



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: 3 file(s)
- Drilling Plan Report
- Drilling Plan Attachments
  - Blowout Prevention Choke Diagram Attachment: 1 file(s)
  - Blowout Prevention BOP Diagram Attachment: 2 file(s)
  - Casing Taperd String Specs: 2 file(s)
  - Casing Design Assumptions and Worksheet(s): 8 file(s)
  - Hydrogen sulfide drilling operations plan: 2 file(s)
  - Proposed horizontal/directional/multi-lateral plan submission: 3 file(s)
  - Other Facets: 3 file(s)
  - Other Variances: 2 file(s)
- SUPO Report
- SUPO Attachments
  - Existing Road Map: 1 file(s)
  - New Road Map: 1 file(s)
  - New road access plan attachment: 1 file(s)
  - Attach Well map: 1 file(s)
  - Production Facilities map: 1 file(s)
  - Water source and transportation map: 1 file(s)
  - Construction Materials source location attachment: 1 file(s)
  - Well Site Layout Diagram: 3 file(s)
  - Recontouring attachment: 1 file(s)
  - Other SUPO Attachment: 3 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**

1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No.
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address		9. API Well No. <span style="border: 1px solid red; padding: 2px;">30-015-54135</span>
3b. Phone No. (include area code)		10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
		13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1. Well plat certified by a registered surveyor.</li> <li>2. A Drilling Plan.</li> <li>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).</li> </ul> | <ul style="list-style-type: none"> <li>4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).</li> <li>5. Operator certification.</li> <li>6. Such other site specific information and/or plans as may be requested by the BLM.</li> </ul> |
|---|---|

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.



(Continued on page 2)

\*(Instructions on page 2)

## 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 well, 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 directionally 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 well 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 will 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 connects this information to a new 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 Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## Additional Operator Remarks

### Location of Well

0. SHL: SWSE / 283 FSL / 2438 FEL / TWSP: 17S / RANGE: 28E / SECTION: 15 / LAT: 32.8279413 / LONG: -104.1631375 ( TVD: 0 feet, MD: 0 feet )

PPP: NWNE / 1 FNL / 2247 FEL / TWSP: 17S / RANGE: 28E / SECTION: 22 / LAT: 32.827177 / LONG: -104.162482 ( TVD: 3700 feet, MD: 4243 feet )

PPP: NWNE / 100 FNL / 2247 FEL / TWSP: 17S / RANGE: 28E / SECTION: 22 / LAT: 32.8268932 / LONG: -104.1624833 ( TVD: 3755 feet, MD: 4346 feet )

BHL: SWSE / 1125 FSL / 2247 FEL / TWSP: 17S / RANGE: 28E / SECTION: 22 / LAT: 32.8158791 / LONG: -104.162517 ( TVD: 3675 feet, MD: 8354 feet )

### BLM Point of Contact

Name: Candy Vigil

Title: LIE

Phone: (575) 234-5982

Email: cvigil@blm.gov

**Review and Appeal Rights**

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

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Spur Energy Partners LLC
LEASE NO.:	NMNM 0080268
COUNTY:	Eddy

**Wells:**

Mayaro 22 State Com East Well Pad

Mayaro 22 State Com 10H

Surface Hole Location: 283' FSL & 2438' FEL, Section 15, T. 17 S., R. 28 E.  
Bottom Hole Location: 1152' FSL & 2247' FEL, Section 22, T. 17 S, R 28 E.

Mayaro 22 State Com 70H

Surface Hole Location: 263' FSL & 2438' FEL, Section 15, T. 17 S., R. 28 E.  
Bottom Hole Location: 1125' FSL & 1823' FEL, Section 22, T. 17 S, R 28 E.

Mayaro 22 State Com West Well Pad

Mayaro 22 State Com 11H

Surface Hole Location: 235' FSL & 570' FEL, Section 15, T. 17 S., R. 28 E.  
Bottom Hole Location: 50' FSL & 923' FEL, Section 22, T. 17 S, R 28 E.

Mayaro 22 State Com 71H

Surface Hole Location: 215' FSL & 570' FEL, Section 15, T. 17 S., R. 28 E.  
Bottom Hole Location: 50' FSL & 375' FEL, Section 22, T. 17 S, R 28 E.

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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.

- General Provisions**
- Permit Expiration**
- Archaeology, Paleontology, and Historical Sites**
- Noxious Weeds**
- Special Requirements**
  - Watershed
  - Range
  - VRM IV
- Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- Road Section Diagram**
- Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines

- Electric Lines
- Interim Reclamation**
- Final Abandonment & Reclamation**

## **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.

#### **V. 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.

##### **SURFACE PIPELINE(S):**

When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, siting valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present.

The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

**ELECTRIC LINE(S):**

Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.

**Range:**

**Cattleguards**

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

**Fence Requirement**

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

Figure 1. Pipe H-brace specifications

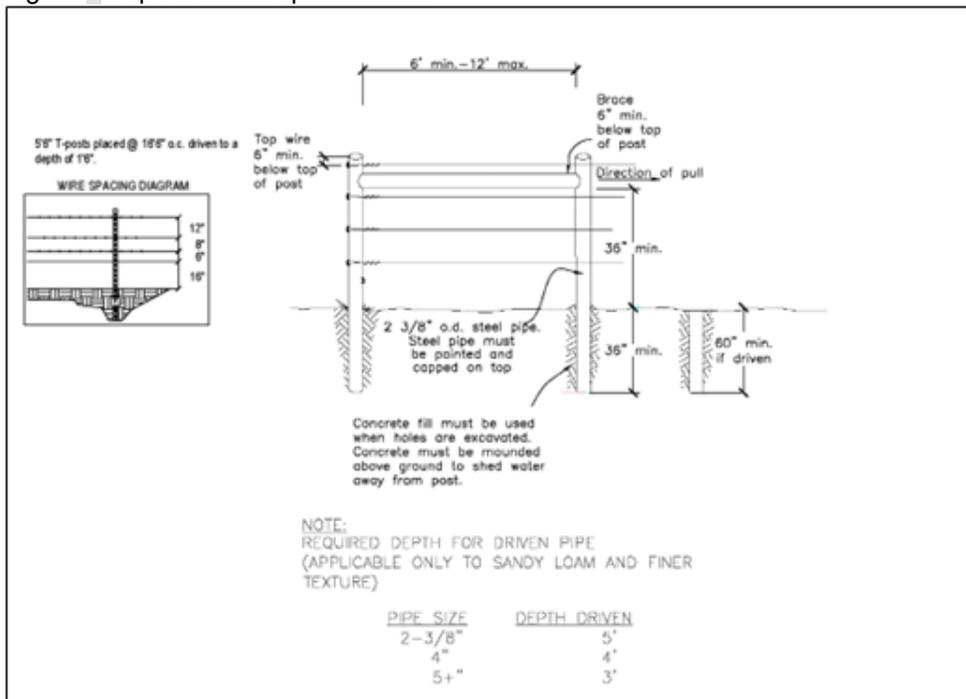
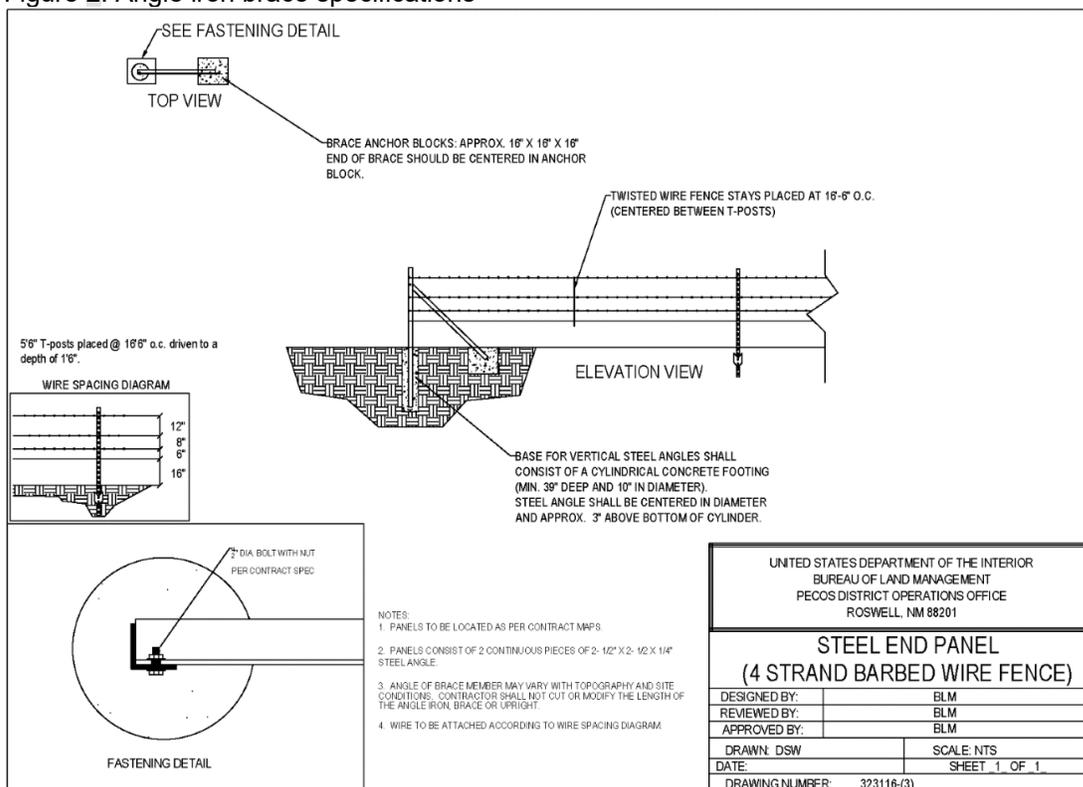


Figure 2. Angle iron brace specifications



**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.

**VRM IV:**

Short-term mitigation measures include painting all above-ground structures that are not subject to safety requirements (including meter housing) Shale Green, which is a flat non-reflective paint color listed in the BLM Standard Environmental Color Chart (CC-001: June 2013). Long-term mitigation measures include the removal of wells and associated infrastructure following abandonment (end of cost-effective production). Previously impacted areas will be reclaimed by removing structures and caliche pads, returning disturbed areas to natural grade, and revegetating with an approved BLM seed mixture; thereby eliminating visual impacts.

**VI. 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 thirty (30) 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.

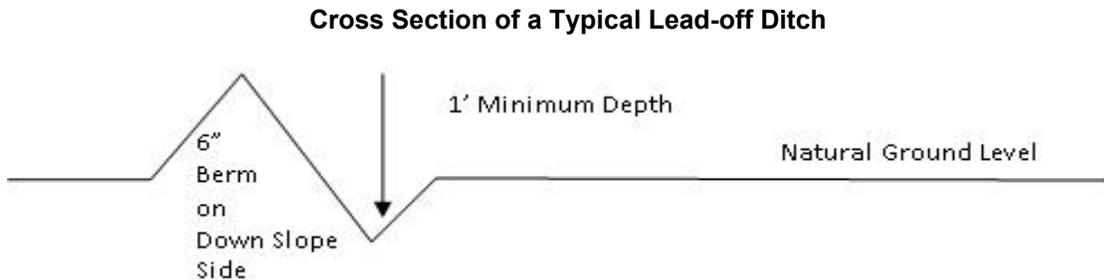
**Turnouts**

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.



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

**Formula for Spacing Interval of Lead-off Ditches**

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

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

**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.

**Construction Steps**

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

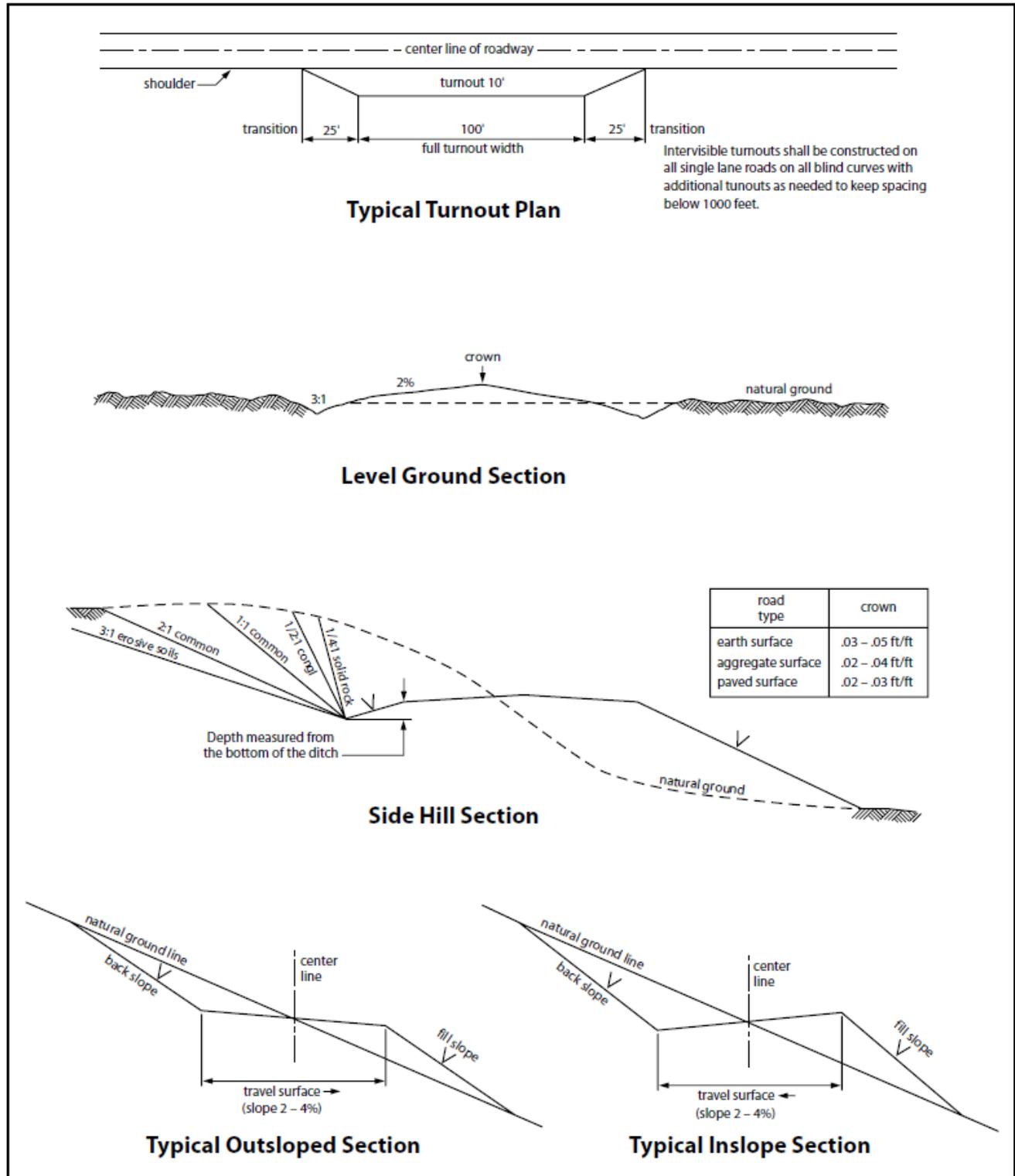


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## VII. 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).

### B. PIPELINES

- A leak detection plan will be submitted to the BLM Carlsbad Field Office for approval

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

- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

### STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

**A copy of the Grant and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review a copy of your permit during construction to ensure compliance with all stipulations.**

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

1. Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC § 2601 *et seq.* (1982) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (see 40 CFR, Part 702-799 and in particular, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. Holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601, *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way Holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way Holder on the Right-of-Way. This provision applies without regard to whether a release is caused by Holder, its agent, or unrelated third parties.
4. Holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. Holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:
  - a. Activities of Holder including, but not limited to: construction, operation, maintenance, and termination of the facility;
  - b. Activities of other parties including, but not limited to:
    - (1) Land clearing
    - (2) Earth-disturbing and earth-moving work
    - (3) Blasting
    - (4) Vandalism and sabotage;

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of Holder, regardless of fault. Upon failure of Holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he/she deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of Holder. Such action by the Authorized Officer shall not relieve Holder of any responsibility as provided herein.

6. All construction and maintenance activity shall be confined to the authorized right-of-way width of **30** feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline shall be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline shall be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity shall be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation shall be allowed unless approved in writing by the Authorized Officer.

8. Holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline shall be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 6 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. 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 Stipulation 16 for more information.

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.

16. 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."

17. 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.

18. 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, powerline 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.

19. Surface pipelines shall be less than or equal to 4 inches and a working pressure below 125 psi.

### C. ELECTRIC LINES

- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction.
- No further construction will be done until clearance has been issued by the Authorized Officer.
- Special restoration stipulations or realignment may be required.

### STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

**A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

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

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.
5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume

the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. 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 Stipulation 11 for more information.

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.

11. 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."

12. 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.

13. Special Stipulations:

For reclamation remove poles, lines, transformer, etc. and dispose of properly.  
Fill in any holes from the poles removed.

#### **VIII. 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).

#### **IX. 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

	<u>lb/acre</u>
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

**Seed Mixture 3, for Shallow 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:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass ( <i>Setaria macrostachya</i> )	1.0
Green Sprangletop ( <i>Leptochloa dubia</i> )	2.0
Sideoats Grama ( <i>Bouteloua curtipendula</i> )	5.0

\*Pounds of pure live seed:

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

## Pecos District

### Application for Permit to Drill

### Conditions of Approval

#### Geology Concerns

Potash	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Secretary	<input type="checkbox"/> R-111-P
Cave/Karst	<input type="checkbox"/> Medium	<input type="checkbox"/> High	<input type="checkbox"/> Critical
H2S	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Below 100 PPM	<input type="checkbox"/> Above 100 PPM
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> SWD Well

Note: The geology of the area where the well is being drilled determines the COAs that apply, not the above table.

#### Additional Engineering Requirements

Surface casing must be set at: 175 feet

Intermediate casing must be set at: 1,089 feet

#### General Requirements

1. Changes to the approved APD casing program need prior approval.
2. The Bureau of Land Management (BLM) will be notified in advance for a representative to witness:
  - a. Well spudding (minimum of 24 hours notice)
  - b. Setting and/or cementing of all casing strings (minimum of 4 hours notice)
  - c. BOPE tests (minimum of 4 hours notice)

Eddy County

620 East Greene Street, Carlsbad, NM 88220

(575) 361-2822

BLM\_NM\_CFO\_DrillingNotifications@BLM.GOV

Lea County

414 West Taylor, Hobbs, NM 88240

(575) 689-5981

3. The initial wellhead installed on the well will remain on the well with spools used as needed.
4. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

- a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig:
    - i. 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 a Spudder Rig:
    - i. Notify the BLM when moving in and removing the Spudder Rig.
    - ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - iii. BOP/BOPE test to be conducted per 43 CFR 3172.6 as soon as 2nd Rig is rigged up on well.
5. 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 always be operational during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table or the area immediately above the substructure on which the draw works are located (this does not include the doghouse or stairway area).
6. 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.

### **Pressure Control**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR 3172.6 and API STD 53 Sec. 5.3.
2. 5M or higher systems require 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.
3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. 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.
  - b. The results of the test shall be reported to the appropriate BLM office.
  - c. 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.

- d. 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.
  - e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per 43 CFR 3172.6(b)(9).
  - f. 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).
  - g. 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.
  - h. The tests shall be done by an independent service company utilizing a test plug, not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to 43 CFR 3172 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 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).
4. If the operator has proposed using a 5,000 (5M) Annular on a 10M BOP:
    - a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 10,000 (10M) psi.
  5. 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 43 CFR 3172 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.
6. If a variance is approved for break testing the BOPE, the following requirements apply:
- a. BOPE break testing is only approved for a BOP rated at 5M or less.
  - b. Approval is only for the intermediate hole sections, so long as those sections do not go deeper than the Bone Springs formation.
  - c. The Annular Preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.
  - d. A full BOP test shall be performed every 21 days (at a minimum).
  - e. A full BOP test is required prior to drilling the first intermediate hole section (if applicable). If any subsequent intermediate hole interval is deeper than the first, a full BOP test shall be required (a maximum 200 foot difference in true vertical depth (TVD) is allowed).
  - f. BOPE break testing is not permitted for drilling the production hole section.
  - g. While in transfer, the BOP shall be secured by the hydraulic carrier or cradle.
  - h. If any repairs or replacements of the BOPE is required, the BOPE shall be tested as required by 43 CFR 3172.
  - i. Pressure tests shall be performed on any BOPE components that have been disconnected. A low pressure (250-300 psi) and a high pressure (BOP max pressure rating) test are required.
  - j. If a testing plug is used, pressure shall be maintained for at least 10 minutes. If there is any bleed off in pressure, the test shall be considered to have failed.
  - k. If no testing plug is used, pressure shall be maintained for at least 30 minutes. If there is a decline in pressure of more than 10 percent, the test shall be considered to have failed.
  - l. The appropriate Bureau of Land Management (BLM) office shall be notified a minimum of 4 hours before testing occurs.
  - m. Any well control event while drilling require notification to the BLM Petroleum Engineer (575-706-2779) prior to the commencement of any BOPE Break Testing operations.
  - n. If break testing is not used, then a full BOPE test shall be conducted.
7. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply:
- a. The flex line must meet the requirements of API 16C.

- b. Check condition of flexible line from BOP to choke manifold (replace if exterior is damaged or if line fails test).
- c. Line is to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements.
- d. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating.
- e. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, shall be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

### **Casing and Cement**

1. 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.).
2. On any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. The 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.
3. 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.
4. The surface casing shall be set at a minimum of 25 feet into the Rustler Anhydrite and 80 feet 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 hours (or 24 hours in the Potash Area) 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.

5. Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.
6. Intermediate casing must be cemented to surface. For medium/high cave/karst, potash, and Capitan Reef, wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
7. The production cement should tie-back at least 200 feet (500 feet in Secretary Potash, surface in R-111-P potash) into previous casing string. Operator shall provide method of verification.
8. Production liner cement should tie-back at least 100 feet into previous casing string. Operator shall provide verification of cement top.
9. In WIPP Areas, cement must come to surface on the first three casing strings.
10. If cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
11. No pea gravel permitted for remedial cement or fall back remedial cement without prior authorization from a BLM petroleum engineer.
12. 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.
13. DV tools:
  - a. First stage to DV tool (The DV tool may be cancelled if cement circulates to surface on the first stage):
    - i. Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
  - b. Second stage above DV tool:
    - i. For intermediate casing, cement to surface.
    - ii. For production casing, cement should tie-back at least 200 feet (500 feet in Secretary Potash, surface in R-111-P potash) into previous casing string. Operator shall provide method of verification.
    - iii. If cement does not circulate, contact the appropriate BLM office.

#### 14. Potash Areas:

- a. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
- b. After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met:
  - i. Cement reaches a minimum compressive strength of 500 psi for all cement blends
  - ii. Until cement has been in place at least 24 hours.
- c. WOC time will be recorded in the driller's log.
- d. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.
- e. In R111 Potash Areas, if cement does not circulate to surface on the first two salt protection casing strings, the cement on the 3rd casing salt string must come to surface.
- f. In Secretary Potash Areas, if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

#### 15. Wait on cement (WOC) for Water Basin:

- a. After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met:
  - i. Cement reaches a minimum compressive strength of 500 psi at the shoe
  - ii. Until cement has been in place at least 8 hours.
- b. WOC time will be recorded in the driller's log.

#### 16. Medium/High/Critical Cave/Karst Areas:

- a. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
- b. In Critical Cave/Karst Areas cement must come to surface on the first three casing strings.
- c. In Medium and High Cave/Karst Areas, if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- d. In Critical Cave/Karst Areas, if cement does not circulate to surface on the first three casing strings, the cement on the 4th casing string must come to surface.

### **Drilling Mud**

1. 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.

### **Waste Material and Fluids**

1. 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.

2. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

## **Special Requirements**

1. Communitization Agreement
  - a. The operator will submit a Communitization Agreement to the Santa Fe Office (301 Dinosaur Trail, Santa Fe, NM 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.
  - b. 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.
    - i. The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
    - ii. 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.
  - c. In addition, the well sign shall include the surface and bottom hole lease numbers.
    - i. When the Communitization Agreement number is known, it shall also be on the sign.
2. Unit Wells
  - a. The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers.
    - i. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.
  - b. Commercial Well Determination
    - i. A commercial well determination shall be submitted after production has been established for at least six months (this is not necessary for secondary recovery unit wells).
3. Hydrogen Sulfide (H<sub>2</sub>S)
  - a. If H<sub>2</sub>S is encountered, provide measured values and formations to the BLM.
  - b. An H<sub>2</sub>S area must meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items.

- c. An H2S Drilling Plan shall be activated 500 feet prior to drilling into any formation designated as having H2S.
  - d. Hydrogen Sulfide 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 43 CFR 3176 requirements, which includes equipment and personnel/public protection items.
4. Capitan Reef
- a. If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following (Use this for 3 string wells in the Capitan Reef, if it is a 4 string well ensure fresh water based mud is used across the Capitan interval):
    - i. Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
    - ii. Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports.
    - iii. The daily drilling report should show mud volume per shift/tour.
    - iv. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval.
    - v. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.
5. Salt Water Disposal Wells
- a. The operator shall supply the BLM with a copy of a mudlog over the permitted disposal interval and estimated in situ water salinity based on open-hole logs.
  - b. If hydrocarbons are encountered while drilling, the operator shall notify the BLM.
  - c. The operator shall provide to the BLM a summary of formation depth picks based on mudlog and geophysical logs along with a copy of the mudlog and open-hole logs from total depth to top of Devonian.
  - d. An NOI sundry with the completion procedure for this well shall be submitted and approved prior to commencing completion work. The procedure will be reviewed to verify that the completion proposal will allow the operator to:
    - i. Properly evaluate the injection zone utilizing open-hole logs, swab testing and/or any other method to confirm that hydrocarbons cannot be produced in paying quantities. This evaluation shall be reviewed by the BLM prior to injection commencing.
    - ii. Restrict the injection fluid to the approved formation.
    - iii. If a step rate test will be run, an NOI sundry shall be submitted to the BLM for approval.

- e. If off-lease water will be disposed in this well, the operator shall provide proof of right-of-way approval.
6. WIPP Requirements
- a. If the proposed surface well or bottom hole is located within 330 feet of the WIPP Land Withdrawal Area boundary:
    - i. Daily drilling reports, logs, and deviation survey information are required to be submitted to the Bureau of Land Management Engineering Department and the U.S. Department of Energy (per requirements of the Joint Powers Agreement) until a total vertical depth of 7,000 feet is reached. These reports will have at a minimum the rate of penetration and a clearly marked section showing the deviation for each 500-foot interval. Operator may be required to do more frequent deviation surveys based on the daily information submitted and may be required to take other corrective measures.
    - ii. Information will also be provided to the New Mexico Oil Conservation Division after drilling activities have been completed.
    - iii. Upon completion of the well, the operator shall submit a complete directional survey.
    - iv. Any future entry into the well for purposes of completing additional drilling will require supplemental information.
  - b. Required information shall be emailed to OilGasReports@wipp.ws.
    - i. Attached files must not be greater than 20 MB.
    - ii. Call WIPP Tech Support at 575-234-7422, during the hours of 7:00am to 4:30pm, if there are any issues sending to this address.



# Operator Certification Data Report

08/24/2023

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

## Operator

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

**NAME:** SARAH CHAPMAN

**Signed on:** 07/11/2023

**Title:** Regulatory Directory

**Street Address:** 9655 KATY FREEWAY, SUITE 500

**City:** Houston

**State:** TX

**Zip:** 77024

**Phone:** (832)930-8613

**Email address:** SCHAPMAN@SPUREPLLC.COM

## Field

**Representative Name:**

**Street Address:**

**City:**

**State:**

**Zip:**

**Phone:**

**Email address:**



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

# Application Data

08/24/2023

APD ID: 10400087415

Submission Date: 08/18/2022

Highlighted data reflects the most recent changes  
[Show Final Text](#)

Operator Name: SPUR ENERGY PARTNERS LLC

Well Name: MAYARO 22 STATE COM

Well Number: 10H

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - General

APD ID: 10400087415

Tie to previous NOS? N

Submission Date: 08/18/2022

BLM Office: Carlsbad

User: SARAH CHAPMAN

Title: Regulatory Directory

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM080268

Lease Acres:

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? N

Permitting Agent? NO

APD Operator: SPUR ENERGY PARTNERS LLC

Operator letter of

## Operator Info

Operator Organization Name: SPUR ENERGY PARTNERS LLC

Operator Address: 9655 KATY FREEWAY, SUITE 500

Zip: 77024

Operator PO Box:

Operator City: Houston

State: TX

Operator Phone: (832)930-8548

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: MAYARO 22 STATE COM

Well Number: 10H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: EMPIRE

Pool Name: GLORIETA-YESO

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

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

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

**Type of Well Pad:** MULTIPLE WELL

**Multiple Well Pad Name:** MAYARO 22 WEST STATE COM    **Number:** 10H, 70H

**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:**

**Distance to nearest well:** 20 FT

**Distance to lease line:** 0 FT

**Reservoir well spacing assigned acres Measurement:** 160 Acres

**Well plat:** Mayaro22StateCom10H\_Supplemental\_20220816101359.pdf

Mayaro22StateCom10H\_SitePlan\_20220816101359.pdf

Mayaro22StateCom10H\_C\_102\_20220816101359.pdf

**Well work start Date:** 03/31/2023

**Duration:** 10 DAYS

**Section 3 - Well Location Table**

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:** 19680

**Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
SHL Leg #1	283	FSL	2438	FEL	17S	28E	15	Aliquot SWSE	32.8279413	-104.1631375	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 080268	3560	0	0	N
KOP Leg #1	810	FSL	2295	FEL	17S	28E	15	Aliquot SWSE	32.8293901	-104.1626692	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 080268	1085	2552	2475	N

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

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
PPP Leg #1-1	1	FNL	2247	FEL	17S	28E	22	Aliquot NWNE	32.827177	-104.162482	EDD Y	NEW MEXICO	NEW MEXICO	S	STATE	-140	4243	3700	Y
PPP Leg #1-2	100	FNL	2247	FEL	17S	28E	22	Aliquot NWNE	32.8268932	-104.1624833	EDD Y	NEW MEXICO	NEW MEXICO	S	STATE	-195	4346	3755	Y
EXIT Leg #1	1175	FSL	2247	FEL	17S	28E	22	Aliquot SWSE	32.8160163	-104.1625106	EDD Y	NEW MEXICO	NEW MEXICO	S	STATE	-116	8304	3676	Y
BHL Leg #1	1125	FSL	2247	FEL	17S	28E	22	Aliquot SWSE	32.8158791	-104.162517	EDD Y	NEW MEXICO	NEW MEXICO	S	STATE	-115	8354	3675	Y

Intent  As Drilled

API #			
Operator Name:		Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit?

Is this well an infill well?

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #			
Operator Name:		Property Name:	Well Number

KZ 06/29/2018







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

# Drilling Plan Data Report

08/24/2023

APD ID: 10400087415

Submission Date: 08/18/2022

Highlighted data  
reflects the most  
recent changes

Operator Name: SPUR ENERGY PARTNERS LLC

Well Name: MAYARO 22 STATE COM

Well Number: 10H

Well Type: OIL WELL

Well Work Type: Drill

[Show Final Text](#)

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
11975247	QUATERNARY	3560	0	0	DOLOMITE, OTHER : CALICHE	USEABLE WATER	N
11975255	TOP SALT	3370	190	190	ANHYDRITE	OTHER : SALT	N
11975256	TANSILL	3185	375	375	DOLOMITE, SANDSTONE	NONE	N
11975257	YATES	3085	475	475	DOLOMITE, LIMESTONE, SHALE, SILTSTONE	NONE	N
11975258	SEVEN RIVERS	2835	725	725	DOLOMITE, LIMESTONE	CO2, NATURAL GAS	N
11975259	QUEEN	2255	1305	1305	ANHYDRITE, DOLOMITE, SANDSTONE	NATURAL GAS, OIL	N
11975248	GRAYBURG	1860	1700	1700	ANHYDRITE	NATURAL GAS, OIL	N
11975249	SAN ANDRES	1515	2045	2045	DOLOMITE, LIMESTONE	NATURAL GAS, OIL	N
11975251	GLORIETA	115	3445	3550	DOLOMITE, SANDSTONE	NATURAL GAS, OIL	N
11975252	PADDOCK	25	3535	3675	DOLOMITE, LIMESTONE	NATURAL GAS, OIL	Y
11975253	BLINEBRY	-415	3975	4100	DOLOMITE, LIMESTONE	NATURAL GAS, OIL	N
11975254	TUBB	-1290	4850	5200	DOLOMITE, LIMESTONE	OIL	N

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 5000

**Equipment:** A 3000psi 5000' rated BOP stack consisting of an annular preventer and double (blind & pipe) ram will be used below surface casing to TD. See attached BOP and choke manifold diagrams.

**Requesting Variance?** YES

**Variance request:** Spur Energy Partners LLC requests permission to adjust the BOP break testing requirements as per the verbal agreement reached over the phone between SPUR/BLM on September 7, 2020. A separate sundry will be sent prior to spud that reflects the pad-based break testing plan. Spur requests a variance to use a flex line from the BOP to the choke manifold. Documentation will be attached in

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

the APD and be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no bends).

**Testing Procedure:** BOP break test under the following conditions: After a full BOP test is conducted When skidding to drill the production section, where the surface casing point is shallower than the 3 Bone Spring or 10,000 TVD. When skidding to drill a production section that does not penetrate the 3rd Bone Spring or deeper. If the kill line is broken prior to skid, four tests will be performed. 1) The void between the wellhead and the spool (this consists of two tests) 2) The spool between the kill lines and the choke manifold (this consists of two tests) If the kill line is not broken prior to skid, two tests will be performed. 1) The void between the wellhead and the pipe rams

**Choke Diagram Attachment:**

Mayaro22StateCom10H\_13.625ChokeBOPDiagramUpdate\_20220816121310.pdf

**BOP Diagram Attachment:**

Mayaro22StateCom10H\_13.625ChokeBOPDiagramUpdate\_20220816121323.pdf

Mayaro22StateCom10H\_FlexHoseCert\_20220816121324.pdf

**Section 3 - Casing**

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	175	0	175	3453	3278	175	J-55	54.5	BUTT	1.125	1.2	DRY	1.4	DRY	1.4
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	1150	0	1089	3453	2364	1150	J-55	36	BUTT	1.125	1.2	DRY	1.4	DRY	1.4
3	PRODUCTION	8.75	7.0	NEW	API	Y	0	4100	0	3707	3453	-254	4100	L-80	32	OTHER - BK-HT	1.125	1.2	DRY	1.4	DRY	1.4
4	PRODUCTION	8.75	5.5	NEW	API	Y	4100	8354	3707	3675	-254	-222	4254	L-80	20	OTHER - BK-HT	1.125	1.2	DRY	1.4	DRY	1.4

**Casing Attachments**

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

**Casing Attachments**

---

**Casing ID:** 1                    **String**      SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Mayaro22StateCom10H\_csg13.375\_54.50\_J55\_20220816121555.pdf

Mayaro22StateCom10H\_CasingAssumptionsSheet\_20220816122334.pdf

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**Casing ID:** 2                    **String**      INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Mayaro22StateCom10H\_csg9.625\_36\_J55\_20220816121728.pdf

Mayaro22StateCom10H\_CasingAssumptionsSheet\_20220816122417.pdf

---

**Casing ID:** 3                    **String**      PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

Mayaro22StateCom10H\_csg5.5\_BKHT\_20\_HCL80\_20220816121802.pdf

**Casing Design Assumptions and Worksheet(s):**

Mayaro22StateCom10H\_csg7\_BKHT\_32\_HCL80\_20220816122218.pdf

Mayaro22StateCom10H\_CasingAssumptionsSheet\_20220816122350.pdf

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**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

**Casing Attachments**

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

Mayaro22StateCom10H\_csg7\_BKHT\_32\_HCL80\_20220816122154.pdf

**Casing Design Assumptions and Worksheet(s):**

Darko25Fd20H\_CasingAssumptionsSheet\_20220802081139.pdf

Darko25Fd20H\_csg5.5\_BKHT\_20\_HCL80\_20220802081139.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
INTERMEDIATE	Lead		0	175	35	1.84	12.2	64	100	CLASS C PREMIUM CEMENT	6% bentonite + 0.5% thixotropic agent + ¼ #/sk cello flake
INTERMEDIATE	Tail		175	1150	357	2.32	13.2	828	165	CLASS C PREMIUM CEMENT	6% bentonite + 0.5% thixotropic agent + ¼ #/sk cello flake
SURFACE	Lead		0	175	128	2.32	13.2	297	165	CLASS C PREMIUM PLUS	6% bentonite + 0.5% thixotropic agent + ¼ #/sk cello flake

PRODUCTION	Lead		0	3100	388	2.54	11.8	986	0	CLASS C PREMIUM PLUS	5% salt + 6% bentonite + 0.1% retarder + ¼ #/sk cello flake
PRODUCTION	Tail		3100	8354	1020	1.81	13.2	1846	50	CLASS C PREMIUM PLUS	0.3% fluid loss + 0.1% dispersant + 0.1% free water control + 0.4% defoamer + 0.1% retarder + ¼ #/sk cello flake

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

### 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:** Same type mud will be used for both casing strings. Necessary mud products (e. g., barite, bentonite, gypsum, lime, soda ash, caustic soda, nut plug, cedar bark fiber, cotton seed hulls, drilling paper, saltwater clay, CaCl<sub>2</sub>) will be on site to handle any abnormal hole condition that may be encountered while drilling. High viscosity sweeps will be pumped as needed to clean the hole.

**Describe the mud monitoring system utilized:** Mud system will be monitored visually and electronically with a Pason PVT system or its equivalent.

### Circulating Medium Table

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
1150	8354	OTHER : BRINE	10	10.5							
0	175	WATER-BASED MUD	8.6	8.9							
175	1150	OTHER : BRINE	10	10.5							

### Section 6 - Test, Logging, Coring

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

A mud logger will be used from surface casing point to TD. A gamma ray log will be run from TD to the surface casing point. No other logs are planned at this time.

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

MUD LOG/GEOLOGICAL LITHOLOGY LOG,GAMMA RAY LOG,

**Coring operation description for the well:**

No core or drill stem test is planned.

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 1738

**Anticipated Surface Pressure:** 911

**Anticipated Bottom Hole Temperature(F):** 111

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations**

Mayaro22StateCom10H\_EmergencyContactList\_20220816123019.pdf

Mayaro22StateCom10H\_H2S\_20220816123019.pdf

### Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

Mayaro22StateCom10H\_DirectPlot\_20220816144531.pdf

Mayaro22StateCom10H\_AC\_20220816144531.pdf

Mayaro22StateCom10H\_DirectPlan\_20220816144531.pdf

**Other proposed operations facets description:**

Spur Energy Partners LLC requests the option to contract a Surface Rig to drill, set surface/intermediate casing, and cement for this well. If the timing between rigs is such that Spur Energy Partners LLC would not be able to preset surface, the Primary Rig will MIRU and drill the well in its entirety per the APD. Please see the attached document for information on the spudder rig.

Spur requests a variance to use a flex line from the BOP to the choke manifold. Documentation will be attached in the APD and be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no bends).

**Other proposed operations facets attachment:**

Mayaro22StateCom10H\_SpudderRig\_20220816130059.pdf

Mayaro22StateCom10H\_DrillPlan\_20220816130059.pdf

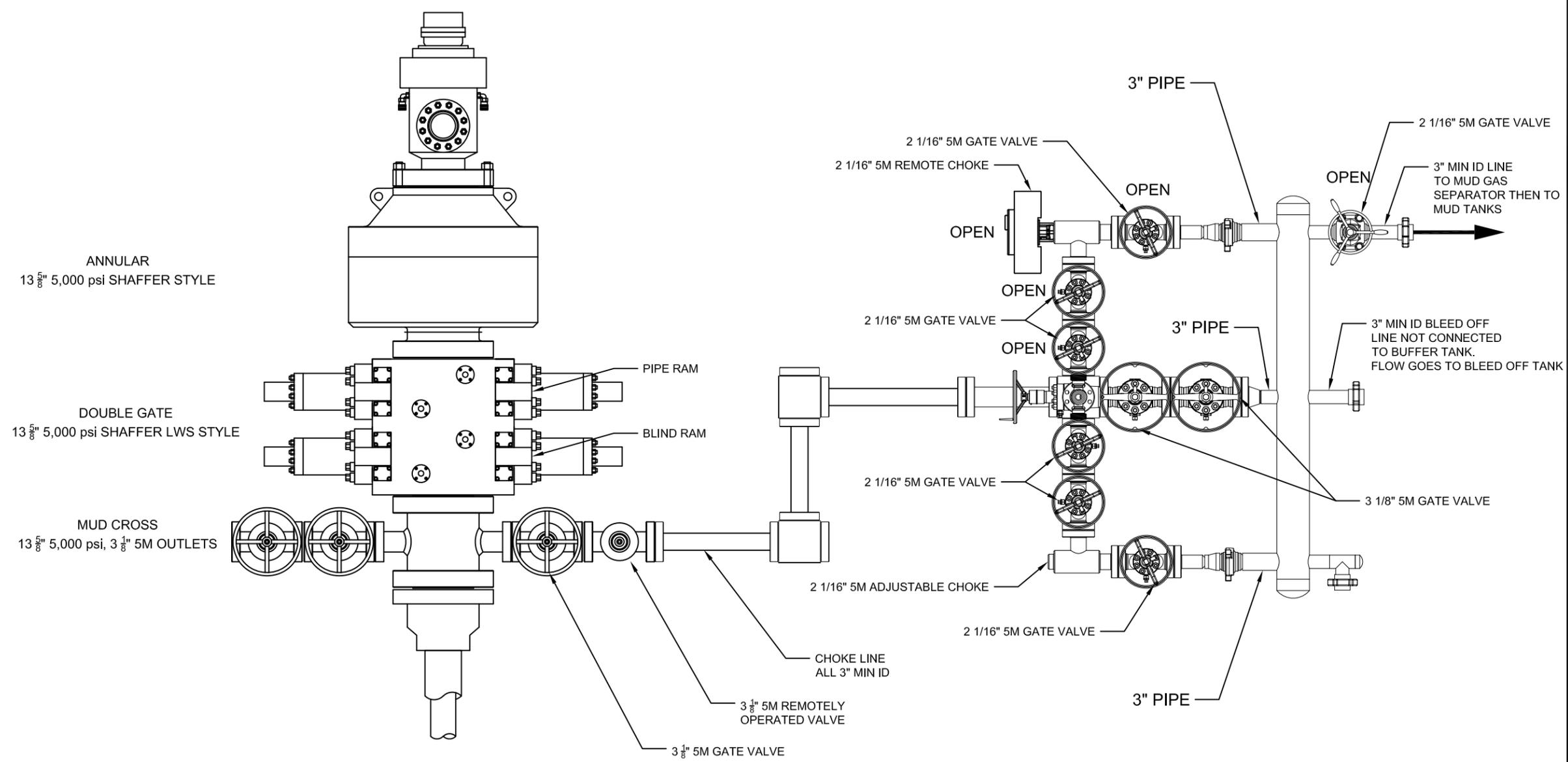
Mayaro22StateCom10H70H\_NGMP\_20220818135710.pdf

**Other Variance attachment:**

Mayaro22StateCom10H\_13.625ChokeBOPDiagramUpdate\_20220816130203.pdf

Mayaro22StateCom10H\_FlexHoseCert\_20220816130206.pdf





Notes  
 -  
 -  
 -

No.	Revision	Date

**AKITA DRILLING LTD.**  
 2302 8th Street, Nisku Alberta  
 T9E 7Z2 Tel: (780) 955-6700

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Date	5-6-2021	Scale	NTS
Des / Chk'd By	BG	File Name	R57 13 5M dou..
Project	R57		

RIG 57 BOP SCHEMATIC





# MTR DATA BOOK

CL2013

**CUSTOMER:** GATES CANADA INC

**DATE:** 12/19/2017

**Purchase Order:** D235455 (PO 45750)

**Sales Order #:** 509128

**Product Description:** 5K 3 1/2 in. 17 FT. Fire Rated Choke & Kill Gates Hose Assembly c/w 3 1/8 5K Flange with Safety Clamps & Slings Attached

**Hose S/N:** H-121917-14

**PART NUMBER:** FR5K3.517.0CK31/85KFLG S/C

**CONTENTS INCLUDED**

**GMCO FITTINGS**

17-309-1	INSERT STEM
15-095-1A	FERRULE

**3 1/8 in. 5K FIXED FLANGE X 3 1/8 in. 5K FLOAT FLANGE**

V4131	FIXED FLANGE
V5054	FLOAT FLANGE

**WELDING SPECIFICATIONS**

Certification and Procedure for welding

**NDE RESULTS**

1622371-03/1622371-01 Ultrasonic Test Results and Imaging

**Safety Clamps**

34145/34144

**TEST CHART**

Chart Recording of Hydrostatic Test

**TEST CERTIFICATE**

Document Product Details & Positive Results of Hydrostatic Testing

**CERTIFICATE OF CONFORMANCE**

A Declaration of the conformity with the type approval

**IMAGES**

Images of the product prior to shipping.

**PACKING LIST**

Details of Shipping Contents, Dimensions and Weights



**GATES ENGINEERING & SERVICES NORTH AMERICA**  
**7603 Prairie Oak Dr. Suite 190**  
**Houston, TX. 77086**

**PHONE: +1 (281) 602-4100**  
**FAX: +1 (281) 602-4147**  
**EMAIL: gesna.quality@gates.com**  
**WEB: www.gates.com/ollandgas**

**PRESSURE TEST CERTIFICATE**

Customer:	GATES CANADA INC	Test Date:	12/19/2017
Customer Ref.:	D235455 (PO 45750)	Hose Serial No.:	H-121917-14
Invoice No.:	509128	Created By:	Cristian Rivera

Product Description: 5K 3 1/2 in. 17 FT. Fire Rated Choke & Kill c/w 3 1/8 5K Flange with Safety Clamps & Slings Attached

End Fitting 1:	3 1/8 in. 5K FIXED FLG	End Fitting 2:	3 1/8 in. 5K FLOAT FLG
Oracle Star No.:	68903550-9725917	Assembly Code:	15M5019042016H-121917-14
CUSTOMER P/N:	FR5K3.517.0CK31/85KFLG S/C	Test Pressure:	7,500 psi.
		Working Pressure:	5,000 psi.

**Gates Engineering & Services North America certifies that:**

The following hose assembly has successfully passed all pressure testing requirements set forth in Gates specifications: GTS-04-052 (for 5K assemblies) or GTS-04-053 (10K assemblies) or GTS-04-048 (15K assemblies), which include reference to Specification API 16C (2nd Edition); sections 7.5.4, 7.5.9, and 10.8.7. A test graph will accompany this test certificate to illustrate conformity to test requirements. This hose assembly was pressure tested using equipment and instrumentation that has been calibrated in accordance with the requirements set-forth in the GESNA management system.

Quality:	QUALITY
Date :	8/5/2021
Signature :	

Production:	PRODUCTION
Date :	8/5/2021
Signature :	

F-PRD-005B

Revision 6\_05032021



# BLACK GOLD®

**GATES ENGINEERING & SERVICES NORTH AMERICA**  
7603 Pralrie Oak Dr.  
Houston, TX. 77086

**PHONE: +1 (281) 602-4100**  
**FAX: +1 (281) 602-4147**  
**EMAIL: gesna.quality@gates.com**  
**WEB: www.gates.com/ollandgas**

## CERTIFICATE OF CONFORMANCE

This is to certify that all parts and materials included in this shipment have manufactured and/or processed in accordance with various Gates and API assembly and test specifications. Records of required tests are on-file and subject to examination. Test reports and subsequent test graphs have been made available with this shipment. Additional supporting documentation related to materials, welding, weld inspections, and heat-treatment activities are available upon request.

**CUSTOMER:** GATES CANADA INC  
**CUSTOMER P.O.#:** D235455 (PO 45750)  
**PART DESCRIPTION:** FR5K3.517.0CK31/85KFLG S/C

**PART DESCRIPTION:** 5K 3 1/2 in. 17 FT. Fire Rated Choke & Kill c/w 3 1/8 5K Flange with Safety Clamps & Slings Attached

**SALES ORDER #:** 509128  
**QUANTITY:** 1  
**SERIAL #:** H-121917-14

**SIGNATURE:**   
**TITLE:** QUALITY ASSURANCE  
**DATE:** 8/5/2021

# Gates E&S

North America

7603 Prairie Oak dr.

Houston, TX

Hydrostatic Test

**Customer= GATES CANADA**

**Date of test= 12/19/17**

**Serial # = H-121917-13,-14**

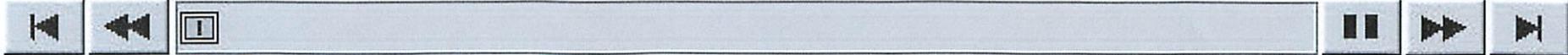
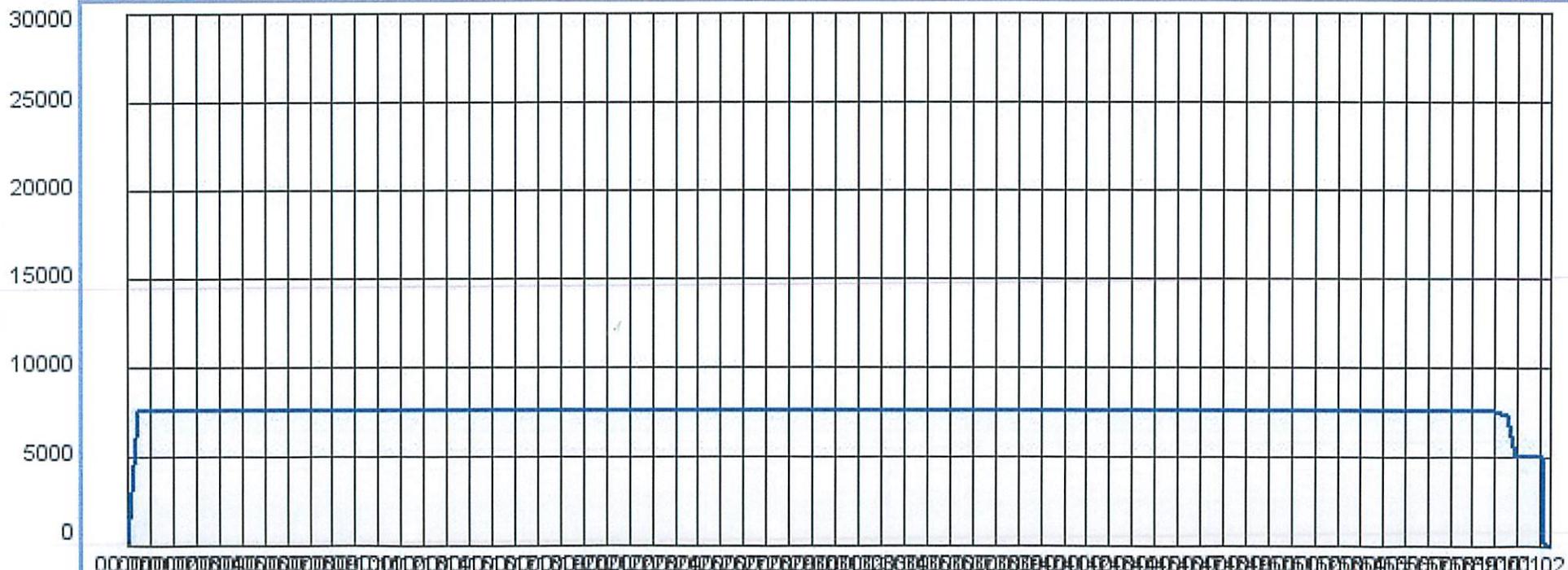
**Description = 3.5 5K 3 1/8 FLG 5K**

**Technician= CHRIS OLIVO**

12/19/2017 16:53:26

17:55:52

P  
S  
I  
G





1385 Hwy. 35 Bypass S. O: (361) 790-7910  
 P.O. Box 2350 F: (361) 790-7927  
 Rockport, TX 78381

tedwards@edwardsfabrication.com  
 www.edwardsfabrication.com

# CERTIFICATE OF TEST

Client:  
 Gates E & S North America  
 134 44th Street  
 Corpus Christi, TX 78405

Purchase Order: 1592198/0

Certificate Number			Date of Examination	
34145			04/27/17	
ID#	Part Number	Description	SWL*	Proofload
34145	E3.5S	3.5" E Safety Clamp	6016 lbs.	12031 lbs.
<p>The Safety Clamp unit identified on this certificate has been load tested completely assembled; including the clamp body, (2) 3/4" shackles, 5/8" x 48" wire rope sling and anchor tab. Thus, all components are tested at the "Proof" load. Do not disassemble. Do not interchange any part or parts of this tested unit with parts of other Safety Clamp units. DO NOT WELD, CUT, ADD-TO, TAKE AWAY ANY COMPONENTS OR MAKE ANY MODIFICATION TO THIS CLAMP UNIT. Doing so voids this test certificate.</p> <p>Cutting/Removing either one or both stainless steel Tamper-proof hardware cables renders this Test Certificate VOID.</p> <p>* Safe Work Load</p>				

THIS PRODUCT IS MANUFACTURED IN THE U.S.A.

