to prevent oil, salt and other chemical contaminates from leaving the well pad.



REV: 2 10-28-21 D.J.S. (UPDATE TO EXISTING PAD)

LEGEND:

EXISTING LOCATION

N

CENTENNIAL RESOURCE PRODUCTION, LLC

SOLOMON FEDERAL COM 505H & SHEBA FEDERAL
COM 107H, 108H, 305H, 306H, 405H, & 506H
SE 1/4 NE 1/4, SECTION 27, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	B.B., R.C.	08-23-19	SCALE
DRAWN BY	S.T.O.	09-12-19	1 : 100,000
ACCESS ROAD MAP			TOPO A

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UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

PROCEED IN A WESTERLY, THEN NORTHWESTERLY, THEN WESTERLY DIRECTION FROM JAL, NEW MEXICO ALONG NM-128 APPROXIMATELY 18.0 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY, THEN SOUTHEASTERLY, THEN SOUTHERLY DIRECTION APPROXIMATELY 1.2 MILES JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; CONTINUE IN A SOUTHERLY, THEN EASTERLY DIRECTION APPROXIMATELY 0.7 MILES TO THE JUNCTION OF THIS ROAD AND THE EXISTING ACCESS ROAD TO THE EAST; CONTINUE IN AN EASTERLY, THEN NORTHERLY, THEN EASTERLY DIRECTION APPROXIMATELY 0.2 MILES TO THE EXISTING WELL LOCATION.

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REV: 3 10-28-21 D.J.S. (UPDATE TO EXISTING PAD)

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LEA COUNTY, NEW MEXICO

SURVEYED BY	B.B., R.C.	08-23-19	
DRAWN BY	S.T.O.	09-12-19	

ROAD DESCRIPTION

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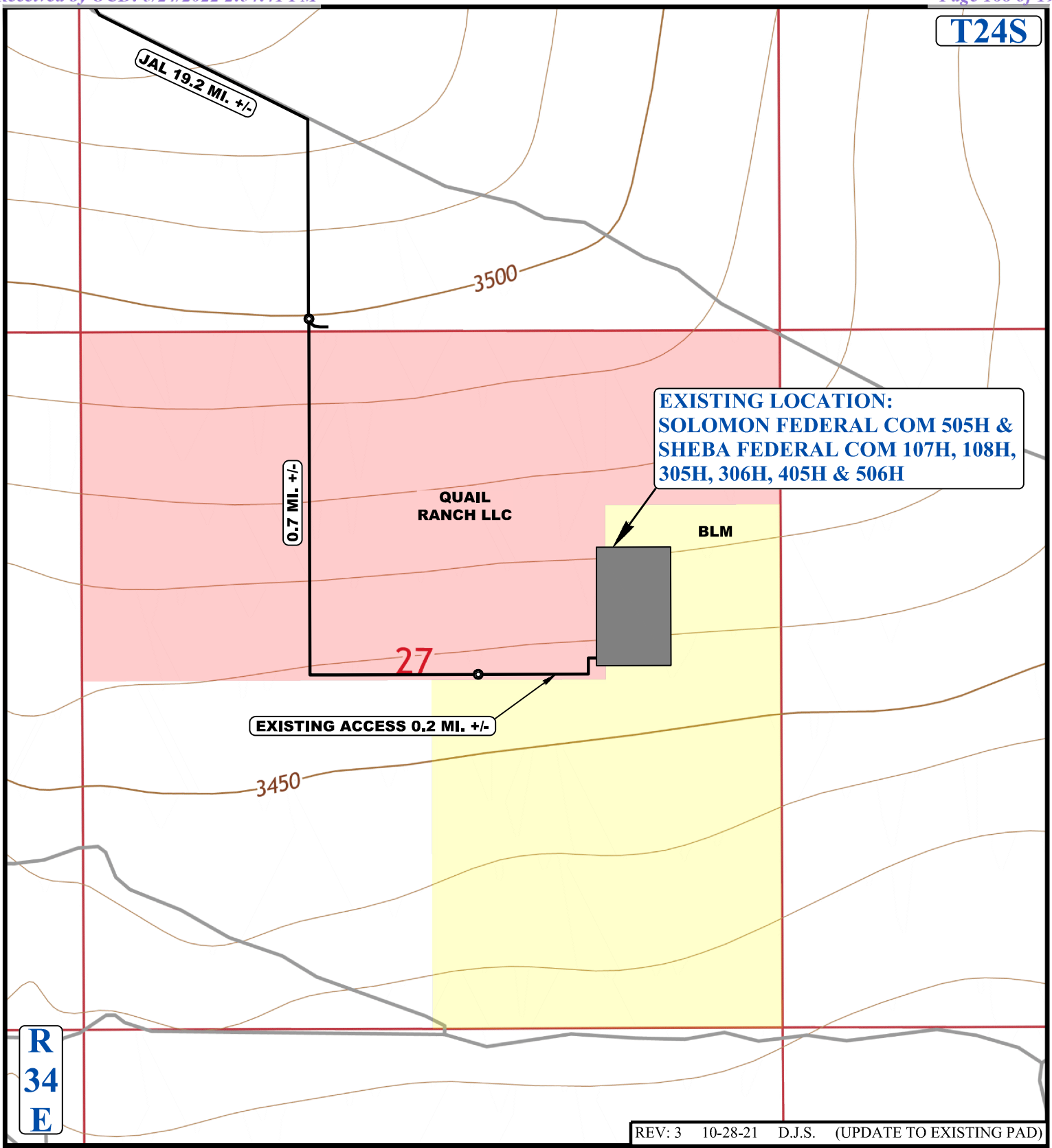

REV: 3 10-28-21 D.J.S. (UPDATE TO EXISTING PAD)

NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

LEGEND:

EXISTING ROAD

N

CENTENNIAL RESOURCE PRODUCTION, LLC

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LEA COUNTY, NEW MEXICO

SURVEYED BY	B.B., R.C.	08-23-19	SCALE
DRAWN BY	S.T.O.	09-12-19	1 : 12,000
ACCESS ROAD MAP			TOPO B

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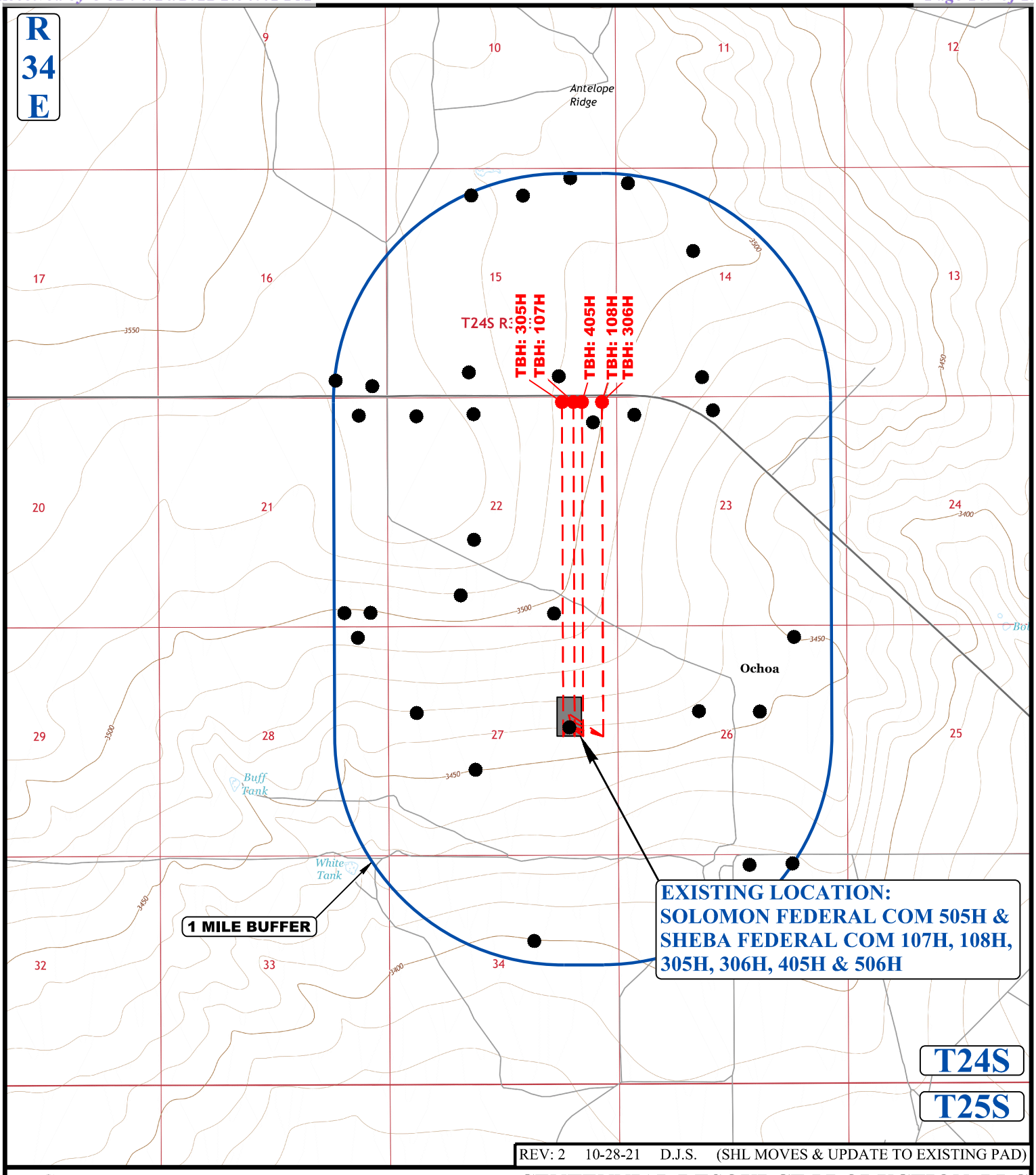

REV: 2 10-28-21 D.J.S. (SHL MOVES & UPDATE TO EXISTING PAD)

LEGEND:

● EXISTING WELLS

N

CENTENNIAL RESOURCE PRODUCTION, LLC

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LEA COUNTY, NEW MEXICO

SURVEYED BY	B.B., R.C.	08-23-19	SCALE
DRAWN BY	S.T.O.	09-12-19	1 : 36,000
WELL PROXIMITY MAP			TOPO C

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UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

JULIET FEDERAL COM 503H, 504H & SOLOMON FEDERAL COM 505H ON EXISTING JULIET FEDERAL COM 1H

SUPPLEMENTAL OIL & GAS SPREADSHEET TO TOPO "C"

DATE: 02-13-20 S.T.O.