We hereby verify that the above information is correct as contained in the records of Edwards Fabrication L.L.C.



Edwards Fabrication L.L.C. is certified as having a Quality Management System.

Thomas F. Edwards  
 President  
 Edwards Fabrication L.L.C.



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 Rockport, TX 78381

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# CERTIFICATE OF TEST

**Client:**  
 Gates E & S North America  
 134 44th Street  
 Corpus Christi, TX 78405

**Purchase Order:** 1592198/0

Certificate Number			Date of Examination	
34144			04/27/17	
ID#	Part Number	Description	SWL*	Proofload
34144	E3.5S	3.5" E Safety Clamp	6014 lbs.	12027 lbs.
<p>The Safety Clamp unit identified on this certificate has been load tested completely assembled; including the clamp body, (2) 3/4" shackles, 5/8" x 48" wire rope sling and anchor tab. Thus, all components are tested at the "Proof" load. Do not disassemble. Do not interchange any part or parts of this tested unit with parts of other Safety Clamp units. DO NOT WELD, CUT, ADD-TO, TAKE AWAY ANY COMPONENTS OR MAKE ANY MODIFICATION TO THIS CLAMP UNIT. Doing so voids this test certificate.</p> <p>Cutting/Removing either one or both stainless steel Tamper-proof hardware cables renders this Test Certificate VOID.</p> <p>* Safe Work Load</p>				

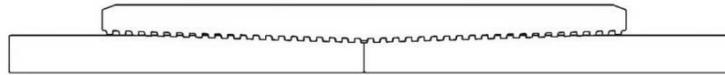
**THIS PRODUCT IS MANUFACTURED IN THE U.S.A.**

We hereby verify that the above information is correct as contained in the records of Edwards Fabrication L.L.C.



*Edwards Fabrication L.L.C. is certified as having a Quality Management System.*

**Thomas F. Edwards**  
 President  
 Edwards Fabrication L.L.C.



## Precision Connections BK-HT

5.5 in. 20 lb/ft HC-L80 with 6.3 in. Coupling OD

### Pipe Body

Nominal OD	5.500	inches
Nominal Weight	20.00	lb/ft
Wall Thickness	0.361	inches
Plain End Weight	19.81	lb/ft
Drift	4.653	inches
Nominal ID	4.778	inches
Grade	HC-L80	
Min Yield	80,000	lbf/in <sup>2</sup>
Min Tensile	95,000	lbf/in <sup>2</sup>
Critical Section Area	5.828	in <sup>2</sup>
Pipe Body Yield Strength	466	kips
Min Internal Yield Pressure	9,190	psi
Collapse Pressure	9,490	psi

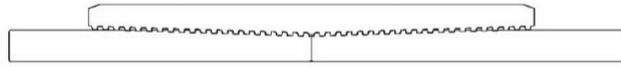
### Connection

Coupling OD	6.300	inches
Coupling Length	8.250	inches
Make Up Loss	4.125	inches
Critical Section Area	8.456	in <sup>2</sup>
Internal Pressure Rating	100%	
External Pressure Rating	100%	
Tension Efficiency	100%	
Connection Strength	466	kips
Compression Efficiency	100%	
Uniaxial Bend Rating	58.2	° / 100 ft
Min Make Up Torque	6,050	ft-lbs
Yield Torque	23,250	ft-lbs

v1.2

7/26/2018

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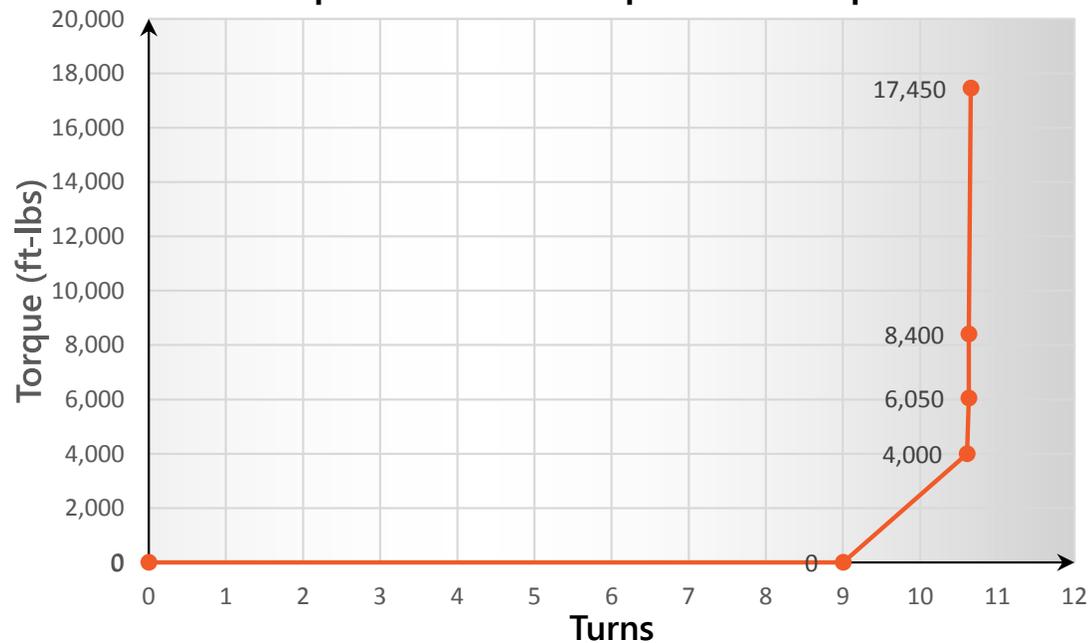
SEMI  
**PREMIUMCONNECTIONS**  
FIELD TESTED. FIELD PROVEN.

### Torque Data Sheet - Precision Connections BK-HT

5.5 in. 20 lb/ft HC-L80 with 6.3 in. Coupling OD

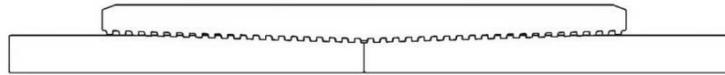
Min Make Up Torque	6,050	ft-lbs	Max Operating Torque	19,800	ft-lbs
Max Make Up Torque	17,450	ft-lbs	Yield Torque	23,250	ft-lbs
Optimum Torque	8,400	ft-lbs			

**Representative Torque Turn Graph**



v1.2

7/26/2018



SEMI  
**PREMIUMCONNECTIONS**  
FIELD TESTED. FIELD PROVEN.

## Precision Connections BK-HT

7 in. 32 lb/ft HC-L80 with 7.875 in. Coupling OD

### Pipe Body

Nominal OD	7.000	inches
Nominal Weight	32.00	lb/ft
Wall Thickness	0.453	inches
Plain End Weight	31.67	lb/ft
Drift	6.000	inches
Nominal ID	6.094	inches
Grade	HC-L80	
Min Yield	80,000	lbf/in <sup>2</sup>
Min Tensile	95,000	lbf/in <sup>2</sup>
Critical Section Area	9.317	in <sup>2</sup>
Pipe Body Yield Strength	745	kips
Min Internal Yield Pressure	9,060	psi
Collapse Pressure	9,290	psi

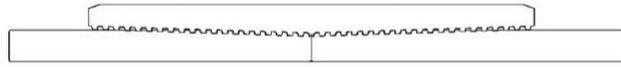
### Connection

Coupling OD	7.875	inches
Coupling Length	9.000	inches
Make Up Loss	4.500	inches
Critical Section Area	11.859	in <sup>2</sup>
Internal Pressure Rating	100%	
External Pressure Rating	100%	
Tension Efficiency	100%	
Connection Strength	745	kips
Compression Efficiency	100%	
Uniaxial Bend Rating	46.5	° / 100 ft
Min Make Up Torque	9,250	ft-lbs
Yield Torque	35,650	ft-lbs

v1.2

7/26/2018

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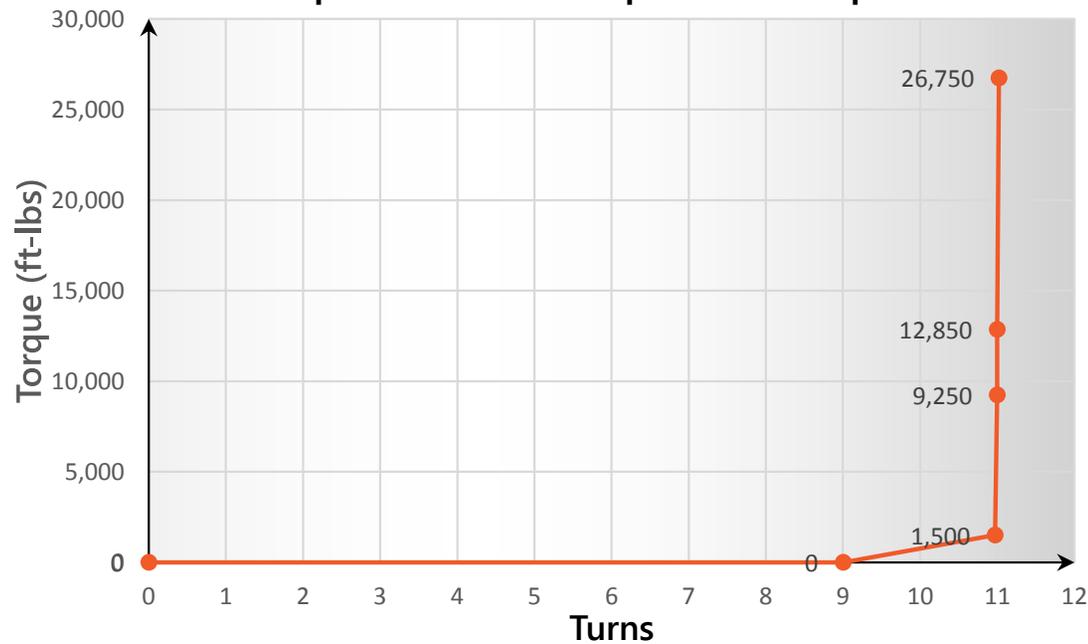
SEMI  
**PREMIUMCONNECTIONS**  
FIELD TESTED. FIELD PROVEN.

### Torque Data Sheet - Precision Connections BK-HT

7 in. 32 lb/ft HC-L80 with 7.875 in. Coupling OD

Min Make Up Torque	9,250	ft-lbs	Max Operating Torque	30,300	ft-lbs
Max Make Up Torque	26,750	ft-lbs	Yield Torque	35,650	ft-lbs
Optimum Torque	12,850	ft-lbs			

**Representative Torque Turn Graph**



v1.2

7/26/2018



# U. S. Steel Tubular Products

## 13.375 54.5/0.38 J55

9/14/2015 12:36:27 PM

MECHANICAL PROPERTIES	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi
DIMENSIONS	Pipe	BTC	LTC	STC	
Outside Diameter	13.375	14.375	--	14.375	in.
Wall Thickness	0.380	--	--	--	in.
Inside Diameter	12.615	12.615	--	12.615	in.
Standard Drift	12.459	12.459	--	12.459	in.
Alternate Drift	--	--	--	--	in.
Nominal Linear Weight, T&C	54.50	--	--	--	lbs/ft
Plain End Weight	52.79	--	--	--	lbs/ft
PERFORMANCE	Pipe	BTC	LTC	STC	
Minimum Collapse Pressure	1,130	1,130	--	1,130	psi
Minimum Internal Yield Pressure	2,740	2,740	--	2,740	psi
Minimum Pipe Body Yield Strength	853,000.00	--	--	--	lbs
Joint Strength	--	909	--	514	1000 lbs
Reference Length	--	11,125	--	6,290	ft
MAKE-UP DATA	Pipe	BTC	LTC	STC	
Make-Up Loss	--	4.81	--	3.50	in.
Minimum Make-Up Torque	--	--	--	3,860	ft-lbs
Maximum Make-Up Torque	--	--	--	6,430	ft-lbs

### Legal Notice

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U. S. Steel Tubular Products  
10343 Sam Houston Park Dr., #120  
Houston, TX 77064

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



### Casing Design Criteria and Load Case Assumptions

1. Collapse:  $DF_C=1.125$ 
  - a. Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.65 psi/ft). The effects of axial load on collapse will be considered.
  - b. Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and minimum mud gradient in which the casing will be run above that (0.65 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft)
2. Burst:  $DF_B=1.125$ 
  - a. Pressure Test: psi casing test with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
  - b. Injection Down Casing: psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
3. Tensile:  $DF_T=1.4$ 
  - a. Overpull: An overpull force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.5 ppg).

Surface Casing Program									
Casing Size (in)	Weight (ppf)	Grade	Connection	ID	ID (drift)	Collapse (psi)	Burst (psi)	Tension (1,000 lbs)	Capacity (bbl/ft)
9-5/8"	36	J-55	BTC	8.921	8.765	2,020	3,520	639	0.0773
Safety Factors									
	API Rec. SF	<b>ACTUAL SF</b>	Case	External Fluids			Internal Fluids		
Collapse	1.125	<b>3.30</b>	Lost Circulation	Mud			None		
Burst	1.125	<b>1.46</b>	Plug Bump	Green Cement + 2ksi surf pressure			Displacement Fluid/Mud		
Tension	1.4	<b>2.8</b>	100 klbs Overpull	Mud			Mud		

Buoyed Casing Weight: 40,798 lbs (assuming 8.4 ppg fluid and 1,300' casing-worst case scenario)

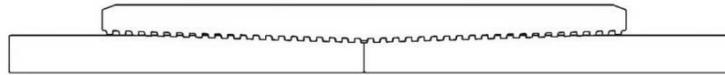
Production Casing Program									
Casing Size (in)	Weight (ppf)	Grade	Connection	ID	ID (drift)	Collapse (psi)	Burst (psi)	Tension (1,000 lbs)	Capacity (bbl/ft)
7"	32	HCL-80	BK-HT	6.094	6.000	11,890	12,460	1025	0.0361
Safety Factors									
	API Rec. SF	<b>ACTUAL SF</b>	Case	External Fluids			Internal Fluids		
Collapse	1.125	<b>3.75</b>	Lost Circulation	Mud			None		
Burst	1.125	<b>2.47</b>	Plug Bump	Green Cement + 2ksi surf pressure			Displacement Fluid/Mud		
Tension	1.4	<b>2.29</b>	100 klbs Overpull	Mud			Mud		

Buoyed Casing Weight: 90,662 lbs (assuming 8.4 ppg fluid and 3,250' TVD-worst case scenario)



Production Casing Program									
Casing Size (in)	Weight (ppf)	Grade	Connection	ID	ID (drift)	Collapse (psi)	Burst (psi)	Tension (1,000 lbs)	Capacity (bbl/ft)
5-1/2"	20	L-80	BK-HT	4.778	4.653	9,490	9,190	466	0.0222
Safety Factors									
	API Rec. SF	<b>ACTUAL SF</b>	Case	External Fluids			Internal Fluids		
Collapse	1.125	<b>3.75</b>	Lost Circulation	Mud			None		
Burst	1.125	<b>2.47</b>	Plug Bump	Green Cement + 2ksi surf pressure			Displacement Fluid/Mud		
Tension	1.4	<b>2.29</b>	100 klbs Overpull	Mud			Mud		

**Buoyed Casing Weight: 56,664 lbs (assuming 8.4 ppg fluid and 3,250' TVD-worst case scenario)**



**SEMI PREMIUM CONNECTIONS**  
FIELD TESTED. FIELD PROVEN.

## Precision Connections BK-HT

### 7 in. 32 lb/ft HC-L80 with 7.875 in. Coupling OD

#### Pipe Body

Nominal OD	7.000	inches
Nominal Weight	32.00	lb/ft
Wall Thickness	0.453	inches
Plain End Weight	31.67	lb/ft
Drift	6.000	inches
Nominal ID	6.094	inches
Grade	HC-L80	
Min Yield	80,000	lbf/in <sup>2</sup>
Min Tensile	95,000	lbf/in <sup>2</sup>
Critical Section Area	9.317	in <sup>2</sup>
Pipe Body Yield Strength	745	kips
Min Internal Yield Pressure	9,060	psi
Collapse Pressure	9,290	psi

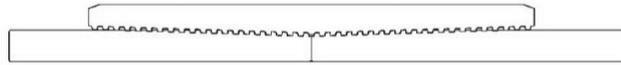
#### Connection

Coupling OD	7.875	inches
Coupling Length	9.000	inches
Make Up Loss	4.500	inches
Critical Section Area	11.859	in <sup>2</sup>
Internal Pressure Rating	100%	
External Pressure Rating	100%	
Tension Efficiency	100%	
Connection Strength	745	kips
Compression Efficiency	100%	
Uniaxial Bend Rating	46.5	° / 100 ft
Min Make Up Torque	9,250	ft-lbs
Yield Torque	35,650	ft-lbs

v1.2

7/26/2018

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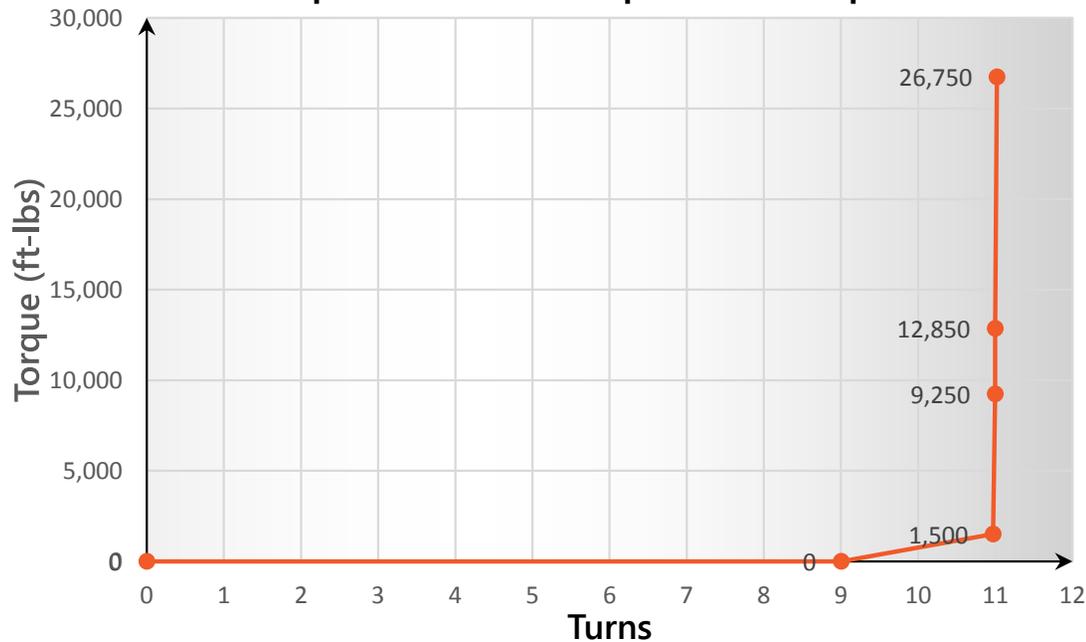
### Torque Data Sheet - Precision Connections BK-HT

7 in. 32 lb/ft HC-L80 with 7.875 in. Coupling OD

SEMI  
**PREMIUMCONNECTIONS**  
FIELD TESTED. FIELD PROVEN.

Min Make Up Torque	9,250	ft-lbs	Max Operating Torque	30,300	ft-lbs
Max Make Up Torque	26,750	ft-lbs	Yield Torque	35,650	ft-lbs
Optimum Torque	12,850	ft-lbs			

#### Representative Torque Turn Graph



v1.2

7/26/2018



### Casing Design Criteria and Load Case Assumptions

1. Collapse:  $DF_C=1.125$ 
  - a. Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.65 psi/ft). The effects of axial load on collapse will be considered.
  - b. Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and minimum mud gradient in which the casing will be run above that (0.65 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft)
2. Burst:  $DF_B=1.125$ 
  - a. Pressure Test: psi casing test with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
  - b. Injection Down Casing: psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
3. Tensile:  $DF_T=1.4$ 
  - a. Overpull: An overpull force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.5 ppg).

Surface Casing Program									
Casing Size (in)	Weight (ppf)	Grade	Connection	ID	ID (drift)	Collapse (psi)	Burst (psi)	Tension (1,000 lbs)	Capacity (bbl/ft)
9-5/8"	36	J-55	BTC	8.921	8.765	2,020	3,520	639	0.0773
Safety Factors									
	API Rec. SF	<b>ACTUAL SF</b>	Case	External Fluids			Internal Fluids		
Collapse	1.125	<b>3.30</b>	Lost Circulation	Mud			None		
Burst	1.125	<b>1.46</b>	Plug Bump	Green Cement + 2ksi surf pressure			Displacement Fluid/Mud		
Tension	1.4	<b>2.8</b>	100 klbs Overpull	Mud			Mud		

Buoyed Casing Weight: 40,798 lbs (assuming 8.4 ppg fluid and 1,300' casing-worst case scenario)

Production Casing Program									
Casing Size (in)	Weight (ppf)	Grade	Connection	ID	ID (drift)	Collapse (psi)	Burst (psi)	Tension (1,000 lbs)	Capacity (bbl/ft)
7"	32	HCL-80	BK-HT	6.094	6.000	11,890	12,460	1025	0.0361
Safety Factors									
	API Rec. SF	<b>ACTUAL SF</b>	Case	External Fluids			Internal Fluids		
Collapse	1.125	<b>3.75</b>	Lost Circulation	Mud			None		
Burst	1.125	<b>2.47</b>	Plug Bump	Green Cement + 2ksi surf pressure			Displacement Fluid/Mud		
Tension	1.4	<b>2.29</b>	100 klbs Overpull	Mud			Mud		

Buoyed Casing Weight: 90,662 lbs (assuming 8.4 ppg fluid and 3,250' TVD-worst case scenario)



Production Casing Program									
Casing Size (in)	Weight (ppf)	Grade	Connection	ID	ID (drift)	Collapse (psi)	Burst (psi)	Tension (1,000 lbs)	Capacity (bbl/ft)
5-1/2"	20	L-80	BK-HT	4.778	4.653	9,490	9,190	466	0.0222
Safety Factors									
	API Rec. SF	<b>ACTUAL SF</b>	Case	External Fluids			Internal Fluids		
Collapse	1.125	<b>3.75</b>	Lost Circulation	Mud			None		
Burst	1.125	<b>2.47</b>	Plug Bump	Green Cement + 2ksi surf pressure			Displacement Fluid/Mud		
Tension	1.4	<b>2.29</b>	100 klbs Overpull	Mud			Mud		

**Buoyed Casing Weight: 56,664 lbs (assuming 8.4 ppg fluid and 3,250' TVD-worst case scenario)**



### Casing Design Criteria and Load Case Assumptions

1. Collapse:  $DF_c=1.125$ 
  - a. Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.65 psi/ft). The effects of axial load on collapse will be considered.
  - b. Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and minimum mud gradient in which the casing will be run above that (0.65 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft)
2. Burst:  $DF_B=1.125$ 
  - a. Pressure Test: psi casing test with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
  - b. Injection Down Casing: psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
3. Tensile:  $DF_T=1.4$ 
  - a. Overpull: An overpull force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.5 ppg).

Surface Casing Program									
Casing Size (in)	Weight (ppf)	Grade	Connection	ID	ID (drift)	Collapse (psi)	Burst (psi)	Tension (1,000 lbs)	Capacity (bbl/ft)
9-5/8"	36	J-55	BTC	8.921	8.765	2,020	3,520	639	0.0773
Safety Factors									
	API Rec. SF	<b>ACTUAL SF</b>	Case	External Fluids			Internal Fluids		
Collapse	1.125	<b>3.30</b>	Lost Circulation	Mud			None		
Burst	1.125	<b>1.46</b>	Plug Bump	Green Cement + 2ksi surf pressure			Displacement Fluid/Mud		
Tension	1.4	<b>2.8</b>	100 klbs Overpull	Mud			Mud		

Buoyed Casing Weight: 40,798 lbs (assuming 8.4 ppg fluid and 1,300' casing-worst case scenario)

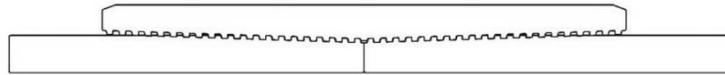
Production Casing Program									
Casing Size (in)	Weight (ppf)	Grade	Connection	ID	ID (drift)	Collapse (psi)	Burst (psi)	Tension (1,000 lbs)	Capacity (bbl/ft)
7"	32	HCL-80	BK-HT	6.094	6.000	11,890	12,460	1025	0.0361
Safety Factors									
	API Rec. SF	<b>ACTUAL SF</b>	Case	External Fluids			Internal Fluids		
Collapse	1.125	<b>3.75</b>	Lost Circulation	Mud			None		
Burst	1.125	<b>2.47</b>	Plug Bump	Green Cement + 2ksi surf pressure			Displacement Fluid/Mud		
Tension	1.4	<b>2.29</b>	100 klbs Overpull	Mud			Mud		

Buoyed Casing Weight: 90,662 lbs (assuming 8.4 ppg fluid and 3,250' TVD-worst case scenario)



Production Casing Program									
Casing Size (in)	Weight (ppf)	Grade	Connection	ID	ID (drift)	Collapse (psi)	Burst (psi)	Tension (1,000 lbs)	Capacity (bbl/ft)
5-1/2"	20	L-80	BK-HT	4.778	4.653	9,490	9,190	466	0.0222
Safety Factors									
	API Rec. SF	<b>ACTUAL SF</b>	Case	External Fluids			Internal Fluids		
Collapse	1.125	<b>3.75</b>	Lost Circulation	Mud			None		
Burst	1.125	<b>2.47</b>	Plug Bump	Green Cement + 2ksi surf pressure			Displacement Fluid/Mud		
Tension	1.4	<b>2.29</b>	100 klbs Overpull	Mud			Mud		

**Buoyed Casing Weight: 56,664 lbs (assuming 8.4 ppg fluid and 3,250' TVD-worst case scenario)**



## Precision Connections BK-HT

### 5.5 in. 20 lb/ft HC-L80 with 6.3 in. Coupling OD

#### Pipe Body

Nominal OD	5.500	inches
Nominal Weight	20.00	lb/ft
Wall Thickness	0.361	inches
Plain End Weight	19.81	lb/ft
Drift	4.653	inches
Nominal ID	4.778	inches
Grade	HC-L80	
Min Yield	80,000	lbf/in <sup>2</sup>
Min Tensile	95,000	lbf/in <sup>2</sup>
Critical Section Area	5.828	in <sup>2</sup>
Pipe Body Yield Strength	466	kips
Min Internal Yield Pressure	9,190	psi
Collapse Pressure	9,490	psi

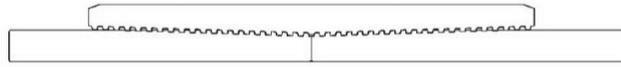
#### Connection

Coupling OD	6.300	inches
Coupling Length	8.250	inches
Make Up Loss	4.125	inches
Critical Section Area	8.456	in <sup>2</sup>
Internal Pressure Rating	100%	
External Pressure Rating	100%	
Tension Efficiency	100%	
Connection Strength	466	kips
Compression Efficiency	100%	
Uniaxial Bend Rating	58.2	° / 100 ft
Min Make Up Torque	6,050	ft-lbs
Yield Torque	23,250	ft-lbs

v1.2

7/26/2018

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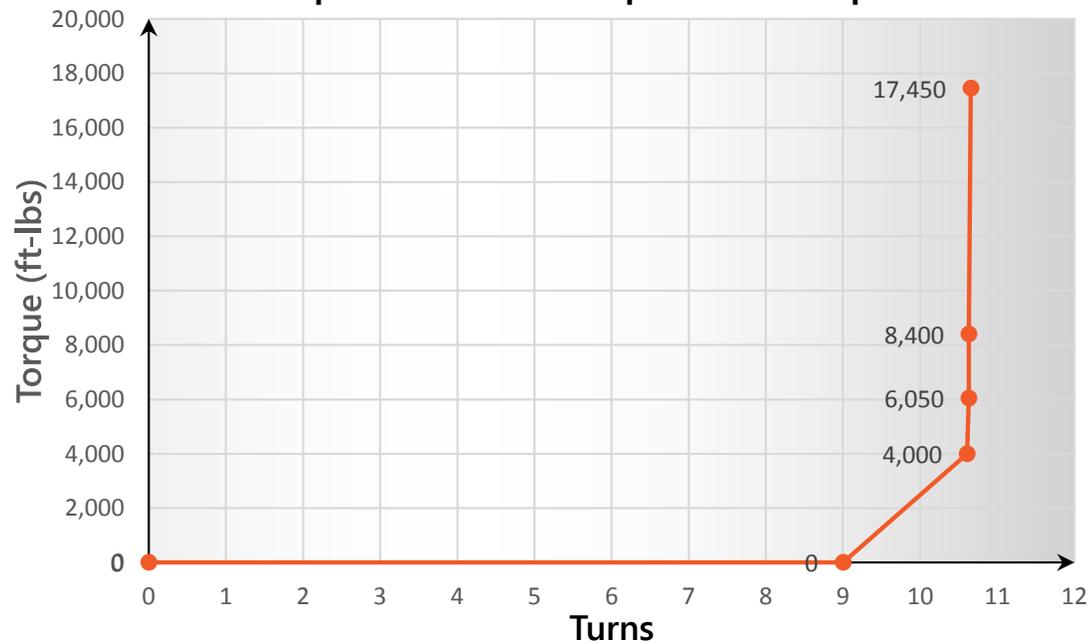
### Torque Data Sheet - Precision Connections BK-HT

5.5 in. 20 lb/ft HC-L80 with 6.3 in. Coupling OD

**SEMI PREMIUM CONNECTIONS**  
FIELD TESTED. FIELD PROVEN.

Min Make Up Torque	6,050	ft-lbs	Max Operating Torque	19,800	ft-lbs
Max Make Up Torque	17,450	ft-lbs	Yield Torque	23,250	ft-lbs
Optimum Torque	8,400	ft-lbs			

#### Representative Torque Turn Graph



v1.2

7/26/2018



# U. S. Steel Tubular Products

## 9.625 36/0.352 J55

8/19/2015 9:44:40 AM

MECHANICAL PROPERTIES	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi

DIMENSIONS	Pipe	BTC	LTC	STC	
Outside Diameter	9.625	10.625	10.625	10.625	in.
Wall Thickness	0.352	--	--	--	in.
Inside Diameter	8.921	8.921	8.921	8.921	in.
Standard Drift	8.765	8.765	8.765	8.765	in.
Alternate Drift	--	--	--	--	in.
Nominal Linear Weight, T&C	36.00	--	--	--	lbs/ft
Plain End Weight	34.89	--	--	--	lbs/ft

PERFORMANCE	Pipe	BTC	LTC	STC	
Minimum Collapse Pressure	2,020	2,020	2,020	2,020	psi
Minimum Internal Yield Pressure	3,520	3,520	3,520	3,520	psi
Minimum Pipe Body Yield Strength	564,000	--	--	--	lbs
Joint Strength	--	639	453	394	lbs
Reference Length	--	11,835	8,389	7,288	ft

MAKE-UP DATA	Pipe	BTC	LTC	STC	
Make-Up Loss	--	4.81	4.75	3.38	in.
Minimum Make-Up Torque	--	--	3,400	2,960	ft-lbs
Maximum Make-Up Torque	--	--	5,660	4,930	ft-lbs

### Legal Notice

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U. S. Steel Tubular Products  
10343 Sam Houston Park Dr., #120  
Houston, TX 77064

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



## Casing Design Criteria and Load Case Assumptions

1. Collapse:  $DF_c=1.125$ 
  - a. Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.65 psi/ft). The effects of axial load on collapse will be considered.
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2. Burst:  $DF_B=1.125$ 
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Safety Factors									
	API Rec. SF	<b>ACTUAL SF</b>	Case	External Fluids			Internal Fluids		
Collapse	1.125	<b>3.30</b>	Lost Circulation	Mud			None		
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**Buoyed Casing Weight: 40,798 lbs (assuming 8.4 ppg fluid and 1,300' casing-worst case scenario)**

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Collapse	1.125	<b>3.75</b>	Lost Circulation	Mud			None		
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**Buoyed Casing Weight: 90,662 lbs (assuming 8.4 ppg fluid and 3,250' TVD-worst case scenario)**



Production Casing Program									
Casing Size (in)	Weight (ppf)	Grade	Connection	ID	ID (drift)	Collapse (psi)	Burst (psi)	Tension (1,000 lbs)	Capacity (bbl/ft)
5-1/2"	20	L-80	BK-HT	4.778	4.653	9,490	9,190	466	0.0222
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**Buoyed Casing Weight: 56,664 lbs (assuming 8.4 ppg fluid and 3,250' TVD-worst case scenario)**

<b>Spur Energy Partners LLC Emergency Contact List</b>			
<b>Person</b>	<b>Location</b>	<b>Office Phone</b>	<b>Cell Phone</b>
<b>Drilling and Completions Department</b>			
Drilling Manager - Chris Hollis	Houston	832-930-8629	713-380-7754
Completions Manager - Theresa Voss	Houston	832-930-8614	832-849-8635
VP of Operations - Seth Ireland	Houston	832-930-8527	940-704-6375
Senior VP of Operations - John Nabors	Houston	832-930-8526	281-904-8811
Executive VP of Operations - Todd Mucha	Houston	832-930-8515	281-795-2286
<b>HES/Environmental and Regulatory Department</b>			
EHS Manager - Braily Moulder	Artestia	575-616-5400	713-264-2517
Superintendent - Jerry Mathews	Artestia	575-616-5400	575-748-5234
Asst. Superintendent - Kenny Kidd	Artestia	575-616-5400	575-703-5851
Regulatory Director - Sarah Chapman	Houston	832-930-8613	281-642-5503
<b>Regulatory Agencies</b>			
Burea of Land Management	Carlsbad	575-886-6544	
Burea of Land Management	Hobbs	575-393-3612	
Burea of Land Management	Roswell	575-622-5335	
Burea of Land Management	Santa Fe	505-954-2000	
DOT Judicial Pipelnes - Incident Reporting NM Public Regulation Commission	Santa Fe	505-827-3549 505-490-2375	
EPA Hotline	Dallas	214-665-6444	
Federal OSHA, Area Office	Lubbock	806-472-7681	
National Response Center	Washington, D.C.	800-424-8803	
National Infrastructure Coordinator Center	Washington, D.C.	202-282-2901	
New Mexico Air Qulaity Bureau	Santa Fe	505-827-1494	
New Mexico Oil Conservation Division	Artestia	575-748-1283	After Hours 575-370-7545
New Mexico Oil Conservation Division	Hobbs	575-393-6161	
New Mexico Oil Conservation Division	Santa Fe	505-476-3770	
New Mexico OCD Environmental Bureau	Santa Fe	505-827-7152 505-476-3470	
New Mexico Environmental Department	Hobbs	575-827-9329	
NM State Emergency Response Center	Santa Fe	505-476-9600	
<b>Medical Facilities</b>			
Artesia General Hospital	Artesia	575-748-3333	
Covenant Medical Center	Lubbock	806-725-1011	
Covenant Medical Center Lakeside	Lubbock	806-725-6000	
Guadalupe County Hospital	Carlsbad	575-887-6633	
Lea Regional Hospital	Hobbs	575-492-5000	
Medical Center Hospital	Odessa	432-640-4000	
Midland Memorial Hospital	Midland	432-685-1111	
Nor-Lea General Hospital	Lovington	575-396-6611	
Odessa Regional Hospital	Odessa	432-334-8200	
Union County General Hospital	Clayton	575-374-2585	
University Medical Center	Lubbock	806-725-8200	
<b>Law Enforcement - Sheriff</b>			
Ector County Sheriff's Department	Odessa	432-335-3050	
Ector County Sheriff's Department	Artesia	575-746-2704	

Ector County Sheriff's Department	Carlsbad	575-887-7551	
Lea County Sherrif's Department	Eunice	575-384-2020	
Lea County Sherrif's Department	Hobbs	575-393-2515	
Lea County Sherrif's Department	Lovington	575-396-3611	
Lubbock County Sheriff's Department	Abernathy	806-296-2724	
Midland County Sheriff's Department	Midland	432-688-1277	
Union County Sheriff's Department	Clayton	575-374-2583	
<b>Law Enforcement - Police</b>			
Abernathy Police Department	Abernathy	806-298-2545	
Artesia City Police	Artesia	575-746-2704	
Carlsbad City Police	Carlsbad	575-885-2111	
Clayton City Police	Clayton	575-374-2504	
Eunice City Police	Eunice	575-394-2112	
Hobbs City Police	Hobbs	575-397-9265 575-393-2677	
Jal City Police	Jal	575-395-2501	
Lovington City Police	Lovington	575-396-2811	
Midland City Police	Midland	432-685-7113	
Odessa City Police	Odessa	432-335-3378	
<b>Law Enforcement - FBI</b>			
FBI	Albuquerque	505-224-2000	
FBI	Midland	432-570-0255	
<b>Law Enforcement - DPS (911)</b>			
NM State Police	Artesia	575-746-2704	
NM State Police	Carlsbad	575-885-3137	
NM State Police	Eunice	575-392-5588	
NM State Police	Hobbs	575-392-5588	
NM State Police	Clayton	575-374-2473	
<b>Firefighting and Rescue (911)</b>			
Abernathy	Abernathy	806-298-2022	
Amistad/Rosebud	Amistad/Rosebud	575-633-9113	
Artesia	Artesia	575-746-5751	
Carlsbad	Carlsbad	575-885-3125	
Clayton	Clayton	575-374-2435	
Eunice	Eunice	575-394-2111	
Hobbs	Hobbs	575-397-9308	
Jal	Jal	575-395-2221	
Lovington	Lovington	575-396-2359	
Maljamar	Maljamar	575-676-4100	
Midland	Midland	432-685-7346	
Nara Visa	Nara Visa	575-461-3300	
Odessa	Odessa	432-335-4659	
Tucumcari	Tucumcari	911	
West Odessa	Odessa	432-381-3033	

<b>Ambulance (911)</b>			
Abernathy Ambulance	Abernathy	806-298-2241	
Amistad/Rosebud	Amistad/Rosebud	575-633-9113	
Artesia Ambulance	Artesia	575-746-2701	
Carlsbad Ambulance	Carlsbad	575-885-2111	
Clayton Ambulance	Clayton	575-374-2501	
Eunice Ambulance	Eunice	575-394-3258	
Hobbs Ambulance	Hobbs	575-397-9308	
Jal Ambulance	Jal	575-395-3501	
Lovington Ambulance	Lovington	575-396-2811	
Midland Ambulance	Midland	432-685-7499	
Nara Visa Ambulance	Nara Visa	575-461-3300	
Odessa Ambulance	Odessa	432-335-3378	
Tucumcari Ambulance	Tucumcari	911	
<b>Medical Air Ambulance Service</b>			
AEROCARE - Methodist Hospital	Lubbock	800-627-2376	
Southwest MediVac	Hobbs	800-242-6199	
Odessa Care Star	Odessa	888-624-3571	



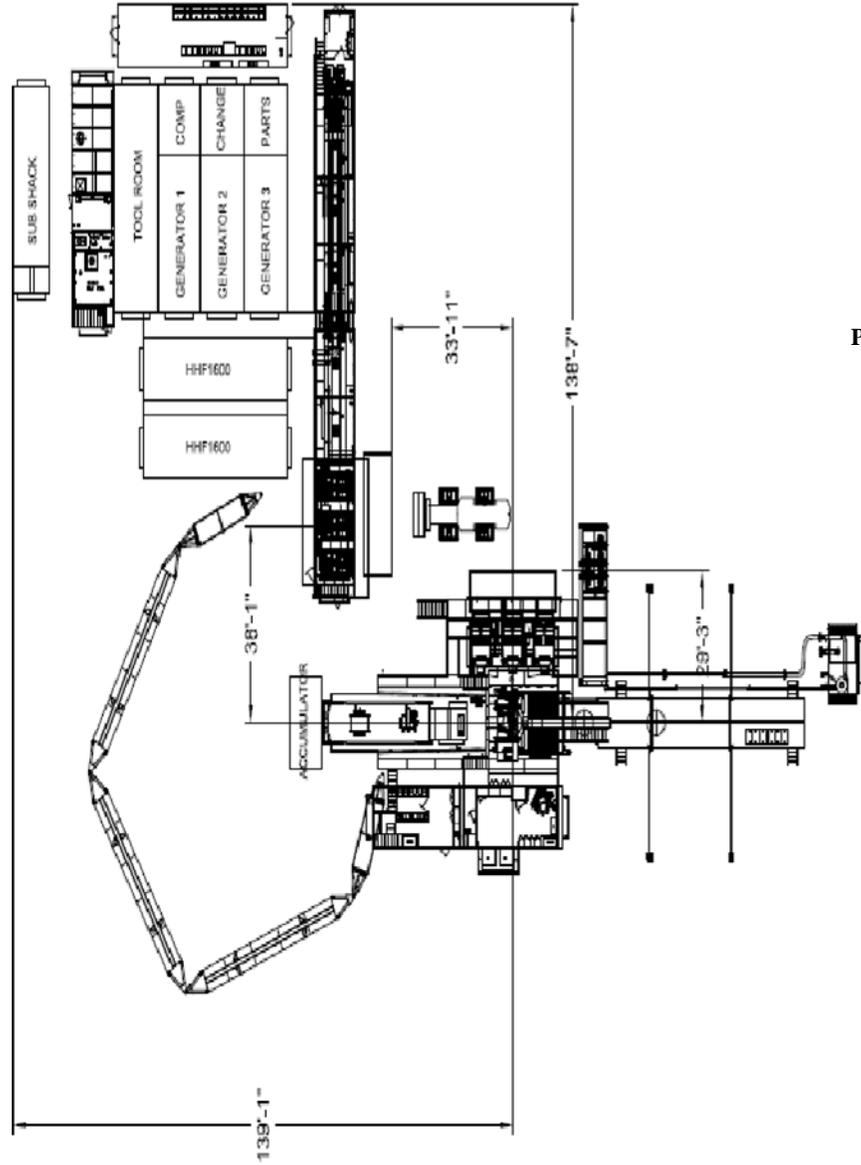
# **Permian Drilling Hydrogen Sulfide Drilling Operations Plan Mayaro 22 State Com 10H**

Open drill site. No homes or buildings are near the proposed location.

## **1. Escape**

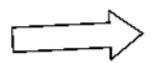
Personnel shall escape upwind of wellbore in the event of an emergency gas release. Escape can take place through the lease road on the Southeast side of the location. Personnel need to move to a safe distance and block the entrance to location. If the primary route is not an option due to the wind direction, then a secondary egress route should be taken.

Secondary Briefing Area



Primary Briefing Area

Exit to road. Caution sign placed here.