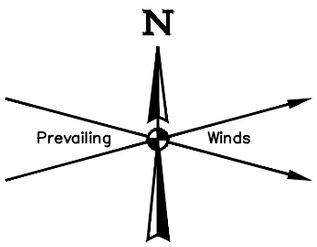
OBJECTID	API	OPERATOR	WELL NAME	WELL TYPE	WELL STATUS	UNIT LETTER-SECTION-TOWNSHIP-RANGE	NAD 83 LATITUDE	NAD 83 LONGITUDE
96265	30-025-42448	OWL SWD OPERATING LLC	MADERA SWD #001	Salt Water Disposal	Active	N-14-24S-34E	32.21148421	-103.44286420
29008	30-025-27572	STRATA PRODUCTION CO	BUCKEYE #001	Oil	Plugged (site released)	C-15-24S-34E	32.22302250	-103.45999150
97	30-025-45462	MARATHON OIL PERMIAN LLC	FLOWMASTER 15 FB FEE #016H	Oil	New	N-15-24S-34E	32.21200950	-103.45940230
118	30-025-45461	MARATHON OIL PERMIAN LLC	FLOWMASTER 15 WD FEE #012H	Gas	New	N-15-24S-34E	32.21200886	-103.45930510
138	30-025-44684	MARATHON OIL PERMIAN LLC	FLOWMASTER FEE 24 34 15 TB #010H	Oil	New	N-15-24S-34E	32.21190551	-103.46027630
139	30-025-44687	MARATHON OIL PERMIAN LLC	FLOWMASTER FEE 24 34 15 WA #014H	Oil	Active	N-15-24S-34E	32.21190496	-103.46017920
145	30-025-45460	MARATHON OIL PERMIAN LLC	FLOWMASTER 15 WB FEE #011H	Gas	New	N-15-24S-34E	32.21201081	-103.45963400
146	30-025-45463	MARATHON OIL PERMIAN LLC	FLOWMASTER 15 AV FEE #017H	Oil	New	N-15-24S-34E	32.21201020	-103.45949930
1404	30-025-44689	MARATHON OIL PERMIAN LLC	FLOWMASTER 15 WXY FEE #002H	Oil	Active	N-15-24S-34E	32.21190550	-103.46027630
63405	30-025-45965	MARATHON OIL PERMIAN LLC	FLOWMASTER 15 FB FEE #015H	Oil	Active	N-15-24S-34E	32.21190671	-103.46037340
66929	30-025-46000	MARATHON OIL PERMIAN LLC	WILL KANE 15 WXY FEE #010H	Gas	Active	O-15-24S-34E	32.21170309	-103.45357800
66945	30-025-45997	MARATHON OIL PERMIAN LLC	WILL KANE 15 WA FEE #006H	Oil	Active	O-15-24S-34E	32.21170365	-103.45367500
66946	30-025-45999	MARATHON OIL PERMIAN LLC	WILL KANE 15 WXY FEE #003H	Oil	Active	O-15-24S-34E	32.21170462	-103.45377180
66944	30-025-45998	MARATHON OIL PERMIAN LLC	WILL KANE 15 WA FEE #011H	Oil	Active	P-15-24S-34E	32.21170261	-103.45348100
99921	30-025-45380	EOG RESOURCES INC	JOLLY ROGER 16 STATE #708H	Oil	Active	N-16-24S-34E	32.21200450	-103.47698430
102603	30-025-45379	EOG RESOURCES INC	JOLLY ROGER 16 STATE #707H	Oil	Active	N-16-24S-34E	32.21200470	-103.47709100
1576	30-025-40566	CENTENNIAL RESOURCE PRODUCTION LLC	PIRATE STATE #001H	Oil	Active	O-16-24S-34E	32.21158600	-103.47171020
1615	30-025-43917	CENTENNIAL RESOURCE PRODUCTION LLC	PIRATE STATE #101H	Oil	Active	P-16-24S-34E	32.21130300	-103.46745800
1623	30-025-44426	CENTENNIAL RESOURCE PRODUCTION LLC	PIRATE STATE #301H	Oil	Active	P-16-24S-34E	32.21133500	-103.47020400
1546	30-025-43408	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #101H	Oil	Active	A-21-24S-34E	32.20919490	-103.46850280
1620	30-025-43401	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL #301H	Oil	Active	B-21-24S-34E	32.20920340	-103.47431920
80563	30-025-08494	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	Plugged (site released)	B-21-24S-34E	32.20850750	-103.47277070
7664	30-025-46428	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #702H	Oil	New	O-21-24S-34E	32.19661800	-103.47186700
9823	30-025-46427	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #701H	Oil	New	O-21-24S-34E	32.19661900	-103.47196400
61398	30-025-28641	CIMAREX ENERGY CO. OF COLORADO	VACA RIDGE 21 FEDERAL COM #001	Gas	Plugged (site released)	O-21-24S-34E	32.19761660	-103.47274780
7665	30-025-46429	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #703H	Oil	New	P-21-24S-34E	32.19661400	-103.46769700
17384	30-025-46301	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #503H	Oil	New	P-21-24S-34E	32.19661600	-103.46963700
23892	30-025-46299	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL #501H	Oil	New	P-21-24S-34E	32.19661600	-103.46983100
23893	30-025-46300	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #502H	Oil	New	P-21-24S-34E	32.19661600	-103.46973400
54010	30-025-46362	CENTENNIAL RESOURCE PRODUCTION LLC	RAIDER FEDERAL COM #704H	Oil	New	P-21-24S-34E	32.19661400	-103.46760000
1595	30-025-43358	CENTENNIAL RESOURCE PRODUCTION LLC	SHEBA FEDERAL COM #001H	Oil	Active	A-22-24S-34E	32.20858750	-103.45101130
1650	30-025-43414	CENTENNIAL RESOURCE PRODUCTION LLC	SOLOMON FEDERAL COM #001H	Oil	New	B-22-24S-34E	32.20918930	-103.45477590
1552	30-025-45577	CENTENNIAL RESOURCE PRODUCTION LLC	SOLOMON FEDERAL COM #505H	Oil	New	C-22-24S-34E	32.20918800	-103.45931000
1556	30-025-45554	CENTENNIAL RESOURCE PRODUCTION LLC	JULIET FEDERAL COM #503H	Oil	New	C-22-24S-34E	32.20919100	-103.46191900
1574	30-025-43385	CENTENNIAL RESOURCE PRODUCTION LLC	JULIET FEDERAL COM #001H	Oil	Active	C-22-24S-34E	32.20919210	-103.45996790
1636	30-025-45576	CENTENNIAL RESOURCE PRODUCTION LLC	JULIET FEDERAL COM #504H	Oil	New	C-22-24S-34E	32.20919000	-103.46182200
1555	30-025-45557	CENTENNIAL RESOURCE PRODUCTION LLC	ROMEO FEDERAL COM #705H	Oil	New	D-22-24S-34E	32.20919200	-103.46374900
1598	30-025-45556	CENTENNIAL RESOURCE PRODUCTION LLC	ROMEO FEDERAL COM #706H	Oil	New	D-22-24S-34E	32.20919200	-103.46365200
1642	30-025-45555	CENTENNIAL RESOURCE PRODUCTION LLC	JULIET FEDERAL COM #707H	Oil	New	D-22-24S-34E	32.20919200	-103.46355400
1651	30-025-42999	CENTENNIAL RESOURCE PRODUCTION LLC	ROMEO FEDERAL COM #001H	Oil	Active	D-22-24S-34E	32.20919210	-103.46423440
82319	30-025-28235	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	Plugged (site released)	K-22-24S-34E	32.20123670	-103.45995330
82643	30-025-30179	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	Plugged (site released)	N-22-24S-34E	32.19760510	-103.46101380
1541	30-025-45404	CENTENNIAL RESOURCE PRODUCTION LLC	SHEBA FEDERAL COM #506H	Oil	New	O-22-24S-34E	32.19660600	-103.45505300
1568	30-025-45374	CENTENNIAL RESOURCE PRODUCTION LLC	SHEBA FEDERAL COM #711H	Oil	Active	O-22-24S-34E	32.19660500	-103.45395400
1575	30-025-45405	CENTENNIAL RESOURCE PRODUCTION LLC	SHEBA FEDERAL COM #507H	Oil	New	O-22-24S-34E	32.19660600	-103.45495500
1604	30-025-45376	CENTENNIAL RESOURCE PRODUCTION LLC	SOLOMON FEDERAL COM #710H	Oil	Active	O-22-24S-34E	32.19660500	-103.45405100
1639	30-025-45375	CENTENNIAL RESOURCE PRODUCTION LLC	SOLOMON FEDERAL COM #709H	Oil	Active	O-22-24S-34E	32.19660500	-103.45414800
36790	30-025-46514	MATADOR PRODUCTION COMPANY	BRAD LUMMIS COM #122H	Oil	New	C-23-24S-34E	32.20946740	-103.44205830
43126	30-025-45441	MATADOR PRODUCTION COMPANY	BRAD LUMMIS COM #212H	Oil	Active	C-23-24S-34E	32.20945160	-103.44219270
43235	30-025-45440	MATADOR PRODUCTION COMPANY	BRAD LUMMIS COM #112H	Oil	New	C-23-24S-34E	32.20940110	-103.44211600
43102	30-025-45709	MATADOR PRODUCTION COMPANY	BRAD LUMMIS FEDERAL COM #221H	Oil	New	D-23-24S-34E	32.20911030	-103.44790930
43144	30-025-45513	MATADOR PRODUCTION COMPANY	BRAD LUMMIS FEDERAL COM #201H	Oil	New	D-23-24S-34E	32.20910250	-103.44781280
43146	30-025-45580	MATADOR PRODUCTION COMPANY	BRAD LUMMIS FEDERAL COM #131H	Oil	New	D-23-24S-34E	32.20909460	-103.44771620
43166	30-025-45581	MATADOR PRODUCTION COMPANY	BRAD LUMMIS FEDERAL COM #211H	Oil	Active	D-23-24S-34E	32.20907900	-103.44752290
43185	30-025-45511	MATADOR PRODUCTION COMPANY	BRAD LUMMIS FEDERAL COM #111H	Oil	Active	D-23-24S-34E	32.20919230	-103.44790010
45482	30-025-45512	MATADOR PRODUCTION COMPANY	BRAD LUMMIS FEDERAL COM #121H	Oil	New	D-23-24S-34E	32.20908680	-103.44761960
74548	30-025-46354	EOG RESOURCES INC	KESTREL 26 FEDERAL #702H	Oil	New	M-26-24S-34E	32.18246200	-103.44609640
85799	30-025-29917	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Gas	Plugged (site released)	E-27-24S-34E	32.19034960	-103.46420290
91224	30-025-28321	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	Plugged (site released)	K-27-24S-34E	32.18671420	-103.45993040
63442	30-025-45939	EOG RESOURCES INC	PEREGRINE 27 FEDERAL COM #311H	Oil	New	M-27-24S-34E	32.18350790	-103.46470040
63361	30-025-46105	EOG RESOURCES INC	PEREGRINE 27 FEDERAL COM #707H	Oil	New	O-27-24S-34E	32.18198700	-103.45526230
63339	30-025-46108	EOG RESOURCES INC	PEREGRINE 27 FEDERAL COM #710H	Oil	New	P-27-24S-34E	32.18181950	-103.45189810
63363	30-025-46107	EOG RESOURCES INC	PEREGRINE 27 FEDERAL COM #709H	Oil	New	P-27-24S-34E	32.18181950	-103.45200470

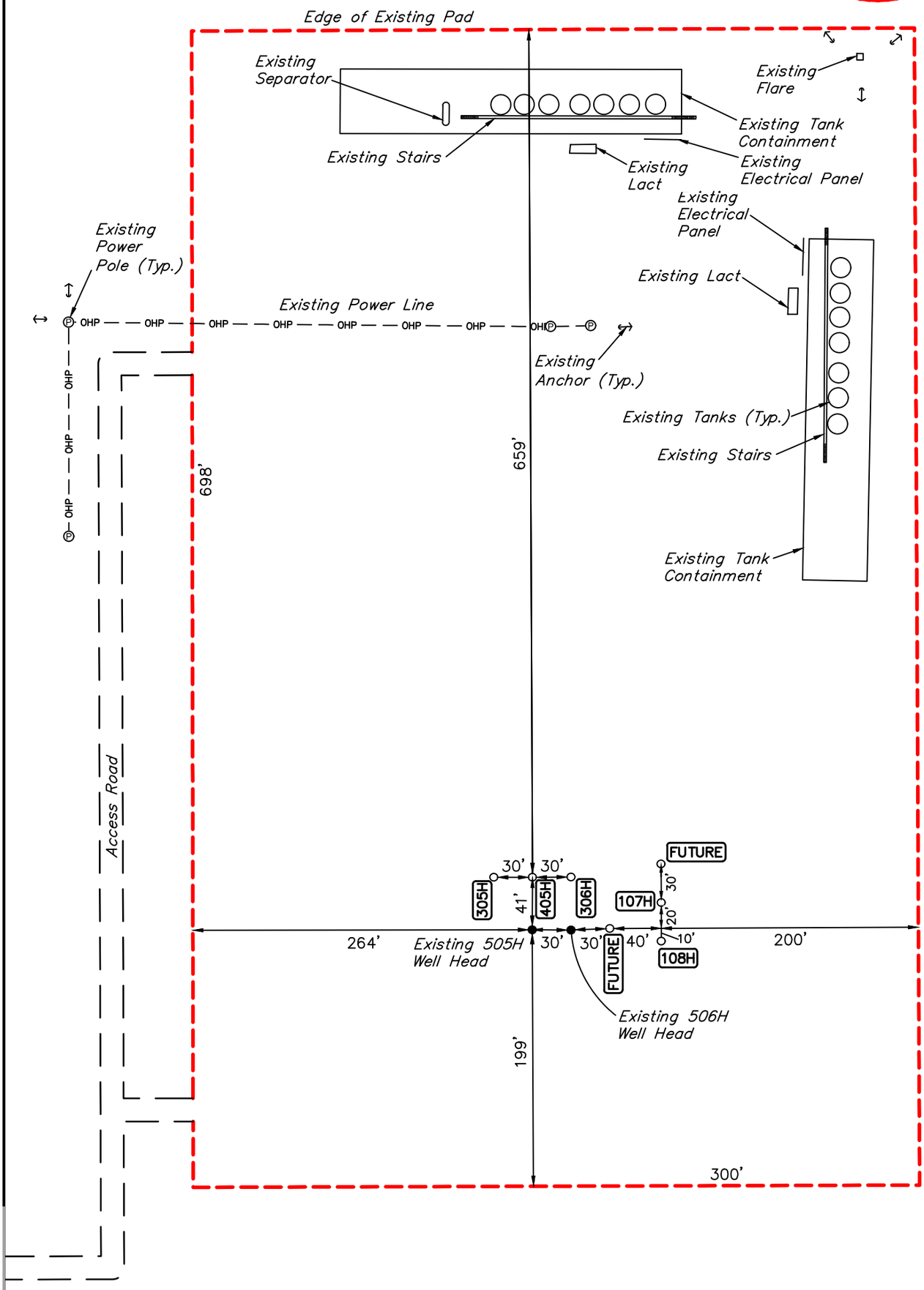
JULIET FEDERAL COM 503H, 504H & SOLOMON FEDERAL COM 505H ON EXISTING JULIET FEDERAL COM 1H

SUPPLEMENTAL OIL & GAS SPREADSHEET TO TOPO "C"

DATE: 02-13-20 S.T.O.

OBJECTID	API	OPERATOR	WELL NAME	WELL TYPE	WELL STATUS	UNIT LETTER-SECTION-TOWNSHIP-RANGE	NAD 83 LATITUDE	NAD 83 LONGITUDE
63365	30-025-46106	EOG RESOURCES INC	PEREGRINE 27 FEDERAL COM #708H	Oil	New	P-27-24S-34E	32.18181960	-103.45211140
99688	30-025-44875	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #314H	Oil	New	A-28-24S-34E	32.19524100	-103.46850600
99813	30-025-44874	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #313H	Oil	New	A-28-24S-34E	32.19524110	-103.46861270
103309	30-025-44930	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #715H	Oil	New	A-28-24S-34E	32.19524090	-103.46839930
99796	30-025-44929	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #712H	Oil	New	B-28-24S-34E	32.19524390	-103.47159960
99917	30-025-44873	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #308H	Oil	New	B-28-24S-34E	32.19524590	-103.47488510
99919	30-025-44928	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #711H	Oil	New	B-28-24S-34E	32.19524390	-103.47170620
102602	30-025-44926	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #309H	Oil	New	B-28-24S-34E	32.19524670	-103.47477840
103308	30-025-44927	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #710H	Oil	New	B-28-24S-34E	32.19524400	-103.47181290
99687	30-025-44872	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #707H	Oil	New	C-28-24S-34E	32.19524680	-103.47499170
99812	30-025-44871	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #706H	Oil	New	C-28-24S-34E	32.19524900	-103.47749650
99916	30-025-44870	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #705H	Oil	New	C-28-24S-34E	32.19524910	-103.47760310
103305	30-025-44869	EOG RESOURCES INC	STONEWALL 28 FEDERAL COM #704H	Oil	New	C-28-24S-34E	32.19524920	-103.47770980
102787	30-025-28488	EOG RESOURCES INC	PITCHFORK RANCH 28 FEDERAL COM #001	Gas	Active	G-28-24S-34E	32.19035720	-103.47274020
102847	30-025-27826	EOG RESOURCES INC	MADERA 28 FEDERAL COM #001	Gas	Active	N-28-24S-34E	32.18309780	-103.47696690
103009	30-025-29862	EOG RESOURCES INC	MADERA 28 FEDERAL COM #002	Gas	Plugged (site released)	N-28-24S-34E	32.18309780	-103.47625730
103281	30-025-29926	EOG RESOURCES INC	MADERA 33 FEDERAL COM #004	Gas	Plugged (site released)	J-33-24S-34E	32.17310330	-103.47270200
112204	30-025-28596	JOHNNY G JONES	MOORE 34 COM #001	Oil	Plugged (site released)	G-34-24S-34E	32.17582320	-103.45564270
99734	30-025-28002	EOG RESOURCES INC	PITCHFORK 34 FEDERAL COM #001	Gas	Active	L-34-24S-34E	32.17219160	-103.46417240





NOTES:

- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.