WIND: Prevailing winds are from the Southwest

Secondary Egress





Company: Spur Energy Partners, LLC  
 Project: Eddy County, NM (NAD 83 - NME)  
 Site: MAYARO 22 STATE COM  
 Well: 10H  
 Wellbore: Wellbore #1  
 Rig: AKITA 57  
 Design: PERMIT / 10:44, August 07 2022

PROJECT DETAILS: Eddy County, NM (NAD 83 - NME)  
 Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Eastern Zone  
 System Datum: Mean Sea Level



WELL DETAILS: 10H

RKB = 20' @ 3580.00usft (AKITA 57)  
 3560.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	664980.00	593616.60	32.8279413	-104.1631376

SECTION DETAILS

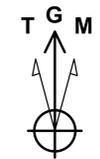
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00
3	1174.29	17.49	15.17	1160.78	127.76	34.65	2.00	-127.80
4	2552.11	17.49	15.17	2474.93	527.32	143.01	0.00	-527.47
5	3834.72	60.00	180.06	3578.35	90.12	202.06	6.00	-90.33
6	4034.72	60.00	180.06	3678.35	-83.09	201.89	0.00	82.87
7	4346.15	91.14	180.06	3755.00	-381.00	201.60	10.00	380.79
8	8304.14	91.14	180.06	3676.00	-4338.20	197.75	0.00	4337.99
9	8354.05	91.14	180.06	3675.00	-4388.10	197.70	0.00	4387.89

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
1. MAYARO 10H SHL: 283' FSL, 2438' FEL	0.00	0.00	0.00	664980.00	593616.60	32.8279413	-104.1631376
2. MAYARO 10H KOP @ 2552.11' MD	2474.93	527.32	143.01	665507.32	593759.61	32.8293901	-104.1626692
3. MAYARO 10H FTP: 100' FNL, 2247' FEL	3755.00	-381.00	201.60	664599.00	593818.20	32.8268932	-104.1624833
4. MAYARO 10H LTP: 1175' FSL, 2247' FEL	3676.00	-4338.20	199.60	660641.80	593816.20	32.8160163	-104.1625106
5. MAYARO 10H BHL: 1125' FSL, 2247' FEL	3675.00	-4388.10	197.70	660591.90	593814.30	32.8158791	-104.1625170

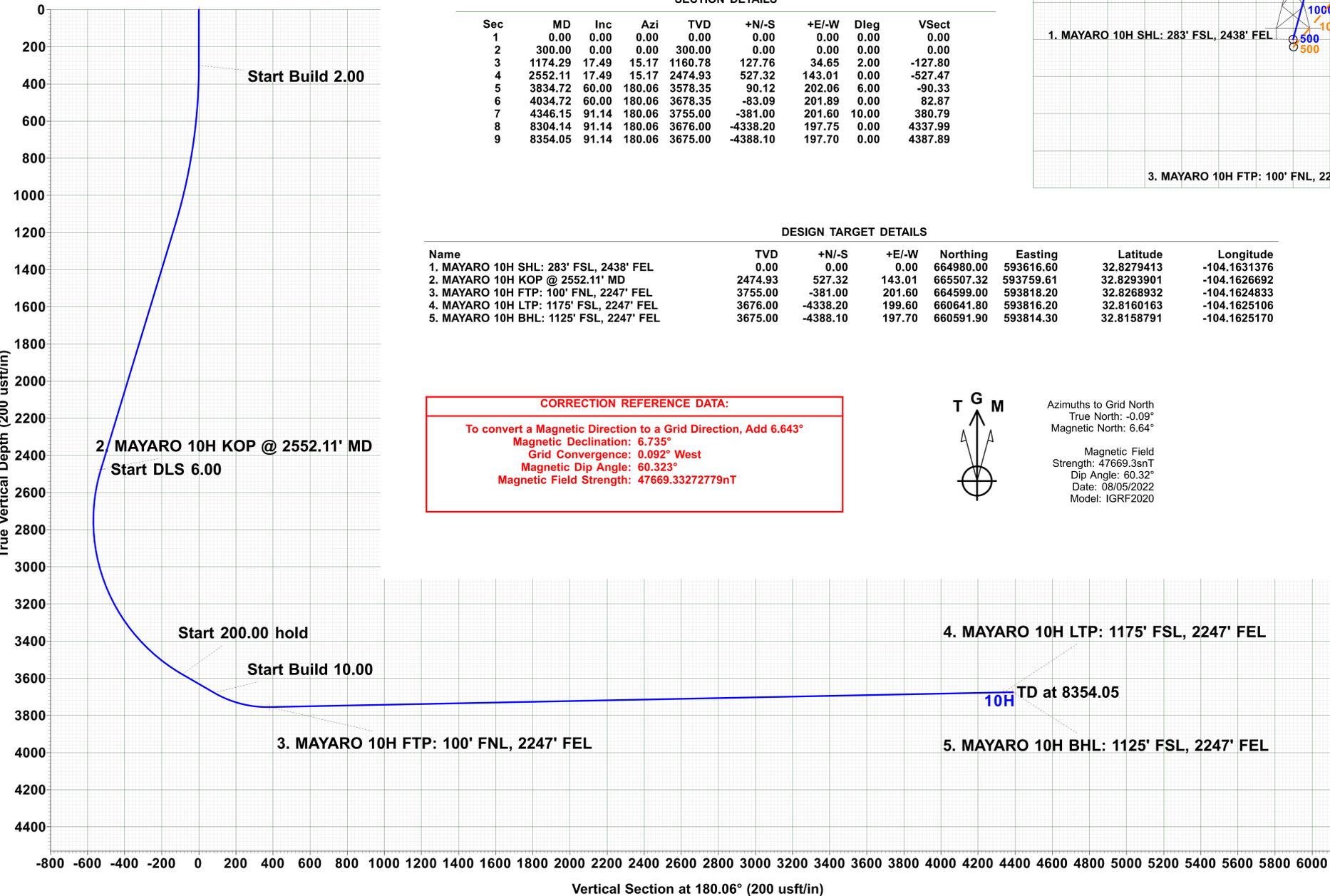
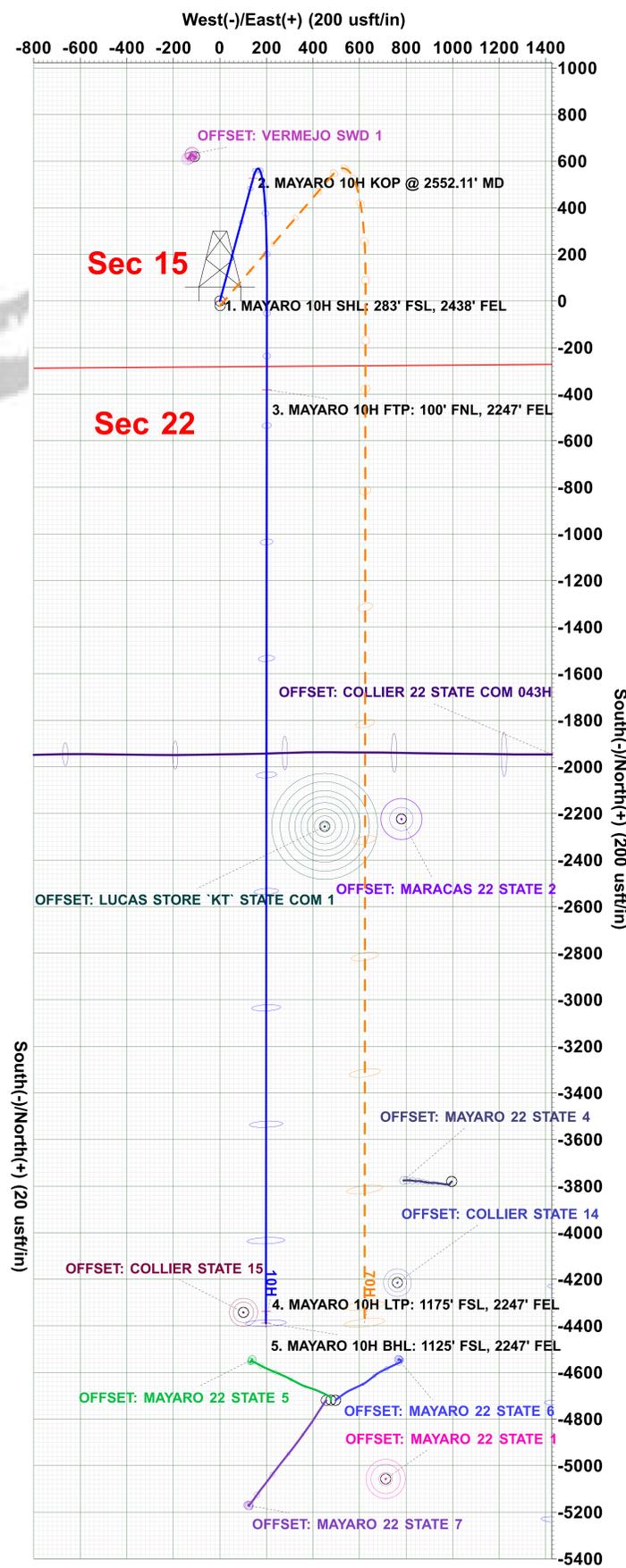
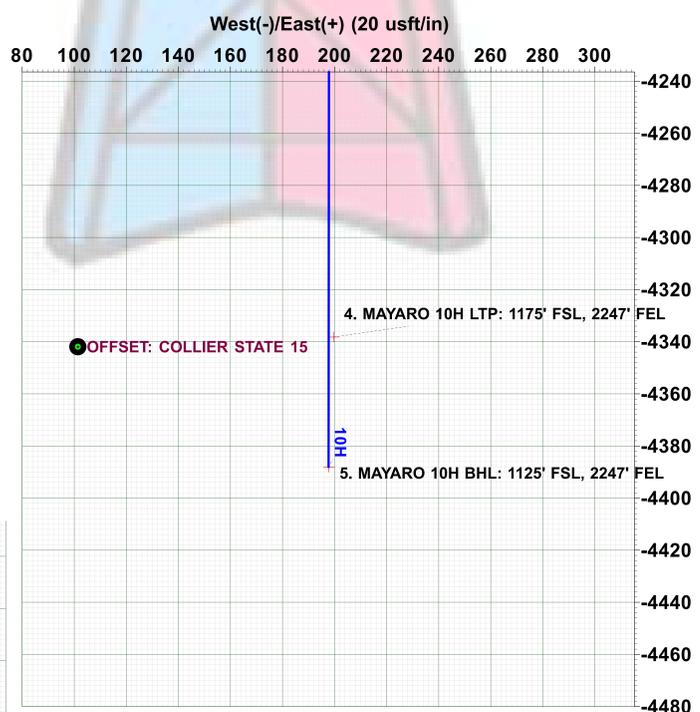
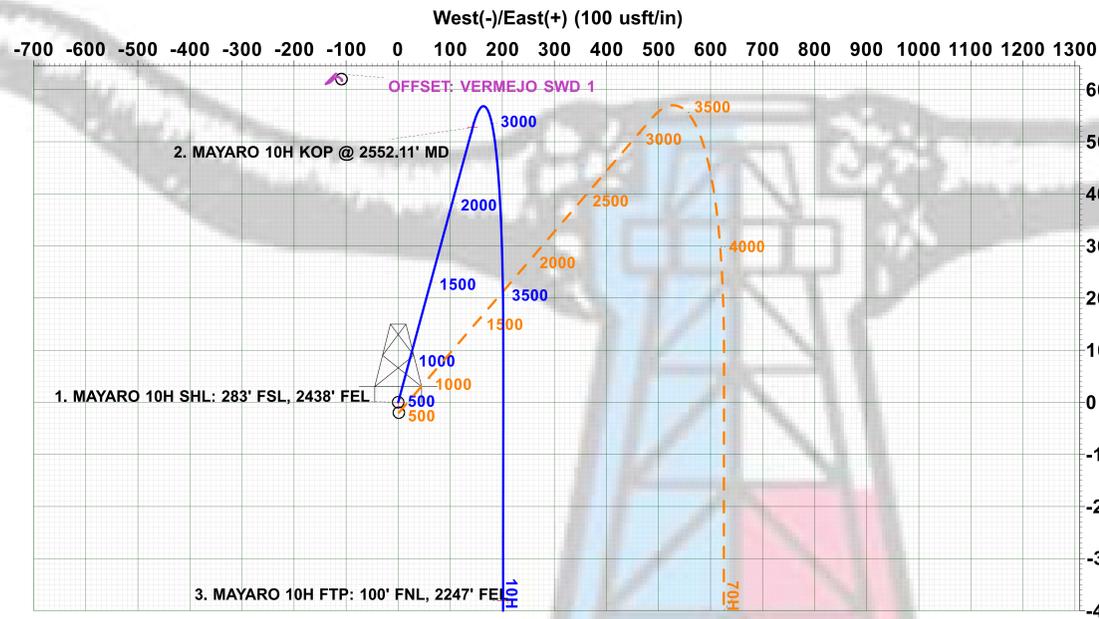
**CORRECTION REFERENCE DATA:**

To convert a Magnetic Direction to a Grid Direction, Add 6.643°  
 Magnetic Declination: 6.735°  
 Grid Convergence: 0.092° West  
 Magnetic Dip Angle: 60.323°  
 Magnetic Field Strength: 47669.33272779nT



Azimuths to Grid North  
 True North: -0.09°  
 Magnetic North: 6.64°

Magnetic Field  
 Strength: 47669.33nT  
 Dip Angle: 60.32°  
 Date: 08/05/2022  
 Model: IGRF2020



**Disclaimer:**  
 All Plan Details, boundary lines and offset well location/ survey data is provided by customer and subject to customer approval.



# Spur Energy Partners, LLC

Eddy County, NM (NAD 83 - NME)

MAYARO 22 STATE COM

10H

Wellbore #1

PERMIT

## Anticollision Report

07 August, 2022





Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

<b>Reference</b>	PERMIT		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 50.00usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 2,000.00 us	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	08/07/22		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	8,354.05	PERMIT (Wellbore #1)	MWD+IGRF	OWSG MWD + IGRF or WMM

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
MAYARO 22 STATE COM						
11H - Wellbore #1 - PERMIT	8,354.05	8,464.70	1,292.42	1,117.58	7.392	CC, ES, SF
70H - Wellbore #1 - PERMIT	300.00	300.00	20.04	18.32	11.648	CC
70H - Wellbore #1 - PERMIT	400.00	400.50	20.45	18.01	8.387	ES
70H - Wellbore #1 - PERMIT	700.00	701.62	28.46	23.80	6.107	SF
71H - Wellbore #1 - PERMIT PLAN #2	3,112.38	3,140.39	1,847.53	1,821.47	70.881	CC
71H - Wellbore #1 - PERMIT PLAN #2	7,800.00	8,516.35	1,878.11	1,767.68	17.008	ES
71H - Wellbore #1 - PERMIT PLAN #2	8,354.05	9,050.15	1,897.14	1,772.61	15.234	SF
OFFSET: COLLIER 22 STATE COM 043H - Wellbore #1	5,920.13	5,772.71	589.59	547.19	13.906	CC, ES
OFFSET: COLLIER 22 STATE COM 043H - Wellbore #1	6,300.00	5,762.58	701.29	637.08	10.923	SF
OFFSET: COLLIER STATE 14 - Wellbore #1 - Wellbore	8,182.66	3,537.00	583.46	443.09	4.157	CC
OFFSET: COLLIER STATE 14 - Wellbore #1 - Wellbore	8,200.00	3,537.00	583.71	442.96	4.147	ES, SF
OFFSET: COLLIER STATE 15 - Wellbore #1 - Wellbore	8,310.90	3,535.00	176.61	85.52	1.939	CC, ES, SF
OFFSET: COLLIER STATE 16 - Wellbore #1 - Wellbore	6,438.02	3,565.00	1,629.45	1,515.70	14.325	CC
OFFSET: COLLIER STATE 16 - Wellbore #1 - Wellbore	6,450.00	3,565.00	1,629.50	1,515.50	14.295	ES
OFFSET: COLLIER STATE 16 - Wellbore #1 - Wellbore	6,750.00	3,565.00	1,659.05	1,539.95	13.931	SF
OFFSET: LUCAS STORE 'KT' STATE COM 1 - Wellbore	6,220.36	3,743.14	250.63	125.43	2.002	CC, ES, SF
OFFSET: MARACAS 22 STATE 1 - Wellbore #1 - Wellbo	6,324.36	3,742.71	1,689.31	1,574.94	14.771	CC
OFFSET: MARACAS 22 STATE 1 - Wellbore #1 - Wellbo	6,350.00	3,742.20	1,689.50	1,574.64	14.709	ES
OFFSET: MARACAS 22 STATE 1 - Wellbore #1 - Wellbo	6,650.00	3,736.21	1,720.39	1,600.56	14.356	SF
OFFSET: MARACAS 22 STATE 12 - Wellbore #1 - Wellb	4,557.74	3,892.19	1,757.83	1,662.65	18.470	CC
OFFSET: MARACAS 22 STATE 12 - Wellbore #1 - Wellb	4,600.00	3,891.49	1,758.33	1,662.58	18.363	ES
OFFSET: MARACAS 22 STATE 12 - Wellbore #1 - Wellb	5,000.00	3,884.77	1,812.59	1,711.08	17.856	SF
OFFSET: MARACAS 22 STATE 2 - Wellbore #1 - Wellbo	6,188.71	3,723.44	580.05	465.90	5.081	CC
OFFSET: MARACAS 22 STATE 2 - Wellbore #1 - Wellbo	6,200.00	3,723.21	580.16	465.77	5.071	ES
OFFSET: MARACAS 22 STATE 2 - Wellbore #1 - Wellbo	6,250.00	3,722.21	583.28	467.99	5.059	SF
OFFSET: MAYARO 22 STATE 1 - Wellbore #1 - Wellbore	8,354.05	3,726.08	843.82	727.89	7.279	CC, ES, SF
OFFSET: MAYARO 22 STATE 3 - Wellbore #1 - Wellbore	7,648.17	3,711.24	1,889.27	1,748.87	13.456	CC
OFFSET: MAYARO 22 STATE 3 - Wellbore #1 - Wellbore	7,700.00	3,710.21	1,889.98	1,748.57	13.365	ES
OFFSET: MAYARO 22 STATE 3 - Wellbore #1 - Wellbore	7,950.00	3,705.22	1,913.22	1,767.74	13.151	SF
OFFSET: MAYARO 22 STATE 4 - Wellbore #1 - Wellbore	7,742.89	3,742.44	651.98	563.46	7.365	CC
OFFSET: MAYARO 22 STATE 4 - Wellbore #1 - Wellbore	7,750.00	3,742.31	652.02	563.34	7.352	ES
OFFSET: MAYARO 22 STATE 4 - Wellbore #1 - Wellbore	7,800.00	3,741.41	654.48	564.91	7.307	SF
OFFSET: MAYARO 22 STATE 5 - Wellbore #1 - Wellbore	8,354.05	3,713.96	178.23	126.25	3.429	CC, ES, SF
OFFSET: MAYARO 22 STATE 6 - Wellbore #1 - Wellbore	8,354.05	3,709.48	599.98	503.13	6.195	CC, ES, SF
OFFSET: MAYARO 22 STATE 7 - Wellbore #1 - Wellbore	8,354.05	3,735.52	782.39	750.75	24.731	CC, ES, SF
OFFSET: VERMEJO SWD 1 - Wellbore #1 - Wellbore #1	2,589.95	2,507.98	267.14	244.96	12.044	CC
OFFSET: VERMEJO SWD 1 - Wellbore #1 - Wellbore #1	2,600.00	2,517.70	267.15	244.87	11.992	ES

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
MAYARO 22 STATE COM						
OFFSET: VERMEJO SWD 1 - Wellbore #1 - Wellbore #1	2,850.00	2,764.65	278.63	254.53	11.560	SF

Offset Design													Offset Site Error:	0.00 usft
MAYARO 22 STATE COM - 11H - Wellbore #1 - PERMIT													Offset Well Error:	0.00 usft
Survey Program: 0-MWD+IGRF														
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	162.00	0.00	0.00	0.37	91.033	-33.70	1,869.40	1,869.70					
50.00	50.00	212.00	50.00	0.05	0.54	91.033	-33.70	1,869.40	1,869.70	1,869.11	0.60	3,123.212		
100.00	100.00	262.00	100.00	0.14	0.72	91.033	-33.70	1,869.40	1,869.70	1,868.84	0.87	2,155.274		
150.00	150.00	317.67	155.67	0.32	0.92	91.031	-33.65	1,869.37	1,869.69	1,868.44	1.25	1,500.266		
200.00	200.00	391.25	229.23	0.50	1.19	90.994	-32.42	1,868.71	1,869.22	1,867.53	1.69	1,106.210		
250.00	250.00	464.71	302.62	0.68	1.45	90.906	-29.54	1,867.15	1,868.12	1,865.99	2.13	875.116		
300.00	300.00	537.96	375.68	0.86	1.72	90.768	-25.01	1,864.70	1,866.40	1,863.82	2.58	722.875		
350.00	350.00	610.94	448.33	1.04	1.99	75.474	-18.87	1,861.38	1,863.96	1,860.93	3.03	615.032		
400.00	399.98	683.64	520.50	1.22	2.28	75.357	-11.14	1,857.20	1,860.69	1,857.20	3.49	533.006		
450.00	449.93	756.02	592.10	1.40	2.57	75.243	-1.84	1,852.17	1,856.60	1,852.64	3.96	468.715		
500.00	499.84	828.04	663.06	1.58	2.88	75.134	8.98	1,846.32	1,851.70	1,847.26	4.44	417.030		
550.00	549.68	899.66	733.29	1.77	3.21	75.029	21.30	1,839.65	1,845.99	1,841.05	4.93	374.206		
600.00	599.45	970.83	802.72	1.95	3.55	74.928	35.07	1,832.21	1,839.47	1,834.03	5.45	337.743		
650.00	649.13	1,033.15	863.19	2.15	3.87	74.861	48.31	1,825.04	1,832.21	1,826.28	5.94	308.692		
700.00	698.70	1,082.36	910.88	2.34	4.13	74.864	58.99	1,819.27	1,824.64	1,818.27	6.37	286.509		
750.00	748.15	1,131.60	958.60	2.55	4.39	74.896	69.67	1,813.49	1,816.84	1,810.03	6.82	266.494		
800.00	797.47	1,180.86	1,006.34	2.76	4.65	74.958	80.36	1,807.72	1,808.83	1,801.56	7.27	248.823		
850.00	846.63	1,230.14	1,054.09	2.98	4.92	75.051	91.05	1,801.93	1,800.60	1,792.86	7.74	232.677		
900.00	895.62	1,279.40	1,101.83	3.20	5.19	75.175	101.73	1,796.16	1,792.15	1,783.94	8.21	218.311		
950.00	944.44	1,328.64	1,149.55	3.45	5.46	75.331	112.41	1,790.38	1,783.48	1,774.78	8.70	205.035		
1,000.00	993.06	1,377.84	1,197.23	3.69	5.73	75.518	123.09	1,784.61	1,774.59	1,765.41	9.19	193.128		
1,050.00	1,041.46	1,426.99	1,244.86	3.95	6.00	75.739	133.75	1,778.84	1,765.49	1,755.79	9.70	182.035		
1,100.00	1,089.64	1,476.07	1,292.43	4.22	6.28	75.992	144.39	1,773.08	1,756.18	1,745.97	10.21	172.006		
1,150.00	1,137.58	1,525.07	1,339.91	4.50	6.55	76.278	155.02	1,767.33	1,746.66	1,735.93	10.74	162.639		
1,200.00	1,185.30	1,573.98	1,387.31	4.79	6.83	76.495	165.63	1,761.60	1,736.98	1,725.71	11.27	154.078		
1,250.00	1,232.99	1,622.88	1,434.70	5.09	7.10	76.624	176.24	1,755.86	1,727.28	1,715.46	11.82	146.169		
1,300.00	1,280.68	1,671.78	1,482.09	5.39	7.38	76.754	186.85	1,750.12	1,717.59	1,705.23	12.36	138.953		
1,350.00	1,328.37	1,720.68	1,529.48	5.70	7.65	76.885	197.46	1,744.38	1,707.90	1,694.99	12.91	132.279		
1,400.00	1,376.06	1,769.58	1,576.87	6.00	7.93	77.018	208.07	1,738.65	1,698.23	1,684.77	13.46	126.147		
1,450.00	1,423.75	1,818.48	1,624.26	6.31	8.21	77.153	218.67	1,732.91	1,688.56	1,674.54	14.02	120.458		
1,500.00	1,471.44	1,867.38	1,671.65	6.62	8.49	77.289	229.28	1,727.17	1,678.90	1,664.33	14.57	115.200		
1,550.00	1,519.13	1,916.28	1,719.04	6.94	8.76	77.426	239.89	1,721.44	1,669.26	1,654.12	15.13	110.305		
1,600.00	1,566.82	1,965.18	1,766.43	7.25	9.04	77.565	250.50	1,715.70	1,659.62	1,643.93	15.69	105.757		
1,650.00	1,614.51	2,014.08	1,813.82	7.56	9.32	77.706	261.11	1,709.96	1,649.99	1,633.74	16.26	101.507		
1,700.00	1,662.20	2,062.98	1,861.21	7.88	9.60	77.848	271.71	1,704.23	1,640.37	1,623.55	16.82	97.540		
1,750.00	1,709.89	2,111.88	1,908.60	8.20	9.88	77.992	282.32	1,698.49	1,630.76	1,613.38	17.38	93.820		
1,800.00	1,757.58	2,160.79	1,955.99	8.52	10.16	78.138	292.93	1,692.75	1,621.16	1,603.22	17.95	90.334		
1,850.00	1,805.27	2,209.69	2,003.39	8.83	10.44	78.286	303.54	1,687.01	1,611.58	1,593.06	18.51	87.054		
1,900.00	1,852.96	2,258.59	2,050.78	9.15	10.72	78.435	314.14	1,681.28	1,602.00	1,582.92	19.08	83.968		
1,950.00	1,900.65	2,307.49	2,098.17	9.47	11.00	78.586	324.75	1,675.54	1,592.43	1,572.78	19.65	81.057		
2,000.00	1,948.34	2,356.39	2,145.56	9.79	11.28	78.739	335.36	1,669.80	1,582.87	1,562.66	20.21	78.309		

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,050.00	1,996.03	2,405.29	2,192.95	10.12	11.56	78.893	345.97	1,664.07	1,573.33	1,552.55	20.78	75.708		
2,100.00	2,043.72	2,454.19	2,240.34	10.44	11.84	79.050	356.58	1,658.33	1,563.79	1,542.44	21.35	73.247		
2,150.00	2,091.41	2,503.09	2,287.73	10.76	12.12	79.209	367.18	1,652.59	1,554.27	1,532.35	21.92	70.911		
2,200.00	2,139.09	2,551.99	2,335.12	11.08	12.41	79.369	377.79	1,646.86	1,544.76	1,522.27	22.49	68.695		
2,250.00	2,186.78	2,600.89	2,382.51	11.40	12.69	79.531	388.40	1,641.12	1,535.26	1,512.21	23.06	66.587		
2,300.00	2,234.47	2,649.79	2,429.90	11.73	12.97	79.696	399.01	1,635.38	1,525.78	1,502.15	23.63	64.581		
2,350.00	2,282.16	2,701.31	2,477.29	12.05	13.26	79.862	409.62	1,629.64	1,516.30	1,492.09	24.21	62.633		
2,400.00	2,329.85	2,747.59	2,524.68	12.37	13.53	80.031	420.22	1,623.91	1,506.84	1,482.07	24.76	60.846		
2,450.00	2,377.54	2,796.49	2,572.07	12.70	13.81	80.201	430.83	1,618.17	1,497.39	1,472.06	25.33	59.105		
2,500.00	2,425.23	2,845.39	2,619.46	13.02	14.09	80.374	441.44	1,612.43	1,487.95	1,462.05	25.90	57.442		
2,550.00	2,472.92	2,894.29	2,666.85	13.35	14.38	80.549	452.05	1,606.70	1,478.53	1,452.06	26.47	55.851		
2,600.00	2,520.94	2,943.27	2,714.31	13.66	14.66	77.602	462.67	1,600.95	1,469.04	1,442.01	27.03	54.352		
2,650.00	2,569.60	2,985.85	2,755.70	13.93	14.89	73.164	471.30	1,595.97	1,459.48	1,431.96	27.52	53.037		
2,700.00	2,618.77	3,026.42	2,795.53	14.17	15.09	66.282	477.43	1,591.30	1,450.06	1,422.12	27.94	51.895		
2,750.00	2,668.30	3,067.00	2,835.65	14.38	15.27	54.142	481.43	1,586.72	1,440.83	1,412.52	28.31	50.900		
2,800.00	2,718.07	3,107.60	2,875.95	14.54	15.42	29.842	483.28	1,582.22	1,431.79	1,403.18	28.61	50.045		
2,850.00	2,767.94	3,148.22	2,916.33	14.67	15.54	-10.854	482.98	1,577.84	1,422.99	1,394.14	28.85	49.322		
2,900.00	2,817.78	3,188.87	2,956.67	14.77	15.64	-43.299	480.52	1,573.58	1,414.45	1,385.42	29.03	48.725		
2,950.00	2,867.43	3,229.53	2,996.86	14.84	15.71	-59.585	475.91	1,569.45	1,406.18	1,377.02	29.16	48.227		
3,000.00	2,916.78	3,270.23	3,036.79	14.88	15.76	-68.189	469.15	1,565.47	1,398.22	1,368.98	29.24	47.820		
3,050.00	2,965.68	3,310.95	3,076.33	14.90	15.79	-73.391	460.27	1,561.64	1,390.58	1,361.31	29.28	47.498		
3,100.00	3,014.00	3,351.69	3,115.39	14.89	15.81	-76.883	449.27	1,557.98	1,383.29	1,354.02	29.27	47.255		
3,150.00	3,061.60	3,392.45	3,153.84	14.86	15.80	-79.406	436.20	1,554.50	1,376.38	1,347.15	29.23	47.089		
3,200.00	3,108.37	3,433.24	3,191.57	14.81	15.78	-81.325	421.08	1,551.20	1,369.85	1,340.69	29.15	46.988		
3,250.00	3,154.16	3,474.04	3,228.47	14.74	15.74	-82.841	403.96	1,548.11	1,363.72	1,334.67	29.05	46.943		
3,300.00	3,198.86	3,514.85	3,264.42	14.66	15.70	-84.070	384.88	1,545.22	1,358.03	1,329.10	28.93	46.948		
3,350.00	3,242.34	3,555.67	3,299.34	14.57	15.64	-85.085	363.90	1,542.56	1,352.77	1,323.99	28.79	46.993		
3,400.00	3,284.47	3,596.50	3,333.09	14.48	15.57	-85.933	341.09	1,540.11	1,347.98	1,319.34	28.64	47.068		
3,450.00	3,325.16	3,637.32	3,365.60	14.38	15.50	-86.645	316.50	1,537.90	1,343.65	1,315.16	28.49	47.159		
3,500.00	3,364.28	3,678.12	3,396.75	14.28	15.42	-87.245	290.22	1,535.93	1,339.81	1,311.46	28.35	47.254		
3,550.00	3,401.73	3,718.91	3,426.46	14.18	15.33	-87.749	262.33	1,534.20	1,336.47	1,308.24	28.23	47.339		
3,600.00	3,437.40	3,759.68	3,454.64	14.10	15.25	-88.168	232.92	1,532.72	1,333.63	1,305.49	28.14	47.399		
3,650.00	3,471.20	3,800.00	3,480.94	14.03	15.16	-88.512	202.39	1,531.51	1,331.31	1,303.23	28.07	47.420		
3,700.00	3,503.03	3,841.10	3,506.07	13.99	15.08	-88.785	169.89	1,530.53	1,329.51	1,301.45	28.06	47.380		
3,750.00	3,532.81	3,881.74	3,529.18	13.97	14.99	-88.996	136.47	1,529.82	1,328.23	1,300.13	28.10	47.270		
3,800.00	3,560.45	3,926.30	3,550.26	13.99	14.91	-89.149	102.29	1,529.37	1,327.49	1,299.29	28.20	47.079		
3,850.00	3,585.99	3,971.90	3,575.26	14.06	14.84	-89.240	59.00	1,528.99	1,327.11	1,298.71	28.40	46.737		
3,900.00	3,610.99	4,021.90	3,600.26	14.18	14.79	-89.240	15.70	1,528.61	1,326.77	1,298.09	28.67	46.274		
3,950.00	3,635.99	4,071.90	3,625.26	14.39	14.81	-89.240	-27.60	1,528.23	1,326.43	1,297.35	29.07	45.623		
4,000.00	3,660.99	4,121.89	3,650.26	14.62	14.92	-89.240	-70.90	1,527.84	1,326.09	1,296.59	29.50	44.952		
4,050.00	3,685.82	4,170.79	3,673.03	14.91	15.15	-89.176	-114.15	1,527.46	1,325.77	1,295.72	30.05	44.126		
4,100.00	3,707.71	4,219.40	3,691.94	15.25	15.46	-89.095	-158.91	1,527.07	1,325.45	1,294.78	30.67	43.221		
4,150.00	3,725.60	4,267.81	3,706.94	15.63	15.83	-89.021	-204.92	1,526.66	1,325.11	1,293.75	31.37	42.243		
4,200.00	3,739.35	4,316.02	3,717.96	16.06	16.24	-88.954	-251.83	1,526.25	1,324.78	1,292.63	32.15	41.207		
4,250.00	3,748.86	4,364.04	3,724.98	16.53	16.68	-88.896	-299.33	1,525.83	1,324.43	1,291.43	33.00	40.132		
4,300.00	3,754.06	4,411.91	3,727.99	17.03	17.15	-88.845	-347.08	1,525.41	1,324.08	1,290.16	33.92	39.038		
4,350.00	3,754.92	4,460.77	3,727.49	17.57	17.66	-88.821	-395.93	1,524.98	1,323.72	1,288.80	34.92	37.911		
4,400.00	3,753.93	4,510.77	3,726.46	18.13	18.21	-88.819	-445.92	1,524.54	1,323.33	1,287.33	35.99	36.769		
4,450.00	3,752.93	4,560.76	3,725.42	18.74	18.80	-88.817	-495.91	1,524.10	1,322.93	1,285.77	37.16	35.600		
4,500.00	3,751.93	4,610.76	3,724.39	19.35	19.41	-88.816	-545.89	1,523.66	1,322.54	1,284.20	38.35	34.490		
4,550.00	3,750.93	4,660.76	3,723.36	20.02	20.05	-88.814	-595.88	1,523.22	1,322.15	1,282.52	39.63	33.363		
4,600.00	3,749.93	4,710.76	3,722.33	20.68	20.70	-88.812	-645.86	1,522.78	1,321.76	1,280.84	40.92	32.298		

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



### Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,650.00	3,748.94	4,760.76	3,721.30	21.38	21.38	-88.810	-695.85	1,522.34	1,321.37	1,279.07	42.30	31.238		
4,700.00	3,747.94	4,810.76	3,720.26	22.09	22.07	-88.808	-745.84	1,521.90	1,320.98	1,277.29	43.69	30.238		
4,750.00	3,746.94	4,860.76	3,719.23	22.83	22.79	-88.807	-795.82	1,521.46	1,320.59	1,275.45	45.14	29.256		
4,800.00	3,745.94	4,910.75	3,718.20	23.57	23.52	-88.805	-845.81	1,521.02	1,320.20	1,273.60	46.60	28.331		
4,850.00	3,744.94	4,960.75	3,717.17	24.34	24.27	-88.803	-895.79	1,520.58	1,319.81	1,271.69	48.12	27.430		
4,900.00	3,743.94	5,010.75	3,716.14	25.11	25.03	-88.801	-945.78	1,520.14	1,319.42	1,269.78	49.64	26.581		
4,950.00	3,742.95	5,060.75	3,715.11	25.90	25.80	-88.799	-995.76	1,519.70	1,319.03	1,267.82	51.21	25.759		
5,000.00	3,741.95	5,110.75	3,714.07	26.69	26.58	-88.797	-1,045.75	1,519.26	1,318.64	1,265.86	52.78	24.984		
5,050.00	3,740.95	5,160.75	3,713.04	27.51	27.38	-88.796	-1,095.74	1,518.82	1,318.24	1,263.85	54.39	24.236		
5,100.00	3,739.95	5,210.74	3,712.01	28.32	28.18	-88.794	-1,145.72	1,518.38	1,317.85	1,261.85	56.01	23.530		
5,150.00	3,738.95	5,260.74	3,710.98	29.15	28.99	-88.792	-1,195.71	1,517.94	1,317.46	1,259.81	57.65	22.851		
5,200.00	3,737.96	5,310.74	3,709.95	29.98	29.81	-88.790	-1,245.69	1,517.50	1,317.07	1,257.77	59.31	22.208		
5,250.00	3,736.96	5,360.74	3,708.92	30.82	30.64	-88.788	-1,295.68	1,517.06	1,316.68	1,255.70	60.98	21.590		
5,300.00	3,735.96	5,410.74	3,707.88	31.67	31.47	-88.786	-1,345.67	1,516.62	1,316.29	1,253.63	62.67	21.005		
5,350.00	3,734.96	5,460.74	3,706.85	32.52	32.32	-88.785	-1,395.65	1,516.18	1,315.90	1,251.53	64.37	20.443		
5,400.00	3,733.96	5,510.74	3,705.82	33.38	33.16	-88.783	-1,445.64	1,515.74	1,315.51	1,249.43	66.08	19.909		
5,450.00	3,732.97	5,560.73	3,704.79	34.24	34.02	-88.781	-1,495.62	1,515.30	1,315.12	1,247.32	67.80	19.396		
5,500.00	3,731.97	5,610.73	3,703.76	35.11	34.87	-88.779	-1,545.61	1,514.86	1,314.73	1,245.20	69.53	18.909		
5,550.00	3,730.97	5,660.73	3,702.72	35.99	35.74	-88.777	-1,595.60	1,514.42	1,314.34	1,243.06	71.28	18.440		
5,600.00	3,729.97	5,710.73	3,701.69	36.86	36.60	-88.775	-1,645.58	1,513.98	1,313.95	1,240.92	73.02	17.994		
5,650.00	3,728.97	5,760.73	3,700.66	37.74	37.48	-88.774	-1,695.57	1,513.54	1,313.56	1,238.77	74.78	17.565		
5,700.00	3,727.98	5,810.73	3,699.63	38.63	38.35	-88.772	-1,745.55	1,513.10	1,313.16	1,236.62	76.55	17.155		
5,750.00	3,726.98	5,860.72	3,698.60	39.52	39.23	-88.770	-1,795.54	1,512.65	1,312.77	1,234.45	78.32	16.761		
5,800.00	3,725.98	5,910.72	3,697.57	40.41	40.11	-88.768	-1,845.52	1,512.21	1,312.38	1,232.28	80.10	16.384		
5,850.00	3,724.98	5,960.72	3,696.53	41.30	41.00	-88.766	-1,895.51	1,511.77	1,311.99	1,230.10	81.89	16.022		
5,900.00	3,723.98	6,010.72	3,695.50	42.20	41.89	-88.764	-1,945.50	1,511.33	1,311.60	1,227.93	83.68	15.675		
5,950.00	3,722.99	6,060.72	3,694.47	43.10	42.78	-88.762	-1,995.48	1,510.89	1,311.21	1,225.74	85.47	15.340		
6,000.00	3,721.99	6,110.72	3,693.44	44.00	43.68	-88.761	-2,045.47	1,510.45	1,310.82	1,223.55	87.27	15.020		
6,050.00	3,720.99	6,160.71	3,692.41	44.91	44.57	-88.759	-2,095.45	1,510.01	1,310.43	1,221.35	89.08	14.710		
6,100.00	3,719.99	6,210.71	3,691.37	45.81	45.47	-88.757	-2,145.44	1,509.57	1,310.04	1,219.15	90.89	14.413		
6,150.00	3,718.99	6,260.71	3,690.34	46.72	46.38	-88.755	-2,195.43	1,509.13	1,309.65	1,216.94	92.71	14.127		
6,200.00	3,718.00	6,310.71	3,689.31	47.63	47.28	-88.753	-2,245.41	1,508.69	1,309.26	1,214.73	94.53	13.851		
6,250.00	3,717.00	6,360.71	3,688.28	48.54	48.19	-88.751	-2,295.40	1,508.25	1,308.87	1,212.52	96.35	13.585		
6,300.00	3,716.00	6,410.71	3,687.25	49.46	49.09	-88.750	-2,345.38	1,507.81	1,308.48	1,210.30	98.17	13.328		
6,350.00	3,715.00	6,460.71	3,686.22	50.37	50.00	-88.748	-2,395.37	1,507.37	1,308.08	1,208.08	100.01	13.080		
6,400.00	3,714.00	6,510.70	3,685.18	51.29	50.92	-88.746	-2,445.35	1,506.93	1,307.69	1,205.86	101.84	12.841		
6,450.00	3,713.01	6,560.70	3,684.15	52.21	51.83	-88.744	-2,495.34	1,506.49	1,307.30	1,203.63	103.67	12.610		
6,500.00	3,712.01	6,610.70	3,683.12	53.13	52.74	-88.742	-2,545.33	1,506.05	1,306.91	1,201.40	105.51	12.387		
6,550.00	3,711.01	6,660.70	3,682.09	54.05	53.66	-88.740	-2,595.31	1,505.61	1,306.52	1,199.17	107.35	12.170		
6,600.00	3,710.01	6,710.70	3,681.06	54.97	54.58	-88.738	-2,645.30	1,505.17	1,306.13	1,196.94	109.20	11.961		
6,650.00	3,709.01	6,760.70	3,680.03	55.90	55.50	-88.737	-2,695.28	1,504.73	1,305.74	1,194.70	111.04	11.759		
6,700.00	3,708.02	6,810.69	3,678.99	56.82	56.42	-88.735	-2,745.27	1,504.29	1,305.35	1,192.46	112.89	11.563		
6,750.00	3,707.02	6,860.69	3,677.96	57.75	57.34	-88.733	-2,795.26	1,503.85	1,304.96	1,190.22	114.74	11.373		
6,800.00	3,706.02	6,910.69	3,676.93	58.68	58.26	-88.731	-2,845.24	1,503.41	1,304.57	1,187.97	116.59	11.189		
6,850.00	3,705.02	6,960.69	3,675.90	59.60	59.18	-88.729	-2,895.23	1,502.97	1,304.18	1,185.73	118.45	11.011		
6,900.00	3,704.02	7,010.69	3,674.87	60.53	60.11	-88.727	-2,945.21	1,502.53	1,303.79	1,183.48	120.30	10.837		
6,950.00	3,703.03	7,060.69	3,673.83	61.46	61.03	-88.725	-2,995.20	1,502.09	1,303.40	1,181.23	122.16	10.669		
7,000.00	3,702.03	7,110.69	3,672.80	62.39	61.96	-88.723	-3,045.19	1,501.65	1,303.00	1,178.98	124.02	10.506		
7,050.00	3,701.03	7,160.68	3,671.77	63.32	62.89	-88.722	-3,095.17	1,501.21	1,302.61	1,176.73	125.88	10.348		
7,100.00	3,700.03	7,210.68	3,670.74	64.26	63.81	-88.720	-3,145.16	1,500.77	1,302.22	1,174.48	127.75	10.194		
7,150.00	3,699.03	7,260.68	3,669.71	65.19	64.74	-88.718	-3,195.14	1,500.33	1,301.83	1,172.22	129.61	10.044		
7,200.00	3,698.04	7,310.68	3,668.68	66.12	65.67	-88.716	-3,245.13	1,499.89	1,301.44	1,169.96	131.48	9.899		

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
7,250.00	3,697.04	7,360.68	3,667.64	67.06	66.60	-88.714	-3,295.11	1,499.45	1,301.05	1,167.70	133.35	9.757	
7,300.00	3,696.04	7,410.68	3,666.61	67.99	67.54	-88.712	-3,345.10	1,499.01	1,300.66	1,165.45	135.21	9.619	
7,350.00	3,695.04	7,460.67	3,665.58	68.93	68.47	-88.710	-3,395.09	1,498.57	1,300.27	1,163.18	137.09	9.485	
7,400.00	3,694.04	7,510.67	3,664.55	69.86	69.40	-88.708	-3,445.07	1,498.13	1,299.88	1,160.92	138.96	9.355	
7,450.00	3,693.05	7,560.67	3,663.52	70.80	70.33	-88.707	-3,495.06	1,497.69	1,299.49	1,158.66	140.83	9.227	
7,500.00	3,692.05	7,610.67	3,662.48	71.74	71.27	-88.705	-3,545.04	1,497.25	1,299.10	1,156.40	142.70	9.104	
7,550.00	3,691.05	7,660.67	3,661.45	72.68	72.20	-88.703	-3,595.03	1,496.81	1,298.71	1,154.13	144.58	8.983	
7,600.00	3,690.05	7,710.67	3,660.42	73.62	73.14	-88.701	-3,645.02	1,496.37	1,298.32	1,151.86	146.45	8.865	
7,650.00	3,689.05	7,760.67	3,659.39	74.55	74.07	-88.699	-3,695.00	1,495.93	1,297.93	1,149.60	148.33	8.750	
7,700.00	3,688.06	7,810.66	3,658.36	75.49	75.01	-88.697	-3,744.99	1,495.49	1,297.53	1,147.33	150.21	8.638	
7,750.00	3,687.06	7,860.66	3,657.33	76.43	75.95	-88.695	-3,794.97	1,495.05	1,297.14	1,145.06	152.09	8.529	
7,800.00	3,686.06	7,910.66	3,656.29	77.37	76.88	-88.693	-3,844.96	1,494.61	1,296.75	1,142.79	153.97	8.422	
7,850.00	3,685.06	7,960.66	3,655.26	78.32	77.82	-88.691	-3,894.95	1,494.17	1,296.36	1,140.52	155.85	8.318	
7,900.00	3,684.06	8,010.66	3,654.23	79.26	78.76	-88.690	-3,944.93	1,493.72	1,295.97	1,138.24	157.73	8.217	
7,950.00	3,683.07	8,060.66	3,653.20	80.20	79.70	-88.688	-3,994.92	1,493.28	1,295.58	1,135.97	159.61	8.117	
8,000.00	3,682.07	8,110.65	3,652.17	81.14	80.64	-88.686	-4,044.90	1,492.84	1,295.19	1,133.70	161.49	8.020	
8,050.00	3,681.07	8,160.65	3,651.13	82.08	81.58	-88.684	-4,094.89	1,492.40	1,294.80	1,131.42	163.38	7.925	
8,100.00	3,680.07	8,210.65	3,650.10	83.03	82.52	-88.682	-4,144.87	1,491.96	1,294.41	1,129.15	165.26	7.833	
8,150.00	3,679.07	8,260.65	3,649.07	83.97	83.46	-88.680	-4,194.86	1,491.52	1,294.02	1,126.87	167.14	7.742	
8,200.00	3,678.08	8,310.65	3,648.04	84.91	84.40	-88.678	-4,244.85	1,491.08	1,293.63	1,124.60	169.03	7.653	
8,250.00	3,677.08	8,360.65	3,647.01	85.86	85.34	-88.676	-4,294.83	1,490.64	1,293.24	1,122.32	170.92	7.566	
8,300.00	3,676.08	8,410.65	3,645.98	86.80	86.28	-88.674	-4,344.82	1,490.20	1,292.85	1,120.04	172.80	7.482	
8,350.00	3,675.08	8,460.64	3,644.94	87.74	87.22	-88.673	-4,394.80	1,489.76	1,292.46	1,117.77	174.69	7.399	
8,354.05	3,675.00	8,464.70	3,644.86	87.82	87.30	-88.672	-4,398.86	1,489.73	1,292.42	1,117.58	174.84	7.392 CC, ES, SF	

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD+IGRF													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toofface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	176.281	-20.00	1.30	20.04						
50.00	50.00	50.00	50.00	0.05	0.07	176.281	-20.00	1.30	20.04	19.92	0.13	159.743			
100.00	100.00	100.00	100.00	0.14	0.14	176.281	-20.00	1.30	20.04	19.76	0.29	69.888			
150.00	150.00	150.00	150.00	0.32	0.32	176.281	-20.00	1.30	20.04	19.40	0.65	31.061			
200.00	200.00	200.00	200.00	0.50	0.50	176.281	-20.00	1.30	20.04	19.04	1.00	19.968			
250.00	250.00	250.00	250.00	0.68	0.68	176.281	-20.00	1.30	20.04	18.68	1.36	14.713			
300.00	300.00	300.00	300.00	0.86	0.86	176.281	-20.00	1.30	20.04	18.32	1.72	11.648	CC		
350.00	350.00	350.25	350.25	1.04	1.04	160.634	-19.67	1.59	20.14	18.06	2.08	9.683			
400.00	399.98	400.50	400.48	1.22	1.22	159.240	-18.66	2.45	20.45	18.01	2.44	8.387	ES		
450.00	449.93	450.73	450.66	1.40	1.40	157.011	-16.99	3.89	20.99	18.19	2.80	7.498			
500.00	499.84	500.96	500.79	1.58	1.58	154.084	-14.66	5.89	21.80	18.64	3.16	6.900			
550.00	549.68	551.16	550.84	1.77	1.77	150.636	-11.66	8.47	22.91	19.38	3.53	6.498			
600.00	599.45	601.34	600.79	1.95	1.95	146.867	-7.99	11.62	24.37	20.47	3.89	6.258			
650.00	649.13	651.50	650.62	2.15	2.15	142.974	-3.67	15.34	26.21	21.93	4.27	6.132			
700.00	698.70	701.62	700.31	2.34	2.35	139.129	1.31	19.63	28.46	23.80	4.66	6.107	SF		
750.00	748.15	751.71	749.84	2.55	2.55	135.459	6.94	24.47	31.13	26.07	5.07	6.147			
800.00	797.47	801.75	799.19	2.76	2.76	132.049	13.23	29.88	34.25	28.77	5.48	6.253			
850.00	846.63	851.76	848.35	2.98	2.99	128.942	20.16	35.84	37.80	31.88	5.92	6.389			
900.00	895.62	901.71	897.30	3.20	3.21	126.148	27.73	42.35	41.78	35.42	6.36	6.569			
950.00	944.44	951.61	946.01	3.45	3.46	123.659	35.94	49.41	46.19	39.35	6.84	6.755			
1,000.00	993.06	1,001.46	994.47	3.69	3.70	121.453	44.79	57.02	51.03	43.71	7.32	6.970			
1,050.00	1,041.46	1,051.24	1,042.66	3.95	3.97	119.501	54.25	65.16	56.28	48.44	7.84	7.178			
1,100.00	1,089.64	1,100.96	1,090.57	4.22	4.23	117.775	64.34	73.84	61.93	53.57	8.36	7.404			
1,150.00	1,137.58	1,150.61	1,138.17	4.50	4.52	116.247	75.04	83.04	67.99	59.07	8.92	7.619			
1,200.00	1,185.30	1,200.19	1,185.51	4.79	4.81	115.013	86.22	92.65	74.40	64.90	9.49	7.836			
1,250.00	1,232.99	1,249.75	1,232.81	5.09	5.11	114.053	97.43	102.29	80.87	70.79	10.08	8.023			
1,300.00	1,280.68	1,300.68	1,280.12	5.39	5.41	113.236	108.64	111.93	87.36	76.68	10.68	8.182			
1,350.00	1,328.37	1,348.88	1,327.43	5.70	5.71	112.532	119.84	121.57	93.87	82.60	11.27	8.331			
1,400.00	1,376.06	1,401.56	1,374.73	6.00	6.04	111.919	131.05	131.21	100.39	88.50	11.89	8.445			
1,450.00	1,423.75	1,448.00	1,422.04	6.31	6.33	111.380	142.26	140.85	106.91	94.44	12.47	8.570			
1,500.00	1,471.44	1,497.57	1,469.34	6.62	6.64	110.904	153.47	150.49	113.45	100.37	13.08	8.671			
1,550.00	1,519.13	1,547.13	1,516.65	6.94	6.95	110.480	164.68	160.13	119.99	106.30	13.70	8.760			
1,600.00	1,566.82	1,596.69	1,563.96	7.25	7.26	110.099	175.89	169.77	126.54	112.23	14.31	8.841			
1,650.00	1,614.51	1,646.25	1,611.26	7.56	7.58	109.756	187.09	179.41	133.10	118.17	14.93	8.914			
1,700.00	1,662.20	1,704.18	1,658.57	7.88	7.95	109.446	198.30	189.05	139.66	124.05	15.61	8.949			
1,750.00	1,709.89	1,745.38	1,705.88	8.20	8.21	109.163	209.51	198.69	146.22	130.04	16.18	9.040			
1,800.00	1,757.58	1,794.94	1,753.18	8.52	8.53	108.904	220.72	208.33	152.78	135.99	16.80	9.095			
1,850.00	1,805.27	1,844.51	1,800.49	8.83	8.85	108.667	231.93	217.97	159.35	141.93	17.42	9.145			
1,900.00	1,852.96	1,905.93	1,847.80	9.15	9.24	108.448	243.14	227.60	165.92	147.80	18.13	9.153			
1,950.00	1,900.65	1,943.63	1,895.10	9.47	9.48	108.246	254.35	237.24	172.50	153.82	18.68	9.234			
2,000.00	1,948.34	1,993.19	1,942.41	9.79	9.80	108.059	265.55	246.88	179.07	159.76	19.31	9.274			
2,050.00	1,996.03	2,042.76	1,989.72	10.12	10.13	107.885	276.76	256.52	185.65	165.71	19.94	9.311			
2,100.00	2,043.72	2,107.68	2,037.02	10.44	10.55	107.724	287.97	266.16	192.23	171.56	20.67	9.300			
2,150.00	2,091.41	2,141.88	2,084.33	10.76	10.77	107.572	299.18	275.80	198.81	177.60	21.20	9.376			
2,200.00	2,139.09	2,208.56	2,131.63	11.08	11.20	107.431	310.39	285.44	205.39	183.44	21.95	9.359			
2,250.00	2,186.78	2,241.01	2,178.94	11.40	11.41	107.298	321.60	295.08	211.97	189.50	22.47	9.434			
2,300.00	2,234.47	2,290.57	2,226.25	11.73	11.74	107.173	332.81	304.72	218.55	195.45	23.10	9.460			
2,350.00	2,282.16	2,340.13	2,273.55	12.05	12.06	107.056	344.01	314.36	225.14	201.40	23.74	9.485			
2,400.00	2,329.85	2,389.69	2,320.86	12.37	12.38	106.945	355.22	324.00	231.72	207.35	24.37	9.508			
2,450.00	2,377.54	2,439.26	2,368.17	12.70	12.70	106.841	366.43	333.64	238.31	213.30	25.01	9.529			
2,500.00	2,425.23	2,488.82	2,415.47	13.02	13.03	106.742	377.64	343.28	244.89	219.25	25.64	9.550			
2,550.00	2,472.92	2,538.38	2,462.78	13.35	13.35	106.648	388.85	352.92	251.48	225.20	26.28	9.569			

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 0-MWD+IGRF												Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis			Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,600.00	2,520.94	2,587.99	2,510.13	13.66	13.68	104.103	400.07	362.57	257.47	230.57	26.91	9.569		
2,650.00	2,569.60	2,637.63	2,557.51	13.93	14.00	99.641	411.29	372.22	262.19	234.69	27.51	9.532		
2,700.00	2,618.77	2,687.16	2,604.78	14.17	14.33	92.210	422.49	381.86	265.72	237.65	28.08	9.464		
2,750.00	2,668.30	2,736.44	2,651.82	14.38	14.65	79.012	433.64	391.44	268.19	239.59	28.60	9.376		
2,800.00	2,718.07	2,785.33	2,698.49	14.54	14.97	53.158	444.70	400.95	269.81	240.73	29.07	9.281		
2,850.00	2,767.94	2,833.71	2,744.67	14.67	15.29	10.431	455.64	410.36	270.81	241.35	29.46	9.191		
2,900.00	2,817.78	2,881.44	2,790.22	14.77	15.60	-24.496	466.43	419.64	271.52	241.76	29.76	9.123		
2,950.00	2,867.43	2,928.39	2,835.03	14.84	15.91	-43.674	477.05	428.77	272.32	242.37	29.95	9.093		
3,000.00	2,916.78	2,974.43	2,878.98	14.88	16.21	-55.522	487.46	437.73	273.64	243.63	30.00	9.120		
3,050.00	2,965.68	3,019.44	2,921.94	14.90	16.50	-64.242	497.64	446.48	275.94	246.03	29.91	9.226		
3,100.00	3,014.00	3,063.29	2,963.79	14.89	16.79	-71.425	507.55	455.01	279.74	250.08	29.66	9.431		
3,150.00	3,061.60	3,105.85	3,004.42	14.86	17.07	-77.701	517.18	463.29	285.52	256.25	29.26	9.756		
3,200.00	3,108.37	3,147.03	3,043.72	14.81	17.34	-83.320	526.49	471.30	293.73	264.98	28.75	10.217		
3,250.00	3,154.16	3,186.70	3,081.58	14.74	17.60	-88.373	535.46	479.01	304.74	276.58	28.16	10.823		
3,300.00	3,198.86	3,224.74	3,117.90	14.66	17.85	-92.880	544.07	486.41	318.81	291.27	27.54	11.575		
3,350.00	3,242.34	3,267.09	3,158.48	14.57	18.12	-97.459	552.95	494.61	335.82	308.79	27.04	12.421		
3,400.00	3,284.47	3,311.82	3,201.76	14.48	18.38	-101.746	560.35	503.13	355.13	328.48	26.65	13.326		
3,450.00	3,325.16	3,358.42	3,247.19	14.38	18.63	-105.690	565.86	511.84	376.38	350.00	26.38	14.268		
3,500.00	3,364.28	3,407.14	3,294.98	14.28	18.86	-109.330	569.23	520.74	399.26	373.05	26.20	15.237		
3,550.00	3,401.73	3,458.34	3,345.34	14.18	19.06	-112.707	570.10	529.85	423.44	397.34	26.10	16.222		
3,600.00	3,437.40	3,512.39	3,398.54	14.10	19.25	-115.858	568.05	539.16	448.63	422.58	26.05	17.221		
3,650.00	3,471.20	3,569.79	3,454.87	14.03	19.40	-118.819	562.56	548.68	474.56	448.54	26.02	18.240		
3,700.00	3,503.03	3,631.08	3,514.61	13.99	19.52	-121.622	552.93	558.37	500.94	474.97	25.97	19.288		
3,750.00	3,532.81	3,696.95	3,578.06	13.97	19.61	-124.297	538.31	568.20	527.50	501.61	25.88	20.380		
3,800.00	3,560.45	3,768.19	3,645.48	13.99	19.66	-126.866	517.58	578.11	553.93	528.21	25.72	21.535		
3,850.00	3,585.99	3,845.88	3,717.14	14.06	19.66	-129.690	489.29	587.99	579.86	554.38	25.47	22.766		
3,900.00	3,610.99	3,933.27	3,794.84	14.18	19.61	-132.934	450.61	597.87	603.67	578.60	25.07	24.075		
3,950.00	3,635.99	4,031.64	3,877.85	14.39	19.50	-135.625	398.78	607.32	624.24	599.66	24.58	25.392		
4,000.00	3,660.99	4,140.72	3,963.37	14.62	19.32	-137.710	331.67	615.63	640.76	616.88	23.88	26.836		
4,050.00	3,685.82	4,258.97	4,047.06	14.91	19.09	-138.961	248.47	621.93	652.61	629.45	23.16	28.183		
4,100.00	3,707.71	4,382.86	4,123.33	15.25	18.82	-139.627	151.02	625.42	661.55	639.07	22.48	29.428		
4,150.00	3,725.60	4,478.05	4,173.38	15.63	18.63	-140.081	70.09	625.94	668.61	646.26	22.34	29.922		
4,200.00	3,739.35	4,526.54	4,197.63	16.06	18.53	-140.118	28.09	625.89	678.02	655.18	22.84	29.683		
4,250.00	3,748.86	4,573.79	4,221.25	16.53	18.47	-140.124	-12.83	625.86	690.81	667.51	23.30	29.645		
4,300.00	3,754.06	4,619.45	4,244.08	17.03	18.44	-140.060	-52.37	625.82	707.00	683.25	23.75	29.770		
4,350.00	3,754.92	4,676.83	4,339.87	17.57	20.35	-144.070	-391.09	625.49	722.41	699.40	23.02	31.388		
4,400.00	3,753.93	5,026.83	4,339.37	18.13	20.87	-144.093	-441.09	625.44	722.82	699.01	23.81	30.361		
4,450.00	3,752.93	5,076.83	4,338.87	18.74	21.41	-144.116	-491.08	625.39	723.22	698.58	24.64	29.346		
4,500.00	3,751.93	5,126.83	4,338.37	19.35	21.99	-144.140	-541.08	625.34	723.63	698.13	25.50	28.376		
4,550.00	3,750.93	5,176.82	4,337.87	20.02	22.59	-144.163	-591.07	625.29	724.03	697.62	26.41	27.417		
4,600.00	3,749.93	5,226.82	4,337.37	20.68	23.20	-144.186	-641.07	625.24	724.44	697.11	27.33	26.506		
4,650.00	3,748.94	5,276.82	4,336.87	21.38	23.84	-144.209	-691.06	625.20	724.84	696.55	28.29	25.619		
4,700.00	3,747.94	5,326.82	4,336.38	22.09	24.50	-144.232	-741.06	625.15	725.25	695.98	29.27	24.778		
4,750.00	3,746.94	5,376.81	4,335.88	22.83	25.17	-144.255	-791.05	625.10	725.65	695.37	30.28	23.967		
4,800.00	3,745.94	5,426.81	4,335.38	23.57	25.86	-144.278	-841.05	625.05	726.06	694.76	31.30	23.200		
4,850.00	3,744.94	5,476.81	4,334.88	24.34	26.56	-144.301	-891.04	625.00	726.46	694.12	32.34	22.463		
4,900.00	3,743.94	5,526.81	4,334.38	25.11	27.28	-144.324	-941.04	624.95	726.87	693.48	33.39	21.767		
4,950.00	3,742.95	5,576.80	4,333.88	25.90	28.01	-144.347	-991.03	624.90	727.27	692.81	34.47	21.101		
5,000.00	3,741.95	5,626.80	4,333.38	26.69	28.76	-144.370	-1,041.03	624.85	727.68	692.13	35.55	20.471		
5,050.00	3,740.95	5,676.80	4,332.88	27.51	29.51	-144.393	-1,091.02	624.81	728.09	691.44	36.65	19.868		
5,100.00	3,739.95	5,726.80	4,332.39	28.32	30.27	-144.416	-1,141.02	624.76	728.49	690.74	37.75	19.298		
5,150.00	3,738.95	5,776.79	4,331.89	29.15	31.05	-144.438	-1,191.01	624.71	728.90	690.03	38.87	18.753		

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



### Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,200.00	3,737.96	5,826.79	4,331.39	29.98	31.83	-144.461	-1,241.01	624.66	729.30	689.31	39.99	18.237		
5,250.00	3,736.96	5,876.79	4,330.89	30.82	32.62	-144.484	-1,291.00	624.61	729.71	688.59	41.12	17.744		
5,300.00	3,735.96	5,926.79	4,330.39	31.67	33.42	-144.507	-1,341.00	624.56	730.12	687.85	42.26	17.276		
5,350.00	3,734.96	5,976.78	4,329.89	32.52	34.23	-144.529	-1,390.99	624.51	730.52	687.11	43.41	16.828		
5,400.00	3,733.96	6,026.78	4,329.39	33.38	35.04	-144.552	-1,440.99	624.47	730.93	686.37	44.56	16.403		
5,450.00	3,732.97	6,076.78	4,328.89	34.24	35.86	-144.575	-1,490.98	624.42	731.34	685.62	45.72	15.996		
5,500.00	3,731.97	6,126.78	4,328.39	35.11	36.69	-144.597	-1,540.98	624.37	731.74	684.86	46.88	15.608		
5,550.00	3,730.97	6,176.77	4,327.90	35.99	37.52	-144.620	-1,590.97	624.32	732.15	684.10	48.05	15.237		
5,600.00	3,729.97	6,226.77	4,327.40	36.86	38.36	-144.643	-1,640.97	624.27	732.56	683.34	49.22	14.883		
5,650.00	3,728.97	6,276.77	4,326.90	37.74	39.21	-144.665	-1,690.96	624.22	732.96	682.57	50.40	14.543		
5,700.00	3,727.98	6,326.77	4,326.40	38.63	40.05	-144.688	-1,740.96	624.17	733.37	681.80	51.58	14.219		
5,750.00	3,726.98	6,376.76	4,325.90	39.52	40.91	-144.710	-1,790.95	624.13	733.78	681.02	52.76	13.908		
5,800.00	3,725.98	6,426.76	4,325.40	40.41	41.76	-144.733	-1,840.95	624.08	734.19	680.24	53.94	13.610		
5,850.00	3,724.98	6,476.76	4,324.90	41.30	42.62	-144.755	-1,890.94	624.03	734.59	679.46	55.13	13.324		
5,900.00	3,723.98	6,526.76	4,324.40	42.20	43.49	-144.778	-1,940.94	623.98	735.00	678.68	56.32	13.050		
5,950.00	3,722.99	6,576.75	4,323.90	43.10	44.36	-144.800	-1,990.93	623.93	735.41	677.90	57.52	12.786		
6,000.00	3,721.99	6,626.75	4,323.41	44.00	45.23	-144.823	-2,040.93	623.88	735.82	677.11	58.71	12.533		
6,050.00	3,720.99	6,676.75	4,322.91	44.91	46.11	-144.845	-2,090.92	623.83	736.23	676.32	59.91	12.290		
6,100.00	3,719.99	6,726.75	4,322.41	45.81	46.98	-144.867	-2,140.92	623.78	736.63	675.53	61.10	12.056		
6,150.00	3,718.99	6,776.74	4,321.91	46.72	47.87	-144.890	-2,190.91	623.74	737.04	674.74	62.30	11.830		
6,200.00	3,718.00	6,826.74	4,321.41	47.63	48.75	-144.912	-2,240.91	623.69	737.45	673.95	63.50	11.613		
6,250.00	3,717.00	6,876.74	4,320.91	48.54	49.64	-144.934	-2,290.90	623.64	737.86	673.15	64.71	11.403		
6,300.00	3,716.00	6,926.74	4,320.41	49.46	50.52	-144.957	-2,340.90	623.59	738.27	672.36	65.91	11.201		
6,350.00	3,715.00	6,976.73	4,319.91	50.37	51.42	-144.979	-2,390.89	623.54	738.68	671.56	67.12	11.006		
6,400.00	3,714.00	7,026.73	4,319.42	51.29	52.31	-145.001	-2,440.89	623.49	739.09	670.77	68.32	10.818		
6,450.00	3,713.01	7,076.73	4,318.92	52.21	53.21	-145.023	-2,490.88	623.44	739.50	669.97	69.53	10.636		
6,500.00	3,712.01	7,126.73	4,318.42	53.13	54.10	-145.045	-2,540.88	623.40	739.90	669.17	70.73	10.460		
6,550.00	3,711.01	7,176.72	4,317.92	54.05	55.00	-145.067	-2,590.87	623.35	740.31	668.37	71.94	10.290		
6,600.00	3,710.01	7,226.72	4,317.42	54.97	55.91	-145.090	-2,640.87	623.30	740.72	667.57	73.15	10.126		
6,650.00	3,709.01	7,276.72	4,316.92	55.90	56.81	-145.112	-2,690.86	623.25	741.13	666.77	74.36	9.967		
6,700.00	3,708.02	7,326.72	4,316.42	56.82	57.71	-145.134	-2,740.86	623.20	741.54	665.97	75.57	9.813		
6,750.00	3,707.02	7,376.71	4,315.92	57.75	58.62	-145.156	-2,790.85	623.15	741.95	665.17	76.78	9.663		
6,800.00	3,706.02	7,426.71	4,315.42	58.68	59.53	-145.178	-2,840.85	623.10	742.36	664.37	77.99	9.519		
6,850.00	3,705.02	7,476.71	4,314.93	59.60	60.44	-145.200	-2,890.84	623.06	742.77	663.57	79.20	9.378		
6,900.00	3,704.02	7,526.71	4,314.43	60.53	61.35	-145.222	-2,940.84	623.01	743.18	662.77	80.41	9.242		
6,950.00	3,703.03	7,576.70	4,313.93	61.46	62.26	-145.244	-2,990.83	622.96	743.59	661.97	81.62	9.110		
7,000.00	3,702.03	7,626.70	4,313.43	62.39	63.18	-145.266	-3,040.83	622.91	744.00	661.17	82.83	8.982		
7,050.00	3,701.03	7,676.70	4,312.93	63.32	64.09	-145.287	-3,090.82	622.86	744.41	660.37	84.05	8.857		
7,100.00	3,700.03	7,726.70	4,312.43	64.26	65.01	-145.309	-3,140.82	622.81	744.82	659.56	85.26	8.736		
7,150.00	3,699.03	7,776.69	4,311.93	65.19	65.93	-145.331	-3,190.81	622.76	745.23	658.76	86.47	8.618		
7,200.00	3,698.04	7,826.69	4,311.43	66.12	66.84	-145.353	-3,240.81	622.71	745.64	657.96	87.68	8.504		
7,250.00	3,697.04	7,876.69	4,310.94	67.06	67.76	-145.375	-3,290.80	622.67	746.05	657.16	88.89	8.393		
7,300.00	3,696.04	7,926.69	4,310.44	67.99	68.68	-145.397	-3,340.80	622.62	746.47	656.36	90.10	8.284		
7,350.00	3,695.04	7,976.68	4,309.94	68.93	69.61	-145.418	-3,390.79	622.57	746.88	655.56	91.32	8.179		
7,400.00	3,694.04	8,026.68	4,309.44	69.86	70.53	-145.440	-3,440.79	622.52	747.29	654.76	92.53	8.076		
7,450.00	3,693.05	8,076.68	4,308.94	70.80	71.45	-145.462	-3,490.78	622.47	747.70	653.96	93.74	7.976		
7,500.00	3,692.05	8,126.68	4,308.44	71.74	72.38	-145.483	-3,540.78	622.42	748.11	653.16	94.95	7.879		
7,550.00	3,691.05	8,176.67	4,307.94	72.68	73.30	-145.505	-3,590.77	622.37	748.52	652.36	96.16	7.784		
7,600.00	3,690.05	8,226.67	4,307.44	73.62	74.23	-145.527	-3,640.77	622.33	748.93	651.56	97.37	7.692		
7,650.00	3,689.05	8,276.67	4,306.94	74.55	75.15	-145.548	-3,690.76	622.28	749.34	650.76	98.58	7.601		
7,700.00	3,688.06	8,326.67	4,306.45	75.49	76.08	-145.570	-3,740.76	622.23	749.75	649.97	99.79	7.513		
7,750.00	3,687.06	8,376.66	4,305.95	76.43	77.01	-145.591	-3,790.75	622.18	750.17	649.17	101.00	7.427		

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft	
MAYARO 22 STATE COM - 70H - Wellbore #1 - PERMIT												Offset Well Error:	0.00 usft	
Survey Program: 0-MWD+IGRF														
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,800.00	3,686.06	8,426.66	4,305.45	77.37	77.94	-145.613	-3,840.75	622.13	750.58	648.37	102.21	7.344		
7,850.00	3,685.06	8,476.66	4,304.95	78.32	78.87	-145.634	-3,890.74	622.08	750.99	647.57	103.42	7.262		
7,900.00	3,684.06	8,526.66	4,304.45	79.26	79.80	-145.656	-3,940.74	622.03	751.40	646.78	104.63	7.182		
7,950.00	3,683.07	8,576.65	4,303.95	80.20	80.73	-145.677	-3,990.73	621.99	751.82	645.98	105.84	7.104		
8,000.00	3,682.07	8,626.65	4,303.45	81.14	81.66	-145.699	-4,040.73	621.94	752.23	645.18	107.04	7.027		
8,050.00	3,681.07	8,676.65	4,302.95	82.08	82.59	-145.720	-4,090.72	621.89	752.64	644.39	108.25	6.953		
8,100.00	3,680.07	8,726.65	4,302.46	83.03	83.53	-145.742	-4,140.72	621.84	753.05	643.59	109.46	6.880		
8,150.00	3,679.07	8,776.64	4,301.96	83.97	84.46	-145.763	-4,190.71	621.79	753.47	642.80	110.67	6.808		
8,200.00	3,678.08	8,826.64	4,301.46	84.91	85.40	-145.784	-4,240.71	621.74	753.88	642.01	111.87	6.739		
8,250.00	3,677.08	8,876.64	4,300.96	85.86	86.33	-145.806	-4,290.70	621.69	754.29	641.21	113.08	6.670		
8,300.00	3,676.08	8,926.64	4,300.46	86.80	87.26	-145.827	-4,340.70	621.64	754.71	640.42	114.28	6.604		
8,350.00	3,675.08	8,976.63	4,299.96	87.74	88.20	-145.848	-4,390.69	621.60	755.12	639.63	115.49	6.538		
8,354.05	3,675.00	8,972.74	4,300.00	87.82	88.13	-145.847	-4,386.80	621.60	755.19	639.61	115.58	6.534		

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	162.00	0.00	0.00	0.37	91.642	-53.60	1,869.90	1,870.67					
50.00	50.00	212.00	50.00	0.05	0.54	91.642	-53.60	1,869.90	1,870.67	1,870.07	0.60	3,124.823		
100.00	100.00	262.00	100.00	0.14	0.72	91.642	-53.60	1,869.90	1,870.67	1,869.80	0.87	2,156.386		
103.07	103.07	265.07	103.07	0.15	0.74	91.642	-53.60	1,869.90	1,870.67	1,869.78	0.89	2,103.023		
150.00	150.00	310.37	148.37	0.32	0.90	91.641	-53.58	1,869.91	1,870.67	1,869.45	1.22	1,533.250		
200.00	200.00	353.59	191.58	0.50	1.05	91.627	-53.12	1,870.03	1,870.81	1,869.25	1.55	1,203.867		
250.00	250.00	396.78	234.76	0.68	1.21	91.593	-52.03	1,870.34	1,871.12	1,869.24	1.89	991.154		
300.00	300.00	439.92	277.87	0.86	1.36	91.540	-50.31	1,870.82	1,871.62	1,869.40	2.22	842.583		
350.00	350.00	483.03	320.90	1.04	1.52	76.295	-47.97	1,871.47	1,872.20	1,869.65	2.55	732.981		
400.00	399.98	526.10	363.87	1.22	1.68	76.226	-45.01	1,872.29	1,872.76	1,869.88	2.89	648.695		
450.00	449.93	569.16	406.76	1.40	1.83	76.161	-41.43	1,873.29	1,873.30	1,870.08	3.22	581.550		
500.00	499.84	612.19	449.57	1.58	1.99	76.100	-37.23	1,874.45	1,873.82	1,870.26	3.56	527.040		
550.00	549.68	655.20	492.29	1.77	2.15	76.042	-32.41	1,875.79	1,874.31	1,870.42	3.89	481.230		
600.00	599.45	698.19	534.91	1.95	2.30	75.988	-26.98	1,877.30	1,874.78	1,870.55	4.23	442.781		
650.00	649.13	741.16	577.42	2.15	2.46	75.937	-20.94	1,878.98	1,875.23	1,870.64	4.58	409.191		
700.00	698.70	784.12	619.82	2.34	2.61	75.891	-14.28	1,880.83	1,875.65	1,870.72	4.93	380.356		
750.00	748.15	827.06	662.09	2.55	2.77	75.848	-7.02	1,882.85	1,876.05	1,870.76	5.29	354.463		
800.00	797.47	869.98	704.23	2.76	2.92	75.808	0.85	1,885.04	1,876.42	1,870.77	5.65	331.856		
850.00	846.63	912.90	746.23	2.98	3.08	75.772	9.32	1,887.40	1,876.77	1,870.74	6.03	311.161		
900.00	895.62	955.80	788.08	3.20	3.23	75.740	18.40	1,889.93	1,877.09	1,870.68	6.41	292.870		
950.00	944.44	1,003.50	834.50	3.45	3.40	75.715	29.02	1,892.88	1,877.35	1,870.52	6.82	275.118		
1,000.00	993.06	1,053.50	883.14	3.69	3.58	75.718	40.17	1,895.98	1,877.40	1,870.15	7.25	258.989		
1,050.00	1,041.46	1,103.49	931.77	3.95	3.77	75.750	51.33	1,899.08	1,877.23	1,869.54	7.69	243.976		
1,100.00	1,089.64	1,153.46	980.38	4.22	3.96	75.812	62.48	1,902.18	1,876.85	1,868.71	8.14	230.556		
1,150.00	1,137.58	1,203.38	1,028.94	4.50	4.14	75.904	73.62	1,905.28	1,876.26	1,867.66	8.61	218.008		
1,200.00	1,185.30	1,253.26	1,077.47	4.79	4.33	76.014	84.75	1,908.38	1,875.49	1,866.41	9.08	206.605		
1,250.00	1,232.99	1,303.13	1,125.98	5.09	4.52	76.121	95.88	1,911.47	1,874.70	1,865.14	9.56	196.114		
1,300.00	1,280.68	1,353.01	1,174.50	5.39	4.71	76.227	107.01	1,914.57	1,873.92	1,863.88	10.04	186.614		
1,350.00	1,328.37	1,402.88	1,223.02	5.70	4.89	76.333	118.14	1,917.66	1,873.14	1,862.61	10.53	177.884		
1,400.00	1,376.06	1,452.75	1,271.53	6.00	5.08	76.440	129.27	1,920.76	1,872.37	1,861.36	11.02	169.918		
1,450.00	1,423.75	1,502.62	1,320.05	6.31	5.27	76.546	140.40	1,923.86	1,871.61	1,860.10	11.51	162.567		
1,500.00	1,471.44	1,552.50	1,368.56	6.62	5.46	76.653	151.52	1,926.95	1,870.86	1,858.85	12.01	155.814		
1,550.00	1,519.13	1,602.37	1,417.08	6.94	5.65	76.759	162.65	1,930.05	1,870.11	1,857.60	12.50	149.555		
1,600.00	1,566.82	1,652.24	1,465.60	7.25	5.84	76.866	173.78	1,933.14	1,869.36	1,856.36	13.00	143.771		
1,650.00	1,614.51	1,702.11	1,514.11	7.56	6.03	76.973	184.91	1,936.24	1,868.63	1,855.12	13.50	138.386		
1,700.00	1,662.20	1,751.98	1,562.63	7.88	6.22	77.080	196.04	1,939.33	1,867.89	1,853.89	14.00	133.383		
1,750.00	1,709.89	1,801.86	1,611.14	8.20	6.41	77.187	207.17	1,942.43	1,867.17	1,852.66	14.51	128.708		
1,800.00	1,757.58	1,851.73	1,659.66	8.52	6.60	77.294	218.30	1,945.52	1,866.45	1,851.44	15.01	124.344		
1,850.00	1,805.27	1,901.60	1,708.18	8.83	6.79	77.401	229.43	1,948.62	1,865.74	1,850.23	15.52	120.250		
1,900.00	1,852.96	1,951.47	1,756.69	9.15	6.98	77.508	240.56	1,951.71	1,865.04	1,849.02	16.02	116.412		
1,950.00	1,900.65	2,001.35	1,805.21	9.47	7.17	77.616	251.69	1,954.81	1,864.34	1,847.81	16.53	112.800		
2,000.00	1,948.34	2,051.22	1,853.73	9.79	7.36	77.723	262.82	1,957.90	1,863.65	1,846.62	17.03	109.402		
2,050.00	1,996.03	2,101.09	1,902.24	10.12	7.55	77.831	273.95	1,961.00	1,862.97	1,845.42	17.54	106.193		
2,100.00	2,043.72	2,150.96	1,950.76	10.44	7.74	77.938	285.07	1,964.09	1,862.29	1,844.24	18.05	103.164		
2,150.00	2,091.41	2,200.84	1,999.27	10.76	7.93	78.046	296.20	1,967.19	1,861.62	1,843.06	18.56	100.296		
2,200.00	2,139.09	2,250.71	2,047.79	11.08	8.12	78.153	307.33	1,970.28	1,860.95	1,841.88	19.07	97.580		
2,250.00	2,186.78	2,300.58	2,096.31	11.40	8.31	78.261	318.46	1,973.38	1,860.29	1,840.71	19.58	95.002		
2,300.00	2,234.47	2,350.45	2,144.82	11.73	8.50	78.369	329.59	1,976.48	1,859.64	1,839.55	20.09	92.554		
2,350.00	2,282.16	2,400.33	2,193.34	12.05	8.69	78.477	340.72	1,979.57	1,859.00	1,838.39	20.60	90.224		
2,400.00	2,329.85	2,450.20	2,241.85	12.37	8.88	78.585	351.85	1,982.67	1,858.36	1,837.24	21.12	88.007		
2,450.00	2,377.54	2,500.07	2,290.37	12.70	9.07	78.693	362.98	1,985.76	1,857.73	1,836.10	21.63	85.893		
2,500.00	2,425.23	2,549.94	2,338.89	13.02	9.26	78.801	374.11	1,988.86	1,857.10	1,834.96	22.14	83.876		

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design MAYARO 22 STATE COM - 71H - Wellbore #1 - PERMIT PLAN #2													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,550.00	2,472.92	2,600.18	2,387.40	13.35	9.45	78.910	385.24	1,991.95	1,856.49	1,833.83	22.66	81.944		
2,600.00	2,520.94	2,649.75	2,435.98	13.66	9.64	76.421	396.38	1,995.05	1,855.82	1,832.67	23.15	80.162		
2,650.00	2,569.60	2,700.26	2,484.61	13.93	9.83	72.460	407.54	1,998.15	1,855.06	1,831.44	23.61	78.558		
2,700.00	2,618.77	2,749.64	2,533.15	14.17	10.02	65.966	418.67	2,001.25	1,854.19	1,830.15	24.03	77.146		
2,750.00	2,668.30	2,800.68	2,581.48	14.38	10.22	54.118	429.76	2,004.33	1,853.23	1,828.81	24.42	75.879		
2,800.00	2,718.07	2,848.64	2,629.46	14.54	10.40	30.015	440.76	2,007.40	1,852.21	1,827.45	24.76	74.802		
2,850.00	2,767.94	2,902.53	2,676.96	14.67	10.61	-10.575	451.66	2,010.43	1,851.17	1,826.08	25.08	73.802		
2,900.00	2,817.78	2,945.67	2,723.85	14.77	10.77	-43.000	462.42	2,013.42	1,850.14	1,824.82	25.33	73.051		
2,950.00	2,867.43	3,006.89	2,770.00	14.84	11.01	-59.347	473.00	2,016.36	1,849.20	1,823.59	25.61	72.215		
3,000.00	2,916.78	3,039.66	2,815.29	14.88	11.13	-68.086	483.39	2,019.25	1,848.40	1,822.65	25.75	71.788		
3,050.00	2,965.68	3,085.20	2,859.58	14.90	11.31	-73.487	493.55	2,022.08	1,847.82	1,821.91	25.91	71.319		
3,100.00	3,014.00	3,129.59	2,902.77	14.89	11.48	-77.232	503.46	2,024.83	1,847.54	1,821.50	26.04	70.952		
3,112.38	3,025.86	3,140.39	2,913.28	14.88	11.52	-77.998	505.87	2,025.50	1,847.53	1,821.47	26.07	70.881	CC	
3,150.00	3,061.60	3,172.72	2,944.72	14.86	11.64	-80.051	513.08	2,027.51	1,847.65	1,821.51	26.14	70.681		
3,200.00	3,108.37	3,214.46	2,985.34	14.81	11.80	-82.299	522.40	2,030.10	1,848.24	1,822.03	26.22	70.502		
3,250.00	3,154.16	3,254.71	3,024.49	14.74	11.95	-84.162	531.38	2,032.60	1,849.41	1,823.14	26.27	70.408		
3,300.00	3,198.86	3,293.36	3,062.08	14.66	12.10	-85.744	540.00	2,035.00	1,851.25	1,824.95	26.30	70.391		
3,350.00	3,242.34	3,330.29	3,098.01	14.57	12.24	-87.105	548.24	2,037.29	1,853.86	1,827.54	26.32	70.443		
3,400.00	3,284.47	3,369.09	3,135.78	14.48	12.39	-88.359	556.78	2,039.69	1,857.32	1,830.98	26.34	70.518		
3,450.00	3,325.16	3,416.02	3,181.82	14.38	12.57	-89.651	565.39	2,042.55	1,861.55	1,835.16	26.39	70.537		
3,500.00	3,364.28	3,465.37	3,230.63	14.28	12.75	-90.872	572.00	2,045.48	1,866.51	1,840.05	26.46	70.545		
3,550.00	3,401.73	3,517.57	3,282.57	14.18	12.93	-92.045	576.22	2,048.48	1,872.16	1,845.62	26.54	70.528		
3,600.00	3,437.40	3,573.15	3,338.04	14.10	13.12	-93.190	577.59	2,051.57	1,878.50	1,851.84	26.65	70.478		
3,650.00	3,471.20	3,632.74	3,397.50	14.03	13.30	-94.327	575.47	2,054.72	1,885.46	1,858.67	26.79	70.388		
3,700.00	3,503.03	3,697.16	3,461.50	13.99	13.49	-95.474	569.01	2,057.96	1,893.00	1,866.05	26.95	70.245		
3,750.00	3,532.81	3,767.36	3,530.59	13.97	13.69	-96.651	557.08	2,061.24	1,901.03	1,873.89	27.14	70.044		
3,800.00	3,560.45	3,844.56	3,605.33	13.99	13.89	-97.873	538.13	2,064.56	1,909.44	1,882.07	27.37	69.776		
3,850.00	3,585.99	3,930.39	3,686.34	14.06	14.09	-99.268	510.06	2,067.85	1,918.05	1,890.42	27.63	69.426		
3,900.00	3,610.99	4,029.15	3,776.02	14.18	14.31	-100.949	468.92	2,071.08	1,926.19	1,898.28	27.91	69.020		
3,950.00	3,635.99	4,142.79	3,873.33	14.39	14.55	-102.546	410.44	2,074.03	1,933.26	1,905.00	28.26	68.400		
4,000.00	3,660.99	4,270.98	3,973.91	14.62	14.79	-103.906	331.15	2,076.32	1,938.79	1,910.21	28.58	67.834		
4,050.00	3,685.82	4,050.00	4,055.10	14.91	14.40	-104.635	247.98	2,077.40	1,942.31	1,914.04	28.28	68.693		
4,100.00	3,707.71	4,558.21	4,155.22	15.25	15.36	-105.250	109.77	2,077.29	1,944.40	1,914.96	29.44	66.045		
4,150.00	3,725.60	4,615.59	4,183.97	15.63	15.49	-105.330	60.12	2,076.86	1,946.17	1,916.26	29.91	65.057		
4,200.00	3,739.35	4,664.08	4,208.22	16.06	15.61	-105.380	18.12	2,076.49	1,949.14	1,918.72	30.42	64.080		
4,250.00	3,748.86	4,711.33	4,231.84	16.53	15.74	-105.411	-22.80	2,076.13	1,953.36	1,922.42	30.94	63.133		
4,300.00	3,754.06	4,756.99	4,254.67	17.03	15.87	-105.404	-62.33	2,075.78	1,958.90	1,927.41	31.48	62.218		
4,350.00	3,754.92	5,118.15	4,337.51	17.57	16.90	-107.303	-408.19	2,072.74	1,959.88	1,927.29	32.59	60.136		
4,400.00	3,753.93	5,168.15	4,336.93	18.13	17.05	-107.318	-458.18	2,072.30	1,959.63	1,926.36	33.27	58.900		
4,450.00	3,752.93	5,218.14	4,336.34	18.74	17.21	-107.332	-508.17	2,071.86	1,959.38	1,925.37	34.01	57.619		
4,500.00	3,751.93	5,268.14	4,335.75	19.35	17.38	-107.347	-558.16	2,071.42	1,959.12	1,924.37	34.75	56.373		
4,550.00	3,750.93	5,318.14	4,335.16	20.02	17.56	-107.362	-608.15	2,070.98	1,958.87	1,923.31	35.56	55.089		
4,600.00	3,749.93	5,368.13	4,334.57	20.68	17.74	-107.377	-658.14	2,070.54	1,958.62	1,922.25	36.37	53.846		
4,650.00	3,748.94	5,418.13	4,333.98	21.38	17.94	-107.392	-708.13	2,070.10	1,958.37	1,921.13	37.24	52.588		
4,700.00	3,747.94	5,468.13	4,333.39	22.09	18.14	-107.407	-758.13	2,069.66	1,958.12	1,920.00	38.11	51.374		
4,750.00	3,746.94	5,518.12	4,332.80	22.83	18.36	-107.421	-808.12	2,069.22	1,957.87	1,918.84	39.03	50.162		
4,800.00	3,745.94	5,568.12	4,332.21	23.57	18.58	-107.436	-858.11	2,068.78	1,957.61	1,917.66	39.96	48.995		
4,850.00	3,744.94	5,618.12	4,331.62	24.34	18.80	-107.451	-908.10	2,068.34	1,957.36	1,916.45	40.91	47.840		
4,900.00	3,743.94	5,668.11	4,331.03	25.11	19.04	-107.466	-958.09	2,067.90	1,957.11	1,915.23	41.88	46.729		
4,950.00	3,742.95	5,718.11	4,330.44	25.90	19.28	-107.481	-1,008.08	2,067.46	1,956.86	1,913.98	42.88	45.638		
5,000.00	3,741.95	5,768.11	4,329.85	26.69	19.53	-107.496	-1,058.07	2,067.02	1,956.61	1,912.73	43.88	44.588		
5,050.00	3,740.95	5,818.11	4,329.26	27.51	19.78	-107.511	-1,108.07	2,066.58	1,956.36	1,911.45	44.91	43.561		

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	3,739.95	5,868.10	4,328.67	28.32	20.04	-107.525	-1,158.06	2,066.14	1,956.11	1,910.16	45.95	42.574		
5,150.00	3,738.95	5,918.10	4,328.08	29.15	20.31	-107.540	-1,208.05	2,065.70	1,955.86	1,908.86	47.00	41.612		
5,200.00	3,737.96	5,968.10	4,327.49	29.98	20.58	-107.555	-1,258.04	2,065.26	1,955.61	1,907.55	48.06	40.687		
5,250.00	3,736.96	6,018.09	4,326.91	30.82	20.85	-107.570	-1,308.03	2,064.82	1,955.36	1,906.22	49.14	39.788		
5,300.00	3,735.96	6,068.09	4,326.32	31.67	21.14	-107.585	-1,358.02	2,064.38	1,955.11	1,904.88	50.23	38.922		
5,350.00	3,734.96	6,118.09	4,325.73	32.52	21.42	-107.600	-1,408.01	2,063.94	1,954.86	1,903.53	51.33	38.082		
5,400.00	3,733.96	6,168.08	4,325.14	33.38	21.72	-107.615	-1,458.00	2,063.50	1,954.61	1,902.17	52.44	37.273		
5,450.00	3,732.97	6,218.08	4,324.55	34.24	22.01	-107.630	-1,508.00	2,063.06	1,954.36	1,900.80	53.56	36.489		
5,500.00	3,731.97	6,268.08	4,323.96	35.11	22.31	-107.644	-1,557.99	2,062.62	1,954.11	1,899.43	54.69	35.733		
5,550.00	3,730.97	6,318.07	4,323.37	35.99	22.62	-107.659	-1,607.98	2,062.18	1,953.86	1,898.04	55.82	35.001		
5,600.00	3,729.97	6,368.07	4,322.78	36.86	22.93	-107.674	-1,657.97	2,061.74	1,953.61	1,896.65	56.97	34.295		
5,650.00	3,728.97	6,418.07	4,322.19	37.74	23.24	-107.689	-1,707.96	2,061.30	1,953.37	1,895.25	58.12	33.611		
5,700.00	3,727.98	6,468.06	4,321.60	38.63	23.56	-107.704	-1,757.95	2,060.86	1,953.12	1,893.84	59.27	32.951		
5,750.00	3,726.98	6,518.06	4,321.01	39.52	23.88	-107.719	-1,807.94	2,060.42	1,952.87	1,892.43	60.44	32.312		
5,800.00	3,725.98	6,568.06	4,320.42	40.41	24.20	-107.734	-1,857.94	2,059.98	1,952.62	1,891.01	61.61	31.695		
5,850.00	3,724.98	6,618.05	4,319.83	41.30	24.53	-107.749	-1,907.93	2,059.54	1,952.37	1,889.59	62.78	31.096		
5,900.00	3,723.98	6,668.05	4,319.24	42.20	24.86	-107.764	-1,957.92	2,059.09	1,952.12	1,888.16	63.96	30.519		
5,950.00	3,722.99	6,718.05	4,318.65	43.10	25.20	-107.779	-2,007.91	2,058.65	1,951.88	1,886.72	65.15	29.959		
6,000.00	3,721.99	6,768.04	4,318.06	44.00	25.53	-107.794	-2,057.90	2,058.21	1,951.63	1,885.28	66.34	29.417		
6,050.00	3,720.99	6,818.04	4,317.48	44.91	25.87	-107.809	-2,107.89	2,057.77	1,951.38	1,883.84	67.54	28.892		
6,100.00	3,719.99	6,868.04	4,316.89	45.81	26.22	-107.823	-2,157.88	2,057.33	1,951.13	1,882.39	68.74	28.384		
6,150.00	3,718.99	6,918.03	4,316.30	46.72	26.56	-107.838	-2,207.88	2,056.89	1,950.88	1,880.94	69.95	27.891		
6,200.00	3,718.00	6,968.03	4,315.71	47.63	26.91	-107.853	-2,257.87	2,056.45	1,950.64	1,879.48	71.15	27.414		
6,250.00	3,717.00	7,018.03	4,315.12	48.54	27.26	-107.868	-2,307.86	2,056.01	1,950.39	1,878.02	72.37	26.951		
6,300.00	3,716.00	7,068.03	4,314.53	49.46	27.61	-107.883	-2,357.85	2,055.57	1,950.14	1,876.56	73.58	26.502		
6,350.00	3,715.00	7,118.02	4,313.94	50.37	27.96	-107.898	-2,407.84	2,055.13	1,949.90	1,875.09	74.81	26.066		
6,400.00	3,714.00	7,168.02	4,313.35	51.29	28.32	-107.913	-2,457.83	2,054.69	1,949.65	1,873.62	76.03	25.644		
6,450.00	3,713.01	7,218.02	4,312.76	52.21	28.68	-107.928	-2,507.82	2,054.25	1,949.40	1,872.15	77.26	25.233		
6,500.00	3,712.01	7,268.01	4,312.17	53.13	29.04	-107.943	-2,557.82	2,053.81	1,949.16	1,870.67	78.48	24.835		
6,550.00	3,711.01	7,318.01	4,311.58	54.05	29.40	-107.958	-2,607.81	2,053.37	1,948.91	1,869.19	79.72	24.448		
6,600.00	3,710.01	7,368.01	4,310.99	54.97	29.77	-107.973	-2,657.80	2,052.93	1,948.66	1,867.71	80.95	24.072		
6,650.00	3,709.01	7,418.01	4,310.40	55.90	30.13	-108.002	-2,707.80	2,051.75	1,948.26	1,865.91	82.35	23.657		
6,700.00	3,708.02	7,468.02	4,309.81	56.82	31.42	-108.099	-2,817.95	2,044.50	1,946.00	1,862.08	83.92	23.189		
6,750.00	3,707.02	7,518.03	4,309.22	57.75	32.13	-108.201	-2,927.74	2,035.70	1,941.68	1,856.44	85.24	22.779		
6,800.00	3,706.02	7,568.04	4,308.63	58.68	32.50	-108.258	-3,037.23	2,030.68	1,937.05	1,850.59	86.46	22.404		
6,850.00	3,705.02	7,618.05	4,308.04	59.60	32.87	-108.316	-3,146.72	2,025.66	1,932.43	1,844.75	87.69	22.038		
6,900.00	3,704.02	7,668.06	4,307.45	60.53	33.24	-108.374	-3,256.21	2,020.64	1,927.81	1,838.90	88.91	21.683		
6,950.00	3,703.03	7,718.07	4,306.86	61.46	33.61	-108.432	-3,365.70	2,015.62	1,923.19	1,833.06	90.14	21.337		
7,000.00	3,702.03	7,768.08	4,306.27	62.39	33.98	-108.490	-3,475.19	2,010.60	1,918.58	1,827.22	91.36	21.000		
7,050.00	3,701.03	7,818.09	4,305.68	63.32	34.36	-108.549	-3,584.68	2,005.59	1,913.97	1,821.38	92.59	20.671		
7,100.00	3,700.03	7,868.10	4,305.09	64.26	34.73	-108.608	-3,694.17	2,000.57	1,909.36	1,815.53	93.82	20.351		
7,150.00	3,699.03	7,918.11	4,304.50	65.19	35.11	-108.667	-3,803.66	1,995.55	1,904.75	1,809.70	95.05	20.039		
7,200.00	3,698.04	7,968.12	4,303.91	66.12	35.49	-108.727	-3,913.15	1,990.53	1,900.14	1,803.86	96.28	19.735		
7,250.00	3,697.04	8,018.13	4,303.32	67.06	35.80	-108.776	-4,022.64	1,985.51	1,895.58	1,798.08	97.50	19.442		
7,300.00	3,696.04	8,068.14	4,302.73	67.99	35.97	-108.802	-4,132.13	1,984.33	1,891.48	1,792.79	98.69	19.166		
7,350.00	3,695.04	8,118.15	4,302.14	68.93	36.28	-108.841	-4,241.62	1,981.15	1,887.83	1,787.92	99.91	18.896		
7,400.00	3,694.04	8,168.16	4,301.55	69.86	36.51	-108.869	-4,351.11	1,979.01	1,884.71	1,783.61	101.10	18.642		
7,450.00	3,693.05	8,218.17	4,300.96	70.80	36.75	-108.894	-4,460.60	1,977.22	1,882.10	1,779.82	102.29	18.400		
7,500.00	3,692.05	8,268.18	4,300.37	71.74	36.99	-108.916	-4,570.09	1,975.72	1,880.00	1,776.53	103.47	18.169		
7,550.00	3,691.05	8,318.19	4,299.78	72.68	37.23	-108.934	-4,679.58	1,974.57	1,878.41	1,773.76	104.65	17.950		
7,600.00	3,690.05	8,368.20	4,299.19	73.62	37.53	-108.952	-4,789.07	1,973.60	1,877.35	1,771.50	105.85	17.735		
7,650.00	3,689.05	8,418.21	4,298.60	74.55	37.71	-108.961	-4,898.56	1,973.26	1,876.76	1,769.78	106.98	17.543		

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD+IFR1+SAG+FDIR													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
7,681.00	3,688.43	8,442.90	4,298.26	75.14	37.86	-108.966	-3,729.08	1,973.12	1,876.66	1,768.96	107.70	17.425			
7,700.00	3,688.06	8,454.63	4,298.12	75.49	37.95	-108.969	-3,740.81	1,973.10	1,876.70	1,768.56	108.14	17.355			
7,750.00	3,687.06	8,485.50	4,297.75	76.43	38.20	-108.975	-3,771.67	1,973.28	1,877.15	1,767.86	109.28	17.177			
7,800.00	3,686.06	8,516.35	4,297.39	77.37	38.44	-108.977	-3,802.52	1,973.78	1,878.11	1,767.68	110.42	17.008 ES			
7,850.00	3,685.06	8,550.52	4,297.04	78.32	38.71	-108.975	-3,832.56	1,974.60	1,879.57	1,768.00	111.58	16.845			
7,900.00	3,684.06	8,603.63	4,296.45	79.26	39.13	-108.970	-3,882.50	1,976.25	1,881.32	1,768.43	112.88	16.666			
7,950.00	3,683.07	8,646.34	4,295.87	80.20	39.47	-108.965	-3,932.44	1,977.90	1,883.06	1,768.95	114.11	16.502			
8,000.00	3,682.07	8,703.69	4,295.28	81.14	39.92	-108.960	-3,982.38	1,979.55	1,884.80	1,769.35	115.46	16.325			
8,050.00	3,681.07	8,746.28	4,294.70	82.08	40.26	-108.955	-4,032.32	1,981.20	1,886.55	1,769.86	116.69	16.168			
8,100.00	3,680.07	8,803.75	4,294.11	83.03	40.72	-108.950	-4,082.26	1,982.86	1,888.29	1,770.26	118.03	15.998			
8,150.00	3,679.07	8,846.22	4,293.53	83.97	41.06	-108.945	-4,132.19	1,984.51	1,890.03	1,770.77	119.26	15.847			
8,200.00	3,678.08	8,903.81	4,292.94	84.91	41.52	-108.940	-4,182.13	1,986.16	1,891.77	1,771.16	120.61	15.685			
8,250.00	3,677.08	8,946.16	4,292.35	85.86	41.86	-108.936	-4,232.07	1,987.81	1,893.52	1,771.67	121.84	15.540			
8,300.00	3,676.08	8,996.13	4,291.77	86.80	42.26	-108.931	-4,282.01	1,989.46	1,895.26	1,772.12	123.14	15.392			
8,350.00	3,675.08	9,046.10	4,291.18	87.74	42.67	-108.926	-4,331.95	1,991.12	1,897.00	1,772.57	124.43	15.246			
8,354.05	3,675.00	9,050.15	4,291.14	87.82	42.70	-108.925	-4,336.00	1,991.25	1,897.14	1,772.61	124.53	15.234 SF			

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 25-MWVD												Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis			Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
3,950.00	3,635.99	5,853.24	3,134.40	14.39	72.29	-3.361	-1,940.16	282.28	1,996.16	1,913.96	82.19	24.286		
4,000.00	3,660.99	5,850.74	3,134.39	14.62	72.23	-3.259	-1,940.26	279.79	1,960.88	1,879.06	81.82	23.965		
4,050.00	3,685.82	5,848.29	3,134.38	14.91	72.17	-3.242	-1,940.36	277.34	1,926.10	1,844.67	81.43	23.653		
4,100.00	3,707.71	5,845.79	3,134.37	15.25	72.11	-3.443	-1,940.46	274.84	1,889.66	1,808.62	81.04	23.319		
4,150.00	3,725.60	5,843.22	3,134.36	15.63	72.05	-3.701	-1,940.56	272.27	1,850.91	1,770.26	80.65	22.950		
4,200.00	3,739.35	5,840.61	3,134.35	16.06	71.98	-4.039	-1,940.66	269.67	1,810.03	1,729.76	80.27	22.551		
4,250.00	3,748.86	5,837.98	3,134.34	16.53	71.92	-4.495	-1,940.76	267.04	1,767.18	1,687.29	79.90	22.119		
4,300.00	3,754.06	5,835.36	3,134.33	17.03	71.86	-5.136	-1,940.86	264.42	1,722.56	1,643.01	79.55	21.655		
4,350.00	3,754.92	5,832.76	3,134.32	17.57	71.79	-5.980	-1,940.96	261.82	1,676.38	1,597.16	79.22	21.160		
4,400.00	3,753.93	5,830.21	3,134.32	18.13	71.73	-5.734	-1,941.05	259.27	1,629.70	1,550.80	78.90	20.655		
4,450.00	3,752.93	5,827.71	3,134.31	18.74	71.67	-5.494	-1,941.14	256.78	1,583.23	1,504.67	78.55	20.155		
4,500.00	3,751.93	5,825.27	3,134.30	19.35	71.61	-5.259	-1,941.23	254.34	1,536.97	1,458.78	78.19	19.658		
4,550.00	3,750.93	5,822.88	3,134.29	20.02	71.55	-5.028	-1,941.32	251.95	1,490.95	1,413.15	77.80	19.164		
4,600.00	3,749.93	5,820.54	3,134.28	20.68	71.50	-4.803	-1,941.40	249.61	1,445.19	1,367.81	77.38	18.676		
4,650.00	3,748.94	5,818.25	3,134.27	21.38	71.44	-4.582	-1,941.48	247.32	1,399.72	1,322.77	76.94	18.192		
4,700.00	3,747.94	5,816.00	3,134.27	22.09	71.39	-4.365	-1,941.56	245.07	1,354.56	1,278.09	76.47	17.714		
4,750.00	3,746.94	5,813.80	3,134.26	22.83	71.33	-4.153	-1,941.63	242.88	1,309.75	1,233.79	75.96	17.242		
4,800.00	3,745.94	5,811.65	3,134.25	23.57	71.28	-3.944	-1,941.71	240.73	1,265.33	1,189.92	75.41	16.779		
4,850.00	3,744.94	5,809.54	3,134.24	24.34	71.23	-3.740	-1,941.78	238.62	1,221.34	1,146.52	74.82	16.323		
4,900.00	3,743.94	5,807.47	3,134.24	25.11	71.18	-3.540	-1,941.85	236.55	1,177.83	1,103.65	74.18	15.878		
4,950.00	3,742.95	5,805.44	3,134.23	25.90	71.13	-3.344	-1,941.91	234.52	1,134.84	1,061.36	73.48	15.444		
5,000.00	3,741.95	5,803.45	3,134.22	26.69	71.08	-3.151	-1,941.98	232.53	1,092.45	1,019.73	72.72	15.023		
5,050.00	3,740.95	5,801.50	3,134.22	27.51	71.04	-2.962	-1,942.04	230.58	1,050.73	978.84	71.89	14.617		
5,100.00	3,739.95	5,799.59	3,134.21	28.32	70.99	-2.777	-1,942.10	228.67	1,009.75	938.79	70.97	14.229		
5,150.00	3,738.95	5,797.71	3,134.20	29.15	70.94	-2.595	-1,942.16	226.80	969.62	899.67	69.95	13.861		
5,200.00	3,737.96	5,795.87	3,134.20	29.98	70.90	-2.416	-1,942.22	224.95	930.45	861.61	68.83	13.517		
5,250.00	3,736.96	5,794.06	3,134.19	30.82	70.86	-2.241	-1,942.27	223.15	892.35	824.75	67.59	13.202		
5,300.00	3,735.96	5,792.29	3,134.18	31.67	70.81	-2.069	-1,942.33	221.37	855.47	789.26	66.21	12.920		
5,350.00	3,734.96	5,790.55	3,134.18	32.52	70.77	-1.900	-1,942.38	219.63	819.98	755.31	64.68	12.678		
5,400.00	3,733.96	5,788.83	3,134.17	33.38	70.73	-1.734	-1,942.43	217.92	786.07	723.11	62.97	12.484		
5,450.00	3,732.97	5,787.15	3,134.17	34.24	70.69	-1.570	-1,942.48	216.24	753.95	692.88	61.07	12.345		
5,500.00	3,731.97	5,785.50	3,134.16	35.11	70.65	-1.410	-1,942.53	214.59	723.86	664.88	58.97	12.274		
5,550.00	3,730.97	5,783.88	3,134.15	35.99	70.61	-1.253	-1,942.58	212.97	696.06	639.38	56.68	12.281		
5,600.00	3,729.97	5,782.29	3,134.15	36.86	70.57	-1.098	-1,942.63	211.38	670.83	616.64	54.19	12.380		
5,650.00	3,728.97	5,780.72	3,134.14	37.74	70.53	-0.946	-1,942.67	209.81	648.48	596.92	51.55	12.579		
5,700.00	3,727.98	5,779.18	3,134.14	38.63	70.50	-0.796	-1,942.72	208.28	629.31	580.45	48.86	12.879		
5,750.00	3,726.98	5,777.67	3,134.13	39.52	70.46	-0.650	-1,942.76	206.76	613.62	567.34	46.28	13.258		
5,800.00	3,725.98	5,776.18	3,134.13	40.41	70.42	-0.505	-1,942.80	205.28	601.69	557.63	44.06	13.655		
5,850.00	3,724.98	5,774.72	3,134.12	41.30	70.39	-0.363	-1,942.84	203.81	593.74	551.17	42.57	13.946		
5,900.00	3,723.98	5,773.28	3,134.12	42.20	70.35	-0.223	-1,942.88	202.38	589.93	547.75	42.18	13.985		
5,920.13	3,723.58	5,772.71	3,134.12	42.56	70.34	-0.168	-1,942.90	201.80	589.59	547.19	42.40	13.906 CC, ES		
5,950.00	3,722.99	5,771.87	3,134.11	43.10	70.32	-0.086	-1,942.92	200.96	590.34	547.24	43.11	13.695		
6,000.00	3,721.99	5,770.48	3,134.11	44.00	70.29	0.049	-1,942.96	199.57	594.97	549.75	45.22	13.159		
6,050.00	3,720.99	5,769.11	3,134.10	44.91	70.25	0.182	-1,942.99	198.20	603.71	555.56	48.15	12.539		
6,100.00	3,719.99	5,767.76	3,134.10	45.81	70.22	0.313	-1,943.03	196.86	616.39	564.90	51.49	11.971		
6,150.00	3,718.99	5,766.43	3,134.09	46.72	70.19	0.442	-1,943.07	195.53	632.78	577.84	54.94	11.518		
6,200.00	3,718.00	5,765.13	3,134.09	47.63	70.16	0.569	-1,943.10	194.23	652.59	594.32	58.27	11.199		
6,250.00	3,717.00	5,763.84	3,134.08	48.54	70.12	0.694	-1,943.13	192.94	675.53	614.15	61.38	11.006		
6,300.00	3,716.00	5,762.58	3,134.08	49.46	70.09	0.816	-1,943.17	191.68	701.29	637.08	64.20	10.923 SF		
6,350.00	3,715.00	5,761.33	3,134.08	50.37	70.06	0.937	-1,943.20	190.43	729.56	662.84	66.72	10.934		
6,400.00	3,714.00	5,760.12	3,134.07	51.29	70.03	1.056	-1,943.23	189.21	760.08	691.13	68.94	11.024		
6,450.00	3,713.01	5,758.92	3,134.07	52.21	70.01	1.171	-1,943.26	188.02	792.57	721.68	70.89	11.180		