CENTENNIAL RESOURCE PRODUCTION, LLC

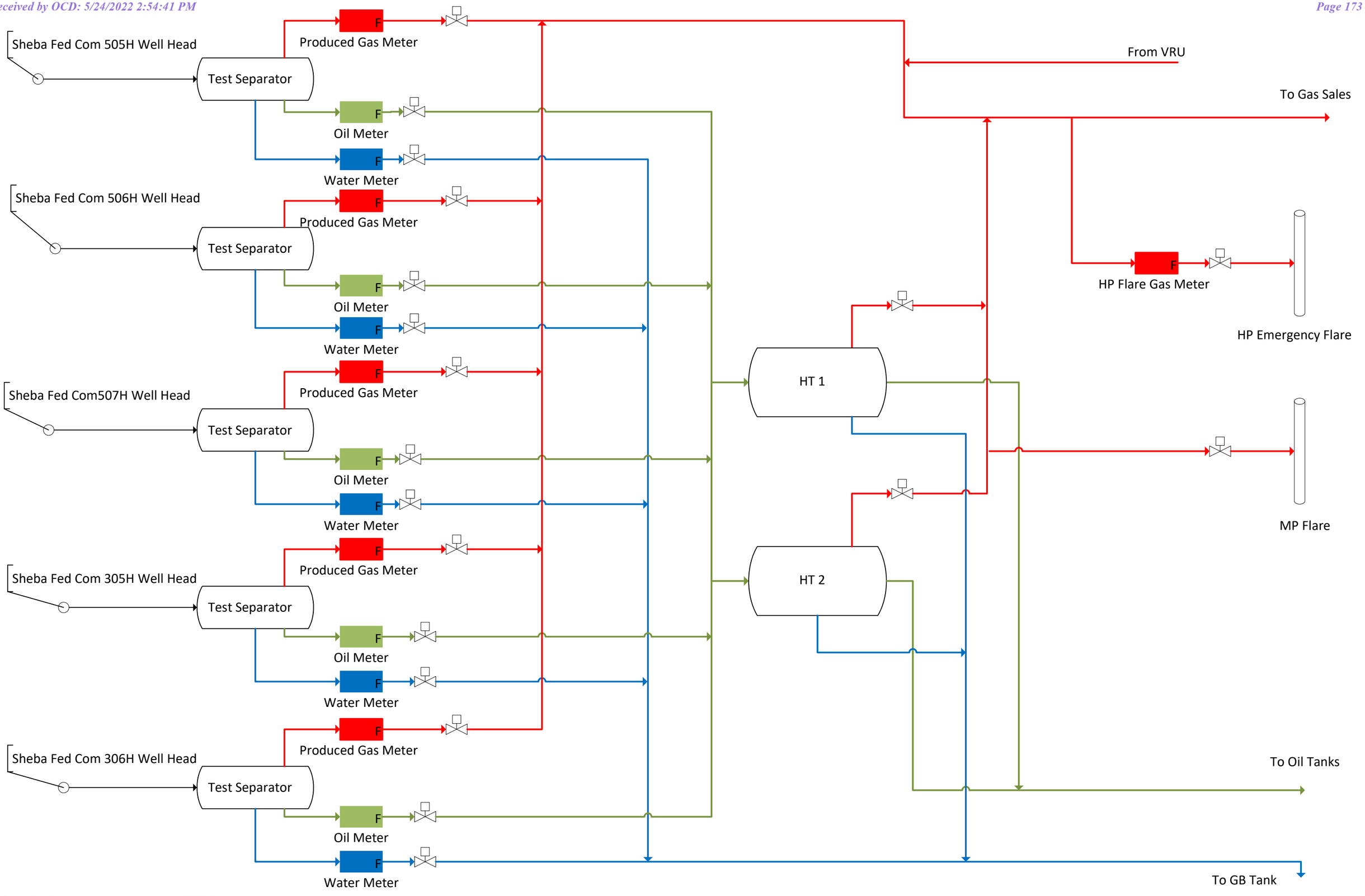
SOLOMON FEDERAL COM 505H & SHEBA FEDERAL COM 107H, 108H, 305H, 306H, 405H & 506H
SE 1/4 NE 1/4, SECTION 27, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	R.C., M.D.	10-23-21	SCALE
DRAWN BY	D.J.S.	10-28-21	1" = 100'

AS-BUILT SITE PLAN

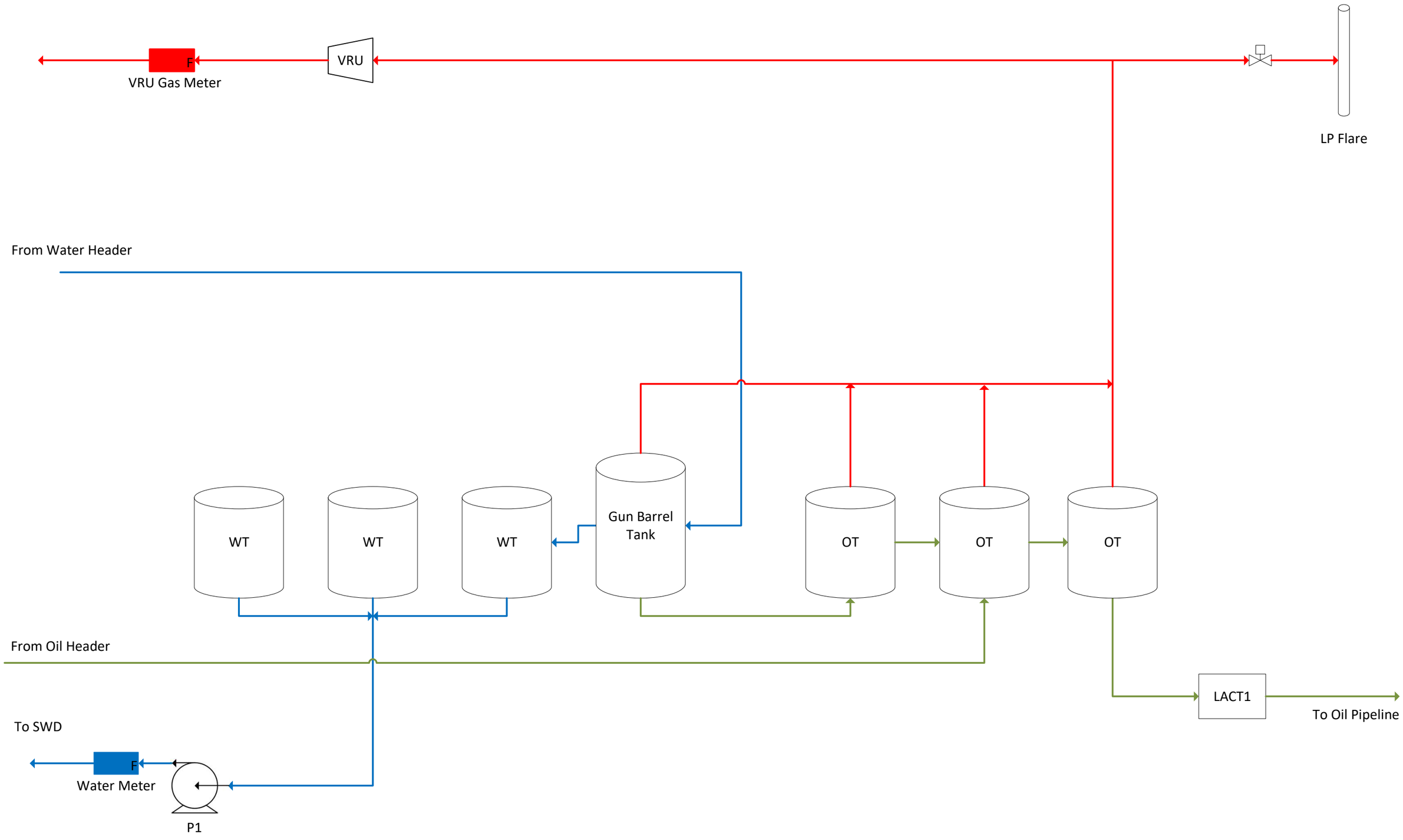
UINTAH ENGINEERING & LAND SURVEYING

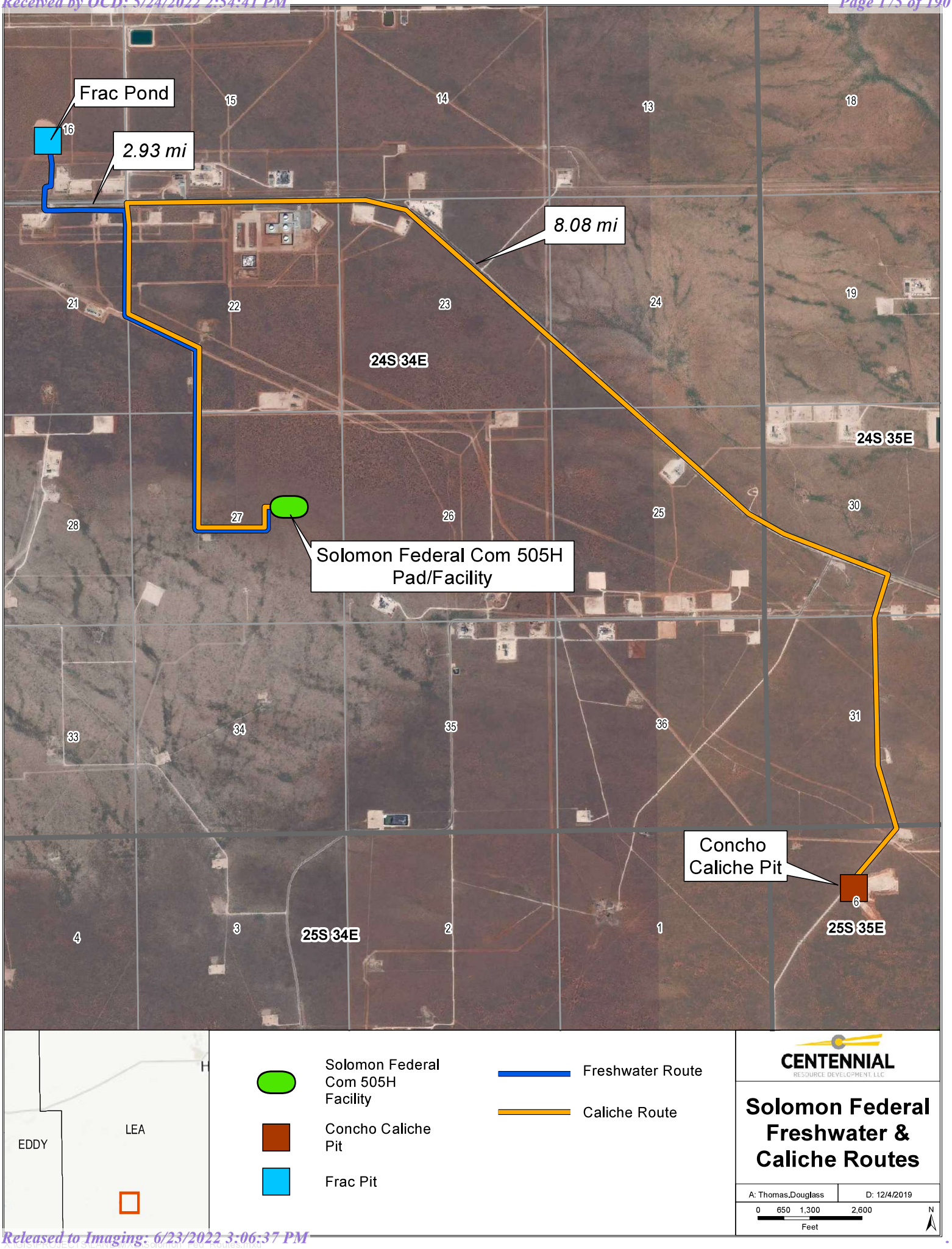
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

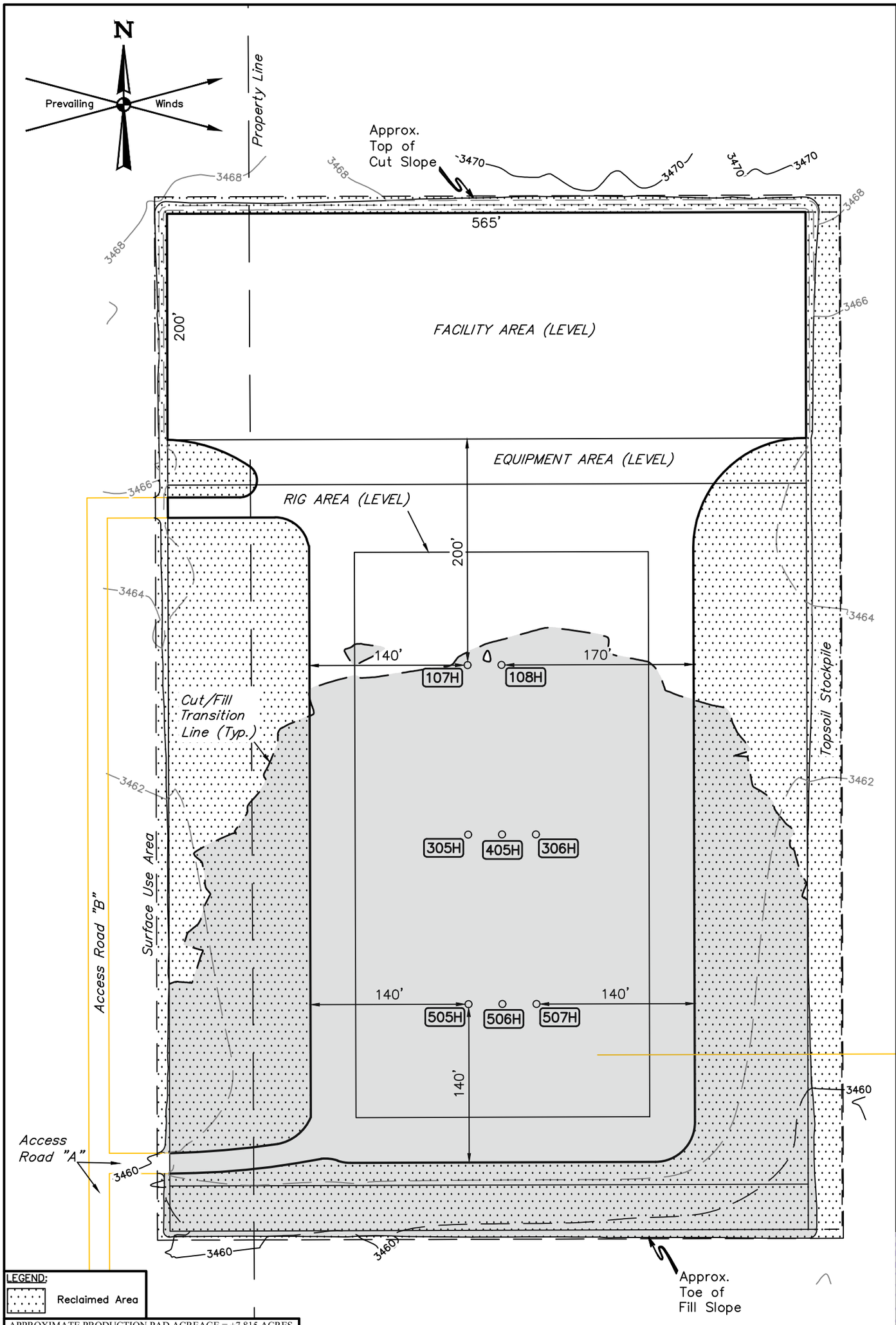

Sheba Fed Com 505H Well Head
Test Separator
F
Produced Gas Meter
F
Oil Meter
F
Water Meter
Sheba Fed Com 506H Well Head
Test Separator
F
Produced Gas Meter
F
Oil Meter
F
Water Meter
Sheba Fed Com507H Well Head
Test Separator
F
Produced Gas Meter
F
Oil Meter
F
Water Meter
Sheba Fed Com 305H Well Head
Test Separator
F
Produced Gas Meter
F
Oil Meter
F
Water Meter
Sheba Fed Com 306H Well Head
Test Separator
F
Produced Gas Meter
F
Oil Meter
F
Water Meter
HT 1
HT 2
From VRU
To Gas Sales
F
HP Flare Gas Meter
HP Emergency Flare
MP Flare
To Oil Tanks
To GB Tank

Water Meter

To GB Tank







LEGEND:

Reclaimed Area

APPROXIMATE PRODUCTION PAD ACREAGE = ±7.815 ACRES
APPROXIMATE RECLAIMED AREA ACREAGE = ±5.047 ACRES
TOTAL ACREAGE = ±12.862 ACRES

NOTES:

- Contours shown at 2' intervals.