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 25-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
6,500.00	3,712.01	5,757.74	3,134.06	53.13	69.98	1.287	-1,943.29	186.84	826.81	754.23	72.58	11.391		
6,550.00	3,711.01	5,756.56	3,134.06	54.05	69.95	1.401	-1,943.32	185.66	862.59	788.54	74.05	11.649		
6,600.00	3,710.01	5,755.39	3,134.05	54.97	69.92	1.514	-1,943.35	184.49	899.72	824.40	75.32	11.945		
6,650.00	3,709.01	5,754.23	3,134.05	55.90	69.89	1.627	-1,943.37	183.33	938.05	861.63	76.42	12.274		
6,700.00	3,708.02	5,753.08	3,134.05	56.82	69.86	1.739	-1,943.40	182.18	977.43	900.06	77.38	12.632		
6,750.00	3,707.02	5,751.93	3,134.04	57.75	69.84	1.850	-1,943.43	181.03	1,017.75	939.54	78.20	13.014		
6,800.00	3,706.02	5,750.79	3,134.04	58.68	69.81	1.961	-1,943.46	179.89	1,058.88	979.96	78.92	13.417		
6,850.00	3,705.02	5,749.66	3,134.03	59.60	69.78	2.070	-1,943.48	178.76	1,100.76	1,021.21	79.55	13.838		
6,900.00	3,704.02	5,748.54	3,134.03	60.53	69.75	2.179	-1,943.51	177.64	1,143.28	1,063.19	80.09	14.275		
6,950.00	3,703.03	5,747.42	3,134.02	61.46	69.73	2.288	-1,943.54	176.52	1,186.39	1,105.82	80.56	14.726		
7,000.00	3,702.03	5,746.31	3,134.02	62.39	69.70	2.395	-1,943.56	175.41	1,230.01	1,149.03	80.98	15.189		
7,050.00	3,701.03	5,745.21	3,134.02	63.32	69.67	2.502	-1,943.59	174.31	1,274.11	1,192.76	81.34	15.663		
7,100.00	3,700.03	5,744.11	3,134.01	64.26	69.65	2.608	-1,943.62	173.22	1,318.62	1,236.96	81.66	16.147		
7,150.00	3,699.03	5,743.03	3,134.01	65.19	69.62	2.714	-1,943.64	172.13	1,363.51	1,281.57	81.94	16.639		
7,200.00	3,698.04	5,741.94	3,134.00	66.12	69.59	2.818	-1,943.67	171.05	1,408.75	1,326.56	82.19	17.140		
7,250.00	3,697.04	5,740.87	3,134.00	67.06	69.57	2.922	-1,943.69	169.98	1,454.30	1,371.89	82.41	17.647		
7,300.00	3,696.04	5,739.80	3,133.99	67.99	69.54	3.026	-1,943.72	168.91	1,500.13	1,417.52	82.61	18.160		
7,350.00	3,695.04	5,738.74	3,133.99	68.93	69.52	3.128	-1,943.74	167.85	1,546.22	1,463.44	82.78	18.679		
7,400.00	3,694.04	5,737.69	3,133.98	69.86	69.49	3.230	-1,943.77	166.80	1,592.54	1,509.61	82.93	19.204		
7,450.00	3,693.05	5,736.64	3,133.98	70.80	69.47	3.332	-1,943.79	165.75	1,639.08	1,556.01	83.07	19.732		
7,500.00	3,692.05	5,735.60	3,133.97	71.74	69.44	3.433	-1,943.82	164.71	1,685.81	1,602.63	83.19	20.266		
7,550.00	3,691.05	5,734.57	3,133.97	72.68	69.42	3.533	-1,943.84	163.67	1,732.73	1,649.44	83.29	20.803		
7,600.00	3,690.05	5,733.54	3,133.96	73.62	69.39	3.632	-1,943.86	162.65	1,779.82	1,696.43	83.39	21.343		
7,650.00	3,689.05	5,732.52	3,133.96	74.55	69.37	3.731	-1,943.89	161.63	1,827.06	1,743.58	83.48	21.887		
7,700.00	3,688.06	5,731.50	3,133.95	75.49	69.34	3.829	-1,943.91	160.61	1,874.44	1,790.88	83.55	22.434		
7,750.00	3,687.06	5,730.49	3,133.95	76.43	69.32	3.926	-1,943.93	159.60	1,921.95	1,838.33	83.62	22.984		
7,800.00	3,686.06	5,729.49	3,133.94	77.37	69.29	4.023	-1,943.95	158.60	1,969.59	1,885.90	83.68	23.536		

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



### Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 520-INC-ONLY												Offset Well Error:	0.00 usft
MAYARO 22 STATE COM - OFFSET: COLLIER STATE 14 - Wellbore #1 - Wellbore #1													
Reference				Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
6,300.00	3,716.00	3,537.00	3,532.21	49.46	59.62	-75.484	-4,214.37	762.70	1,971.00	1,894.80	76.20	25.866	
6,350.00	3,715.00	3,537.00	3,532.21	50.37	59.62	-75.484	-4,214.37	762.70	1,923.29	1,846.68	76.61	25.103	
6,400.00	3,714.00	3,537.00	3,532.21	51.29	59.62	-75.484	-4,214.37	762.70	1,875.71	1,798.65	77.06	24.341	
6,450.00	3,713.01	3,537.00	3,532.21	52.21	59.62	-75.484	-4,214.37	762.70	1,828.26	1,750.72	77.54	23.577	
6,500.00	3,712.01	3,537.00	3,532.21	53.13	59.62	-75.484	-4,214.37	762.70	1,780.94	1,702.88	78.06	22.815	
6,550.00	3,711.01	3,537.00	3,532.21	54.05	59.62	-75.484	-4,214.37	762.70	1,733.78	1,655.16	78.62	22.052	
6,600.00	3,710.01	3,537.00	3,532.21	54.97	59.62	-75.484	-4,214.37	762.70	1,686.78	1,607.55	79.23	21.290	
6,650.00	3,709.01	3,537.00	3,532.21	55.90	59.62	-75.484	-4,214.37	762.70	1,639.96	1,560.08	79.88	20.530	
6,700.00	3,708.02	3,537.00	3,532.21	56.82	59.62	-75.484	-4,214.37	762.70	1,593.33	1,512.75	80.58	19.773	
6,750.00	3,707.02	3,537.00	3,532.21	57.75	59.62	-75.484	-4,214.37	762.70	1,546.91	1,465.57	81.34	19.018	
6,800.00	3,706.02	3,537.00	3,532.21	58.68	59.62	-75.484	-4,214.37	762.70	1,500.72	1,418.57	82.16	18.267	
6,850.00	3,705.02	3,537.00	3,532.21	59.60	59.62	-75.484	-4,214.37	762.70	1,454.79	1,371.75	83.04	17.520	
6,900.00	3,704.02	3,537.00	3,532.21	60.53	59.62	-75.484	-4,214.37	762.70	1,409.13	1,325.14	83.98	16.779	
6,950.00	3,703.03	3,537.00	3,532.21	61.46	59.62	-75.484	-4,214.37	762.70	1,363.77	1,278.77	85.01	16.043	
7,000.00	3,702.03	3,537.00	3,532.21	62.39	59.62	-75.484	-4,214.37	762.70	1,318.75	1,232.65	86.11	15.316	
7,050.00	3,701.03	3,537.00	3,532.21	63.32	59.62	-75.484	-4,214.37	762.70	1,274.10	1,186.81	87.29	14.596	
7,100.00	3,700.03	3,537.00	3,532.21	64.26	59.62	-75.484	-4,214.37	762.70	1,229.87	1,141.30	88.57	13.886	
7,150.00	3,699.03	3,537.00	3,532.21	65.19	59.62	-75.484	-4,214.37	762.70	1,186.09	1,096.14	89.95	13.186	
7,200.00	3,698.04	3,537.00	3,532.21	66.12	59.62	-75.484	-4,214.37	762.70	1,142.82	1,051.39	91.44	12.499	
7,250.00	3,697.04	3,537.00	3,532.21	67.06	59.62	-75.484	-4,214.37	762.70	1,100.12	1,007.09	93.04	11.824	
7,300.00	3,696.04	3,537.00	3,532.21	67.99	59.62	-75.484	-4,214.37	762.70	1,058.07	963.30	94.77	11.165	
7,350.00	3,695.04	3,537.00	3,532.21	68.93	59.62	-75.484	-4,214.37	762.70	1,016.73	920.11	96.63	10.522	
7,400.00	3,694.04	3,537.00	3,532.21	69.86	59.62	-75.484	-4,214.37	762.70	976.21	877.58	98.63	9.898	
7,450.00	3,693.05	3,537.00	3,532.21	70.80	59.62	-75.484	-4,214.37	762.70	936.60	835.82	100.78	9.294	
7,500.00	3,692.05	3,537.00	3,532.21	71.74	59.62	-75.484	-4,214.37	762.70	898.02	794.94	103.09	8.711	
7,550.00	3,691.05	3,537.00	3,532.21	72.68	59.62	-75.484	-4,214.37	762.70	860.63	755.07	105.56	8.153	
7,600.00	3,690.05	3,537.00	3,532.21	73.62	59.62	-75.484	-4,214.37	762.70	824.57	716.38	108.19	7.622	
7,650.00	3,689.05	3,537.00	3,532.21	74.55	59.62	-75.484	-4,214.37	762.70	790.03	679.05	110.98	7.119	
7,700.00	3,688.06	3,537.00	3,532.21	75.49	59.62	-75.484	-4,214.37	762.70	757.22	643.30	113.92	6.647	
7,750.00	3,687.06	3,537.00	3,532.21	76.43	59.62	-75.484	-4,214.37	762.70	726.37	609.38	116.99	6.209	
7,800.00	3,686.06	3,537.00	3,532.21	77.37	59.62	-75.484	-4,214.37	762.70	697.75	577.59	120.16	5.807	
7,850.00	3,685.06	3,537.00	3,532.21	78.32	59.62	-75.484	-4,214.37	762.70	671.63	548.25	123.38	5.444	
7,900.00	3,684.06	3,537.00	3,532.21	79.26	59.62	-75.484	-4,214.37	762.70	648.32	521.72	126.59	5.121	
7,950.00	3,683.07	3,537.00	3,532.21	80.20	59.62	-75.484	-4,214.37	762.70	628.13	498.41	129.72	4.842	
8,000.00	3,682.07	3,537.00	3,532.21	81.14	59.62	-75.484	-4,214.37	762.70	611.38	478.71	132.67	4.608	
8,050.00	3,681.07	3,537.00	3,532.21	82.08	59.62	-75.484	-4,214.37	762.70	598.35	463.00	135.34	4.421	
8,100.00	3,680.07	3,537.00	3,532.21	83.03	59.62	-75.484	-4,214.37	762.70	589.28	451.65	137.64	4.281	
8,150.00	3,679.07	3,537.00	3,532.21	83.97	59.62	-75.484	-4,214.37	762.70	584.37	444.91	139.46	4.190	
8,182.66	3,678.42	3,537.00	3,532.21	84.58	59.62	-75.484	-4,214.37	762.70	583.46	443.09	140.37	4.157 CC	
8,200.00	3,678.08	3,537.00	3,532.21	84.91	59.62	-75.484	-4,214.37	762.70	583.71	442.96	140.75	4.147 ES, SF	
8,250.00	3,677.08	3,537.00	3,532.21	85.86	59.62	-75.484	-4,214.37	762.70	587.33	445.86	141.47	4.152	
8,300.00	3,676.08	3,537.00	3,532.21	86.80	59.62	-75.484	-4,214.37	762.70	595.14	453.50	141.63	4.202	
8,350.00	3,675.08	3,537.00	3,532.21	87.74	59.62	-75.484	-4,214.37	762.70	606.98	465.71	141.27	4.297	
8,354.05	3,675.00	3,537.00	3,532.21	87.82	59.62	-75.484	-4,214.37	762.70	608.11	466.89	141.22	4.306	

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 530-INC-ONLY												Offset Well Error:	0.00 usft	
MAYARO 22 STATE COM - OFFSET: COLLIER STATE 15 - Wellbore #1 - Wellbore #1														
Reference				Offset			Semi Major Axis		Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
6,350.00	3,715.00	3,535.00	3,527.87	50.37	60.63	33.060	-4,341.91	101.40	1,968.84	1,894.69	74.15	26.552		
6,400.00	3,714.00	3,535.00	3,527.87	51.29	60.63	33.060	-4,341.91	101.40	1,919.05	1,844.85	74.20	25.863		
6,450.00	3,713.01	3,535.00	3,527.87	52.21	60.63	33.060	-4,341.91	101.40	1,869.27	1,795.02	74.25	25.175		
6,500.00	3,712.01	3,535.00	3,527.87	53.13	60.63	33.060	-4,341.91	101.40	1,819.50	1,745.19	74.30	24.487		
6,550.00	3,711.01	3,535.00	3,527.87	54.05	60.63	33.060	-4,341.91	101.40	1,769.74	1,695.38	74.36	23.799		
6,600.00	3,710.01	3,535.00	3,527.87	54.97	60.63	33.060	-4,341.91	101.40	1,720.00	1,645.57	74.42	23.111		
6,650.00	3,709.01	3,535.00	3,527.87	55.90	60.63	33.060	-4,341.91	101.40	1,670.27	1,595.78	74.49	22.423		
6,700.00	3,708.02	3,535.00	3,527.87	56.82	60.63	33.060	-4,341.91	101.40	1,620.56	1,546.00	74.56	21.735		
6,750.00	3,707.02	3,535.00	3,527.87	57.75	60.63	33.060	-4,341.91	101.40	1,570.86	1,496.23	74.64	21.047		
6,800.00	3,706.02	3,535.00	3,527.87	58.68	60.63	33.060	-4,341.91	101.40	1,521.19	1,446.47	74.72	20.359		
6,850.00	3,705.02	3,535.00	3,527.87	59.60	60.63	33.060	-4,341.91	101.40	1,471.54	1,396.74	74.80	19.672		
6,900.00	3,704.02	3,535.00	3,527.87	60.53	60.63	33.060	-4,341.91	101.40	1,421.92	1,347.02	74.90	18.984		
6,950.00	3,703.03	3,535.00	3,527.87	61.46	60.63	33.060	-4,341.91	101.40	1,372.32	1,297.31	75.00	18.297		
7,000.00	3,702.03	3,535.00	3,527.87	62.39	60.63	33.060	-4,341.91	101.40	1,322.75	1,247.63	75.11	17.610		
7,050.00	3,701.03	3,535.00	3,527.87	63.32	60.63	33.060	-4,341.91	101.40	1,273.21	1,197.98	75.24	16.923		
7,100.00	3,700.03	3,535.00	3,527.87	64.26	60.63	33.060	-4,341.91	101.40	1,223.72	1,148.35	75.37	16.236		
7,150.00	3,699.03	3,535.00	3,527.87	65.19	60.63	33.060	-4,341.91	101.40	1,174.26	1,098.74	75.52	15.550		
7,200.00	3,698.04	3,535.00	3,527.87	66.12	60.63	33.060	-4,341.91	101.40	1,124.86	1,049.18	75.68	14.863		
7,250.00	3,697.04	3,535.00	3,527.87	67.06	60.63	33.060	-4,341.91	101.40	1,075.50	999.64	75.86	14.177		
7,300.00	3,696.04	3,535.00	3,527.87	67.99	60.63	33.060	-4,341.91	101.40	1,026.22	950.16	76.06	13.492		
7,350.00	3,695.04	3,535.00	3,527.87	68.93	60.63	33.060	-4,341.91	101.40	977.00	900.71	76.29	12.807		
7,400.00	3,694.04	3,535.00	3,527.87	69.86	60.63	33.060	-4,341.91	101.40	927.87	851.33	76.54	12.123		
7,450.00	3,693.05	3,535.00	3,527.87	70.80	60.63	33.060	-4,341.91	101.40	878.83	802.01	76.82	11.440		
7,500.00	3,692.05	3,535.00	3,527.87	71.74	60.63	33.060	-4,341.91	101.40	829.91	752.77	77.15	10.757		
7,550.00	3,691.05	3,535.00	3,527.87	72.68	60.63	33.060	-4,341.91	101.40	781.13	703.61	77.52	10.077		
7,600.00	3,690.05	3,535.00	3,527.87	73.62	60.63	33.060	-4,341.91	101.40	732.51	654.57	77.94	9.398		
7,650.00	3,689.05	3,535.00	3,527.87	74.55	60.63	33.060	-4,341.91	101.40	684.10	605.66	78.44	8.722		
7,700.00	3,688.06	3,535.00	3,527.87	75.49	60.63	33.060	-4,341.91	101.40	635.92	556.91	79.01	8.049		
7,750.00	3,687.06	3,535.00	3,527.87	76.43	60.63	33.060	-4,341.91	101.40	588.05	508.38	79.67	7.381		
7,800.00	3,686.06	3,535.00	3,527.87	77.37	60.63	33.060	-4,341.91	101.40	540.57	460.11	80.46	6.719		
7,850.00	3,685.06	3,535.00	3,527.87	78.32	60.63	33.060	-4,341.91	101.40	493.58	412.21	81.38	6.065		
7,900.00	3,684.06	3,535.00	3,527.87	79.26	60.63	33.060	-4,341.91	101.40	447.25	364.79	82.46	5.424		
7,950.00	3,683.07	3,535.00	3,527.87	80.20	60.63	33.060	-4,341.91	101.40	401.80	318.06	83.74	4.798		
8,000.00	3,682.07	3,535.00	3,527.87	81.14	60.63	33.060	-4,341.91	101.40	357.57	272.35	85.22	4.196		
8,050.00	3,681.07	3,535.00	3,527.87	82.08	60.63	33.060	-4,341.91	101.40	315.06	228.16	86.90	3.626		
8,100.00	3,680.07	3,535.00	3,527.87	83.03	60.63	33.060	-4,341.91	101.40	275.09	186.40	88.68	3.102		
8,150.00	3,679.07	3,535.00	3,527.87	83.97	60.63	33.060	-4,341.91	101.40	238.92	148.59	90.32	2.645		
8,200.00	3,678.08	3,535.00	3,527.87	84.91	60.63	33.060	-4,341.91	101.40	208.55	117.20	91.35	2.283		
8,250.00	3,677.08	3,535.00	3,527.87	85.86	60.63	33.060	-4,341.91	101.40	186.82	95.49	91.33	2.046		
8,300.00	3,676.08	3,535.00	3,527.87	86.80	60.63	33.060	-4,341.91	101.40	176.95	85.93	91.02	1.944		
8,310.90	3,675.86	3,535.00	3,527.87	87.01	60.63	33.060	-4,341.91	101.40	176.61	85.52	91.09	1.939	CC, ES, SF	
8,350.00	3,675.08	3,535.00	3,527.87	87.74	60.63	33.060	-4,341.91	101.40	180.89	89.03	91.85	1.969		
8,354.05	3,675.00	3,535.00	3,527.87	87.82	60.63	33.060	-4,341.91	101.40	181.81	89.86	91.95	1.977		

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



### Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft		
Survey Program: 522-INC-ONLY												MAYARO 22 STATE COM - OFFSET: COLLIER STATE 16 - Wellbore #1 - Wellbore #1		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance					Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor		
5,300.00	3,735.96	3,565.00	3,558.81	31.67	62.21	-84.561	-2,470.94	1,821.68	1,987.51	1,900.04	87.47	22.723			
5,350.00	3,734.96	3,565.00	3,558.81	32.52	62.21	-84.561	-2,470.94	1,821.68	1,959.31	1,870.84	88.47	22.146			
5,400.00	3,733.96	3,565.00	3,558.81	33.38	62.21	-84.561	-2,470.94	1,821.68	1,931.99	1,842.49	89.50	21.586			
5,450.00	3,732.97	3,565.00	3,558.81	34.24	62.21	-84.561	-2,470.94	1,821.68	1,905.59	1,815.02	90.57	21.040			
5,500.00	3,731.97	3,565.00	3,558.81	35.11	62.21	-84.561	-2,470.94	1,821.68	1,880.16	1,788.49	91.66	20.511			
5,550.00	3,730.97	3,565.00	3,558.81	35.99	62.21	-84.561	-2,470.94	1,821.68	1,855.72	1,762.93	92.79	19.999			
5,600.00	3,729.97	3,565.00	3,558.81	36.86	62.21	-84.561	-2,470.94	1,821.68	1,832.32	1,738.38	93.94	19.506			
5,650.00	3,728.97	3,565.00	3,558.81	37.74	62.21	-84.561	-2,470.94	1,821.68	1,809.99	1,714.88	95.11	19.030			
5,700.00	3,727.98	3,565.00	3,558.81	38.63	62.21	-84.561	-2,470.94	1,821.68	1,788.79	1,692.49	96.30	18.574			
5,750.00	3,726.98	3,565.00	3,558.81	39.52	62.21	-84.561	-2,470.94	1,821.68	1,768.75	1,671.23	97.52	18.138			
5,800.00	3,725.98	3,565.00	3,558.81	40.41	62.21	-84.561	-2,470.94	1,821.68	1,749.91	1,651.17	98.74	17.723			
5,850.00	3,724.98	3,565.00	3,558.81	41.30	62.21	-84.561	-2,470.94	1,821.68	1,732.30	1,632.33	99.97	17.328			
5,900.00	3,723.98	3,565.00	3,558.81	42.20	62.21	-84.561	-2,470.94	1,821.68	1,715.98	1,614.77	101.21	16.955			
5,950.00	3,722.99	3,565.00	3,558.81	43.10	62.21	-84.561	-2,470.94	1,821.68	1,700.96	1,598.51	102.45	16.603			
6,000.00	3,721.99	3,565.00	3,558.81	44.00	62.21	-84.561	-2,470.94	1,821.68	1,687.30	1,583.61	103.69	16.273			
6,050.00	3,720.99	3,565.00	3,558.81	44.91	62.21	-84.561	-2,470.94	1,821.68	1,675.01	1,570.09	104.92	15.965			
6,100.00	3,719.99	3,565.00	3,558.81	45.81	62.21	-84.561	-2,470.94	1,821.68	1,664.14	1,558.00	106.14	15.679			
6,150.00	3,718.99	3,565.00	3,558.81	46.72	62.21	-84.561	-2,470.94	1,821.68	1,654.71	1,547.36	107.35	15.415			
6,200.00	3,718.00	3,565.00	3,558.81	47.63	62.21	-84.561	-2,470.94	1,821.68	1,646.74	1,538.21	108.53	15.173			
6,250.00	3,717.00	3,565.00	3,558.81	48.54	62.21	-84.561	-2,470.94	1,821.68	1,640.26	1,530.57	109.69	14.954			
6,300.00	3,716.00	3,565.00	3,558.81	49.46	62.21	-84.561	-2,470.94	1,821.68	1,635.29	1,524.47	110.82	14.756			
6,350.00	3,715.00	3,565.00	3,558.81	50.37	62.21	-84.561	-2,470.94	1,821.68	1,631.83	1,519.91	111.92	14.581			
6,400.00	3,714.00	3,565.00	3,558.81	51.29	62.21	-84.561	-2,470.94	1,821.68	1,629.89	1,516.92	112.97	14.427			
6,438.02	3,713.25	3,565.00	3,558.81	51.99	62.21	-84.561	-2,470.94	1,821.68	1,629.45	1,515.70	113.75	14.325	CC		
6,450.00	3,713.01	3,565.00	3,558.81	52.21	62.21	-84.561	-2,470.94	1,821.68	1,629.50	1,515.50	113.99	14.295	ES		
6,500.00	3,712.01	3,565.00	3,558.81	53.13	62.21	-84.561	-2,470.94	1,821.68	1,630.63	1,515.66	114.97	14.184			
6,550.00	3,711.01	3,565.00	3,558.81	54.05	62.21	-84.561	-2,470.94	1,821.68	1,633.29	1,517.40	115.89	14.093			
6,600.00	3,710.01	3,565.00	3,558.81	54.97	62.21	-84.561	-2,470.94	1,821.68	1,637.48	1,520.71	116.77	14.023			
6,650.00	3,709.01	3,565.00	3,558.81	55.90	62.21	-84.561	-2,470.94	1,821.68	1,643.18	1,525.58	117.60	13.973			
6,700.00	3,708.02	3,565.00	3,558.81	56.82	62.21	-84.561	-2,470.94	1,821.68	1,650.38	1,532.00	118.37	13.942			
6,750.00	3,707.02	3,565.00	3,558.81	57.75	62.21	-84.561	-2,470.94	1,821.68	1,659.05	1,539.95	119.09	13.931	SF		
6,800.00	3,706.02	3,565.00	3,558.81	58.68	62.21	-84.561	-2,470.94	1,821.68	1,669.17	1,549.41	119.76	13.938			
6,850.00	3,705.02	3,565.00	3,558.81	59.60	62.21	-84.561	-2,470.94	1,821.68	1,680.73	1,560.35	120.37	13.963			
6,900.00	3,704.02	3,565.00	3,558.81	60.53	62.21	-84.561	-2,470.94	1,821.68	1,693.68	1,572.74	120.93	14.005			
6,950.00	3,703.03	3,565.00	3,558.81	61.46	62.21	-84.561	-2,470.94	1,821.68	1,707.99	1,586.55	121.44	14.065			
7,000.00	3,702.03	3,565.00	3,558.81	62.39	62.21	-84.561	-2,470.94	1,821.68	1,723.64	1,601.75	121.89	14.141			
7,050.00	3,701.03	3,565.00	3,558.81	63.32	62.21	-84.561	-2,470.94	1,821.68	1,740.58	1,618.29	122.30	14.232			
7,100.00	3,700.03	3,565.00	3,558.81	64.26	62.21	-84.561	-2,470.94	1,821.68	1,758.79	1,636.13	122.65	14.339			
7,150.00	3,699.03	3,565.00	3,558.81	65.19	62.21	-84.561	-2,470.94	1,821.68	1,778.21	1,655.25	122.96	14.461			
7,200.00	3,698.04	3,565.00	3,558.81	66.12	62.21	-84.561	-2,470.94	1,821.68	1,798.81	1,675.59	123.23	14.597			
7,250.00	3,697.04	3,565.00	3,558.81	67.06	62.21	-84.561	-2,470.94	1,821.68	1,820.56	1,697.11	123.45	14.747			
7,300.00	3,696.04	3,565.00	3,558.81	67.99	62.21	-84.561	-2,470.94	1,821.68	1,843.40	1,719.77	123.63	14.910			
7,350.00	3,695.04	3,565.00	3,558.81	68.93	62.21	-84.561	-2,470.94	1,821.68	1,867.30	1,743.52	123.78	15.086			
7,400.00	3,694.04	3,565.00	3,558.81	69.86	62.21	-84.561	-2,470.94	1,821.68	1,892.23	1,768.34	123.89	15.273			
7,450.00	3,693.05	3,565.00	3,558.81	70.80	62.21	-84.561	-2,470.94	1,821.68	1,918.13	1,794.16	123.97	15.473			
7,500.00	3,692.05	3,565.00	3,558.81	71.74	62.21	-84.561	-2,470.94	1,821.68	1,944.97	1,820.96	124.02	15.683			
7,550.00	3,691.05	3,565.00	3,558.81	72.68	62.21	-84.561	-2,470.94	1,821.68	1,972.72	1,848.68	124.03	15.905			

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



### Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 170-INC-ONLY												Offset Well Error:		0.00 usft
Reference				Offset			Semi Major Axis		Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,250.00	3,748.86	3,765.44	3,739.88	16.53	77.77	-39.965	-2,255.15	450.41	1,985.66	1,895.19	90.47	21.949		
4,300.00	3,754.06	3,769.99	3,744.43	17.03	77.86	-63.332	-2,255.18	450.41	1,936.38	1,845.83	90.55	21.384		
4,350.00	3,754.92	3,770.93	3,745.37	17.57	77.88	-96.324	-2,255.18	450.41	1,886.84	1,796.28	90.56	20.836		
4,400.00	3,753.93	3,770.30	3,744.74	18.13	77.87	-96.182	-2,255.18	450.41	1,837.30	1,746.77	90.53	20.295		
4,450.00	3,752.93	3,769.67	3,744.11	18.74	77.86	-96.039	-2,255.17	450.41	1,787.78	1,697.28	90.51	19.753		
4,500.00	3,751.93	3,769.03	3,743.47	19.35	77.84	-95.895	-2,255.17	450.41	1,738.30	1,647.82	90.48	19.212		
4,550.00	3,750.93	3,768.38	3,742.83	20.02	77.83	-95.749	-2,255.17	450.41	1,688.84	1,598.38	90.46	18.670		
4,600.00	3,749.93	3,767.73	3,742.18	20.68	77.81	-95.602	-2,255.16	450.41	1,639.42	1,548.98	90.44	18.128		
4,650.00	3,748.94	3,767.08	3,741.52	21.38	77.80	-95.453	-2,255.16	450.41	1,590.03	1,499.61	90.42	17.584		
4,700.00	3,747.94	3,766.42	3,740.86	22.09	77.79	-95.304	-2,255.16	450.41	1,540.68	1,450.27	90.41	17.041		
4,750.00	3,746.94	3,765.75	3,740.19	22.83	77.77	-95.152	-2,255.16	450.41	1,491.37	1,400.97	90.40	16.497		
4,800.00	3,745.94	3,765.08	3,739.52	23.57	77.76	-95.000	-2,255.15	450.41	1,442.11	1,351.71	90.40	15.952		
4,850.00	3,744.94	3,764.40	3,738.84	24.34	77.74	-94.846	-2,255.15	450.41	1,392.91	1,302.50	90.41	15.406		
4,900.00	3,743.94	3,763.71	3,738.16	25.11	77.73	-94.690	-2,255.15	450.41	1,343.76	1,253.34	90.42	14.861		
4,950.00	3,742.95	3,763.02	3,737.47	25.90	77.71	-94.534	-2,255.14	450.41	1,294.68	1,204.23	90.45	14.313		
5,000.00	3,741.95	3,762.32	3,736.77	26.69	77.70	-94.375	-2,255.14	450.41	1,245.67	1,155.18	90.49	13.766		
5,050.00	3,740.95	3,761.62	3,736.07	27.51	77.68	-94.215	-2,255.14	450.41	1,196.74	1,106.19	90.54	13.217		
5,100.00	3,739.95	3,760.91	3,735.36	28.32	77.67	-94.054	-2,255.13	450.41	1,147.90	1,057.29	90.61	12.668		
5,150.00	3,738.95	3,760.20	3,734.64	29.15	77.65	-93.891	-2,255.13	450.41	1,099.17	1,008.46	90.71	12.117		
5,200.00	3,737.96	3,759.47	3,733.92	29.98	77.64	-93.727	-2,255.13	450.41	1,050.55	959.72	90.83	11.566		
5,250.00	3,736.96	3,758.74	3,733.19	30.82	77.62	-93.561	-2,255.13	450.41	1,002.07	911.09	90.99	11.014		
5,300.00	3,735.96	3,758.01	3,732.45	31.67	77.61	-93.393	-2,255.12	450.41	953.75	862.57	91.18	10.460		
5,350.00	3,734.96	3,757.27	3,731.71	32.52	77.59	-93.224	-2,255.12	450.41	905.61	814.19	91.42	9.906		
5,400.00	3,733.96	3,756.52	3,730.96	33.38	77.58	-93.053	-2,255.12	450.41	857.68	765.95	91.73	9.350		
5,450.00	3,732.97	3,755.76	3,730.20	34.24	77.56	-92.881	-2,255.11	450.41	810.00	717.90	92.10	8.794		
5,500.00	3,731.97	3,755.00	3,729.44	35.11	77.54	-92.706	-2,255.11	450.41	762.62	670.05	92.57	8.238		
5,550.00	3,730.97	3,754.22	3,728.67	35.99	77.53	-92.531	-2,255.11	450.41	715.59	622.44	93.15	7.682		
5,600.00	3,729.97	3,753.45	3,727.89	36.86	77.51	-92.353	-2,255.11	450.41	668.99	575.14	93.86	7.128		
5,650.00	3,728.97	3,752.66	3,727.11	37.74	77.49	-92.174	-2,255.10	450.41	622.92	528.19	94.74	6.575		
5,700.00	3,727.98	3,751.87	3,726.31	38.63	77.48	-91.993	-2,255.10	450.41	577.51	481.69	95.82	6.027		
5,750.00	3,726.98	3,751.07	3,725.51	39.52	77.46	-91.810	-2,255.10	450.41	532.91	435.75	97.15	5.485		
5,800.00	3,725.98	3,750.26	3,724.70	40.41	77.44	-91.626	-2,255.10	450.41	489.36	390.56	98.79	4.953		
5,850.00	3,724.98	3,749.44	3,723.89	41.30	77.43	-91.439	-2,255.09	450.41	447.15	346.35	100.80	4.436		
5,900.00	3,723.98	3,748.62	3,723.06	42.20	77.41	-91.251	-2,255.09	450.41	406.72	303.47	103.24	3.939		
5,950.00	3,722.99	3,747.79	3,722.23	43.10	77.39	-91.061	-2,255.09	450.41	368.63	262.44	106.19	3.471		
6,000.00	3,721.99	3,746.95	3,721.39	44.00	77.37	-90.869	-2,255.09	450.41	333.71	224.05	109.66	3.043		
6,050.00	3,720.99	3,746.10	3,720.54	44.91	77.35	-90.675	-2,255.08	450.41	303.04	189.45	113.59	2.668		
6,100.00	3,719.99	3,745.24	3,719.69	45.81	77.34	-90.479	-2,255.08	450.41	278.03	160.29	117.74	2.361		
6,150.00	3,718.99	3,744.38	3,718.82	46.72	77.32	-90.281	-2,255.08	450.41	260.32	138.72	121.60	2.141		
6,200.00	3,718.00	3,743.50	3,717.95	47.63	77.30	-90.082	-2,255.08	450.41	251.46	126.99	124.47	2.020		
6,220.36	3,717.59	3,743.14	3,717.59	48.00	77.29	-90.000	-2,255.08	450.41	250.63	125.43	125.21	2.002 CC, ES, SF		
6,250.00	3,717.00	3,742.62	3,717.06	48.54	77.28	-89.880	-2,255.08	450.41	252.38	126.63	125.75	2.007		
6,300.00	3,716.00	3,741.73	3,716.17	49.46	77.26	-89.676	-2,255.07	450.41	262.98	137.66	125.32	2.098		
6,350.00	3,715.00	3,740.83	3,715.27	50.37	77.24	-89.470	-2,255.07	450.41	282.17	158.59	123.58	2.283		
6,400.00	3,714.00	3,739.92	3,714.36	51.29	77.22	-89.262	-2,255.07	450.41	308.35	187.21	121.13	2.545		
6,450.00	3,713.01	3,739.00	3,713.44	52.21	77.20	-89.052	-2,255.07	450.41	339.90	221.42	118.48	2.869		
6,500.00	3,712.01	3,738.07	3,712.51	53.13	77.18	-88.840	-2,255.07	450.41	375.49	259.57	115.91	3.239		
6,550.00	3,711.01	3,737.13	3,711.57	54.05	77.16	-88.625	-2,255.07	450.41	414.06	300.48	113.58	3.646		
6,600.00	3,710.01	3,736.18	3,710.63	54.97	77.14	-88.409	-2,255.06	450.41	454.86	343.35	111.51	4.079		
6,650.00	3,709.01	3,735.22	3,709.67	55.90	77.12	-88.190	-2,255.06	450.41	497.34	387.64	109.70	4.534		
6,700.00	3,708.02	3,734.26	3,708.70	56.82	77.10	-87.969	-2,255.06	450.41	541.11	432.98	108.13	5.004		
6,750.00	3,707.02	3,733.28	3,707.72	57.75	77.08	-87.746	-2,255.06	450.41	585.87	479.10	106.76	5.488		

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 170-INC-ONLY												Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor	
6,800.00	3,706.02	3,732.29	3,706.73	58.68	77.06	-87.520	-2,255.06	450.41	631.42	525.84	105.57	5.981		
6,850.00	3,705.02	3,731.29	3,705.73	59.60	77.04	-87.292	-2,255.06	450.41	677.59	573.06	104.54	6.482		
6,900.00	3,704.02	3,730.28	3,704.72	60.53	77.02	-87.062	-2,255.06	450.41	724.27	620.65	103.62	6.990		
6,950.00	3,703.03	3,729.26	3,703.70	61.46	77.00	-86.829	-2,255.05	450.41	771.37	668.55	102.82	7.502		
7,000.00	3,702.03	3,728.22	3,702.67	62.39	76.97	-86.594	-2,255.05	450.41	818.81	716.71	102.10	8.019		
7,050.00	3,701.03	3,727.18	3,701.63	63.32	76.95	-86.356	-2,255.05	450.41	866.54	765.07	101.47	8.540		
7,100.00	3,700.03	3,726.13	3,700.57	64.26	76.93	-86.116	-2,255.05	450.41	914.50	813.61	100.90	9.064		
7,150.00	3,699.03	3,725.06	3,699.50	65.19	76.91	-85.873	-2,255.05	450.41	962.68	862.29	100.38	9.590		
7,200.00	3,698.04	3,723.98	3,698.42	66.12	76.88	-85.628	-2,255.05	450.41	1,011.03	911.11	99.92	10.118		
7,250.00	3,697.04	3,722.89	3,697.33	67.06	76.86	-85.380	-2,255.05	450.41	1,059.53	960.03	99.50	10.649		
7,300.00	3,696.04	3,721.79	3,696.23	67.99	76.84	-85.130	-2,255.05	450.41	1,108.16	1,009.05	99.12	11.180		
7,350.00	3,695.04	3,720.67	3,695.12	68.93	76.81	-84.877	-2,255.05	450.41	1,156.92	1,058.15	98.77	11.713		
7,400.00	3,694.04	3,719.59	3,694.04	69.86	76.79	-84.636	-2,255.43	450.41	1,205.40	1,106.94	98.45	12.243		
7,450.00	3,693.05	3,718.60	3,693.05	70.80	76.77	-84.410	-2,255.43	450.41	1,254.34	1,156.17	98.16	12.778		
7,500.00	3,692.05	3,717.60	3,692.05	71.74	76.75	-84.184	-2,255.43	450.41	1,303.36	1,205.46	97.89	13.314		
7,550.00	3,691.05	3,716.60	3,691.05	72.68	76.73	-83.958	-2,255.43	450.41	1,352.45	1,254.80	97.65	13.851		
7,600.00	3,690.05	3,715.60	3,690.05	73.62	76.70	-83.733	-2,255.43	450.41	1,401.60	1,304.19	97.42	14.388		
7,650.00	3,689.05	3,714.60	3,689.05	74.55	76.68	-83.507	-2,255.43	450.41	1,450.81	1,353.61	97.20	14.926		
7,700.00	3,688.06	3,713.61	3,688.06	75.49	76.66	-83.282	-2,255.43	450.41	1,500.08	1,403.07	97.01	15.464		
7,750.00	3,687.06	3,712.61	3,687.06	76.43	76.64	-83.057	-2,255.43	450.41	1,549.39	1,452.57	96.82	16.002		
7,800.00	3,686.06	3,711.61	3,686.06	77.37	76.62	-82.833	-2,255.43	450.41	1,598.74	1,502.09	96.65	16.542		
7,850.00	3,685.06	3,710.61	3,685.06	78.32	76.60	-82.608	-2,255.43	450.41	1,648.13	1,551.64	96.49	17.081		
7,900.00	3,684.06	3,709.61	3,684.06	79.26	76.58	-82.384	-2,255.43	450.41	1,697.56	1,601.22	96.34	17.621		
7,950.00	3,683.07	3,708.62	3,683.07	80.20	76.56	-82.160	-2,255.43	450.41	1,747.01	1,650.82	96.20	18.161		
8,000.00	3,682.07	3,707.62	3,682.07	81.14	76.54	-81.936	-2,255.43	450.41	1,796.50	1,700.44	96.06	18.701		
8,050.00	3,681.07	3,706.62	3,681.07	82.08	76.51	-81.713	-2,255.43	450.41	1,846.01	1,750.08	95.94	19.241		
8,100.00	3,680.07	3,705.62	3,680.07	83.03	76.49	-81.490	-2,255.43	450.41	1,895.55	1,799.73	95.82	19.782		
8,150.00	3,679.07	3,704.62	3,679.07	83.97	76.47	-81.267	-2,255.43	450.41	1,945.12	1,849.41	95.71	20.323		
8,200.00	3,678.08	3,703.63	3,678.08	84.91	76.45	-81.044	-2,255.43	450.41	1,994.70	1,899.09	95.61	20.864		

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft		
Survey Program: 532-INC-ONLY												MAYARO 22 STATE COM - OFFSET: MARACAS 22 STATE 1 - Wellbore #1 - Wellbore #1		Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Reference		Semi Major Axis			Distance				Separation Factor	Warning			
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			Minimum Separation (usft)		
5,300.00	3,735.96	3,763.15	3,735.96	31.67	64.92	-90.693	-2,360.45	1,888.98	1,975.51	1,884.06	91.45	21.601			
5,350.00	3,734.96	3,762.16	3,734.96	32.52	64.90	-90.659	-2,360.45	1,888.98	1,950.06	1,857.59	92.47	21.088			
5,400.00	3,733.96	3,761.16	3,733.96	33.38	64.88	-90.626	-2,360.45	1,888.98	1,925.58	1,832.06	93.52	20.591			
5,450.00	3,732.97	3,760.16	3,732.97	34.24	64.86	-90.592	-2,360.45	1,888.98	1,902.09	1,807.50	94.59	20.108			
5,500.00	3,731.97	3,759.16	3,731.97	35.11	64.85	-90.558	-2,360.45	1,888.98	1,879.64	1,783.95	95.69	19.644			
5,550.00	3,730.97	3,758.16	3,730.97	35.99	64.83	-90.524	-2,360.45	1,888.98	1,858.26	1,761.45	96.81	19.195			
5,600.00	3,729.97	3,757.17	3,729.97	36.86	64.81	-90.490	-2,360.45	1,888.98	1,838.00	1,740.05	97.95	18.765			
5,650.00	3,728.97	3,756.17	3,728.97	37.74	64.79	-90.456	-2,360.45	1,888.98	1,818.88	1,719.78	99.10	18.353			
5,700.00	3,727.98	3,755.17	3,727.98	38.63	64.77	-90.423	-2,360.45	1,888.98	1,800.95	1,700.68	100.27	17.961			
5,750.00	3,726.98	3,754.17	3,726.98	39.52	64.76	-90.389	-2,360.45	1,888.98	1,784.24	1,682.79	101.45	17.588			
5,800.00	3,725.98	3,753.17	3,725.98	40.41	64.74	-90.355	-2,360.45	1,888.98	1,768.78	1,666.15	102.63	17.235			
5,850.00	3,724.98	3,752.18	3,724.98	41.30	64.72	-90.321	-2,360.45	1,888.98	1,754.62	1,650.80	103.81	16.902			
5,900.00	3,723.98	3,751.18	3,723.98	42.20	64.70	-90.287	-2,360.45	1,888.98	1,741.77	1,636.77	104.99	16.589			
5,950.00	3,722.99	3,750.18	3,722.99	43.10	64.68	-90.253	-2,360.45	1,888.98	1,730.27	1,624.10	106.17	16.297			
6,000.00	3,721.99	3,749.18	3,721.99	44.00	64.66	-90.220	-2,360.45	1,888.98	1,720.15	1,612.81	107.34	16.026			
6,050.00	3,720.99	3,748.18	3,720.99	44.91	64.65	-90.186	-2,360.45	1,888.98	1,711.43	1,602.94	108.49	15.775			
6,100.00	3,719.99	3,747.19	3,719.99	45.81	64.63	-90.152	-2,360.45	1,888.98	1,704.13	1,594.51	109.62	15.546			
6,150.00	3,718.99	3,746.19	3,718.99	46.72	64.61	-90.118	-2,360.45	1,888.98	1,698.28	1,587.55	110.73	15.337			
6,200.00	3,718.00	3,745.19	3,718.00	47.63	64.59	-90.084	-2,360.45	1,888.98	1,693.87	1,582.06	111.81	15.149			
6,250.00	3,717.00	3,744.19	3,717.00	48.54	64.57	-90.050	-2,360.45	1,888.98	1,690.94	1,578.08	112.86	14.982			
6,300.00	3,716.00	3,743.19	3,716.00	49.46	64.55	-90.016	-2,360.45	1,888.98	1,689.48	1,575.60	113.88	14.835			
6,324.36	3,715.51	3,742.71	3,715.51	49.90	64.55	-90.000	-2,360.45	1,888.98	1,689.31	1,574.94	114.36	14.771	CC		
6,350.00	3,715.00	3,742.20	3,715.00	50.37	64.54	-89.983	-2,360.45	1,888.98	1,689.50	1,574.64	114.86	14.709	ES		
6,400.00	3,714.00	3,741.20	3,714.00	51.29	64.52	-89.949	-2,360.45	1,888.98	1,691.00	1,575.19	115.80	14.602			
6,450.00	3,713.01	3,740.20	3,713.01	52.21	64.50	-89.915	-2,360.45	1,888.98	1,693.97	1,577.27	116.70	14.515			
6,500.00	3,712.01	3,739.20	3,712.01	53.13	64.48	-89.881	-2,360.45	1,888.98	1,698.41	1,580.85	117.56	14.448			
6,550.00	3,711.01	3,738.20	3,711.01	54.05	64.46	-89.847	-2,360.45	1,888.98	1,704.30	1,585.94	118.36	14.399			
6,600.00	3,710.01	3,737.21	3,710.01	54.97	64.45	-89.813	-2,360.45	1,888.98	1,711.64	1,592.51	119.12	14.369			
6,650.00	3,709.01	3,736.21	3,709.01	55.90	64.43	-89.780	-2,360.45	1,888.98	1,720.39	1,600.56	119.83	14.356	SF		
6,700.00	3,708.02	3,735.21	3,708.02	56.82	64.41	-89.746	-2,360.45	1,888.98	1,730.55	1,610.06	120.50	14.362			
6,750.00	3,707.02	3,734.21	3,707.02	57.75	64.39	-89.712	-2,360.45	1,888.98	1,742.08	1,620.98	121.11	14.385			
6,800.00	3,706.02	3,733.21	3,706.02	58.68	64.37	-89.678	-2,360.45	1,888.98	1,754.97	1,633.29	121.67	14.424			
6,850.00	3,705.02	3,732.22	3,705.02	59.60	64.35	-89.644	-2,360.45	1,888.98	1,769.17	1,646.98	122.19	14.479			
6,900.00	3,704.02	3,731.22	3,704.02	60.53	64.34	-89.610	-2,360.45	1,888.98	1,784.65	1,662.00	122.65	14.551			
6,950.00	3,703.03	3,730.22	3,703.03	61.46	64.32	-89.577	-2,360.45	1,888.98	1,801.40	1,678.33	123.07	14.637			
7,000.00	3,702.03	3,729.22	3,702.03	62.39	64.30	-89.543	-2,360.45	1,888.98	1,819.36	1,695.91	123.45	14.738			
7,050.00	3,701.03	3,728.22	3,701.03	63.32	64.28	-89.509	-2,360.45	1,888.98	1,838.51	1,714.73	123.78	14.853			
7,100.00	3,700.03	3,727.23	3,700.03	64.26	64.26	-89.475	-2,360.45	1,888.98	1,858.80	1,734.73	124.07	14.982			
7,150.00	3,699.03	3,727.09	3,699.00	65.19	64.22	-89.470	-2,360.50	1,888.98	1,880.19	1,755.90	124.29	15.128			
7,200.00	3,698.04	3,726.14	3,698.95	66.12	64.20	-89.438	-2,360.50	1,888.98	1,902.66	1,778.16	124.50	15.282			
7,250.00	3,697.04	3,725.19	3,698.00	67.06	64.18	-89.406	-2,360.49	1,888.98	1,926.18	1,801.50	124.68	15.449			
7,300.00	3,696.04	3,724.24	3,697.05	67.99	64.17	-89.374	-2,360.49	1,888.98	1,950.69	1,825.86	124.82	15.628			
7,350.00	3,695.04	3,723.29	3,696.10	68.93	64.15	-89.342	-2,360.49	1,888.98	1,976.16	1,851.22	124.93	15.818			