CENTENNIAL RESOURCE PRODUCTION, LLC

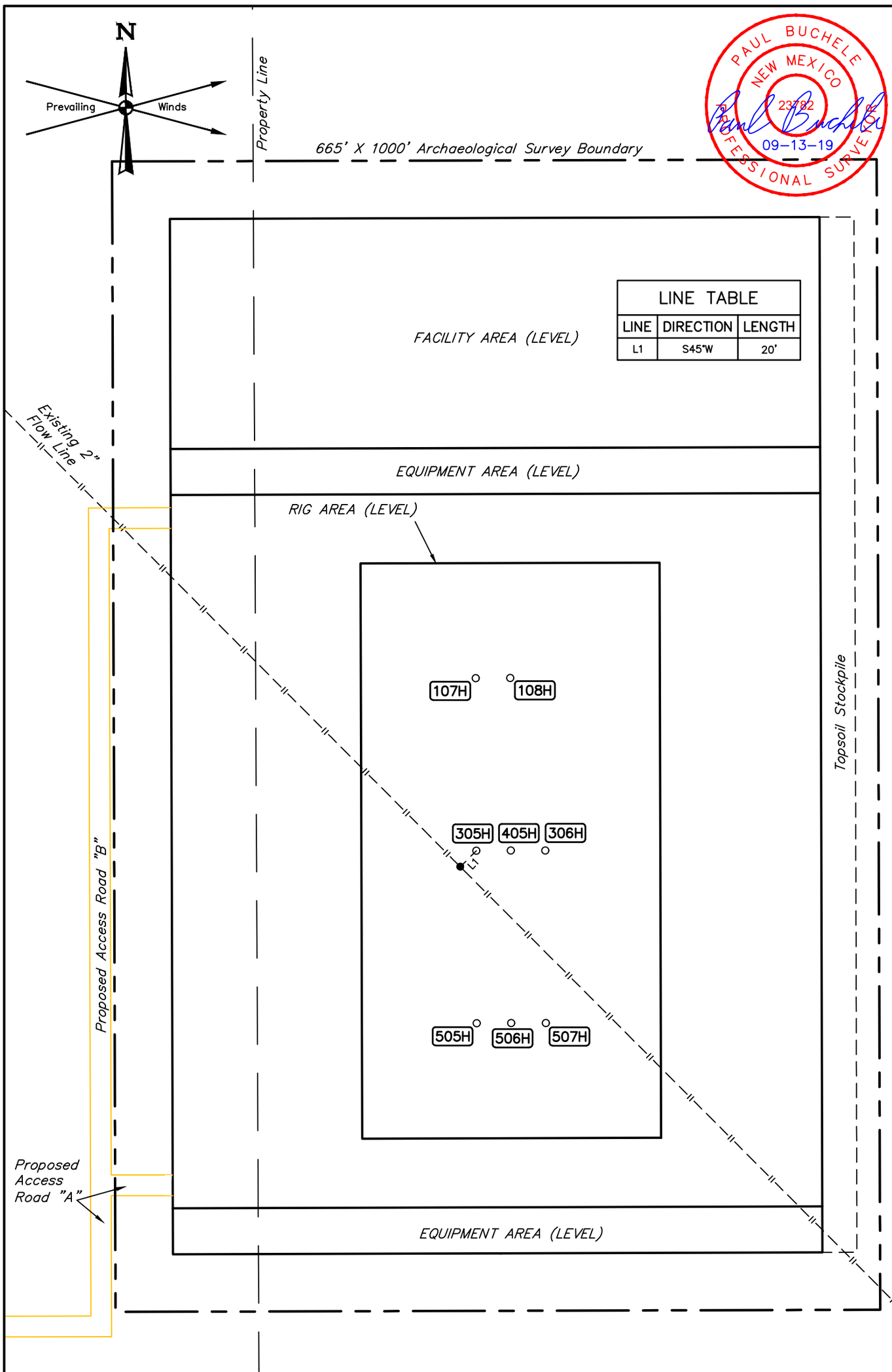
SOLOMON FEDERAL COM 505H & SHEBA FEDERAL COM 107H, 108H, 305H, 306H, 405H, 506H & 507H
SE 1/4 NE 1/4, SECTION 27, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	B.B., R.C.	08-23-19	SCALE
DRAWN BY	D.J.S.	09-12-19	1" = 100'

RECLAMATION DIAGRAM | **FIGURE #4**

UINTAH ENGINEERING & LAND SURVEYING

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



NOTES:

- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

CENTENNIAL RESOURCE PRODUCTION, LLC

SOLOMON FEDERAL COM 505H & SHEBA FEDERAL COM 107H, 108H, 305H, 306H, 405H, 506H & 507H
SE 1/4 NE 1/4, SECTION 27, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	B.B., R.C.	08-23-19	SCALE
DRAWN BY	D.J.S.	09-12-19	1" = 100'
ARCHAEOLOGICAL SURVEY BOUNDARY			FIGURE #5

UINTAH ENGINEERING & LAND SURVEYING

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

AFMSS

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

PWD Data Report

03/02/2022

APD ID: 10400070418 **Submission Date:** 03/04/2021

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Well Type: OIL WELL **Well Work Type:** Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Lined pit Monitor description:

Lined pit Monitor attachment:

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 attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

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 evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

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 attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

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:

Section 6 - Other

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

03/02/2022

APD ID: 10400070418 **Submission Date:** 03/04/2021

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SHEBA FEDERAL COM **Well Number:** 305H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001841

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 number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-50267	96434	Red Hills Bone Spring, North

[4] Property Code	[5] Property Name	[6] Well Number
318028	SHEBA FEDERAL COM	305H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372165	CENTENNIAL RESOURCE PRODUCTION, LLC	3464.8'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	27	24S	34E		2299	NORTH	1160	EAST	LEA

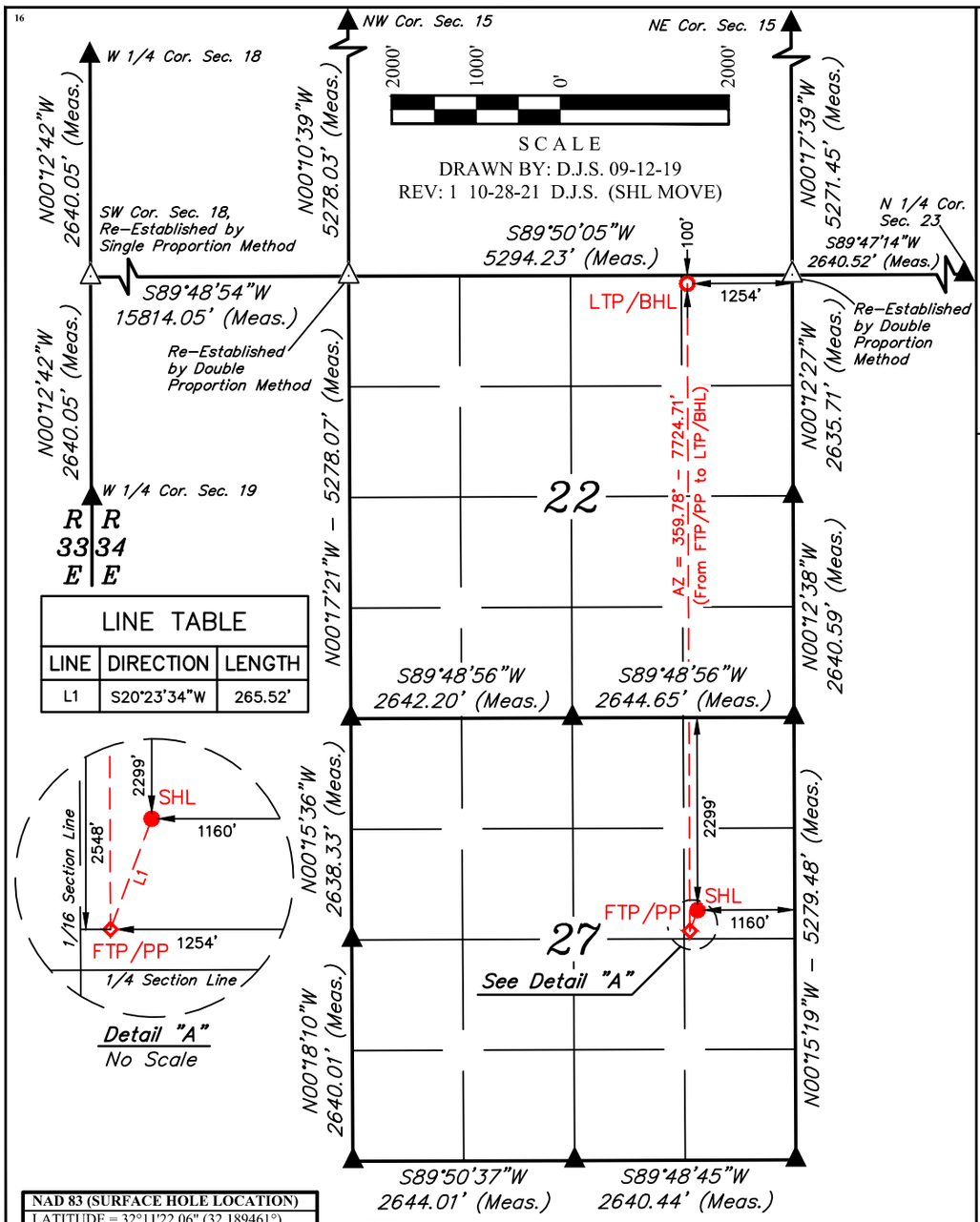
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	22	24S	34E		100	NORTH	1254	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
240			

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.

16



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S20°23'34"W	265.52'

Detail "A"
No Scale

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°11'22.06" (32.189461°)
LONGITUDE = 103°27'10.91" (103.453031°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 433774.81' X: 813662.84'
UTM, NAD 83 (ZONE 13)
Y: 11687920.11' X: 2118847.36'

NAD 83 (FTP/PP)
LATITUDE = 32°11'19.60" (32.188778°)
LONGITUDE = 103°27'12.00" (103.453333°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 433525.58' X: 813571.37'
UTM, NAD 83 (ZONE 13)
Y: 11687670.35' X: 2118757.46'

NAD 83 (LTP/BHL)
LATITUDE = 32°12'36.03" (32.210007°)
LONGITUDE = 103°27'11.99" (103.453331°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 441248.81' X: 813508.81'
UTM, NAD 83 (ZONE 13)
Y: 11695392.03' X: 2118647.01'

NOTE:
- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

● = SURFACE HOLE LOCATION
◇ = FIRST TAKE POINT/ PENETRATION POINT
○ = LAST TAKE POINT/ BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED
△ = SECTION CORNER RE-ESTABLISHED. (Not Set on Ground.)

[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and 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 such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Meghan Twele
Printed Name

meghan.twele@cdevinc.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

August 23, 2019
Date of Survey

Signature and Seal of Professional Surveyor:

PAUL BUCHELE
NEW MEXICO
23782
10-28-21
PROFESSIONAL SURVEYOR

Certificate Number:

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: Centennial Resource Prod, LLC **OGRID:** 372165 **Date:** 05 / 18 / 2022

II. Type: ■ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Sheba Federal Com 305H	30-025-50267	H-27-24S-34E	2299FNL&1160FEL	3600 BBL/D	4320 MCF/D	18000 BBL/D
Sheba Federal Com 306H		H-27-24S-34E	2299FNL&1100FEL	3600 BBL/D	4320 MCF/D	18000 BBL/D

IV. Central Delivery Point Name: SOLOMON CDP [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Sheba Federal Com 305H	30-025-50267	11/05/2022	11/13/2022	12/17/2022	12/31/2022	12/31/2022
Sheba Federal Com 306H		11/13/2022	11/21/2022	12/17/2022	12/31/2022	12/31/2022

VI. Separation Equipment: ■ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ■ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ■ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

■ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

■ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	Stewart MacCallum
Printed Name:	Stewart MacCallum
Title:	Director of Marketing
E-mail Address:	Stewart.MacCallum@cdevinc.com
Date:	05/18/2022
Phone:	(720) 499-1458

OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

Centennial Resource Production, LLC (372165)

Natural Gas Management Plan Descriptions

VI. Separation Equipment:

Centennial utilizes a production forecast from our Reservoir Engineering team to appropriately size each permanent, 3-phase separator and heater treater utilized for production operations. Our goal is to maintain 5 minutes of retention time in the test vessel and 20 minutes in the heater treater at peak production rates. The gas produced is routed from the separator to the gas sales line.

VII. Operational Practices:

Drilling

During Centennial's drilling operations it is uncommon for venting or flaring to occur. If flaring is needed due to safety concerns, gas will be routed to a flare and volumes will be estimated.

Flowback

During completion/recompletion flowback operations, after separation flowback begins and as soon as it is technically feasible, Centennial routes gas though a permanent separator and the controlled facility where the gas is either sold or flared through a high-pressure flare if needed.

Production

Per 19.15.27.8.D, Centennial's facilities are designed to minimize waste. Our produced gas will only be vented or flared in an emergency or malfunction situation, except as allowed for normal operations noted in 19.15.27.8.D(2) & (4). All gas that is flared is metered. All gas that may be vented will be estimated.

Performance Standards

Centennial utilizes a production forecast from our Reservoir Engineering team to appropriately size each permanent, 3-phase separator and heater treater utilized for production operations.

All of Centennial's permanent storage tanks associated with production operations which are routed to a flare or control device are equipped with an automatic gauging system.

All of Centennial's flare stacks, both currently installed and for future installation, are:

1) Appropriately sized and designed to ensure proper combustion efficiency.
2) Equipped with an automatic ignitor or continuous pilot.
3) Anchored and located at least 100 feet from the well and storage tanks.

Centennial's field operations and HSE teams have implemented an AVO inspection schedule that adheres to the requirements of 19.15.27.8.E(5).

All of our operations and facilities are designed to minimize waste. We routinely employ the following methods and practices:

- Closed-loop systems
- Enclosed and properly sized tanks

- Vapor recovery units to maximize recovery of low-pressure gas streams and potential unauthorized emissions
- Low-emitting or electric engines whenever practical
- Combustors and flare stacks in the event of a malfunction or emergency
- Routine facility inspections to identify leaking components, functioning control devices, such as flares and combustors, and repair / replacement of malfunctioning components where applicable

Measurement or estimation

Centennial measures or estimates the volumes of natural gas vented, flared and/or beneficially used for all of our drilling, completing and producing wells. We utilize accepted industry standards and methodology which can be independently verified. Annual GOR testing is completed on our wells and will be submitted as required by the OCD. None of our equipment is designed to allow diversion around metering elements except during inspection, maintenance and repair operations.

VIII. Best Management Practices:

Centennial utilizes the following BMPs to minimize venting during active and planned maintenance activities:

- Use a closed-loop process wherever possible during planned maintenance activities, such as blowdowns, liquid removal, and work over operations.
- Employ low-emitting or electric engines for equipment, such as compressors
- Adhere to a strict preventative maintenance program which includes routine facility inspections, identification of component malfunctions, and repairing or replacing components such as hatches, seals, valves, etc. where applicable
- Utilize vapor recovery units (VRU's) to maximize recovery of volumes of low-pressure gas streams and potential unauthorized emissions
- Route low pressure gas and emissions streams to a combustion device to prevent venting where necessary

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 110024

CONDITIONS

Operator: CENTENNIAL RESOURCE PRODUCTION, LLC 1001 17th Street, Suite 1800 Denver, CO 80202	OGRID: 372165
	Action Number: 110024
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	6/23/2022
pkautz	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	6/23/2022
pkautz	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	6/23/2022
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	6/23/2022