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



### Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 369-INC-ONLY												Offset Well Error:	0.00 usft
MAYARO 22 STATE COM - OFFSET: MARACAS 22 STATE 12 - Wellbore #1 - Wellbore #1													
Reference				Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
3,500.00	3,364.28	3,505.69	3,364.28	14.28	67.92	-65.729	-594.47	1,959.22	1,996.52	1,914.34	82.18	24.296	
3,550.00	3,401.73	3,543.13	3,401.73	14.18	68.62	-67.782	-594.47	1,959.22	1,980.04	1,897.25	82.79	23.916	
3,600.00	3,437.40	3,578.80	3,437.40	14.10	69.29	-69.830	-594.47	1,959.22	1,963.32	1,879.94	83.38	23.547	
3,650.00	3,471.20	3,612.60	3,471.20	14.03	69.92	-71.864	-594.47	1,959.22	1,946.50	1,862.55	83.95	23.188	
3,700.00	3,503.03	3,644.44	3,503.03	13.99	70.52	-73.871	-594.47	1,959.22	1,929.71	1,845.21	84.49	22.839	
3,750.00	3,532.81	3,674.22	3,532.81	13.97	71.08	-75.833	-594.47	1,959.22	1,913.10	1,828.07	85.03	22.500	
3,800.00	3,560.45	3,701.86	3,560.45	13.99	71.60	-77.734	-594.47	1,959.22	1,896.83	1,811.28	85.55	22.171	
3,850.00	3,585.99	3,727.21	3,585.80	14.06	72.07	-79.219	-593.96	1,959.22	1,880.87	1,794.79	86.08	21.850	
3,900.00	3,610.99	3,751.94	3,610.53	14.18	72.53	-79.893	-593.97	1,959.22	1,865.91	1,779.28	86.64	21.537	
3,950.00	3,635.99	3,776.70	3,635.29	14.39	73.00	-80.572	-593.99	1,959.22	1,851.85	1,764.59	87.25	21.224	
4,000.00	3,660.99	3,801.51	3,660.10	14.62	73.46	-81.254	-594.03	1,959.22	1,838.69	1,750.78	87.92	20.913	
4,050.00	3,685.82	3,826.18	3,684.77	14.91	73.92	-82.310	-594.08	1,959.22	1,826.45	1,737.81	88.63	20.607	
4,100.00	3,707.71	3,847.98	3,706.57	15.25	74.33	-84.131	-594.13	1,959.22	1,814.78	1,725.43	89.35	20.311	
4,150.00	3,725.60	3,865.86	3,724.44	15.63	74.67	-85.795	-594.17	1,959.22	1,803.75	1,713.71	90.04	20.033	
4,200.00	3,739.35	3,879.66	3,738.24	16.06	74.93	-87.261	-594.22	1,959.22	1,793.60	1,702.89	90.71	19.773	
4,250.00	3,748.86	3,889.27	3,747.85	16.53	75.11	-88.492	-594.25	1,959.22	1,784.50	1,693.15	91.35	19.534	
4,300.00	3,754.06	3,894.60	3,753.19	17.03	75.21	-89.463	-594.26	1,959.22	1,776.61	1,684.65	91.96	19.319	
4,350.00	3,754.92	3,895.63	3,754.22	17.57	75.22	-90.112	-594.27	1,959.22	1,770.06	1,677.52	92.53	19.129	
4,400.00	3,753.93	3,894.80	3,753.39	18.13	75.21	-90.085	-594.26	1,959.22	1,764.89	1,671.78	93.11	18.955	
4,450.00	3,752.93	3,893.98	3,752.56	18.74	75.19	-90.058	-594.26	1,959.22	1,761.12	1,667.38	93.74	18.787	
4,500.00	3,751.93	3,893.15	3,751.74	19.35	75.18	-90.031	-594.26	1,959.22	1,758.77	1,664.40	94.38	18.635	
4,550.00	3,750.93	3,892.32	3,750.90	20.02	75.16	-90.004	-594.26	1,959.22	1,757.84	1,662.78	95.07	18.490	
4,557.74	3,750.78	3,892.19	3,750.78	20.12	75.16	-90.000	-594.26	1,959.22	1,757.83	1,662.65	95.17	18.470	CC
4,600.00	3,749.93	3,891.49	3,750.07	20.68	75.15	-89.977	-594.25	1,959.22	1,758.33	1,662.58	95.75	18.363	ES
4,650.00	3,748.94	3,890.65	3,749.24	21.38	75.13	-89.950	-594.25	1,959.22	1,760.25	1,663.77	96.48	18.245	
4,700.00	3,747.94	3,889.82	3,748.40	22.09	75.12	-89.923	-594.25	1,959.22	1,763.57	1,666.38	97.19	18.145	
4,750.00	3,746.94	3,888.98	3,747.57	22.83	75.10	-89.895	-594.24	1,959.22	1,768.31	1,670.38	97.93	18.057	
4,800.00	3,745.94	3,888.14	3,746.73	23.57	75.08	-89.868	-594.24	1,959.22	1,774.44	1,675.79	98.65	17.987	
4,850.00	3,744.94	3,887.30	3,745.89	24.34	75.07	-89.841	-594.24	1,959.22	1,781.95	1,682.56	99.39	17.930	
4,900.00	3,743.94	3,886.46	3,745.05	25.11	75.05	-89.813	-594.24	1,959.22	1,790.83	1,690.73	100.10	17.890	
4,950.00	3,742.95	3,885.62	3,744.21	25.90	75.04	-89.786	-594.23	1,959.22	1,801.05	1,700.23	100.82	17.864	
5,000.00	3,741.95	3,884.77	3,743.36	26.69	75.02	-89.758	-594.23	1,959.22	1,812.59	1,711.08	101.51	17.856	SF
5,050.00	3,740.95	3,883.93	3,742.51	27.51	75.01	-89.731	-594.23	1,959.22	1,825.43	1,723.23	102.20	17.861	
5,100.00	3,739.95	3,883.08	3,741.67	28.32	74.99	-89.703	-594.23	1,959.22	1,839.54	1,736.67	102.87	17.883	
5,150.00	3,738.95	3,882.23	3,740.82	29.15	74.97	-89.675	-594.22	1,959.22	1,854.89	1,751.37	103.52	17.918	
5,200.00	3,737.96	3,881.38	3,739.97	29.98	74.96	-89.648	-594.22	1,959.22	1,871.45	1,767.30	104.15	17.969	
5,250.00	3,736.96	3,880.53	3,739.11	30.82	74.94	-89.620	-594.22	1,959.22	1,889.19	1,784.43	104.76	18.033	
5,300.00	3,735.96	3,879.67	3,738.26	31.67	74.93	-89.592	-594.22	1,959.22	1,908.07	1,802.73	105.35	18.112	
5,350.00	3,734.96	3,878.82	3,737.41	32.52	74.91	-89.564	-594.21	1,959.22	1,928.07	1,822.15	105.92	18.204	
5,400.00	3,733.96	3,877.96	3,736.55	33.38	74.89	-89.536	-594.21	1,959.22	1,949.14	1,842.69	106.46	18.309	
5,450.00	3,732.97	3,877.10	3,735.69	34.24	74.88	-89.508	-594.21	1,959.22	1,971.26	1,864.28	106.98	18.427	
5,500.00	3,731.97	3,876.24	3,734.83	35.11	74.86	-89.480	-594.20	1,959.22	1,994.38	1,886.91	107.48	18.557	

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



### Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 209-INC-ONLY												Offset Well Error:	0.00 usft	
MAYARO 22 STATE COM - OFFSET: MARACAS 22 STATE 2 - Wellbore #1 - Wellbore #1														
Reference				Offset			Semi Major Axis		Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,300.00	3,754.06	3,759.28	3,754.06	17.03	67.45	-78.848	-2,223.75	779.86	1,975.40	1,895.11	80.29	24.604		
4,350.00	3,754.92	3,760.14	3,754.92	17.57	67.46	-93.620	-2,223.75	779.86	1,927.68	1,847.37	80.32	24.001		
4,400.00	3,753.93	3,759.14	3,753.93	18.13	67.44	-93.522	-2,223.75	779.86	1,880.07	1,799.75	80.32	23.407		
4,450.00	3,752.93	3,758.14	3,752.93	18.74	67.43	-93.423	-2,223.75	779.86	1,832.58	1,752.24	80.34	22.810		
4,500.00	3,751.93	3,757.15	3,751.93	19.35	67.41	-93.325	-2,223.75	779.86	1,785.23	1,704.86	80.37	22.213		
4,550.00	3,750.93	3,756.15	3,750.93	20.02	67.39	-93.227	-2,223.75	779.86	1,738.03	1,657.61	80.42	21.611		
4,600.00	3,749.93	3,755.15	3,749.93	20.68	67.37	-93.129	-2,223.75	779.86	1,690.99	1,610.50	80.49	21.008		
4,650.00	3,748.94	3,754.15	3,748.94	21.38	67.36	-93.030	-2,223.75	779.86	1,644.12	1,563.53	80.59	20.402		
4,700.00	3,747.94	3,753.15	3,747.94	22.09	67.34	-92.932	-2,223.75	779.86	1,597.44	1,516.74	80.70	19.794		
4,750.00	3,746.94	3,752.15	3,746.94	22.83	67.32	-92.834	-2,223.75	779.86	1,550.97	1,470.12	80.85	19.183		
4,800.00	3,745.94	3,751.16	3,745.94	23.57	67.30	-92.735	-2,223.75	779.86	1,504.73	1,423.70	81.03	18.570		
4,850.00	3,744.94	3,750.16	3,744.94	24.34	67.29	-92.637	-2,223.75	779.86	1,458.73	1,377.48	81.25	17.954		
4,900.00	3,743.94	3,749.16	3,743.94	25.11	67.27	-92.539	-2,223.75	779.86	1,413.00	1,331.50	81.50	17.338		
4,950.00	3,742.95	3,748.16	3,742.95	25.90	67.25	-92.440	-2,223.75	779.86	1,367.57	1,285.77	81.80	16.718		
5,000.00	3,741.95	3,747.16	3,741.95	26.69	67.23	-92.342	-2,223.75	779.86	1,322.47	1,240.32	82.15	16.098		
5,050.00	3,740.95	3,746.17	3,740.95	27.51	67.21	-92.244	-2,223.75	779.86	1,277.73	1,195.17	82.56	15.476		
5,100.00	3,739.95	3,745.17	3,739.95	28.32	67.20	-92.145	-2,223.75	779.86	1,233.40	1,150.37	83.03	14.855		
5,150.00	3,738.95	3,744.17	3,738.95	29.15	67.18	-92.047	-2,223.75	779.86	1,189.51	1,105.95	83.57	14.234		
5,200.00	3,737.96	3,743.17	3,737.96	29.98	67.16	-91.948	-2,223.75	779.86	1,146.13	1,061.95	84.18	13.616		
5,250.00	3,736.96	3,742.17	3,736.96	30.82	67.14	-91.850	-2,223.75	779.86	1,103.31	1,018.43	84.87	12.999		
5,300.00	3,735.96	3,741.18	3,735.96	31.67	67.13	-91.751	-2,223.75	779.86	1,061.11	975.45	85.65	12.389		
5,350.00	3,734.96	3,740.18	3,734.96	32.52	67.11	-91.653	-2,223.75	779.86	1,019.61	933.08	86.53	11.783		
5,400.00	3,733.96	3,739.18	3,733.96	33.38	67.09	-91.554	-2,223.75	779.86	978.91	891.40	87.51	11.186		
5,450.00	3,732.97	3,738.18	3,732.97	34.24	67.07	-91.456	-2,223.75	779.86	939.11	850.51	88.61	10.599		
5,500.00	3,731.97	3,737.18	3,731.97	35.11	67.06	-91.357	-2,223.75	779.86	900.33	810.51	89.82	10.024		
5,550.00	3,730.97	3,736.19	3,730.97	35.99	67.04	-91.259	-2,223.75	779.86	862.70	771.54	91.15	9.464		
5,600.00	3,729.97	3,735.19	3,729.97	36.86	67.02	-91.160	-2,223.75	779.86	826.38	733.76	92.61	8.923		
5,650.00	3,728.97	3,734.19	3,728.97	37.74	67.00	-91.062	-2,223.75	779.86	791.55	697.34	94.21	8.402		
5,700.00	3,727.98	3,733.19	3,727.98	38.63	66.99	-90.963	-2,223.75	779.86	758.42	662.49	95.93	7.906		
5,750.00	3,726.98	3,732.19	3,726.98	39.52	66.97	-90.865	-2,223.75	779.86	727.22	629.45	97.77	7.438		
5,800.00	3,725.98	3,731.20	3,725.98	40.41	66.95	-90.766	-2,223.75	779.86	698.21	598.49	99.72	7.002		
5,850.00	3,724.98	3,730.20	3,724.98	41.30	66.93	-90.668	-2,223.75	779.86	671.67	569.91	101.76	6.601		
5,900.00	3,723.98	3,729.20	3,723.98	42.20	66.91	-90.569	-2,223.75	779.86	647.90	544.07	103.84	6.239		
5,950.00	3,722.99	3,728.20	3,722.99	43.10	66.90	-90.471	-2,223.75	779.86	627.23	521.30	105.93	5.921		
6,000.00	3,721.99	3,727.20	3,721.99	44.00	66.88	-90.372	-2,223.75	779.86	609.97	501.99	107.98	5.649		
6,050.00	3,720.99	3,726.21	3,720.99	44.91	66.86	-90.273	-2,223.75	779.86	596.40	486.49	109.91	5.426		
6,100.00	3,719.99	3,725.21	3,719.99	45.81	66.84	-90.175	-2,223.75	779.86	586.79	475.13	111.66	5.255		
6,150.00	3,718.99	3,724.21	3,718.99	46.72	66.83	-90.076	-2,223.75	779.86	581.34	468.16	113.18	5.137		
6,188.71	3,718.22	3,723.44	3,718.22	47.43	66.81	-90.000	-2,223.75	779.86	580.05	465.90	114.15	5.081 CC		
6,200.00	3,718.00	3,723.21	3,718.00	47.63	66.81	-89.978	-2,223.75	779.86	580.16	465.77	114.40	5.071 ES		
6,250.00	3,717.00	3,722.21	3,717.00	48.54	66.79	-89.879	-2,223.75	779.86	583.28	467.99	115.29	5.059 SF		
6,300.00	3,716.00	3,721.22	3,716.00	49.46	66.77	-89.781	-2,223.75	779.86	590.63	474.78	115.85	5.098		
6,350.00	3,715.00	3,720.22	3,715.00	50.37	66.76	-89.682	-2,223.75	779.86	602.05	485.97	116.08	5.186		
6,400.00	3,714.00	3,719.22	3,714.00	51.29	66.74	-89.583	-2,223.75	779.86	617.32	501.31	116.02	5.321		
6,450.00	3,713.01	3,718.22	3,713.01	52.21	66.72	-89.485	-2,223.75	779.86	636.17	520.47	115.70	5.498		
6,500.00	3,712.01	3,717.22	3,712.01	53.13	66.70	-89.386	-2,223.75	779.86	658.28	543.10	115.18	5.715		
6,550.00	3,711.01	3,716.23	3,711.01	54.05	66.68	-89.288	-2,223.75	779.86	683.33	568.84	114.50	5.968		
6,600.00	3,710.01	3,715.23	3,710.01	54.97	66.67	-89.189	-2,223.75	779.86	711.02	597.32	113.70	6.253		
6,650.00	3,709.01	3,714.23	3,709.01	55.90	66.65	-89.091	-2,223.75	779.86	741.06	628.23	112.83	6.568		
6,700.00	3,708.02	3,713.23	3,708.02	56.82	66.63	-88.992	-2,223.75	779.86	773.16	661.24	111.92	6.908		
6,750.00	3,707.02	3,712.23	3,707.02	57.75	66.61	-88.894	-2,223.75	779.86	807.08	696.09	110.99	7.272		
6,800.00	3,706.02	3,711.24	3,706.02	58.68	66.60	-88.795	-2,223.75	779.86	842.61	732.55	110.06	7.656		

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft		
Survey Program: 209-INC-ONLY												MAYARO 22 STATE COM - OFFSET: MARACAS 22 STATE 2 - Wellbore #1 - Wellbore #1		Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Reference		Semi Major Axis			Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
6,850.00	3,705.02	3,710.24	3,705.02	59.60	66.58	-88.697	-2,223.75	779.86	879.54	770.39	109.15	8.058			
6,900.00	3,704.02	3,709.24	3,704.02	60.53	66.56	-88.598	-2,223.75	779.86	917.71	809.45	108.26	8.477			
6,950.00	3,703.03	3,708.24	3,703.03	61.46	66.54	-88.500	-2,223.75	779.86	956.97	849.57	107.40	8.910			
7,000.00	3,702.03	3,707.24	3,702.03	62.39	66.53	-88.401	-2,223.75	779.86	997.19	890.62	106.58	9.357			
7,050.00	3,701.03	3,706.25	3,701.03	63.32	66.51	-88.303	-2,223.75	779.86	1,038.26	932.47	105.79	9.814			
7,100.00	3,700.03	3,705.25	3,700.03	64.26	66.49	-88.204	-2,223.75	779.86	1,080.09	975.05	105.04	10.283			
7,150.00	3,699.03	3,704.25	3,699.03	65.19	66.47	-88.106	-2,223.75	779.86	1,122.58	1,018.25	104.33	10.760			
7,200.00	3,698.04	3,703.25	3,698.04	66.12	66.46	-88.007	-2,223.75	779.86	1,165.66	1,062.01	103.65	11.246			
7,250.00	3,697.04	3,702.25	3,697.04	67.06	66.44	-87.909	-2,223.75	779.86	1,209.28	1,106.27	103.01	11.739			
7,300.00	3,696.04	3,701.26	3,696.04	67.99	66.42	-87.810	-2,223.75	779.86	1,253.37	1,150.97	102.41	12.239			
7,350.00	3,695.04	3,700.26	3,695.04	68.93	66.40	-87.712	-2,223.75	779.86	1,297.89	1,196.06	101.83	12.745			
7,400.00	3,694.04	3,699.26	3,694.04	69.86	66.38	-87.614	-2,223.75	779.86	1,342.80	1,241.51	101.29	13.257			
7,450.00	3,693.05	3,698.26	3,693.05	70.80	66.37	-87.515	-2,223.75	779.86	1,388.05	1,287.28	100.78	13.774			
7,500.00	3,692.05	3,697.26	3,692.05	71.74	66.35	-87.417	-2,223.75	779.86	1,433.62	1,333.33	100.29	14.295			
7,550.00	3,691.05	3,696.27	3,691.05	72.68	66.33	-87.319	-2,223.75	779.86	1,479.47	1,379.65	99.83	14.820			
7,600.00	3,690.05	3,695.27	3,690.05	73.62	66.31	-87.220	-2,223.75	779.86	1,525.59	1,426.20	99.39	15.350			
7,650.00	3,689.05	3,694.27	3,689.05	74.55	66.30	-87.122	-2,223.75	779.86	1,571.94	1,472.96	98.97	15.882			
7,700.00	3,688.06	3,693.27	3,688.06	75.49	66.28	-87.024	-2,223.75	779.86	1,618.50	1,519.92	98.58	16.418			
7,750.00	3,687.06	3,692.27	3,687.06	76.43	66.26	-86.925	-2,223.75	779.86	1,665.27	1,567.06	98.21	16.957			
7,800.00	3,686.06	3,691.28	3,686.06	77.37	66.24	-86.827	-2,223.75	779.86	1,712.22	1,614.37	97.85	17.498			
7,850.00	3,685.06	3,690.28	3,685.06	78.32	66.23	-86.729	-2,223.75	779.86	1,759.33	1,661.82	97.51	18.042			
7,900.00	3,684.06	3,689.28	3,684.06	79.26	66.21	-86.631	-2,223.75	779.86	1,806.60	1,709.41	97.19	18.589			
7,950.00	3,683.07	3,688.28	3,683.07	80.20	66.19	-86.532	-2,223.75	779.86	1,854.02	1,757.13	96.88	19.137			
8,000.00	3,682.07	3,687.28	3,682.07	81.14	66.17	-86.434	-2,223.75	779.86	1,901.56	1,804.97	96.59	19.687			
8,050.00	3,681.07	3,686.28	3,681.07	82.08	66.16	-86.336	-2,223.75	779.86	1,949.23	1,852.92	96.31	20.239			
8,100.00	3,680.07	3,685.29	3,680.07	83.03	66.14	-86.238	-2,223.75	779.86	1,997.01	1,900.97	96.04	20.793			

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 388-INC-ONLY												Offset Well Error:	0.00 usft
Reference				Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
7,100.00	3,700.03	3,751.12	3,700.03	64.26	64.04	-94.257	-5,056.74	712.43	1,989.84	1,907.09	82.75	24.046	
7,150.00	3,699.03	3,750.12	3,699.03	65.19	64.02	-94.147	-5,056.74	712.43	1,941.60	1,858.38	83.22	23.330	
7,200.00	3,698.04	3,749.12	3,698.04	66.12	64.01	-94.036	-5,056.74	712.43	1,893.45	1,809.72	83.73	22.614	
7,250.00	3,697.04	3,748.12	3,697.04	67.06	63.99	-93.926	-5,056.74	712.43	1,845.40	1,761.13	84.27	21.898	
7,300.00	3,696.04	3,747.12	3,696.04	67.99	63.97	-93.816	-5,056.74	712.43	1,797.45	1,712.60	84.86	21.182	
7,350.00	3,695.04	3,746.13	3,695.04	68.93	63.95	-93.705	-5,056.74	712.43	1,749.62	1,664.14	85.48	20.467	
7,400.00	3,694.04	3,745.13	3,694.04	69.86	63.93	-93.595	-5,056.74	712.43	1,701.91	1,615.76	86.16	19.754	
7,450.00	3,693.05	3,744.13	3,693.05	70.80	63.92	-93.484	-5,056.74	712.43	1,654.34	1,567.46	86.88	19.042	
7,500.00	3,692.05	3,743.13	3,692.05	71.74	63.90	-93.374	-5,056.74	712.43	1,606.91	1,519.26	87.66	18.332	
7,550.00	3,691.05	3,742.13	3,691.05	72.68	63.88	-93.263	-5,056.74	712.43	1,559.65	1,471.15	88.49	17.624	
7,600.00	3,690.05	3,741.14	3,690.05	73.62	63.86	-93.152	-5,056.74	712.43	1,512.56	1,423.16	89.39	16.920	
7,650.00	3,689.05	3,740.14	3,689.05	74.55	63.84	-93.042	-5,056.74	712.43	1,465.66	1,375.30	90.36	16.220	
7,700.00	3,688.06	3,739.14	3,688.06	75.49	63.82	-92.931	-5,056.74	712.43	1,418.97	1,327.57	91.40	15.525	
7,750.00	3,687.06	3,738.14	3,687.06	76.43	63.81	-92.821	-5,056.74	712.43	1,372.51	1,279.99	92.52	14.834	
7,800.00	3,686.06	3,737.14	3,686.06	77.37	63.79	-92.710	-5,056.74	712.43	1,326.31	1,232.58	93.73	14.150	
7,850.00	3,685.06	3,736.15	3,685.06	78.32	63.77	-92.599	-5,056.74	712.43	1,280.40	1,185.36	95.04	13.472	
7,900.00	3,684.06	3,735.15	3,684.06	79.26	63.75	-92.488	-5,056.74	712.43	1,234.80	1,138.35	96.45	12.803	
7,950.00	3,683.07	3,734.15	3,683.07	80.20	63.73	-92.378	-5,056.74	712.43	1,189.56	1,091.59	97.97	12.142	
8,000.00	3,682.07	3,733.15	3,682.07	81.14	63.71	-92.267	-5,056.74	712.43	1,144.71	1,045.09	99.62	11.491	
8,050.00	3,681.07	3,732.15	3,681.07	82.08	63.70	-92.156	-5,056.74	712.43	1,100.30	998.90	101.40	10.851	
8,100.00	3,680.07	3,731.16	3,680.07	83.03	63.68	-92.045	-5,056.74	712.43	1,056.39	953.06	103.33	10.223	
8,150.00	3,679.07	3,730.16	3,679.07	83.97	63.66	-91.935	-5,056.74	712.43	1,013.05	907.63	105.42	9.609	
8,200.00	3,678.08	3,729.16	3,678.08	84.91	63.64	-91.824	-5,056.74	712.43	970.34	862.66	107.69	9.011	
8,250.00	3,677.08	3,728.16	3,677.08	85.86	63.62	-91.713	-5,056.74	712.43	928.37	818.22	110.15	8.429	
8,300.00	3,676.08	3,727.16	3,676.08	86.80	63.61	-91.602	-5,056.74	712.43	887.22	774.42	112.81	7.865	
8,350.00	3,675.08	3,726.17	3,675.08	87.74	63.59	-91.491	-5,056.74	712.43	847.03	731.34	115.69	7.322	
8,354.05	3,675.00	3,726.08	3,675.00	87.82	63.59	-91.482	-5,056.74	712.43	843.82	727.89	115.93	7.279 CC, ES, SF	

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 269-INC-ONLY													Offset Well Error:		0.00 usft
Reference				Offset			Semi Major Axis			Distance			Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
7,000.00	3,702.03	3,724.18	3,702.03	62.39	66.17	-90.392	-3,684.20	2,087.66	1,997.33	1,873.00	124.33	16.065			
7,050.00	3,701.03	3,723.18	3,701.03	63.32	66.15	-90.362	-3,684.20	2,087.66	1,981.67	1,855.97	125.71	15.764			
7,100.00	3,700.03	3,722.18	3,700.03	64.26	66.14	-90.332	-3,684.20	2,087.66	1,967.16	1,840.09	127.08	15.480			
7,150.00	3,699.03	3,721.18	3,699.03	65.19	66.12	-90.301	-3,684.20	2,087.66	1,953.83	1,825.39	128.43	15.213			
7,200.00	3,698.04	3,720.19	3,698.04	66.12	66.10	-90.271	-3,684.20	2,087.66	1,941.68	1,811.92	129.77	14.963			
7,250.00	3,697.04	3,719.19	3,697.04	67.06	66.08	-90.241	-3,684.20	2,087.66	1,930.76	1,799.67	131.09	14.729			
7,300.00	3,696.04	3,718.19	3,696.04	67.99	66.07	-90.211	-3,684.20	2,087.66	1,921.08	1,788.70	132.38	14.512			
7,350.00	3,695.04	3,717.19	3,695.04	68.93	66.05	-90.180	-3,684.20	2,087.66	1,912.65	1,779.01	133.64	14.312			
7,400.00	3,694.04	3,716.19	3,694.04	69.86	66.03	-90.150	-3,684.20	2,087.66	1,905.50	1,770.62	134.87	14.128			
7,450.00	3,693.05	3,715.20	3,693.05	70.80	66.01	-90.120	-3,684.20	2,087.66	1,899.64	1,763.56	136.07	13.961			
7,500.00	3,692.05	3,714.20	3,692.05	71.74	66.00	-90.090	-3,684.20	2,087.66	1,895.07	1,757.84	137.23	13.809			
7,550.00	3,691.05	3,713.20	3,691.05	72.68	65.98	-90.059	-3,684.20	2,087.66	1,891.82	1,753.48	138.35	13.675			
7,600.00	3,690.05	3,712.20	3,690.05	73.62	65.96	-90.029	-3,684.20	2,087.66	1,889.89	1,750.47	139.42	13.556			
7,648.17	3,689.09	3,711.24	3,689.09	74.52	65.95	-90.000	-3,684.20	2,087.66	1,889.27	1,748.87	140.41	13.456 CC			
7,650.00	3,689.05	3,711.20	3,689.05	74.55	65.95	-89.999	-3,684.20	2,087.66	1,889.27	1,748.83	140.44	13.452			
7,700.00	3,688.06	3,710.21	3,688.06	75.49	65.93	-89.969	-3,684.20	2,087.66	1,889.98	1,748.57	141.42	13.365 ES			
7,750.00	3,687.06	3,709.21	3,687.06	76.43	65.91	-89.938	-3,684.20	2,087.66	1,892.01	1,749.68	142.34	13.292			
7,800.00	3,686.06	3,708.21	3,686.06	77.37	65.89	-89.908	-3,684.20	2,087.66	1,895.36	1,752.16	143.21	13.235			
7,850.00	3,685.06	3,707.21	3,685.06	78.32	65.88	-89.878	-3,684.20	2,087.66	1,900.02	1,756.00	144.02	13.193			
7,900.00	3,684.06	3,706.21	3,684.06	79.26	65.86	-89.848	-3,684.20	2,087.66	1,905.98	1,761.20	144.78	13.165			
7,950.00	3,683.07	3,705.22	3,683.07	80.20	65.84	-89.817	-3,684.20	2,087.66	1,913.22	1,767.74	145.48	13.151 SF			
8,000.00	3,682.07	3,704.22	3,682.07	81.14	65.82	-89.787	-3,684.20	2,087.66	1,921.74	1,775.62	146.12	13.151			
8,050.00	3,681.07	3,703.22	3,681.07	82.08	65.81	-89.757	-3,684.20	2,087.66	1,931.52	1,784.80	146.71	13.165			
8,100.00	3,680.07	3,702.22	3,680.07	83.03	65.79	-89.727	-3,684.20	2,087.66	1,942.53	1,795.29	147.24	13.193			
8,150.00	3,679.07	3,701.22	3,679.07	83.97	65.77	-89.696	-3,684.20	2,087.66	1,954.76	1,807.04	147.72	13.233			
8,200.00	3,678.08	3,700.23	3,678.08	84.91	65.76	-89.666	-3,684.20	2,087.66	1,968.18	1,820.04	148.14	13.286			
8,250.00	3,677.08	3,699.23	3,677.08	85.86	65.74	-89.636	-3,684.20	2,087.66	1,982.78	1,834.27	148.51	13.351			
8,300.00	3,676.08	3,698.23	3,676.08	86.80	65.72	-89.606	-3,684.20	2,087.66	1,998.52	1,849.69	148.83	13.429			

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



### Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 547-MWD												Offset Well Error:	0.00 usft	
MAYARO 22 STATE COM - OFFSET: MAYARO 22 STATE 4 - Wellbore #1 - Wellbore #1														
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,900.00	3,723.98	3,774.69	3,748.96	42.20	12.68	-95.429	-3,778.35	848.15	1,954.55	1,925.29	29.27	66.787		
5,950.00	3,722.99	3,773.83	3,748.10	43.10	12.68	-95.354	-3,778.35	848.19	1,907.50	1,877.80	29.70	64.234		
6,000.00	3,721.99	3,772.97	3,747.25	44.00	12.67	-95.279	-3,778.35	848.22	1,860.59	1,830.43	30.16	61.689		
6,050.00	3,720.99	3,772.12	3,746.39	44.91	12.67	-95.204	-3,778.35	848.26	1,813.85	1,783.19	30.67	59.148		
6,100.00	3,719.99	3,771.26	3,745.53	45.81	12.67	-95.128	-3,778.35	848.30	1,767.29	1,736.08	31.21	56.622		
6,150.00	3,718.99	3,770.40	3,744.67	46.72	12.66	-95.053	-3,778.34	848.34	1,720.93	1,689.12	31.80	54.112		
6,200.00	3,718.00	3,769.54	3,743.81	47.63	12.66	-94.977	-3,778.34	848.38	1,674.77	1,642.33	32.44	51.626		
6,250.00	3,717.00	3,768.67	3,742.95	48.54	12.66	-94.902	-3,778.34	848.42	1,628.84	1,595.71	33.13	49.165		
6,300.00	3,716.00	3,767.81	3,742.09	49.46	12.65	-94.826	-3,778.34	848.46	1,583.15	1,549.28	33.87	46.740		
6,350.00	3,715.00	3,766.95	3,741.23	50.37	12.65	-94.750	-3,778.34	848.50	1,537.73	1,503.06	34.67	44.349		
6,400.00	3,714.00	3,766.08	3,740.36	51.29	12.65	-94.674	-3,778.33	848.54	1,492.61	1,457.07	35.54	42.004		
6,450.00	3,713.01	3,765.22	3,739.50	52.21	12.64	-94.598	-3,778.33	848.58	1,447.80	1,411.34	36.47	39.704		
6,500.00	3,712.01	3,764.35	3,738.63	53.13	12.64	-94.522	-3,778.33	848.61	1,403.34	1,365.88	37.46	37.458		
6,550.00	3,711.01	3,763.48	3,737.76	54.05	12.64	-94.446	-3,778.33	848.65	1,359.27	1,320.73	38.54	35.268		
6,600.00	3,710.01	3,762.61	3,736.90	54.97	12.63	-94.370	-3,778.33	848.69	1,315.63	1,275.93	39.70	33.140		
6,650.00	3,709.01	3,761.74	3,736.03	55.90	12.63	-94.293	-3,778.32	848.73	1,272.45	1,231.50	40.94	31.077		
6,700.00	3,708.02	3,760.87	3,735.15	56.82	12.63	-94.217	-3,778.32	848.77	1,229.78	1,187.50	42.28	29.085		
6,750.00	3,707.02	3,760.00	3,734.28	57.75	12.62	-94.140	-3,778.32	848.81	1,187.69	1,143.97	43.72	27.166		
6,800.00	3,706.02	3,759.12	3,733.41	58.68	12.62	-94.063	-3,778.32	848.85	1,146.23	1,100.97	45.26	25.324		
6,850.00	3,705.02	3,758.25	3,732.54	59.60	12.62	-93.986	-3,778.32	848.89	1,105.48	1,058.56	46.92	23.562		
6,900.00	3,704.02	3,757.37	3,731.66	60.53	12.62	-93.910	-3,778.31	848.93	1,065.52	1,016.82	48.69	21.883		
6,950.00	3,703.03	3,756.49	3,730.78	61.46	12.61	-93.833	-3,778.31	848.97	1,026.43	975.84	50.59	20.289		
7,000.00	3,702.03	3,755.62	3,729.91	62.39	12.61	-93.755	-3,778.31	849.01	988.33	935.72	52.61	18.784		
7,050.00	3,701.03	3,754.74	3,729.03	63.32	12.61	-93.678	-3,778.31	849.05	951.33	896.56	54.77	17.369		
7,100.00	3,700.03	3,753.86	3,728.15	64.26	12.60	-93.601	-3,778.31	849.09	915.57	858.50	57.06	16.045		
7,150.00	3,699.03	3,752.97	3,727.27	65.19	12.60	-93.523	-3,778.31	849.13	881.19	821.70	59.48	14.814		
7,200.00	3,698.04	3,752.09	3,726.39	66.12	12.60	-93.446	-3,778.30	849.17	848.36	786.34	62.03	13.677		
7,250.00	3,697.04	3,751.21	3,725.50	67.06	12.59	-93.368	-3,778.30	849.21	817.28	752.60	64.68	12.635		
7,300.00	3,696.04	3,750.32	3,724.62	67.99	12.59	-93.291	-3,778.30	849.25	788.15	720.72	67.43	11.688		
7,350.00	3,695.04	3,749.44	3,723.74	68.93	12.59	-93.213	-3,778.30	849.29	761.18	690.94	70.24	10.836		
7,400.00	3,694.04	3,748.55	3,722.85	69.86	12.58	-93.135	-3,778.30	849.33	736.63	663.55	73.08	10.080		
7,450.00	3,693.05	3,747.66	3,721.96	70.80	12.58	-93.057	-3,778.29	849.37	714.73	638.84	75.90	9.417		
7,500.00	3,692.05	3,746.77	3,721.07	71.74	12.58	-92.979	-3,778.29	849.41	695.74	617.12	78.63	8.848		
7,550.00	3,691.05	3,745.88	3,720.18	72.68	12.57	-92.900	-3,778.29	849.45	679.91	598.70	81.21	8.372		
7,600.00	3,690.05	3,744.99	3,719.29	73.62	12.57	-92.822	-3,778.29	849.49	667.45	583.88	83.58	7.986		
7,650.00	3,689.05	3,744.10	3,718.40	74.55	12.57	-92.744	-3,778.29	849.53	658.57	572.92	85.65	7.689		
7,700.00	3,688.06	3,743.21	3,717.51	75.49	12.56	-92.665	-3,778.29	849.57	653.39	566.02	87.37	7.479		
7,742.89	3,687.20	3,742.44	3,716.74	76.30	12.56	-92.598	-3,778.28	849.61	651.98	563.46	88.52	7.365 CC		
7,750.00	3,687.06	3,742.31	3,716.62	76.43	12.56	-92.586	-3,778.28	849.61	652.02	563.34	88.69	7.352 ES		
7,800.00	3,686.06	3,741.41	3,715.72	77.37	12.56	-92.508	-3,778.28	849.65	654.48	564.91	89.57	7.307 SF		
7,850.00	3,685.06	3,740.52	3,714.82	78.32	12.55	-92.429	-3,778.28	849.69	660.72	570.70	90.02	7.340		
7,900.00	3,684.06	3,739.62	3,713.93	79.26	12.55	-92.350	-3,778.28	849.74	670.64	580.60	90.04	7.448		
7,950.00	3,683.07	3,738.72	3,713.03	80.20	12.55	-92.271	-3,778.28	849.78	684.08	594.40	89.68	7.628		
8,000.00	3,682.07	3,737.82	3,712.13	81.14	12.54	-92.192	-3,778.27	849.82	700.83	611.85	88.98	7.876		
8,050.00	3,681.07	3,736.92	3,711.23	82.08	12.54	-92.113	-3,778.27	849.86	720.67	632.67	88.01	8.189		
8,100.00	3,680.07	3,736.01	3,710.33	83.03	12.54	-92.033	-3,778.27	849.90	743.35	656.54	86.81	8.563		
8,150.00	3,679.07	3,735.11	3,709.42	83.97	12.53	-91.954	-3,778.27	849.94	768.61	683.17	85.44	8.996		
8,200.00	3,678.08	3,734.21	3,708.52	84.91	12.53	-91.874	-3,778.27	849.98	796.22	712.26	83.96	9.483		
8,250.00	3,677.08	3,733.30	3,707.61	85.86	12.53	-91.795	-3,778.27	850.02	825.93	743.52	82.41	10.022		
8,300.00	3,676.08	3,732.39	3,706.71	86.80	12.52	-91.715	-3,778.26	850.06	857.53	776.70	80.83	10.609		
8,350.00	3,675.08	3,731.48	3,705.80	87.74	12.52	-91.635	-3,778.26	850.10	890.81	811.57	79.24	11.242		
8,354.05	3,675.00	3,731.41	3,705.73	87.82	12.52	-91.629	-3,778.26	850.11	893.58	814.47	79.11	11.296		

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 132-MWD												Offset Well Error:	0.00 usft
Reference				Offset		Semi Major Axis			Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
6,550.00	3,711.01	3,760.88	3,723.61	54.05	14.48	128.206	-4,553.16	131.60	1,969.96	1,941.91	28.06	70.217	
6,600.00	3,710.01	3,759.64	3,722.37	54.97	14.47	127.529	-4,553.17	131.60	1,920.01	1,891.91	28.10	68.338	
6,650.00	3,709.01	3,758.39	3,721.12	55.90	14.47	126.837	-4,553.17	131.59	1,870.06	1,841.92	28.14	66.459	
6,700.00	3,708.02	3,757.14	3,719.87	56.82	14.47	126.132	-4,553.18	131.58	1,820.10	1,791.92	28.18	64.580	
6,750.00	3,707.02	3,755.89	3,718.62	57.75	14.46	125.412	-4,553.19	131.57	1,770.16	1,741.93	28.23	62.702	
6,800.00	3,706.02	3,754.63	3,717.36	58.68	14.46	124.677	-4,553.20	131.56	1,720.21	1,691.93	28.28	60.825	
6,850.00	3,705.02	3,753.37	3,716.10	59.60	14.45	123.927	-4,553.21	131.55	1,670.27	1,641.93	28.33	58.947	
6,900.00	3,704.02	3,752.11	3,714.84	60.53	14.45	123.162	-4,553.21	131.54	1,620.32	1,591.93	28.39	57.071	
6,950.00	3,703.03	3,750.84	3,713.57	61.46	14.45	122.382	-4,553.22	131.53	1,570.38	1,541.93	28.45	55.194	
7,000.00	3,702.03	3,749.57	3,712.30	62.39	14.44	121.586	-4,553.23	131.52	1,520.45	1,491.93	28.52	53.319	
7,050.00	3,701.03	3,748.30	3,711.03	63.32	14.44	120.775	-4,553.24	131.51	1,470.51	1,441.93	28.59	51.443	
7,100.00	3,700.03	3,747.03	3,709.75	64.26	14.43	119.948	-4,553.25	131.51	1,420.58	1,391.92	28.66	49.568	
7,150.00	3,699.03	3,745.75	3,708.48	65.19	14.43	119.105	-4,553.25	131.50	1,370.66	1,341.92	28.74	47.693	
7,200.00	3,698.04	3,744.46	3,707.19	66.12	14.43	118.246	-4,553.26	131.49	1,320.74	1,291.91	28.83	45.818	
7,250.00	3,697.04	3,743.18	3,705.91	67.06	14.42	117.371	-4,553.27	131.48	1,270.82	1,241.90	28.92	43.944	
7,300.00	3,696.04	3,741.89	3,704.62	67.99	14.42	116.480	-4,553.28	131.47	1,220.91	1,191.89	29.02	42.069	
7,350.00	3,695.04	3,740.60	3,703.33	68.93	14.42	115.573	-4,553.29	131.46	1,171.00	1,141.87	29.13	40.195	
7,400.00	3,694.04	3,739.31	3,702.03	69.86	14.41	114.650	-4,553.30	131.45	1,121.10	1,091.85	29.26	38.321	
7,450.00	3,693.05	3,738.01	3,700.74	70.80	14.41	113.711	-4,553.31	131.44	1,071.21	1,041.82	29.39	36.446	
7,500.00	3,692.05	3,736.71	3,699.43	71.74	14.40	112.756	-4,553.31	131.43	1,021.33	991.79	29.54	34.571	
7,550.00	3,691.05	3,735.40	3,698.13	72.68	14.40	111.785	-4,553.32	131.42	971.46	941.75	29.71	32.696	
7,600.00	3,690.05	3,734.09	3,696.82	73.62	14.40	110.799	-4,553.33	131.41	921.60	891.70	29.90	30.821	
7,650.00	3,689.05	3,732.78	3,695.51	74.55	14.39	109.797	-4,553.34	131.41	871.76	841.64	30.12	28.945	
7,700.00	3,688.06	3,731.47	3,694.20	75.49	14.39	108.780	-4,553.35	131.40	821.93	791.56	30.37	27.068	
7,750.00	3,687.06	3,730.15	3,692.88	76.43	14.38	107.749	-4,553.36	131.39	772.12	741.47	30.65	25.191	
7,800.00	3,686.06	3,728.83	3,691.56	77.37	14.38	106.703	-4,553.37	131.38	722.33	691.35	30.98	23.314	
7,850.00	3,685.06	3,727.50	3,690.23	78.32	14.38	105.643	-4,553.38	131.37	672.58	641.21	31.37	21.437	
7,900.00	3,684.06	3,726.17	3,688.90	79.26	14.37	104.570	-4,553.39	131.36	622.86	591.02	31.84	19.562	
7,950.00	3,683.07	3,724.84	3,687.57	80.20	14.37	103.483	-4,553.40	131.35	573.19	540.78	32.41	17.688	
8,000.00	3,682.07	3,723.51	3,686.24	81.14	14.36	102.384	-4,553.41	131.34	523.57	490.47	33.10	15.818	
8,050.00	3,681.07	3,722.17	3,684.90	82.08	14.36	101.273	-4,553.42	131.33	474.04	440.07	33.97	13.956	
8,100.00	3,680.07	3,720.83	3,683.56	83.03	14.35	100.151	-4,553.43	131.32	424.60	389.53	35.08	12.105	
8,150.00	3,679.07	3,719.48	3,682.21	83.97	14.35	99.019	-4,553.44	131.31	375.32	338.79	36.52	10.276	
8,200.00	3,678.08	3,718.13	3,680.86	84.91	14.35	97.877	-4,553.45	131.30	326.24	287.76	38.48	8.479	
8,250.00	3,677.08	3,716.78	3,679.51	85.86	14.34	96.725	-4,553.46	131.29	277.49	236.28	41.20	6.734	
8,300.00	3,676.08	3,715.43	3,678.16	86.80	14.34	95.566	-4,553.47	131.28	229.27	184.08	45.19	5.074	
8,350.00	3,675.08	3,714.07	3,676.80	87.74	14.33	94.399	-4,553.48	131.27	181.99	130.66	51.34	3.545	
8,354.05	3,675.00	3,713.96	3,676.69	87.82	14.33	94.304	-4,553.48	131.27	178.23	126.25	51.98	3.429 CC, ES, SF	

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 496-MWD												Offset Well Error:	0.00 usft	
MAYARO 22 STATE COM - OFFSET: MAYARO 22 STATE 6 - Wellbore #1 - Wellbore #1														
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toofface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
6,600.00	3,710.01	3,747.58	3,717.11	54.97	13.45	-94.470	-4,545.99	776.24	1,996.74	1,965.26	31.48	63.434		
6,650.00	3,709.01	3,746.52	3,716.05	55.90	13.45	-94.365	-4,545.99	776.25	1,948.95	1,916.99	31.96	60.985		
6,700.00	3,708.02	3,745.46	3,714.98	56.82	13.44	-94.261	-4,545.99	776.26	1,901.28	1,868.81	32.47	58.550		
6,750.00	3,707.02	3,744.40	3,713.92	57.75	13.44	-94.156	-4,545.99	776.27	1,853.73	1,820.70	33.03	56.128		
6,800.00	3,706.02	3,743.33	3,712.85	58.68	13.44	-94.051	-4,545.99	776.28	1,806.31	1,772.69	33.62	53.727		
6,850.00	3,705.02	3,742.26	3,711.79	59.60	13.43	-93.946	-4,545.99	776.28	1,759.03	1,724.77	34.26	51.347		
6,900.00	3,704.02	3,741.20	3,710.72	60.53	13.43	-93.841	-4,546.00	776.29	1,711.91	1,676.97	34.94	48.994		
6,950.00	3,703.03	3,740.13	3,709.65	61.46	13.43	-93.735	-4,546.00	776.30	1,664.95	1,629.27	35.68	46.670		
7,000.00	3,702.03	3,739.06	3,708.58	62.39	13.42	-93.630	-4,546.00	776.31	1,618.17	1,581.71	36.46	44.380		
7,050.00	3,701.03	3,737.98	3,707.51	63.32	13.42	-93.524	-4,546.00	776.31	1,571.60	1,534.29	37.31	42.126		
7,100.00	3,700.03	3,736.91	3,706.43	64.26	13.42	-93.418	-4,546.00	776.32	1,525.24	1,487.02	38.21	39.914		
7,150.00	3,699.03	3,735.83	3,705.36	65.19	13.41	-93.312	-4,546.00	776.33	1,479.11	1,439.93	39.19	37.745		
7,200.00	3,698.04	3,734.76	3,704.28	66.12	13.41	-93.205	-4,546.01	776.34	1,433.25	1,393.01	40.23	35.625		
7,250.00	3,697.04	3,733.68	3,703.20	67.06	13.41	-93.099	-4,546.01	776.34	1,387.67	1,346.31	41.36	33.555		
7,300.00	3,696.04	3,732.60	3,702.12	67.99	13.40	-92.992	-4,546.01	776.35	1,342.40	1,299.84	42.56	31.540		
7,350.00	3,695.04	3,731.52	3,701.04	68.93	13.40	-92.885	-4,546.01	776.36	1,297.48	1,253.62	43.86	29.583		
7,400.00	3,694.04	3,730.43	3,699.96	69.86	13.40	-92.778	-4,546.01	776.36	1,252.94	1,207.69	45.25	27.687		
7,450.00	3,693.05	3,729.35	3,698.87	70.80	13.39	-92.671	-4,546.02	776.37	1,208.83	1,162.08	46.76	25.854		
7,500.00	3,692.05	3,728.26	3,697.78	71.74	13.39	-92.564	-4,546.02	776.38	1,165.20	1,116.83	48.37	24.089		
7,550.00	3,691.05	3,727.17	3,696.70	72.68	13.39	-92.457	-4,546.02	776.39	1,122.09	1,071.98	50.11	22.393		
7,600.00	3,690.05	3,726.08	3,695.61	73.62	13.38	-92.349	-4,546.02	776.39	1,079.58	1,027.60	51.98	20.770		
7,650.00	3,689.05	3,724.99	3,694.52	74.55	13.38	-92.241	-4,546.02	776.40	1,037.74	983.74	53.99	19.220		
7,700.00	3,688.06	3,723.90	3,693.43	75.49	13.38	-92.133	-4,546.03	776.41	996.64	940.49	56.16	17.748		
7,750.00	3,687.06	3,722.81	3,692.33	76.43	13.37	-92.025	-4,546.03	776.42	956.40	897.92	58.48	16.354		
7,800.00	3,686.06	3,721.71	3,691.24	77.37	13.37	-91.917	-4,546.03	776.42	917.11	856.13	60.97	15.041		
7,850.00	3,685.06	3,720.62	3,690.14	78.32	13.37	-91.809	-4,546.03	776.43	878.91	815.26	63.64	13.810		
7,900.00	3,684.06	3,719.52	3,689.04	79.26	13.36	-91.700	-4,546.03	776.44	841.94	775.45	66.49	12.662		
7,950.00	3,683.07	3,718.42	3,687.94	80.20	13.36	-91.591	-4,546.04	776.44	806.39	736.87	69.52	11.599		
8,000.00	3,682.07	3,717.32	3,686.84	81.14	13.36	-91.482	-4,546.04	776.45	772.43	699.71	72.72	10.622		
8,050.00	3,681.07	3,716.22	3,685.74	82.08	13.35	-91.373	-4,546.04	776.46	740.29	664.22	76.07	9.732		
8,100.00	3,680.07	3,715.11	3,684.63	83.03	13.35	-91.264	-4,546.04	776.47	710.21	630.67	79.54	8.929		
8,150.00	3,679.07	3,714.01	3,683.53	83.97	13.35	-91.155	-4,546.05	776.47	682.48	599.39	83.10	8.213		
8,200.00	3,678.08	3,712.90	3,682.42	84.91	13.34	-91.045	-4,546.05	776.48	657.39	570.72	86.67	7.585		
8,250.00	3,677.08	3,711.79	3,681.31	85.86	13.34	-90.935	-4,546.05	776.49	635.24	545.06	90.19	7.044		
8,300.00	3,676.08	3,710.68	3,680.20	86.80	13.34	-90.826	-4,546.05	776.49	616.36	522.82	93.54	6.589		
8,350.00	3,675.08	3,709.57	3,679.09	87.74	13.33	-90.716	-4,546.05	776.50	601.06	504.44	96.62	6.221		
8,354.05	3,675.00	3,709.48	3,679.00	87.82	13.33	-90.707	-4,546.05	776.50	599.98	503.13	96.85	6.195 CC, ES, SF		

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 132-MWD												Offset Well Error:	0.00 usft	
MAYARO 22 STATE COM - OFFSET: MAYARO 22 STATE 7 - Wellbore #1 - Wellbore #1														
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,150.00	3,699.03	3,745.42	3,676.91	65.19	15.96	103.498	-5,167.09	124.20	1,984.34	1,955.98	28.36	69.974		
7,200.00	3,698.04	3,745.04	3,676.53	66.12	15.96	103.214	-5,167.09	124.20	1,934.37	1,905.96	28.41	68.088		
7,250.00	3,697.04	3,744.66	3,676.15	67.06	15.95	102.928	-5,167.09	124.19	1,884.41	1,855.95	28.46	66.203		
7,300.00	3,696.04	3,744.28	3,675.76	67.99	15.95	102.639	-5,167.08	124.19	1,834.45	1,805.93	28.52	64.319		
7,350.00	3,695.04	3,743.89	3,675.38	68.93	15.95	102.348	-5,167.08	124.19	1,784.49	1,755.91	28.58	62.435		
7,400.00	3,694.04	3,743.50	3,674.99	69.86	15.95	102.054	-5,167.07	124.19	1,734.54	1,705.89	28.64	60.553		
7,450.00	3,693.05	3,743.11	3,674.59	70.80	15.95	101.758	-5,167.07	124.19	1,684.59	1,655.87	28.71	58.671		
7,500.00	3,692.05	3,742.71	3,674.20	71.74	15.95	101.458	-5,167.06	124.19	1,634.64	1,605.85	28.78	56.790		
7,550.00	3,691.05	3,742.31	3,673.80	72.68	15.95	101.157	-5,167.06	124.19	1,584.69	1,555.83	28.86	54.910		
7,600.00	3,690.05	3,741.91	3,673.40	73.62	15.95	100.852	-5,167.05	124.19	1,534.75	1,505.81	28.94	53.031		
7,650.00	3,689.05	3,741.51	3,672.99	74.55	15.95	100.545	-5,167.05	124.18	1,484.81	1,455.78	29.03	51.152		
7,700.00	3,688.06	3,741.10	3,672.59	75.49	15.94	100.235	-5,167.05	124.18	1,434.87	1,405.75	29.12	49.274		
7,750.00	3,687.06	3,740.69	3,672.18	76.43	15.94	99.923	-5,167.04	124.18	1,384.94	1,355.72	29.22	47.396		
7,800.00	3,686.06	3,740.28	3,671.77	77.37	15.94	99.607	-5,167.04	124.18	1,335.01	1,305.68	29.33	45.519		
7,850.00	3,685.06	3,739.86	3,671.35	78.32	15.94	99.289	-5,167.03	124.18	1,285.09	1,255.65	29.45	43.642		
7,900.00	3,684.06	3,739.45	3,670.93	79.26	15.94	98.968	-5,167.03	124.18	1,235.18	1,205.60	29.57	41.766		
7,950.00	3,683.07	3,739.03	3,670.51	80.20	15.94	98.645	-5,167.02	124.18	1,185.27	1,155.56	29.71	39.889		
8,000.00	3,682.07	3,738.60	3,670.09	81.14	15.94	98.318	-5,167.02	124.18	1,135.37	1,105.50	29.87	38.013		
8,050.00	3,681.07	3,738.18	3,669.66	82.08	15.94	97.989	-5,167.01	124.17	1,085.48	1,055.44	30.04	36.137		
8,100.00	3,680.07	3,737.75	3,669.23	83.03	15.93	97.657	-5,167.01	124.17	1,035.60	1,005.37	30.23	34.261		
8,150.00	3,679.07	3,737.31	3,668.80	83.97	15.93	97.322	-5,167.00	124.17	985.73	955.30	30.44	32.385		
8,200.00	3,678.08	3,736.88	3,668.37	84.91	15.93	96.985	-5,167.00	124.17	935.88	905.20	30.68	30.509		
8,250.00	3,677.08	3,736.44	3,667.93	85.86	15.93	96.644	-5,167.00	124.17	886.04	855.10	30.94	28.633		
8,300.00	3,676.08	3,736.00	3,667.49	86.80	15.93	96.301	-5,166.99	124.17	836.22	804.97	31.25	26.758		
8,350.00	3,675.08	3,735.55	3,667.04	87.74	15.93	95.954	-5,166.99	124.17	786.43	754.82	31.61	24.883		
8,354.05	3,675.00	3,735.52	3,667.00	87.82	15.93	95.926	-5,166.99	124.17	782.39	750.75	31.64	24.731	CC, ES, SF	

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



### Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 100-MWD													Offset Well Error:	0.00 usft
MAYARO 22 STATE COM - OFFSET: VERMEJO SWD 1 - Wellbore #1 - Wellbore #1														
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	3.00	0.00	0.00	-9.949	620.23	-108.79	629.71					
50.00	50.00	46.51	49.51	0.05	0.07	-9.950	620.25	-108.80	629.72	629.60	0.12	5,155.888		
100.00	100.00	95.98	98.98	0.14	0.14	-9.952	620.30	-108.84	629.78	629.49	0.28	2,213.571		
150.00	150.00	146.17	149.17	0.32	0.31	-9.957	620.37	-108.91	629.85	629.22	0.63	992.284		
200.00	200.00	196.43	199.43	0.50	0.49	-9.963	620.41	-108.99	629.91	628.91	0.99	633.907		
250.00	250.00	246.85	249.85	0.68	0.67	-9.969	620.43	-109.05	629.94	628.59	1.35	467.650		
300.00	300.00	297.28	300.28	0.86	0.84	-9.970	620.42	-109.06	629.93	628.23	1.70	370.564		
350.00	350.00	348.69	351.69	1.04	1.02	-25.162	620.35	-109.02	629.46	627.40	2.06	306.149		
400.00	399.98	400.13	403.12	1.22	1.19	-25.221	620.16	-108.93	628.08	625.67	2.41	260.352		
450.00	449.93	449.76	452.76	1.40	1.37	-25.317	619.94	-108.81	625.87	623.11	2.77	226.106		
500.00	499.84	499.35	502.35	1.58	1.54	-25.454	619.75	-108.69	622.90	619.78	3.12	199.426		
550.00	549.68	549.14	552.13	1.77	1.72	-25.634	619.57	-108.57	619.16	615.68	3.48	177.789		
600.00	599.45	598.85	601.84	1.95	1.89	-25.858	619.39	-108.44	614.64	610.80	3.84	159.997		
650.00	649.13	648.43	651.43	2.15	2.07	-26.127	619.23	-108.31	609.36	605.16	4.20	144.977		
700.00	698.70	697.91	700.90	2.34	2.24	-26.445	619.06	-108.19	603.31	598.75	4.56	132.167		
750.00	748.15	747.21	750.21	2.55	2.42	-26.814	618.90	-108.09	596.52	591.59	4.93	121.009		
800.00	797.47	796.38	799.37	2.76	2.59	-27.239	618.75	-108.00	588.98	583.68	5.29	111.245		
850.00	846.63	845.71	848.71	2.98	2.77	-27.726	618.60	-107.94	580.70	575.03	5.66	102.511		
900.00	895.62	894.90	897.89	3.20	2.94	-28.276	618.42	-107.88	571.67	565.64	6.04	94.717		
950.00	944.44	943.52	946.52	3.45	3.12	-28.888	618.24	-107.82	561.93	555.52	6.41	87.660		
1,000.00	993.06	991.92	994.91	3.69	3.29	-29.569	618.08	-107.75	551.50	544.71	6.79	81.271		
1,050.00	1,041.46	1,040.33	1,043.33	3.95	3.46	-30.329	617.93	-107.66	540.40	533.23	7.17	75.377		
1,100.00	1,089.64	1,088.56	1,091.55	4.22	3.64	-31.176	617.78	-107.59	528.63	521.08	7.55	69.973		
1,150.00	1,137.58	1,136.40	1,139.39	4.50	3.81	-32.115	617.62	-107.52	516.23	508.28	7.95	64.945		
1,200.00	1,185.30	1,183.99	1,186.98	4.79	3.98	-33.072	617.47	-107.46	503.33	494.98	8.35	60.294		
1,250.00	1,232.99	1,231.29	1,234.28	5.09	4.15	-34.006	617.33	-107.39	490.48	481.73	8.75	56.065		
1,300.00	1,280.68	1,278.48	1,281.48	5.39	4.32	-34.987	617.24	-107.35	477.81	468.65	9.15	52.198		
1,350.00	1,328.37	1,325.89	1,328.88	5.70	4.48	-36.025	617.18	-107.33	465.32	455.75	9.57	48.636		
1,400.00	1,376.06	1,373.47	1,376.46	6.00	4.65	-37.124	617.13	-107.32	453.01	443.02	9.99	45.359		
1,450.00	1,423.75	1,421.03	1,424.03	6.31	4.82	-38.283	617.09	-107.34	440.88	430.46	10.41	42.333		
1,500.00	1,471.44	1,468.60	1,471.59	6.62	4.99	-39.505	617.05	-107.37	428.95	418.10	10.85	39.543		
1,550.00	1,519.13	1,516.09	1,519.09	6.94	5.15	-40.793	617.03	-107.40	417.23	405.94	11.29	36.962		
1,600.00	1,566.82	1,563.45	1,566.45	7.25	5.32	-42.147	617.03	-107.45	405.77	394.04	11.73	34.581		
1,650.00	1,614.51	1,610.88	1,613.87	7.56	5.48	-43.579	617.06	-107.53	394.59	382.40	12.19	32.372		
1,700.00	1,662.20	1,658.46	1,661.46	7.88	5.64	-45.097	617.11	-107.63	383.68	371.03	12.65	30.324		
1,750.00	1,709.89	1,706.09	1,709.08	8.20	5.80	-46.704	617.14	-107.76	373.08	359.95	13.13	28.420		
1,800.00	1,757.58	1,753.98	1,756.97	8.52	5.97	-48.409	617.17	-107.90	362.78	349.16	13.61	26.647		
1,850.00	1,805.27	1,801.86	1,804.85	8.83	6.13	-50.206	617.18	-108.01	352.79	338.68	14.11	24.999		
1,900.00	1,852.96	1,849.28	1,852.27	9.15	6.30	-52.081	617.20	-108.12	343.17	328.55	14.62	23.473		
1,950.00	1,900.65	1,896.73	1,899.72	9.47	6.46	-54.057	617.24	-108.25	333.99	318.86	15.14	22.062		
2,000.00	1,948.34	1,944.44	1,947.43	9.79	6.62	-56.146	617.30	-108.40	325.27	309.60	15.67	20.759		
2,050.00	1,996.03	1,992.17	1,995.16	10.12	6.79	-58.339	617.35	-108.53	317.00	300.80	16.21	19.558		
2,100.00	2,043.72	2,040.23	2,043.22	10.44	6.96	-60.656	617.39	-108.65	309.22	292.46	16.76	18.450		
2,150.00	2,091.41	2,088.33	2,091.32	10.76	7.12	-63.086	617.36	-108.74	301.92	284.60	17.32	17.432		
2,200.00	2,139.09	2,136.11	2,139.10	11.08	7.29	-65.611	617.30	-108.80	295.17	277.28	17.89	16.501		
2,250.00	2,186.78	2,183.81	2,186.81	11.40	7.46	-68.229	617.24	-108.84	289.04	270.58	18.46	15.657		
2,300.00	2,234.47	2,231.50	2,234.49	11.73	7.63	-70.941	617.21	-108.86	283.57	264.54	19.03	14.898		
2,350.00	2,282.16	2,279.18	2,282.17	12.05	7.80	-73.742	617.18	-108.88	278.81	259.20	19.61	14.221		
2,400.00	2,329.85	2,326.80	2,329.79	12.37	7.97	-76.619	617.17	-108.89	274.79	254.62	20.17	13.624		
2,450.00	2,377.54	2,374.38	2,377.37	12.70	8.14	-79.555	617.19	-108.90	271.57	250.85	20.72	13.104		
2,500.00	2,425.23	2,422.00	2,424.99	13.02	8.30	-82.542	617.26	-108.91	269.16	247.90	21.26	12.658		
2,550.00	2,472.92	2,469.65	2,472.64	13.35	8.46	-85.564	617.37	-108.92	267.58	245.80	21.79	12.282		

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



### Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 100-MWD												Offset Well Error:	0.00 usft
MAYARO 22 STATE COM - OFFSET: VERMEJO SWD 1 - Wellbore #1 - Wellbore #1													
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,589.95	2,511.25	2,507.98	2,510.97	13.59	8.59	-89.772	617.49	-108.92	267.14	244.96	22.18	12.044	CC
2,600.00	2,520.94	2,517.70	2,520.69	13.66	8.62	-90.898	617.52	-108.92	267.15	244.87	22.28	11.992	ES
2,650.00	2,569.60	2,566.47	2,569.46	13.93	8.79	-97.207	617.69	-108.91	267.97	245.26	22.72	11.795	
2,700.00	2,618.77	2,615.69	2,618.68	14.17	8.96	-105.489	617.90	-108.88	269.74	246.62	23.12	11.668	
2,750.00	2,668.30	2,665.12	2,668.11	14.38	9.13	-118.527	618.13	-108.86	272.21	248.73	23.48	11.594	
2,800.00	2,718.07	2,714.81	2,717.80	14.54	9.30	-143.214	618.39	-108.85	275.21	251.41	23.81	11.560	
2,850.00	2,767.94	2,764.65	2,767.63	14.67	9.47	176.211	618.65	-108.86	278.63	254.53	24.10	11.560	SF
2,900.00	2,817.78	2,814.40	2,817.39	14.77	9.64	144.379	618.92	-108.87	282.43	258.05	24.37	11.587	
2,950.00	2,867.43	2,863.90	2,866.88	14.84	9.81	129.162	619.16	-108.90	286.65	262.03	24.62	11.643	
3,000.00	2,916.78	2,913.10	2,916.09	14.88	9.98	122.040	619.37	-108.97	291.41	266.56	24.84	11.731	
3,050.00	2,965.68	2,961.94	2,964.92	14.90	10.15	118.688	619.56	-109.05	296.83	271.80	25.04	11.856	
3,100.00	3,014.00	3,010.18	3,013.16	14.89	10.32	117.353	619.73	-109.13	303.13	277.93	25.20	12.027	
3,150.00	3,061.60	3,057.64	3,060.63	14.86	10.48	117.223	619.88	-109.23	310.53	285.19	25.34	12.255	
3,200.00	3,108.37	3,104.26	3,107.24	14.81	10.64	117.858	620.03	-109.34	319.31	293.86	25.44	12.549	
3,250.00	3,154.16	3,149.86	3,152.84	14.74	10.80	118.978	620.18	-109.46	329.70	304.18	25.52	12.920	
3,300.00	3,198.86	3,194.35	3,197.33	14.66	10.96	120.394	620.33	-109.60	341.97	316.40	25.56	13.377	
3,350.00	3,242.34	3,237.79	3,240.77	14.57	11.11	121.972	620.47	-109.74	356.31	330.72	25.59	13.926	
3,400.00	3,284.47	3,279.90	3,282.88	14.48	11.26	123.592	620.62	-109.86	372.88	347.29	25.59	14.572	
3,450.00	3,325.16	3,320.55	3,323.53	14.38	11.40	125.163	620.75	-109.97	391.81	366.23	25.58	15.319	
3,500.00	3,364.28	3,359.64	3,362.62	14.28	11.54	126.616	620.88	-110.07	413.17	387.61	25.56	16.166	
3,550.00	3,401.73	3,397.06	3,400.04	14.18	11.67	127.896	620.99	-110.17	436.98	411.45	25.54	17.112	
3,600.00	3,437.40	3,432.45	3,435.44	14.10	11.79	128.942	621.09	-110.27	463.24	437.73	25.52	18.154	
3,650.00	3,471.20	3,465.93	3,468.91	14.03	11.91	129.733	621.21	-110.36	491.90	466.40	25.50	19.290	
3,700.00	3,503.03	3,497.42	3,500.40	13.99	12.02	130.242	621.33	-110.46	522.85	497.36	25.49	20.513	
3,750.00	3,532.81	3,527.20	3,530.18	13.97	12.12	130.469	621.44	-110.55	555.98	530.50	25.48	21.817	
3,800.00	3,560.45	3,554.89	3,557.87	13.99	12.22	130.355	621.53	-110.64	591.14	565.65	25.48	23.197	
3,850.00	3,585.99	3,580.49	3,583.47	14.06	12.31	130.758	621.61	-110.72	628.14	602.65	25.49	24.644	
3,900.00	3,610.99	3,605.57	3,608.55	14.18	12.40	132.957	621.68	-110.79	666.11	640.61	25.50	26.117	
3,950.00	3,635.99	3,630.09	3,633.07	14.39	12.49	134.964	621.75	-110.87	704.72	679.20	25.52	27.620	
4,000.00	3,660.99	3,654.67	3,657.65	14.62	12.57	136.843	621.83	-110.95	743.86	718.27	25.58	29.076	
4,050.00	3,685.82	3,679.06	3,682.03	14.91	12.66	137.226	621.92	-111.03	783.54	757.90	25.64	30.557	
4,100.00	3,707.71	3,700.51	3,703.49	15.25	12.73	133.728	622.00	-111.11	825.03	799.33	25.70	32.104	
4,150.00	3,725.60	3,718.25	3,721.23	15.63	12.80	128.819	622.07	-111.17	868.46	842.72	25.74	33.737	
4,200.00	3,739.35	3,731.86	3,734.84	16.06	12.84	121.919	622.12	-111.23	913.51	887.74	25.77	35.451	
4,250.00	3,748.86	3,741.22	3,744.19	16.53	12.88	112.345	622.16	-111.27	959.78	934.01	25.78	37.235	
4,300.00	3,754.06	3,746.25	3,749.23	17.03	12.89	99.604	622.18	-111.29	1,006.92	981.15	25.77	39.077	
4,350.00	3,754.92	3,746.93	3,749.91	17.57	12.90	85.426	622.18	-111.29	1,054.53	1,028.78	25.74	40.964	
4,400.00	3,753.93	3,745.74	3,748.72	18.13	12.89	85.211	622.18	-111.29	1,102.35	1,076.63	25.71	42.870	
4,450.00	3,752.93	3,744.56	3,747.53	18.74	12.89	84.996	622.17	-111.28	1,150.35	1,124.66	25.69	44.773	
4,500.00	3,751.93	3,743.37	3,746.35	19.35	12.88	84.781	622.17	-111.28	1,198.51	1,172.85	25.67	46.692	
4,550.00	3,750.93	3,742.18	3,745.16	20.02	12.88	84.565	622.16	-111.27	1,246.82	1,221.17	25.65	48.602	
4,600.00	3,749.93	3,740.99	3,743.97	20.68	12.88	84.350	622.16	-111.27	1,295.26	1,269.62	25.64	50.526	
4,650.00	3,748.94	3,739.80	3,742.78	21.38	12.87	84.135	622.15	-111.26	1,343.81	1,318.19	25.62	52.442	
4,700.00	3,747.94	3,738.61	3,741.58	22.09	12.87	83.919	622.15	-111.26	1,392.46	1,366.85	25.61	54.368	
4,750.00	3,746.94	3,737.41	3,740.39	22.83	12.86	83.704	622.15	-111.25	1,441.20	1,415.60	25.60	56.287	
4,800.00	3,745.94	3,736.22	3,739.20	23.57	12.86	83.489	622.14	-111.25	1,490.03	1,464.43	25.60	58.214	
4,850.00	3,744.94	3,735.02	3,738.00	24.34	12.85	83.273	622.14	-111.24	1,538.93	1,513.34	25.59	60.136	
4,900.00	3,743.94	3,733.83	3,736.80	25.11	12.85	83.058	622.13	-111.24	1,587.90	1,562.31	25.58	62.064	
4,950.00	3,742.95	3,732.63	3,735.61	25.90	12.85	82.842	622.13	-111.23	1,636.93	1,611.34	25.58	63.987	
5,000.00	3,741.95	3,731.43	3,734.41	26.69	12.84	82.627	622.12	-111.23	1,686.01	1,660.43	25.58	65.915	
5,050.00	3,740.95	3,730.23	3,733.21	27.51	12.84	82.412	622.12	-111.22	1,735.15	1,709.57	25.58	67.838	
5,100.00	3,739.95	3,729.03	3,732.01	28.32	12.83	82.196	622.11	-111.22	1,784.33	1,758.76	25.58	69.766	

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



Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

<b>Offset Design</b> MAYARO 22 STATE COM - OFFSET: VERMEJO SWD 1 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.00 usft
Survey Program: 100-MWD												<b>Offset Well Error:</b>	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,150.00	3,738.95	3,727.83	3,730.81	29.15	12.83	81.981	622.11	-111.21	1,833.56	1,807.98	25.58	71.688	
5,200.00	3,737.96	3,726.63	3,729.60	29.98	12.83	81.766	622.10	-111.21	1,882.83	1,857.25	25.58	73.615	
5,250.00	3,736.96	3,725.42	3,728.40	30.82	12.82	81.551	622.10	-111.20	1,932.13	1,906.55	25.58	75.536	
5,300.00	3,735.96	3,724.22	3,727.20	31.67	12.82	81.336	622.10	-111.20	1,981.47	1,955.89	25.58	77.461	

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

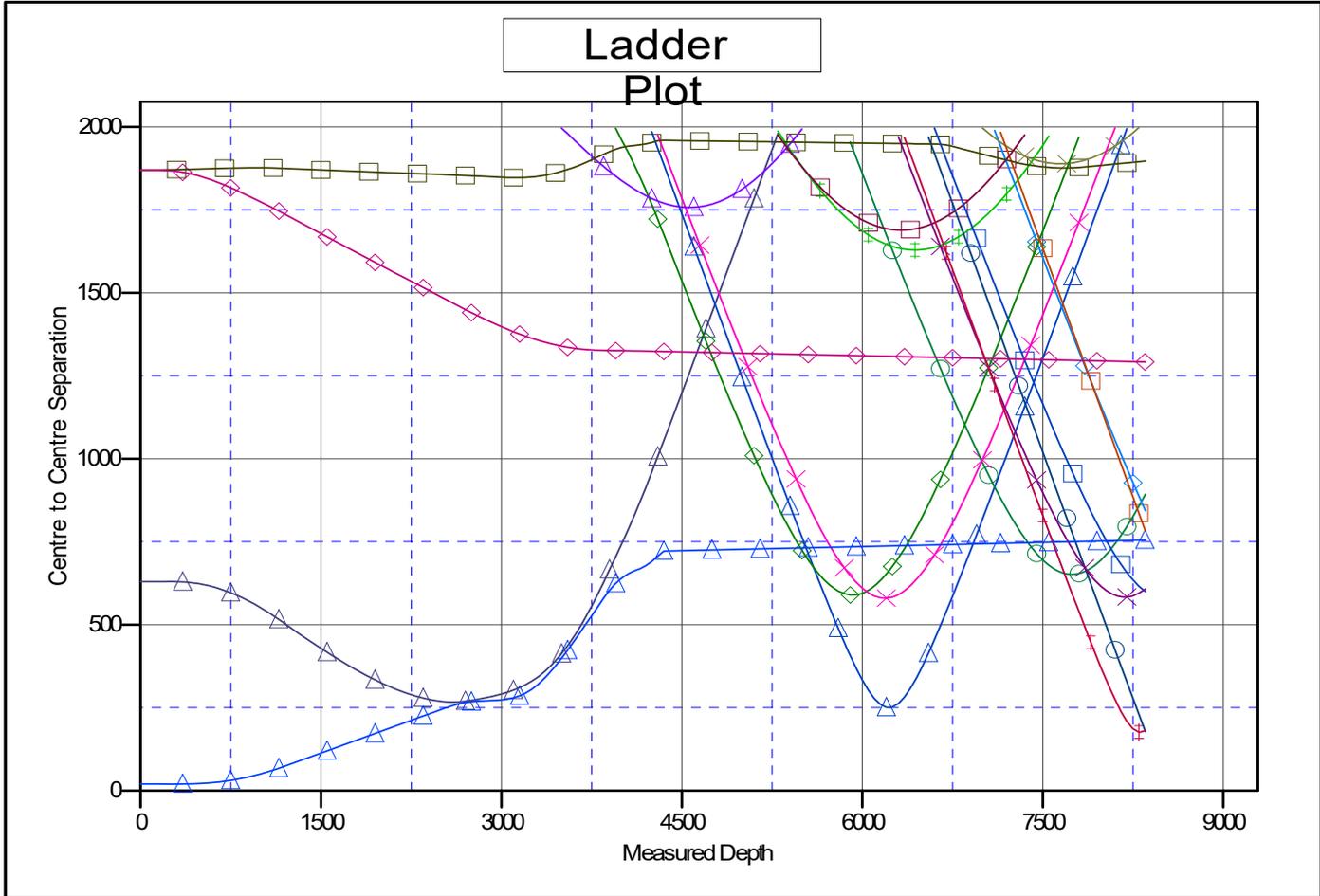


Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Reference Depths are relative to RKB = 20' @ 3580.00usft (AKITA 57) Coordinates are relative to: 10H  
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, New Mexico Eastern Zone  
 Central Meridian is -104.3333333 Grid Convergence at Surface is: 0.092°



LEGEND

- OFFSET: VERMEJO SWD 1, Wellbore #1, Wellbore #1 VO
- OFFSET: COILIER 22 STATE COM 043H, Wellbore #1, Wellbore #1 VO
- 71H, Wellbore #1, PERMIT PLAN #2 VO
- OFFSET: LUCAS STORE 1KT STATE COM1, Wellbore #1, Wellbore #1 VO
- OFFSET: MARACAS 22 STATE 2, Wellbore #1, Wellbore #1 VO
- OFFSET: MAYARO 22 STATE 5, Wellbore #1 Wellbore #1 VO
- OFFSET: MAYARO 22 STATE 4, Wellbore #1 Wellbore #1 VO
- OFFSET: MARACAS 22 STATE 12, Wellbore #1, Wellbore #1 VO
- 11H, Wellbore #1, PERMIT VO
- OFFSET: COILIER STATE 16, Wellbore #1, Wellbore #1 VO
- OFFSET: MAYARO 22 STATE 7, Wellbore #1 Wellbore #1 VO
- OFFSET: COILIER STATE 14, Wellbore #1, Wellbore #1 VO
- OFFSET: MAYARO 22 STATE 1, Wellbore #1 Wellbore #1 VO
- OFFSET: MARACAS 22 STATE 1, Wellbore #1, Wellbore #1 VO
- OFFSET: COILIER STATE 15, Wellbore #1, Wellbore #1 VO
- OFFSET: MAYARO 22 STATE 3, Wellbore #1 Wellbore #1 VO
- OFFSET: MAYARO 22 STATE 5, Wellbore #1 Wellbore #1 VO
- 70H, Wellbore #1, PERMIT VO

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

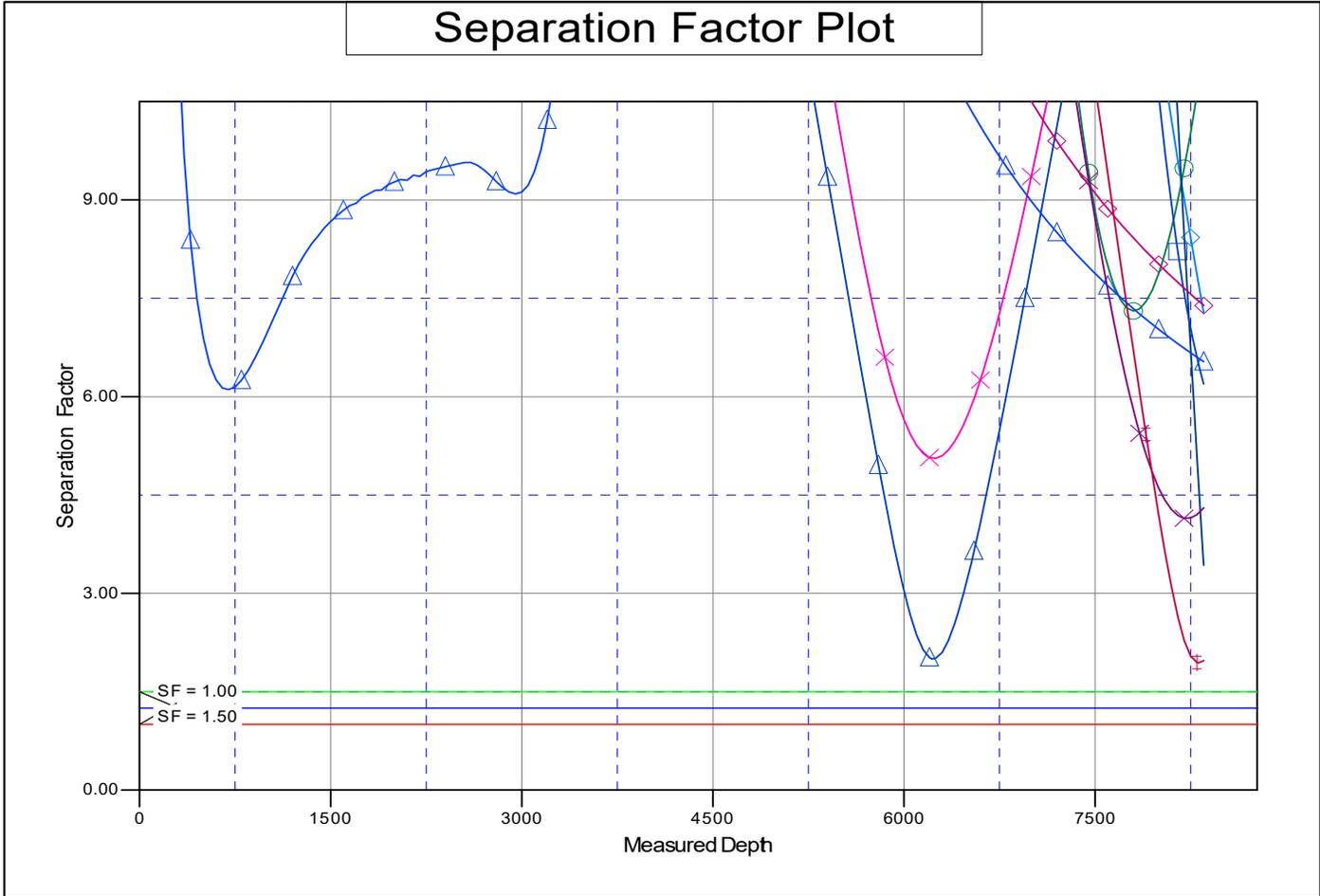


Anticollision Report



<b>Company:</b>	Spur Energy Partners, LLC	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Reference Site:</b>	MAYARO 22 STATE COM	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	WBDS_SQL_2
<b>Reference Design:</b>	PERMIT	<b>Offset TVD Reference:</b>	Reference Datum

Reference Depths are relative to RKB = 20' @ 3580.00usft (AKITA 57) Coordinates are relative to: 10H  
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, New Mexico Eastern Zone  
 Central Meridian is -104.3333333 Grid Convergence at Surface is: 0.092°



**LEGEND**

<ul style="list-style-type: none"> <li>OFFSET: VERMEJO SMD 1, Wellbore #1, Wellbore #1 V0</li> <li>OFFSET: LUCAS STORE 'KT' STATE COM1, Wellbore #1, Wellbore #1 V0</li> <li>OFFSET: MAYARO 22 STATE 4, Wellbore #1, Wellbore #1 V0</li> <li>OFFSET: COILIER STATE 16, Wellbore #1, Wellbore #1 V0</li> <li>OFFSET: MAYARO 22 STATE 1, Wellbore #1, Wellbore #1 V0</li> <li>OFFSET: MAYARO 22 STATE 3, Wellbore #1, Wellbore #1 V0</li> </ul>	<ul style="list-style-type: none"> <li>OFFSET: COILIER 22 STATE COM 043H, Wellbore #1, Wellbore #1 V0</li> <li>OFFSET: MARACAS 22 STATE 2, Wellbore #1, Wellbore #1 V0</li> <li>OFFSET: MARACAS 22 STATE 12, Wellbore #1, Wellbore #1 V0</li> <li>OFFSET: MAYARO 22 STATE 7, Wellbore #1, Wellbore #1 V0</li> <li>OFFSET: MARACAS 22 STATE 1, Wellbore #1, Wellbore #1 V0</li> <li>OFFSET: MAYARO 22 STATE 5, Wellbore #1, Wellbore #1 V0</li> </ul>	<ul style="list-style-type: none"> <li>71H, Wellbore #1, PERMIT PLAN #2 V0</li> <li>OFFSET: MAYARO 22 STATE 6, Wellbore #1, Wellbore #1 V0</li> <li>11H, Wellbore #1, PERMIT V0</li> <li>OFFSET: COILIER STATE 14, Wellbore #1, Wellbore #1 V0</li> <li>OFFSET: COILIER STATE 15, Wellbore #1, Wellbore #1 V0</li> <li>70H, Wellbore #1, PERMIT V0</li> </ul>
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CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Spur Energy Partners, LLC

Eddy County, NM (NAD 83 - NME)

MAYARO 22 STATE COM

10H

Wellbore #1

Plan: PERMIT

## Standard Planning Report

07 August, 2022





Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Company:</b>	Spur Energy Partners, LLC	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site:</b>	MAYARO 22 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PERMIT		

<b>Project</b>	Eddy County, NM (NAD 83 - NME)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	MAYARO 22 STATE COM				
<b>Site Position:</b>		<b>Northing:</b>	664,946.30 usft	<b>Latitude:</b>	32.8278403
<b>From:</b>	Map	<b>Easting:</b>	595,486.00 usft	<b>Longitude:</b>	-104.1570519
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.096 °

<b>Well</b>	10H					
<b>Well Position</b>	<b>+N/-S</b>	33.70 usft	<b>Northing:</b>	664,980.00 usft	<b>Latitude:</b>	32.8279413
	<b>+E/-W</b>	-1,869.40 usft	<b>Easting:</b>	593,616.60 usft	<b>Longitude:</b>	-104.1631376
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	3,560.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	08/05/22	6.735	60.323	47,669.33272779

<b>Design</b>	PERMIT			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	180.06

<b>Plan Survey Tool Program</b>	<b>Date</b>	08/05/22			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	8,354.05 PERMIT (Wellbore #1)	MWD+IGRF	OWSG MWD + IGRF or WM	

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,174.29	17.49	15.17	1,160.78	127.76	34.65	2.00	2.00	0.00	15.173	
2,552.11	17.49	15.17	2,474.93	527.32	143.01	0.00	0.00	0.00	0.000	
3,834.72	60.00	180.06	3,578.35	90.12	202.06	6.00	3.31	12.86	166.595	
4,034.72	60.00	180.06	3,678.35	-83.09	201.89	0.00	0.00	0.00	0.000	
4,346.15	91.14	180.06	3,755.00	-381.00	201.60	10.00	10.00	0.00	0.000	3. MAYARO 10H F1
8,304.14	91.14	180.06	3,676.00	-4,338.20	197.75	0.00	0.00	0.00	0.000	4. MAYARO 10H LT
8,354.05	91.14	180.06	3,675.00	-4,388.10	197.70	0.00	0.00	0.00	0.000	5. MAYARO 10H B1



Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Company:</b>	Spur Energy Partners, LLC	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site:</b>	MAYARO 22 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PERMIT		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	15.17	399.98	1.68	0.46	-1.68	2.00	2.00	0.00
500.00	4.00	15.17	499.84	6.74	1.83	-6.74	2.00	2.00	0.00
600.00	6.00	15.17	599.45	15.15	4.11	-15.15	2.00	2.00	0.00
700.00	8.00	15.17	698.70	26.91	7.30	-26.92	2.00	2.00	0.00
800.00	10.00	15.17	797.47	42.01	11.39	-42.02	2.00	2.00	0.00
900.00	12.00	15.17	895.62	60.42	16.39	-60.44	2.00	2.00	0.00
1,000.00	14.00	15.17	993.06	82.13	22.27	-82.15	2.00	2.00	0.00
1,100.00	16.00	15.17	1,089.64	107.11	29.05	-107.14	2.00	2.00	0.00
1,174.29	17.49	15.17	1,160.78	127.76	34.65	-127.80	2.00	2.00	0.00
1,200.00	17.49	15.17	1,185.30	135.22	36.67	-135.26	0.00	0.00	0.00
1,300.00	17.49	15.17	1,280.68	164.22	44.54	-164.27	0.00	0.00	0.00
1,400.00	17.49	15.17	1,376.06	193.22	52.40	-193.27	0.00	0.00	0.00
1,500.00	17.49	15.17	1,471.44	222.22	60.26	-222.28	0.00	0.00	0.00
1,600.00	17.49	15.17	1,566.82	251.22	68.13	-251.29	0.00	0.00	0.00
1,700.00	17.49	15.17	1,662.20	280.22	75.99	-280.30	0.00	0.00	0.00
1,800.00	17.49	15.17	1,757.58	309.22	83.86	-309.30	0.00	0.00	0.00
1,900.00	17.49	15.17	1,852.96	338.22	91.72	-338.31	0.00	0.00	0.00
2,000.00	17.49	15.17	1,948.34	367.22	99.59	-367.32	0.00	0.00	0.00
2,100.00	17.49	15.17	2,043.72	396.21	107.45	-396.33	0.00	0.00	0.00
2,200.00	17.49	15.17	2,139.09	425.21	115.32	-425.33	0.00	0.00	0.00
2,300.00	17.49	15.17	2,234.47	454.21	123.18	-454.34	0.00	0.00	0.00
2,400.00	17.49	15.17	2,329.85	483.21	131.04	-483.35	0.00	0.00	0.00
2,500.00	17.49	15.17	2,425.23	512.21	138.91	-512.36	0.00	0.00	0.00
2,552.11	17.49	15.17	2,474.93	527.32	143.01	-527.47	0.00	0.00	0.00
2,600.00	14.71	17.80	2,520.94	540.06	146.75	-540.21	6.00	-5.81	5.48
2,650.00	11.85	21.81	2,569.60	550.87	150.60	-551.03	6.00	-5.71	8.02
2,700.00	9.08	28.27	2,618.77	559.11	154.37	-559.27	6.00	-5.53	12.92
2,750.00	6.53	39.99	2,668.30	564.77	158.07	-564.93	6.00	-5.12	23.45
2,800.00	4.54	63.89	2,718.07	567.81	161.67	-567.98	6.00	-3.97	47.80
2,850.00	4.08	104.20	2,767.94	568.25	165.18	-568.42	6.00	-0.92	80.62
2,900.00	5.54	136.27	2,817.78	566.07	168.57	-566.25	6.00	2.91	64.15
2,950.00	7.91	152.21	2,867.43	561.28	171.84	-561.46	6.00	4.75	31.86
3,000.00	10.61	160.48	2,916.78	553.90	174.99	-554.08	6.00	5.39	16.54
3,050.00	13.43	165.37	2,965.68	543.94	177.99	-544.12	6.00	5.65	9.78
3,100.00	16.32	168.57	3,014.00	531.43	180.85	-531.62	6.00	5.77	6.40
3,150.00	19.24	170.82	3,061.60	516.41	183.56	-516.60	6.00	5.84	4.51
3,200.00	22.18	172.50	3,108.37	498.91	186.10	-499.11	6.00	5.88	3.36
3,250.00	25.14	173.81	3,154.16	478.99	188.48	-479.19	6.00	5.91	2.61
3,300.00	28.10	174.85	3,198.86	456.70	190.68	-456.90	6.00	5.93	2.09
3,350.00	31.07	175.71	3,242.34	432.11	192.71	-432.31	6.00	5.94	1.72
3,400.00	34.04	176.43	3,284.47	405.27	194.54	-405.47	6.00	5.95	1.45
3,450.00	37.02	177.05	3,325.16	376.26	196.19	-376.46	6.00	5.96	1.24
3,500.00	40.00	177.59	3,364.28	345.16	197.64	-345.37	6.00	5.96	1.08
3,550.00	42.99	178.07	3,401.73	312.06	198.89	-312.27	6.00	5.97	0.95
3,600.00	45.97	178.50	3,437.40	277.05	199.93	-277.26	6.00	5.97	0.85
3,650.00	48.96	178.88	3,471.20	240.22	200.77	-240.43	6.00	5.97	0.77
3,700.00	51.95	179.23	3,503.03	201.67	201.40	-201.89	6.00	5.98	0.70
3,750.00	54.93	179.56	3,532.81	161.52	201.83	-161.73	6.00	5.98	0.65
3,800.00	57.92	179.86	3,560.45	119.86	202.04	-120.08	6.00	5.98	0.60
3,834.72	60.00	180.06	3,578.35	90.12	202.06	-90.33	6.00	5.98	0.57



Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Company:</b>	Spur Energy Partners, LLC	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site:</b>	MAYARO 22 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PERMIT		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,900.00	60.00	180.06	3,610.99	33.58	202.00	-33.79	0.00	0.00	0.00
4,000.00	60.00	180.06	3,660.99	-53.02	201.92	52.81	0.00	0.00	0.00
4,034.72	60.00	180.06	3,678.35	-83.09	201.89	82.87	0.00	0.00	0.00
4,050.00	61.53	180.06	3,685.82	-96.42	201.88	96.21	10.00	10.00	0.00
4,100.00	66.53	180.06	3,707.71	-141.36	201.83	141.15	10.00	10.00	0.00
4,150.00	71.53	180.06	3,725.60	-188.03	201.79	187.82	10.00	10.00	0.00
4,200.00	76.53	180.06	3,739.35	-236.08	201.74	235.87	10.00	10.00	0.00
4,250.00	81.53	180.06	3,748.86	-285.16	201.69	284.94	10.00	10.00	0.00
4,300.00	86.53	180.06	3,754.06	-334.87	201.64	334.66	10.00	10.00	0.00
4,346.15	91.14	180.06	3,755.00	-381.00	201.60	380.79	10.00	10.00	0.00
4,400.00	91.14	180.06	3,753.93	-434.84	201.55	434.62	0.00	0.00	0.00
4,500.00	91.14	180.06	3,751.93	-534.82	201.45	534.60	0.00	0.00	0.00
4,600.00	91.14	180.06	3,749.93	-634.80	201.35	634.58	0.00	0.00	0.00
4,700.00	91.14	180.06	3,747.94	-734.78	201.26	734.56	0.00	0.00	0.00
4,800.00	91.14	180.06	3,745.94	-834.76	201.16	834.54	0.00	0.00	0.00
4,900.00	91.14	180.06	3,743.94	-934.74	201.06	934.52	0.00	0.00	0.00
5,000.00	91.14	180.06	3,741.95	-1,034.72	200.96	1,034.50	0.00	0.00	0.00
5,100.00	91.14	180.06	3,739.95	-1,134.70	200.87	1,134.48	0.00	0.00	0.00
5,200.00	91.14	180.06	3,737.96	-1,234.68	200.77	1,234.46	0.00	0.00	0.00
5,300.00	91.14	180.06	3,735.96	-1,334.66	200.67	1,334.44	0.00	0.00	0.00
5,400.00	91.14	180.06	3,733.96	-1,434.64	200.57	1,434.42	0.00	0.00	0.00
5,500.00	91.14	180.06	3,731.97	-1,534.62	200.48	1,534.40	0.00	0.00	0.00
5,600.00	91.14	180.06	3,729.97	-1,634.60	200.38	1,634.38	0.00	0.00	0.00
5,700.00	91.14	180.06	3,727.98	-1,734.58	200.28	1,734.36	0.00	0.00	0.00
5,800.00	91.14	180.06	3,725.98	-1,834.56	200.19	1,834.35	0.00	0.00	0.00
5,900.00	91.14	180.06	3,723.98	-1,934.54	200.09	1,934.33	0.00	0.00	0.00
6,000.00	91.14	180.06	3,721.99	-2,034.52	199.99	2,034.31	0.00	0.00	0.00
6,100.00	91.14	180.06	3,719.99	-2,134.50	199.89	2,134.29	0.00	0.00	0.00
6,200.00	91.14	180.06	3,718.00	-2,234.48	199.80	2,234.27	0.00	0.00	0.00
6,300.00	91.14	180.06	3,716.00	-2,334.46	199.70	2,334.25	0.00	0.00	0.00
6,400.00	91.14	180.06	3,714.00	-2,434.44	199.60	2,434.23	0.00	0.00	0.00
6,500.00	91.14	180.06	3,712.01	-2,534.42	199.50	2,534.21	0.00	0.00	0.00
6,600.00	91.14	180.06	3,710.01	-2,634.40	199.41	2,634.19	0.00	0.00	0.00
6,700.00	91.14	180.06	3,708.02	-2,734.38	199.31	2,734.17	0.00	0.00	0.00
6,800.00	91.14	180.06	3,706.02	-2,834.36	199.21	2,834.15	0.00	0.00	0.00
6,900.00	91.14	180.06	3,704.02	-2,934.34	199.11	2,934.13	0.00	0.00	0.00
7,000.00	91.14	180.06	3,702.03	-3,034.32	199.02	3,034.11	0.00	0.00	0.00
7,100.00	91.14	180.06	3,700.03	-3,134.30	198.92	3,134.09	0.00	0.00	0.00
7,200.00	91.14	180.06	3,698.04	-3,234.28	198.82	3,234.07	0.00	0.00	0.00
7,300.00	91.14	180.06	3,696.04	-3,334.26	198.73	3,334.05	0.00	0.00	0.00
7,400.00	91.14	180.06	3,694.04	-3,434.24	198.63	3,434.03	0.00	0.00	0.00
7,500.00	91.14	180.06	3,692.05	-3,534.22	198.53	3,534.01	0.00	0.00	0.00
7,600.00	91.14	180.06	3,690.05	-3,634.20	198.43	3,633.99	0.00	0.00	0.00
7,700.00	91.14	180.06	3,688.06	-3,734.18	198.34	3,733.97	0.00	0.00	0.00
7,800.00	91.14	180.06	3,686.06	-3,834.16	198.24	3,833.95	0.00	0.00	0.00
7,900.00	91.14	180.06	3,684.06	-3,934.14	198.14	3,933.93	0.00	0.00	0.00
8,000.00	91.14	180.06	3,682.07	-4,034.12	198.04	4,033.91	0.00	0.00	0.00
8,100.00	91.14	180.06	3,680.07	-4,134.10	197.95	4,133.89	0.00	0.00	0.00
8,200.00	91.14	180.06	3,678.08	-4,234.08	197.85	4,233.87	0.00	0.00	0.00
8,304.14	91.14	180.06	3,676.00	-4,338.20	197.75	4,337.99	0.00	0.00	0.00
8,354.05	91.14	180.06	3,675.00	-4,388.10	197.70	4,387.89	0.00	0.00	0.00



Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 10H
<b>Company:</b>	Spur Energy Partners, LLC	<b>TVD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 20' @ 3580.00usft (AKITA 57)
<b>Site:</b>	MAYARO 22 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PERMIT		

Design Targets										
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
- Shape										
1. MAYARO 10H SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	664,980.00	593,616.60	32.8279413	-104.1631376	
2. MAYARO 10H KOP - plan hits target center - Point	0.00	0.00	2,474.93	527.32	143.01	665,507.33	593,759.61	32.8293901	-104.1626692	
5. MAYARO 10H BHL - plan hits target center - Point	0.00	0.00	3,675.00	-4,388.10	197.70	660,591.90	593,814.30	32.8158792	-104.1625170	
4. MAYARO 10H LTP: - plan misses target center by 1.85usft at 8304.14usft MD (3676.00 TVD, -4338.20 N, 197.75 E) - Point	0.00	0.00	3,676.00	-4,338.20	199.60	660,641.80	593,816.20	32.8160163	-104.1625106	
3. MAYARO 10H FTP - plan hits target center - Point	0.00	0.00	3,755.00	-381.00	201.60	664,599.00	593,818.20	32.8268932	-104.1624833	

TRANSCEND RIG 4	Contractor Specification
Make	Schram
Model	TXD 130
Year of Manufacture	2006
Truck Mounted	YES
Rated Drilling Depth	130,000# hook load
Rated Depth with Tubing	
Derrick Height	69' 9"
Derrick Type	Telescoping Hydraulic
Derrick Capacity	130,000#
Elevators	N/A
Drawworks	760 HP Detroit
Wire Diameter	Hydraulic
Workfloor Max Height	8'
Tongs	Hydraulic Iron Roughneck
Slips	Manual Slips
Included Tubing Handling Tools	<ul style="list-style-type: none"> <li>• 13 3/8" handling tools</li> </ul>
Included Rod Handling Tools	85jts of 4.5" drill pipe
BOP Class Compatibility	
Weight Indicator	Hydraulic
Rig Safety Equipment	Eye wash station, fire extengushers, wind sock
Pad Size Requirements/Limitations	60' x 60'
Guy Line Spacing	N/A
Other Supplied Rig Equipment	<p>Standard Rig Hand Tools:</p> <ul style="list-style-type: none"> <li>• (2) 36" pipe wrenches</li> <li>• (2) 24" pipe wrenches</li> <li>• (2) 18" pipe wrenches</li> <li>• (1) 24" crescent wrench</li> <li>• (2) 12" crescent wrenches</li> <li>• (1) 4 lb shop hammer</li> <li>• (1) 12 lb sledge hammer</li> <li>• (1) 4 foot pry bar</li> <li>• Vehicles for Contractor personnel</li> <li>• Air Impact Wrench with Sockets</li> <li>• Mud Scales (as needed)</li> </ul> <p>1- F800 pump  1- Pill pit 80bbl  1- 400 bbl mud mix  1- Shaker 150mesh  1- 500 bbl fresh water frac tank</p>

**Spur Energy Partners LLC – Mayaro 22 State Com 10H**

**1. Geologic Formations**

TVD of Target	3,675'
MD at TD	8,354'

Formation	Depth	Lithology	Expected Fluids
Quaternary	0'	Dolomite, other: Caliche	Useable Water
Top Salt	190'	Anhydrite	Other: Salt
Tansill	375'	Sandstone, Dolomite	None
Yates	475'	Dolomite, Limestone, Shale, Siltstone	None
Seven Rivers	725'	Dolomite, Limestone	Natural Gas, Oil
Queen	1305'	Anhydrite, Dolomite, Sandstone	Natural Gas, Oil
Grayburg	1700'	Anhydrite	Natural Gas, Oil
San Andres	2045'	Dolomite	Natural Gas, Oil
Glorieta	3445'	Dolomite, Siltstone	Natural Gas, Oil
Paddock	3535'	Dolomite, Limestone	Natural Gas, Oil
Blinebry	3975'	Dolomite, Limestone	Natural Gas, Oil
Tubb	4850'	Dolomite, Limestone	Natural Gas, Oil

\*H2S, water flows, loss of circulation, abnormal pressures, etc.

**2. Casing Program**

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Casing Formation Set Interval	Hole Size (in)	Casing Interval		Csg. Size (in)	Weight (lbs)	Grade	Conn.	SF	SF Burst	Body SF	Joint SF
		From (ft)	To (ft)					Collapse		Tension	Tension
Quaternary	17.5	0	175	13.375	54.5	J-55	BTC	1.125	1.2	1.4	1.4
Seven Rivers	12.25	0	1150	9.625	36	J-55	BTC	1.125	1.2	1.4	1.4
N/A	8.75	0	4100	7	32	L-80	BK-HT	1.125	1.2	1.4	1.4
Yeso	8.75	4100	8354	5.5	20	L-80	BK-HT	1.125	1.2	1.4	1.4
SF Values will meet or Exceed											

**Spur Energy Partners LLC – Mayaro 22 State Com 10H**

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM’s minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50’ above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500’ into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100’ to 600’ below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

**3. Cementing Program**

Casing String	Top (ft)	Bottom (ft)	% Excess
Surface Tail	0	175	165%
Intermediate (Lead)	0	175	100%
Intermediate (Tail)	175	1150	165%
Production (Lead)	0	3100	0%
Production (Tail)	3100	8354	50%

Casing String	# Skcs	Wt. (lb/gal)	Yld (ft3/sack)	H2O (gal/sk)	500# Comp. Strength (hours)	Slurry Description
Surface Tail	128	13.2	2.32	9.92	6:59	Clas C Premium Plus Cement
Intermediate (Lead)	35	12.2	1.84	13.48	8:12	Clas C Premium Plus Cement
Intermediate (Tail)	357	13.2	2.32	9.92	6:59	Clas C Premium Plus Cement
Production (Lead)	388	11.8	2.54	15.29	N/A	Clas C Premium Plus Cement
Production (Tail)	1020	13.2	1.81	9.81	N/A	Clas C Premium Plus Cement

**Spur Energy Partners LLC – Mayaro 22 State Com 10H**

**4. Pressure Control Equipment**

**\*Spur Energy Partners LLC variance for flex hose\***

Spur requests a variance to use a flex line from the BOP to the choke manifold. Documentation will be attached in the APD and be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no bends).

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12.25" Hole	13-5/8"	5M	Annular	✓	70% of working pressure
			5M	Blind Ram	✓
		Pipe Ram		✓	
		Double Ram			
		Other*			
8.75" Hole	13-5/8"	5M	Annular	✓	70% of working pressure
			5M	Blind Ram	✓
		Pipe Ram		✓	
		Double Ram			
		Other*			

**\*Spur Energy Partners LLC will be utilizing a 5M BOP\***

Condition	Specify what type and where?
BH Pressure at deepest TVD	1738 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	111°F

\*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or 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. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.	
Y	Are anchors required by manufacturer?

### Spur Energy Partners LLC – Mayaro 22 State Com 10H

	A conventional wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. See attached schematics.
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#### 5. BOP Break Testing Request

Spur Energy Partners LLC requests permission to adjust the BOP break testing requirements as follows:

BOP break test under the following conditions:

- After a full BOP test is conducted
- When skidding to drill the production section, where the surface casing point is shallower than the 3 Bone Spring or 10,000 TVD.
- When skidding to drill a production section that does not penetrate the 3<sup>rd</sup> Bone Spring or deeper.

If the kill line is broken prior to skid, four tests will be performed.

- 1) The void between the wellhead and the spool (this consists of two tests)
- 2) The spool between the kill lines and the choke manifold (this consists of two tests)

If the kill line is not broken prior to skid, two tests will be performed.

- 1) The void between the wellhead and the pipe rams

#### 6. Mud Program

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CACL2. Spur will use a closed mud system.

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From (ft)	To (ft)				
0	175	Water-Based Mud	8.6-8.9	32-36	N/C
175	1150	Brine	10.0-10.5	32-36	N/C
1150	8354	Brine	10.0-10.5	32-36	N/C

What will be used to monitor the loss or gain of fluid?	PVT/PASON/Visual Monitoring
---	-----------------------------

**Spur Energy Partners LLC – Mayaro 22 State Com 10H**

**7. Logging and Testing Procedures**

<b>Logging, Coring and Testing.</b>	
Yes	Will run GR from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
No	Logs are planned based on well control or offset log information.
No	Drill stem test? If yes, explain
No	Coring? If yes, explain
<b>Additional logs planned</b>	<b>Interval</b>
No	Resistivity
No	Density
No	CBL
Yes	Mud log ICP - TD
No	PEX

**8. Drilling Conditions**

Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

**Total estimated cuttings volume:** 796.3 bbls.

**Spur Energy Partners LLC – Mayaro 22 State Com 10H**

**9. Other facets of operation**

	<b>Yes/No</b>
Will more than one drilling rig be used for drilling operations? If yes, describe. Spur Energy Partners LLC. requests the option to contract a Surface Rig to drill, set surface/intermediate casing, and cement for this well. If the timing between rigs is such that Spur Energy Partners LLC. would not be able to preset surface, the Primary Rig will MIRU and drill the well in its entirety per the APD. Please see the attached document for information on the spudder rig.	Yes

Attachments

- Directional Plan
- H2S Contingency Plan
- Akita 57 Attachments
- BOP Schematics
- Transcend Spudder Rig Attachments

**10. Company Personnel**

<b>Name</b>	<b>Title</b>	<b>Office Phone</b>	<b>Mobile Phone</b>
Christopher Hollis	Drilling Manager	832-930-8629	713-380-7754
Johnny Nabors	Senior Vice President Operations	832-930-8502	281-904-8811

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:** SPUR ENERGY PARTNERS LLC **OGRID:** 328947 **Date:** 08 / 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
MAYARO 22 STATE COM 10H	30-015-	O-15-17S-28E	283' FSL 2438' FEL	265 BBL/D	290 MCF/D	1855 BBL/D
MAYARO 22 STATE COM 70H	30-015-	O-15-17S-28E	263' FSL 2438' FEL	253 BBL/D	407 MCF/D	1519 BBL/D

**IV. Central Delivery Point Name:** MAYARO 22 WEST STATE TANK BATTERY [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
MAYARO 22 STATE COM 10H	30-015-	04/01/2023	04/09/2023	05/01/2022	05/11/2022	05/11/2022
MAYARO 22 STATE COM 70H	30-015-	04/09/2023	04/17/2023	05/01/2022	05/11/2022	05/11/2022

**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:	<i>Sarah Chapman</i>
Printed Name:	SARAH CHAPMAN
Title:	REGULATORY DIRECTOR
E-mail Address:	SCHAPMAN@SPUREENERGY.COM
Date:	AUGUST 18, 2022
Phone:	832-930-8613
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>	
Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	



## Natural Gas Management Plan – Attachment

VI. Separation equipment will be sized by construction engineering staff based on anticipated daily production to ensure adequate capacity.

VII. Spur Energy Partners LLC (“Spur”) will take the following actions to comply with the regulations listed in 19.15.27.8:

- A. Spur will maximize the recovery of natural gas by minimizing waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. Spur will ensure that our wells will be connected to a natural gas gathering system with sufficient capacity to transport natural gas.
- B. All drilling operations will be equipped with a rig flare at least 100 feet from the nearest surface hole location. Rig flare will be utilized to combust any natural gas that is brought to surface during normal operations. In the case of emergency, flaring volumes will be reported appropriately.
- C. During completion operations any natural gas brought to surface will be flared. Immediately following completion operations, wells will flow to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. If natural gas does not meet gathering pipeline specifications, Spur will flare for 60 days or until natural gas meets the pipeline specifications. Spur will ensure flare is properly sized and is equipped with an automatic igniter or continuous pilot. Gas samples will be taken twice per week and natural gas will be routed into a gathering system as soon as the pipeline specifications are met.
- D. Natural gas will not be flared with the exception of 19.15.27.8(D)(1-4). If there is no adequate takeaway for the separator gas, wells will be shut-in until that natural gas gathering system is available with exception of emergency or malfunction situations. Volumes will be reported appropriately.
- E. Spur will comply with performance standards pursuant to 19.15.27.8(E)(1-8). All equipment will be designed and sized to handle maximum pressures to minimize waste. Storage tanks constructed after May 25, 2021 will be equipped with an automatic gauging system that reduces venting of natural gas. Flare stacks installed or replaced after May 25, 2021 will be equipped with an automatic igniter or continuous pilot. Spur will conduct AVO inspections as described in 19.15.27.8(E)(5)(a) with frequencies specified in 19.15.27.8(E)(5)(b) and (c). All emergencies or malfunctions will be resolved as quickly and safely as possible to minimize waste.
- F. The volume of natural gas that is vented or flared as the result of an emergency or malfunction during drilling and/or completion operations will be estimated and reported accordingly. The volume of natural gas that is vented, flared or beneficially used during production operations, will be measured and reported accordingly. Spur will install equipment to measure the volume of natural gas flared from existing piping or a flowline piped from equipment such as high-pressure separators, heater treaters, or VRUs associated with a well or facility associated with a well authorized by an APD after May 25, 2021 that has an average daily production of less than 60,000 cubic feet of natural gas. If metering is not practicable due to circumstances such as low flow rate or low pressure venting or flaring, Spur will estimate the volume of flared or vented natural gas. Measuring equipment will conform to industry standards and will not be equipped with a manifold



that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing equipment.

VIII. For maintenance activities involving production equipment and compression, venting be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production equipment, the associated producing wells will be shut-in to eliminate venting. For maintenance of VRUs, all natural gas normally routed to the VRU will be routed to flare.





# MTR DATA BOOK

CL2013

**CUSTOMER:** GATES CANADA INC

**DATE:** 12/19/2017

**Purchase Order:** D235455 (PO 45750)

**Sales Order #:** 509128

**Product Description:** 5K 3 1/2 in. 17 FT. Fire Rated Choke & Kill Gates Hose Assembly c/w 3 1/8 5K Flange with Safety Clamps & Slings Attached

**Hose S/N:** H-121917-14

**PART NUMBER:** FR5K3.517.0CK31/85KFLG S/C

**CONTENTS INCLUDED**

**GMCO FITTINGS**

17-309-1	INSERT STEM
15-095-1A	FERRULE

**3 1/8 in. 5K FIXED FLANGE X 3 1/8 in. 5K FLOAT FLANGE**

V4131	FIXED FLANGE
V5054	FLOAT FLANGE

**WELDING SPECIFICATIONS**

Certification and Procedure for welding

**NDE RESULTS**

1622371-03/1622371-01 Ultrasonic Test Results and Imaging

**Safety Clamps**

34145/34144

**TEST CHART**

Chart Recording of Hydrostatic Test

**TEST CERTIFICATE**

Document Product Details & Positive Results of Hydrostatic Testing

**CERTIFICATE OF CONFORMANCE**

A Declaration of the conformity with the type approval

**IMAGES**

Images of the product prior to shipping.

**PACKING LIST**

Details of Shipping Contents, Dimensions and Weights



**GATES ENGINEERING & SERVICES NORTH AMERICA**  
**7603 Prairie Oak Dr. Suite 190**  
**Houston, TX. 77086**

**PHONE: +1 (281) 602-4100**  
**FAX: +1 (281) 602-4147**  
**EMAIL: gesna.quality@gates.com**  
**WEB: www.gates.com/ollandgas**

**PRESSURE TEST CERTIFICATE**

Customer:	GATES CANADA INC	Test Date:	12/19/2017
Customer Ref.:	D235455 (PO 45750)	Hose Serial No.:	H-121917-14
Invoice No.:	509128	Created By:	Cristian Rivera

Product Description: 5K 3 1/2 in. 17 FT. Fire Rated Choke & Kill c/w 3 1/8 5K Flange with Safety Clamps & Slings Attached

End Fitting 1:	3 1/8 in. 5K FIXED FLG	End Fitting 2:	3 1/8 in. 5K FLOAT FLG
Oracle Star No.:	68903550-9725917	Assembly Code:	15M5019042016H-121917-14
CUSTOMER P/N:	FR5K3.517.0CK31/85KFLG S/C	Test Pressure:	7,500 psi.
		Working Pressure:	5,000 psi.

**Gates Engineering & Services North America certifies that:**

The following hose assembly has successfully passed all pressure testing requirements set forth in Gates specifications: GTS-04-052 (for 5K assemblies) or GTS-04-053 (10K assemblies) or GTS-04-048 (15K assemblies), which include reference to Specification API 16C (2nd Edition); sections 7.5.4, 7.5.9, and 10.8.7. A test graph will accompany this test certificate to illustrate conformity to test requirements. This hose assembly was pressure tested using equipment and instrumentation that has been calibrated in accordance with the requirements set-forth in the GESNA management system.

Quality:	QUALITY
Date :	8/5/2021
Signature :	

Production:	PRODUCTION
Date :	8/5/2021
Signature :	

F-PRD-005B

Revision 6\_05032021



# BLACK GOLD®

**GATES ENGINEERING & SERVICES NORTH AMERICA**  
7603 Pralrie Oak Dr.  
Houston, TX. 77086

**PHONE: +1 (281) 602-4100**  
**FAX: +1 (281) 602-4147**  
**EMAIL: gesna.quality@gates.com**  
**WEB: www.gates.com/ollandgas**

## CERTIFICATE OF CONFORMANCE

This is to certify that all parts and materials included in this shipment have manufactured and/or processed in accordance with various Gates and API assembly and test specifications. Records of required tests are on-file and subject to examination. Test reports and subsequent test graphs have been made available with this shipment. Additional supporting documentation related to materials, welding, weld inspections, and heat-treatment activities are available upon request.

**CUSTOMER:** GATES CANADA INC  
**CUSTOMER P.O.#:** D235455 (PO 45750)  
**PART DESCRIPTION:** FR5K3.517.0CK31/85KFLG S/C

**PART DESCRIPTION:** 5K 3 1/2 in. 17 FT. Fire Rated Choke & Kill c/w 3 1/8 5K Flange with Safety Clamps & Slings Attached

**SALES ORDER #:** 509128  
**QUANTITY:** 1  
**SERIAL #:** H-121917-14

**SIGNATURE:**   
**TITLE:** QUALITY ASSURANCE  
**DATE:** 8/5/2021

# Gates E&S

North America

7603 Prairie Oak dr.

Houston, TX

Hydrostatic Test

**Customer= GATES CANADA**

**Date of test= 12/19/17**

**Serial # = H-121917-13,-14**

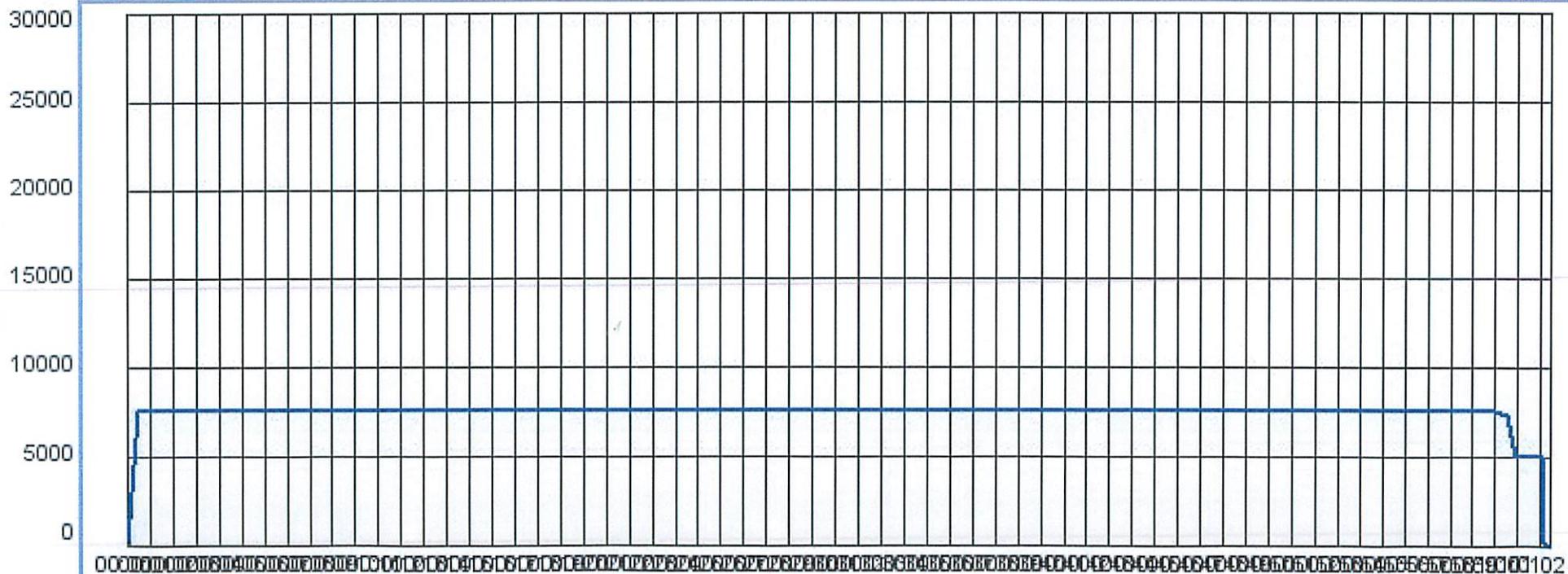
**Description = 3.5 5K 3 1/8 FLG 5K**

**Technician= CHRIS OLIVO**

12/19/2017 16:53:26

17:55:52

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S  
I  
G



00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102

⏪ ⏩ [ ] || ⏴ ⏵



1385 Hwy. 35 Bypass S. O: (361) 790-7910  
 P.O. Box 2350 F: (361) 790-7927  
 Rockport, TX 78381

tedwards@edwardsfabrication.com  
 www.edwardsfabrication.com

# CERTIFICATE OF TEST

Client:  
 Gates E & S North America  
 134 44th Street  
 Corpus Christi, TX 78405

Purchase Order: 1592198/0

Certificate Number			Date of Examination	
34145			04/27/17	
ID#	Part Number	Description	SWL*	Proofload
34145	E3.5S	3.5" E Safety Clamp	6016 lbs.	12031 lbs.
<p>The Safety Clamp unit identified on this certificate has been load tested completely assembled; including the clamp body, (2) 3/4" shackles, 5/8" x 48" wire rope sling and anchor tab. Thus, all components are tested at the "Proof" load. Do not disassemble. Do not interchange any part or parts of this tested unit with parts of other Safety Clamp units. DO NOT WELD, CUT, ADD-TO, TAKE AWAY ANY COMPONENTS OR MAKE ANY MODIFICATION TO THIS CLAMP UNIT. Doing so voids this test certificate.</p> <p>Cutting/Removing either one or both stainless steel Tamper-proof hardware cables renders this Test Certificate VOID.</p> <p>* Safe Work Load</p>				

THIS PRODUCT IS MANUFACTURED IN THE U.S.A.

We hereby verify that the above information is correct as contained in the records of Edwards Fabrication L.L.C.



Edwards Fabrication L.L.C. is certified as having a Quality Management System.

Thomas F. Edwards  
 President  
 Edwards Fabrication L.L.C.



1385 Hwy. 35 Bypass S. O: (361) 790-7910  
 P.O. Box 2350 F: (361) 790-7927  
 Rockport, TX 78381

tedwards@edwardsfabrication.com  
 www.edwardsfabrication.com

# CERTIFICATE OF TEST

**Client:**  
 Gates E & S North America  
 134 44th Street  
 Corpus Christi, TX 78405

**Purchase Order:** 1592198/0

Certificate Number			Date of Examination	
34144			04/27/17	
ID#	Part Number	Description	SWL*	Proofload
34144	E3.5S	3.5" E Safety Clamp	6014 lbs.	12027 lbs.
<p>The Safety Clamp unit identified on this certificate has been load tested completely assembled; including the clamp body, (2) 3/4" shackles, 5/8" x 48" wire rope sling and anchor tab. Thus, all components are tested at the "Proof" load. Do not disassemble. Do not interchange any part or parts of this tested unit with parts of other Safety Clamp units. DO NOT WELD, CUT, ADD-TO, TAKE AWAY ANY COMPONENTS OR MAKE ANY MODIFICATION TO THIS CLAMP UNIT. Doing so voids this test certificate.</p> <p>Cutting/Removing either one or both stainless steel Tamper-proof hardware cables renders this Test Certificate VOID.</p> <p>* Safe Work Load</p>				

**THIS PRODUCT IS MANUFACTURED IN THE U.S.A.**

We hereby verify that the above information is correct as contained in the records of Edwards Fabrication L.L.C.



*Edwards Fabrication L.L.C. is certified as having a Quality Management System.*

**Thomas F. Edwards**  
 President  
 Edwards Fabrication L.L.C.



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

# SUPO Data Report

08/24/2023

APD ID: 10400087415

Submission Date: 08/18/2022

Highlighted data reflects the most recent changes

Operator Name: SPUR ENERGY PARTNERS LLC

Well Name: MAYARO 22 STATE COM

Well Number: 10H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Mayaro22StateCom10H\_ExistRoad\_20220816125310.pdf

Existing Road Purpose: ACCESS

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

## Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Mayaro22StateCom10H\_NewRoad\_20220816125352.pdf

New road type: RESOURCE

Length: 305.97 Feet

Width (ft.): 30

Max slope (%): 0

Max grade (%): 5

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Crowned and ditched.

New road access plan or profile prepared? Y

New road access plan

Mayaro22StateCom10H\_SitePlan\_20220816125401.pdf

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

**Access road engineering design?** N

**Access road engineering design**

**Turnout?** N

**Access surfacing type:** OTHER

**Access topsoil source:** ONSITE

**Access surfacing type description:** Caliche

**Access onsite topsoil source depth:** 6

**Offsite topsoil source description:**

**Onsite topsoil removal process:** Grader

**Access other construction information:**

**Access miscellaneous information:**

**Number of access turnouts:**

**Access turnout map:**

**Drainage Control**

**New road drainage crossing:** OTHER

**Drainage Control comments:** Crowned and ditched.

**Road Drainage Control Structures (DCS) description:** NA

**Road Drainage Control Structures (DCS) attachment:**

**Access Additional Attachments**

**Section 3 - Location of Existing Wells**

**Existing Wells Map?** YES

**Attach Well map:**

Mayaro22StateCom10H\_ExistWells\_20220816125416.pdf

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

**Submit or defer a Proposed Production Facilities plan?** SUBMIT

**Production Facilities description:** a. In the event the well is found to be productive, Mayaro 22 West State Com Tank Battery would be utilized and the necessary production equipment will be installed at the well site. See proposed facilities layout diagram. b. Each well will have two (2) 4 surface flowlines operating around 90 psi from the well sites to the tank battery. The flowlines for Mayaro 22 West State Com wells will be routed to the Mayaro 22 West State Com tank battery (on lease). The wells will produce into this battery at any given time. c. Gas line will follow a route approved by the BLM. Survey a strip of land 30 feet wide, being 28.32 feet in length, lying in Section 15, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico being 15 feet left and 15 feet right of the centerline survey. d. Electric line will follow a route approved by the BLM. Survey a strip of land 30 feet wide, being 23.38 feet in length, lying in Section 22, Township 17 South, Range

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

28 East, N.M.P.M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the centerline survey. Survey a strip of land 30 feet wide, being 100.41 feet in length, lying in Section 15, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the centerline survey. e. SWD line will follow a route approved by the BLM. Survey a strip of land 30 feet wide, being 479.49 feet in length, lying in Section 15, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico being 15 feet left and 15 feet right of the centerline survey. Survey a strip of land 30 feet wide, being 554.11 feet in length, lying in Section 15, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico being 15 feet left and 15 feet right of the centerline survey. f. See attached for additional information on the Mayaro 22 West State Com Tank Battery.

**Production Facilities map:**

Mayaro22StateCom10H\_FacilityPLEL\_20230531130802.pdf

**Section 5 - Location and Types of Water Supply**

**Water Source Table**

**Water source type:** GW WELL

**Water source use type:** DUST CONTROL  
SURFACE CASING  
STIMULATION

**Source latitude:** 32.806108

**Source longitude:** -104.155514

**Source datum:** NAD83

**Water source permit type:** WATER WELL

**Water source transport method:** TRUCKING

**Source land ownership:** PRIVATE

**Source transportation land ownership:** PRIVATE

**Water source volume (barrels):** 9000

**Source volume (acre-feet):** 1.16003787

**Source volume (gal):** 378000

**Water source and transportation**

Mayaro22StateCom\_FracPond\_20230523095028.pdf

**Water source comments:** Water will be trucked from the existing Halberd Pond owned by Spur in Unit H (SENE) Section 27, Township 17 South, Range 28 East.

**New water well?** N

**New Water Well Info**

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

**Operator Name:** SPUR ENERGY PARTNERS LLC**Well Name:** MAYARO 22 STATE COM**Well Number:** 10H**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:** a. All caliche for the drilling pad and proposed access road will be obtained from an existing BLM/State/Fee approved pit from prevailing deposits found on location. Will use BLM recommended caliche from other locations close by for roads, if available. b. The secondary way obtaining caliche to build locations and roads will be by turning over the location. Amount will vary for each pad. The procedure below has been approved by BLM personnel: i. The top 6 of topsoil is pushed off and stockpiled along the side of location ii. An approximate 298 X 30 area on the eastern side of the well pad will be used within the proposed well site to remove caliche iii. Subsoil will be removed and piled alongside the 298 X 30 within the pad site iv. When caliche is found, material will be stockpiled within the pad site to build location and road v. Once the well is drilled, the stockpiled topsoil will be used for interim reclamation and spread along areas where caliche is picked up and the location size is reduced. Neither the caliche nor subsoil will be stockpiled outside of the well pad. Topsoil will be stockpiled along the eastern edge of the pad as depicted in our Site Plan

### Construction Materials source location

Mayaro\_Sierra\_Nevada\_Caliche\_Source\_Aerial\_Map\_5\_23\_23\_20230523095140.pdf

## Section 7 - Methods for Handling

**Waste type:** DRILLING**Waste content description:** Drill cuttings, mud, salts, and other chemicals**Amount of waste:** 796.3 barrels**Waste disposal frequency :** Daily**Safe containment description:** Steel mud tanks**Safe containmant attachment:****Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE

<b>Operator Name:</b> SPUR ENERGY PARTNERS LLC	<b>Well Number:</b> 10H
<b>Well Name:</b> MAYARO 22 STATE COM	

**Disposal type description:**

**Disposal location description:** Mud tanks will be hauled to R360's state approved (NM-01-0006) disposal site at Halfway, NM.

**Waste type:** SEWAGE

**Waste content description:** Black and grey matter

**Amount of waste:** 5 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** Plastic holding tanks and chemical toilets

**Safe containmant attachment:**

**Waste disposal type:** OTHER

**Disposal location ownership:** OTHER

**Disposal type description:** Public

**Disposal location description:** Artesia wastewater treatment plant

**Waste type:** GARBAGE

**Waste content description:** Trash

**Amount of waste:** 10 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** Portable trash cage

**Safe containmant attachment:**

**Waste disposal type:** OTHER

**Disposal location ownership:** OTHER

**Disposal type description:** Public

**Disposal location description:** Eddy County landfill

**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**

<b>Operator Name:</b> SPUR ENERGY PARTNERS LLC	
<b>Well Name:</b> MAYARO 22 STATE COM	<b>Well Number:</b> 10H

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** Y

**Description of cuttings location** Steel tank on pad

**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**

**Are you requesting any Ancillary Facilities?:** N

**Ancillary Facilities**

**Comments:**

**Section 9 - Well Site**

**Well Site Layout Diagram:**

Mayaro22StateCom10H\_SpudderRig\_20220816130235.pdf

Mayaro22StateCom10H\_SitePlan\_20220816130235.pdf

Mayaro22StateCom10H\_RigSpecs\_20220816130235.pdf

**Comments:**

**Section 10 - Plans for Surface**

**Type of disturbance:** New Surface Disturbance

**Multiple Well Pad Name:** MAYARO 22 WEST STATE COM

**Multiple Well Pad Number:** 10H, 70H

**Recontouring**

Mayaro22StateCom10H\_IR\_20220816130256.pdf

**Drainage/Erosion control construction:** Crowned and ditched

**Drainage/Erosion control reclamation:** Harrowed on the contour

<b>Operator Name:</b> SPUR ENERGY PARTNERS LLC		
<b>Well Name:</b> MAYARO 22 STATE COM	<b>Well Number:</b> 10H	

<b>Well pad proposed disturbance (acres):</b> 3.97	<b>Well pad interim reclamation (acres):</b> 0.6	<b>Well pad long term disturbance (acres):</b> 3.37
<b>Road proposed disturbance (acres):</b> 0.211	<b>Road interim reclamation (acres):</b> 0	<b>Road long term disturbance (acres):</b> 0.211
<b>Powerline proposed disturbance (acres):</b> 0.085	<b>Powerline interim reclamation (acres):</b> 0.085	<b>Powerline long term disturbance (acres):</b> 0
<b>Pipeline proposed disturbance (acres):</b> 0	<b>Pipeline interim reclamation (acres):</b> 0	<b>Pipeline long term disturbance (acres):</b> 0
<b>Other proposed disturbance (acres):</b> 0.732	<b>Other interim reclamation (acres):</b> 0	<b>Other long term disturbance (acres):</b> 0.732
<b>Total proposed disturbance:</b> 4.998	<b>Total interim reclamation:</b> 0.6849999999999999	<b>Total long term disturbance:</b> 4.313

**Disturbance Comments:**

**Reconstruction method:** a. After concluding drilling and/or completion operations, if the well is non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM COAs. The original topsoil will again be returned to the pad and contoured, as close as possible to the original topography, and the area will be seeded with an approved BLM mixture to re-establish vegetation. b. If the well is deemed commercially productive, caliche from the areas of the pad site will not be required for operations will be reclaimed. The original topsoil will be returned to the area of the drill pad not necessary to operate the well. The unused areas of the drill pad will be re-contoured as close as possible to the original topography, and the area will be seeded with an approved BLM mixture to re-establish vegetation.

**Topsoil redistribution:** The original topsoil will be returned to the area of the drill pad necessary to operate the wells

**Soil treatment:** To be determined by BLM.

**Existing Vegetation at the well pad:** NA

**Existing Vegetation at the well pad**

**Existing Vegetation Community at the road:** NA

**Existing Vegetation Community at the road**

**Existing Vegetation Community at the pipeline:** NA

**Existing Vegetation Community at the pipeline**

**Existing Vegetation Community at other disturbances:** NA

**Existing Vegetation Community at other disturbances**

**Non native seed used?** N

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** N

**Seedling transplant description**

**Will seed be harvested for use in site reclamation?**

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

**Seed harvest description:**

**Seed harvest description attachment:**

**Seed**

**Seed Table**

Seed Summary	
Seed Type	Pounds/Acre

**Total pounds/Acre:**

**Seed reclamation**

**Operator Contact/Responsible Official**

**First Name:**

**Last Name:**

**Phone:**

**Email:**

**Seedbed prep:**

**Seed BMP:**

**Seed method:**

**Existing invasive species?** N

**Existing invasive species treatment description:**

**Existing invasive species treatment**

**Weed treatment plan description:** To be determined by BLM.

**Weed treatment plan**

**Monitoring plan description:** To be determined by BLM.

**Monitoring plan**

**Success standards:** To be determined by BLM.

**Pit closure description:** No pit.

**Pit closure attachment:**

**Section 11 - Surface**

<b>Operator Name:</b> SPUR ENERGY PARTNERS LLC	<b>Well Number:</b> 10H
<b>Well Name:</b> MAYARO 22 STATE COM	

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT, STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** NEW MEXICO STATE LAND OFFICE - SANTA FE

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** EXISTING ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT, STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** NEW MEXICO STATE LAND OFFICE - SANTA FE

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

<b>Operator Name:</b> SPUR ENERGY PARTNERS LLC	
<b>Well Name:</b> MAYARO 22 STATE COM	<b>Well Number:</b> 10H

**Disturbance type:** NEW ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT, STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** NEW MEXICO STATE LAND OFFICE - SANTA FE

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** OTHER

**Describe:** GAS LINE

**Surface Owner:** BUREAU OF LAND MANAGEMENT, STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** NEW MEXICO STATE LAND OFFICE - SANTA FE

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

<b>Operator Name:</b> SPUR ENERGY PARTNERS LLC	<b>Well Number:</b> 10H
<b>Well Name:</b> MAYARO 22 STATE COM	

**Disturbance type:** OTHER

**Describe:** Powerline

**Surface Owner:** BUREAU OF LAND MANAGEMENT,STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** NEW MEXICO STATE LAND OFFICE - SANTA FE

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** OTHER

**Describe:** SWD

**Surface Owner:** BUREAU OF LAND MANAGEMENT,STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** NEW MEXICO STATE LAND OFFICE - SANTA FE

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

**Section 12 - Other**

**Right of Way needed?** Y

**Use APD as ROW?** Y

**ROW Type(s):** 281001 ROW - ROADS,288100 ROW – O&G Pipeline,288101 ROW – O&G Facility Sites,288103 ROW – Salt Water Disposal Pipeline/Facility,289001 ROW- O&G Well Pad,FLPMA (Powerline)

**ROW**

**SUPO Additional Information:** Agreement with lessee in place for NMNM080268.

**Use a previously conducted onsite?** N

**Previous Onsite information:**

**Other SUPO**

Mayaro22StateCom10H\_LVM\_20220816144748.pdf

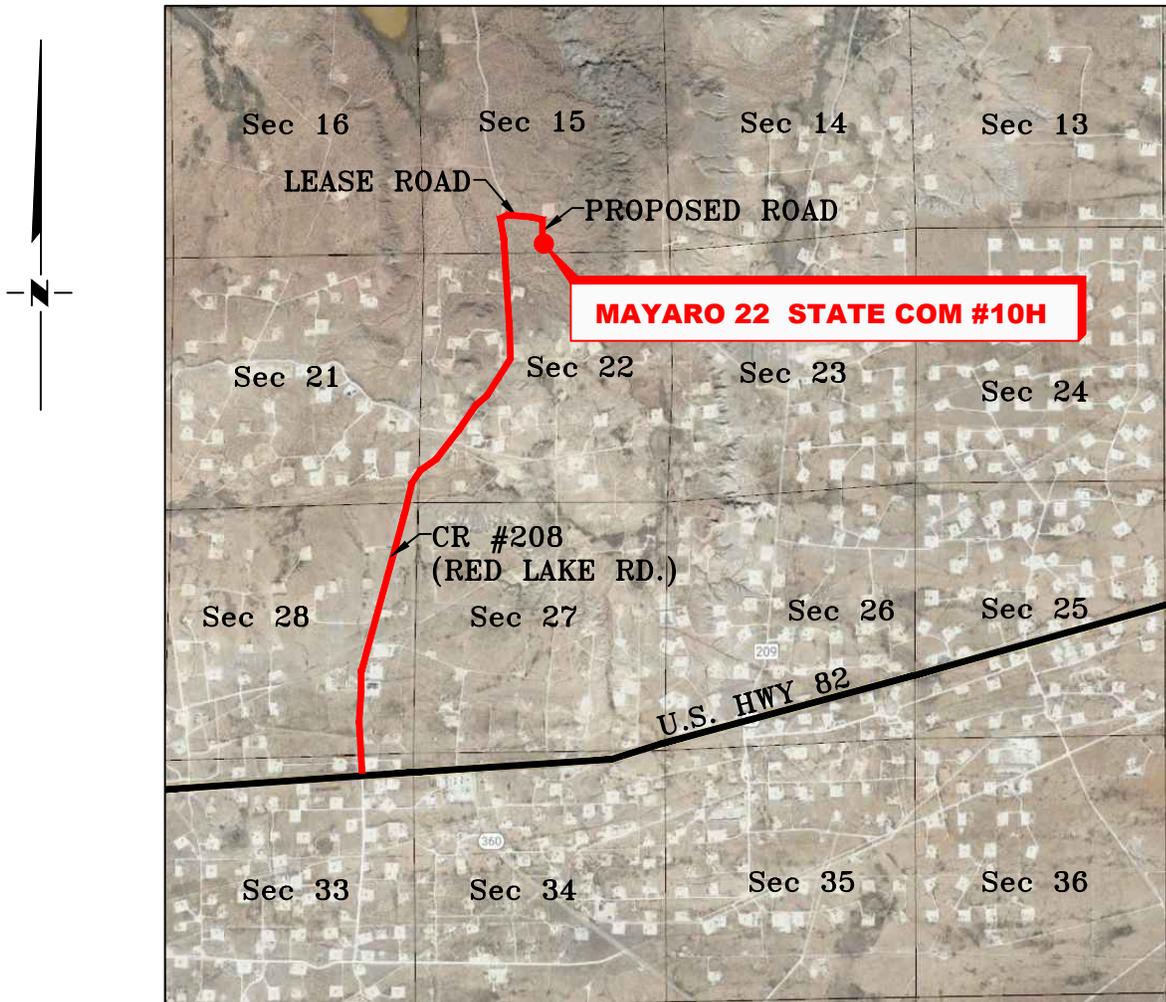
Mayaro22StateCom10H70H\_NGMP\_20220818135730.pdf

Mayaro22StateCom10H\_SUPO\_20230531131448.pdf



# VICINITY MAP

NOT TO SCALE



*SECTION 15, TWP. 17 SOUTH, RGE. 28 EAST,  
N. M. P. M., EDDY CO., NEW MEXICO*

OPERATOR: Spur Energy Partners LLC.  
 LEASE: Mayaro 22 State Com  
 WELL NO.: 10H

LOCATION: 283' FSL & 2438' FEL  
 ELEVATION: 3560'

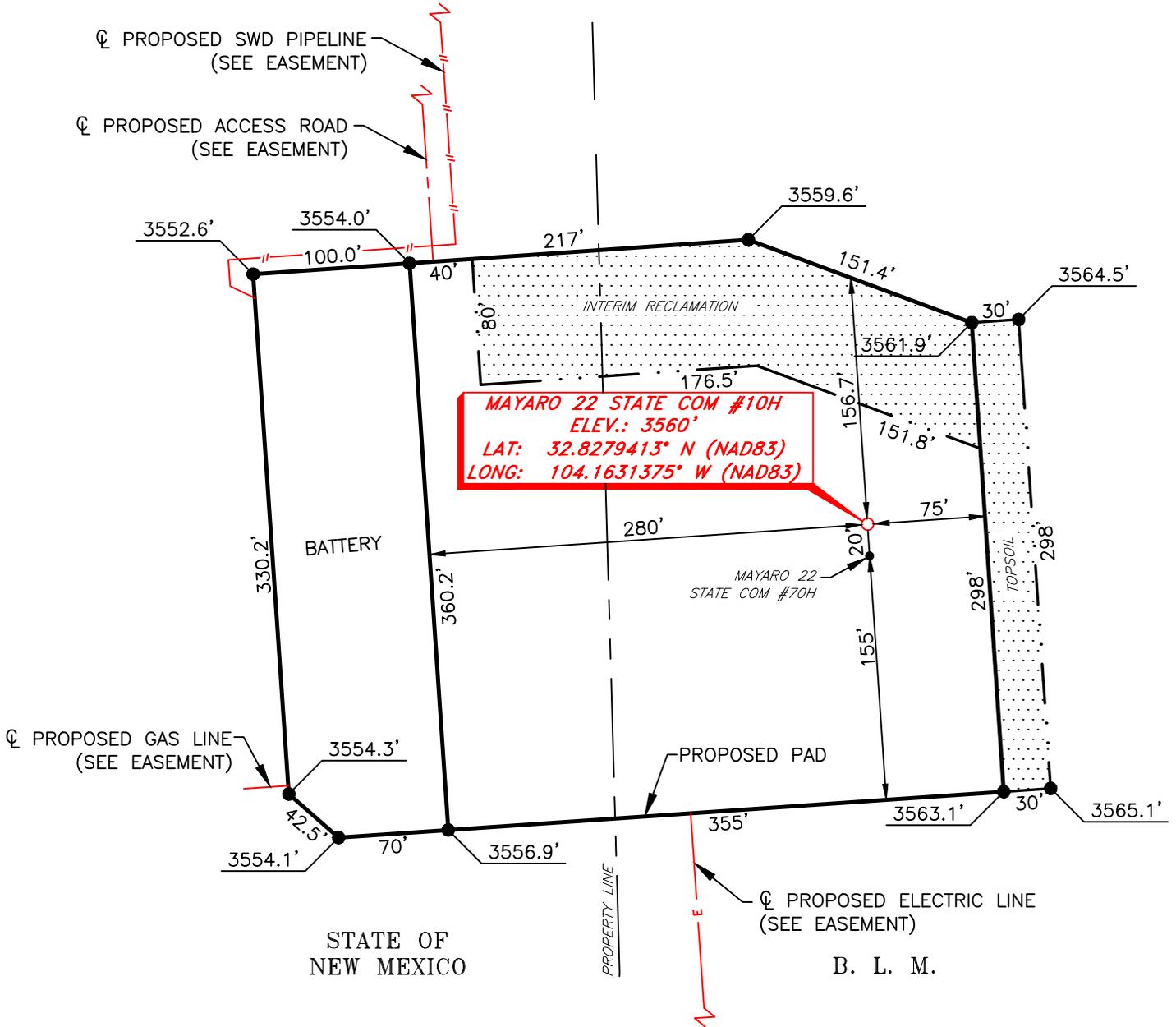
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NO.	REVISION	DATE
JOB NO.: LS22060696		
DWG. NO.: 22060696-3		

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

SCALE: N. T. S.
DATE: 06/23/2022
SURVEYED BY: JF/JM/IW
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 1 OF 1

**SPUR ENERGY PARTNERS LLC.  
MAYARO 22 STATE COM #10H  
(283' FSL & 2438' FEL)  
SECTION 15, T17S, R28E  
N. M. P. M., EDDY COUNTY, NEW MEXICO**



DIRECTIONS TO LOCATION

*From the intersection of U.S. Hwy. 82 and CR #208 (Red Lake Rd.);  
Go North on CR #208 approx. 2.3 miles to a lease road on the right;  
Turn right and go East approx. 0.1 miles to a proposed road on the right;  
Turn right and go South approx. 0.1 miles to location on the left.*



I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this unclassified survey of a well location from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

*Robert M. Howett*  
Robert M. Howett NM PS 19680



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SCALE: 1" = 100'  
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BEARINGS ARE  
NAD 83 GRID - NM EAST  
DISTANCES ARE GROUND

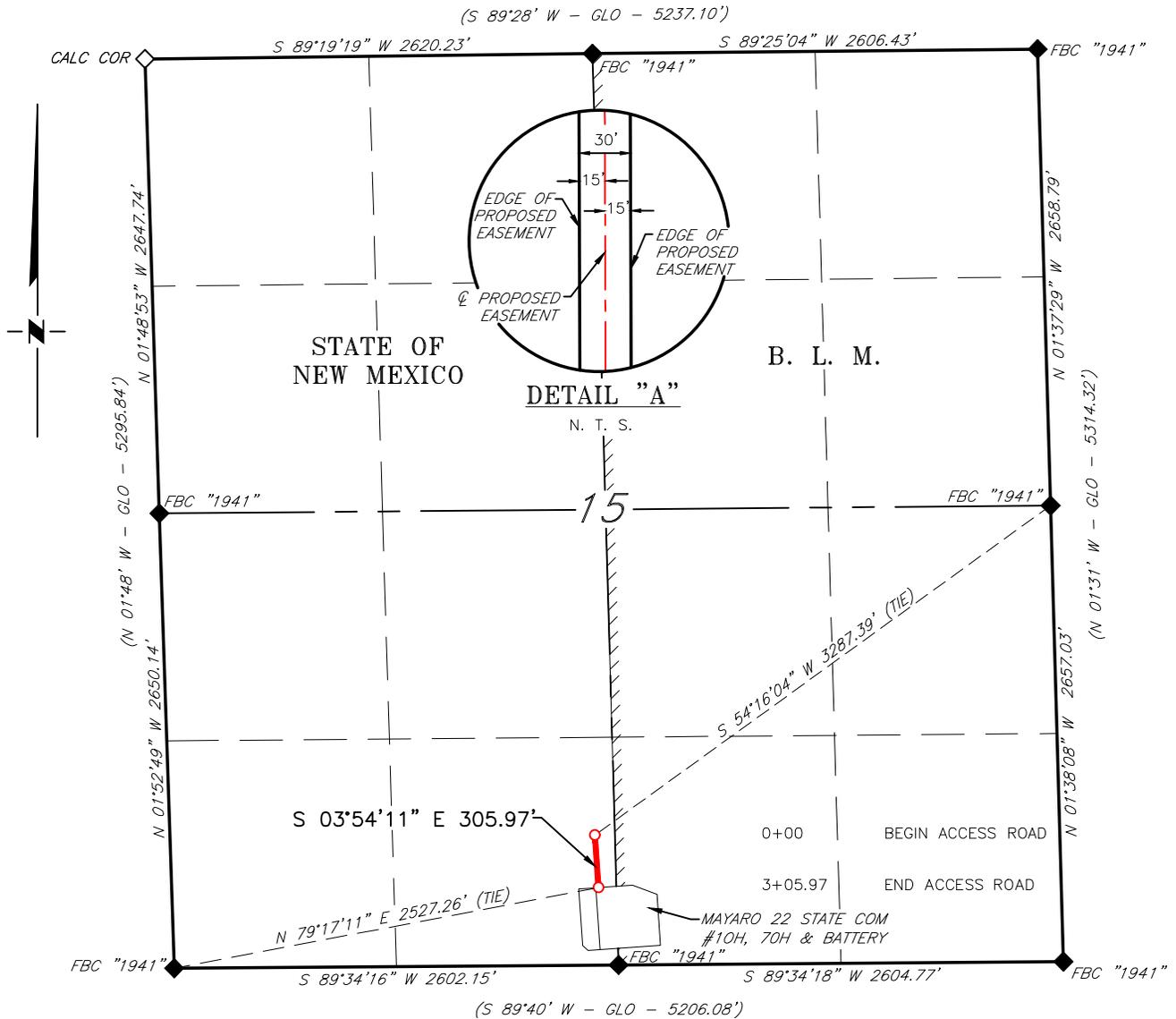
NO.	REVISION	DATE
JOB NO.: LS22060696		
DWG. NO.: 22060696-4		



701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 06/23/2022
SURVEYED BY: JF/JM/IW
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 1 OF 1

**SPUR ENERGY PARTNERS, LLC.  
PROPOSED ACCESS ROAD FOR THE MAYARO WELL LOCATIONS  
SECTION 15, T17S, R28E  
N. M. P. M., EDDY COUNTY, NEW MEXICO**



**DESCRIPTION**

A strip of land 30 feet wide, being 305.97 feet or 18.544 rods in length, lying in Section 15, Township 17 South, Range 28 East, N. M. P. M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across State of New Mexico land:

BEGINNING at Engr. Sta. 0+00, a point in the Southwest quarter of Section 15, which bears, S 54°16'04" W, 3,287.39 feet from a brass cap, stamped "1941", found for the East quarter corner of Section 15;

Thence S 03°54'11" E, 305.97 feet, to Engr. Sta. 3+05.97, the End of Survey, a point in the Southwest quarter of Section 15, which bears, N 79°17'11" E, 2,527.26 feet from a brass cap, stamped "1941", found for the Southwest corner of Section 15.

Said strip of land contains 0.211 acres, more or less, and is allocated by forties as follows:

SE 1/4 SW 1/4	18.544 Rods	0.211 Acres
---------------	-------------	-------------

SCALE: 1" = 1000'

0 500' 1000'

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

LEGEND

- ( ) RECORD DATA - GLO
- ◇ CALCULATED CORNER
- ◆ FOUND MONUMENT AS NOTED
- PROPOSED ACCESS ROAD

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

*Robert M. Howett*

Robert M. Howett NM PS 19680



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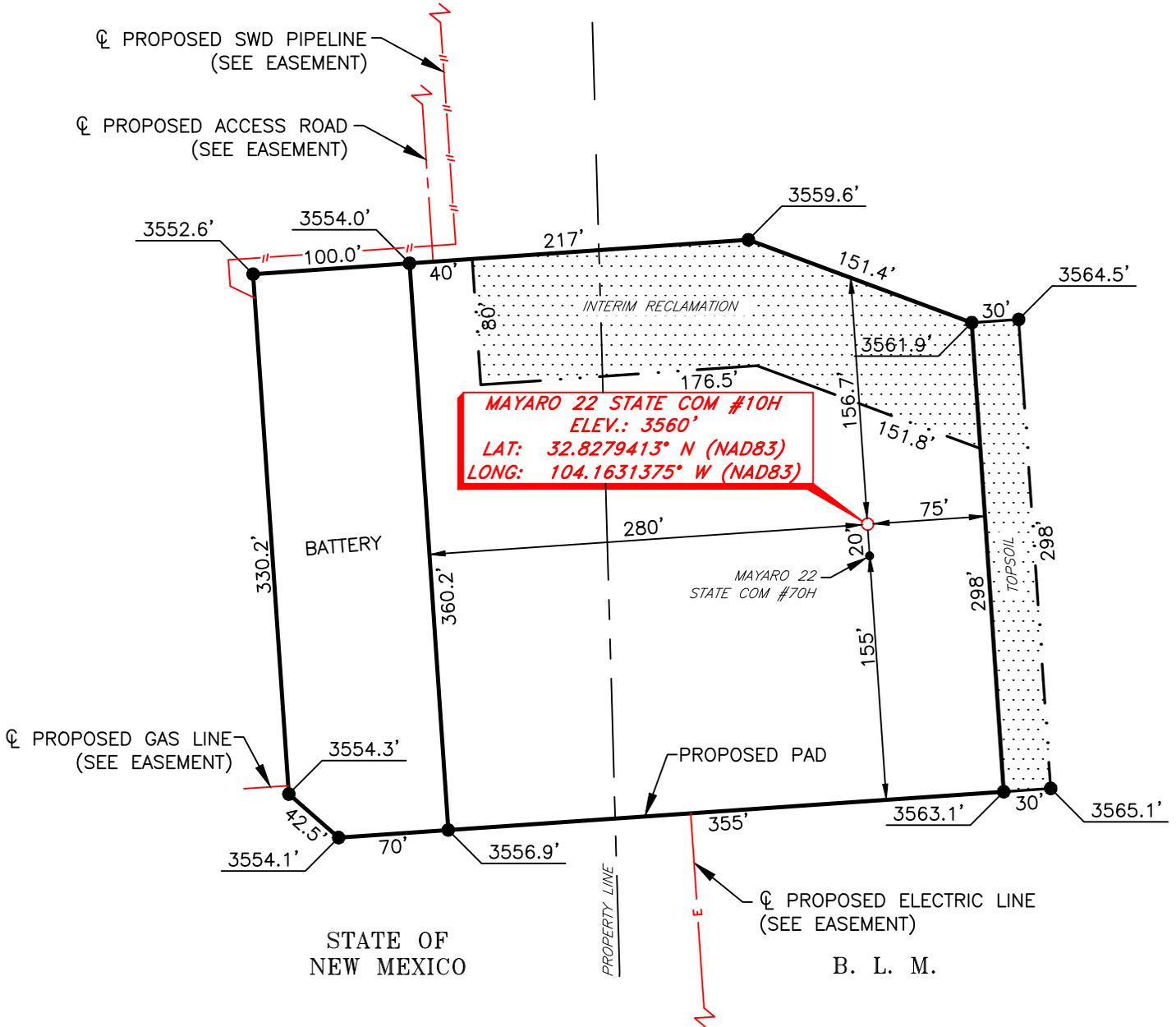
NO.	REVISION	DATE
JOB NO.: LS22060700		
DWG. NO.: 22060700-1		



701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 06/23/2022
SURVEYED BY: JF/JM/IW
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 1 OF 1

**SPUR ENERGY PARTNERS LLC.  
MAYARO 22 STATE COM #10H  
(283' FSL & 2438' FEL)  
SECTION 15, T17S, R28E  
N. M. P. M., EDDY COUNTY, NEW MEXICO**



DIRECTIONS TO LOCATION

From the intersection of U.S. Hwy. 82 and CR #208 (Red Lake Rd.);  
 Go North on CR #208 approx. 2.3 miles to a lease road on the right;  
 Turn right and go East approx. 0.1 miles to a proposed road on the right;  
 Turn right and go South approx. 0.1 miles to location on the left.



I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this unclassified survey of a well location from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

*Robert M. Howett*  
 Robert M. Howett NM PS 19680



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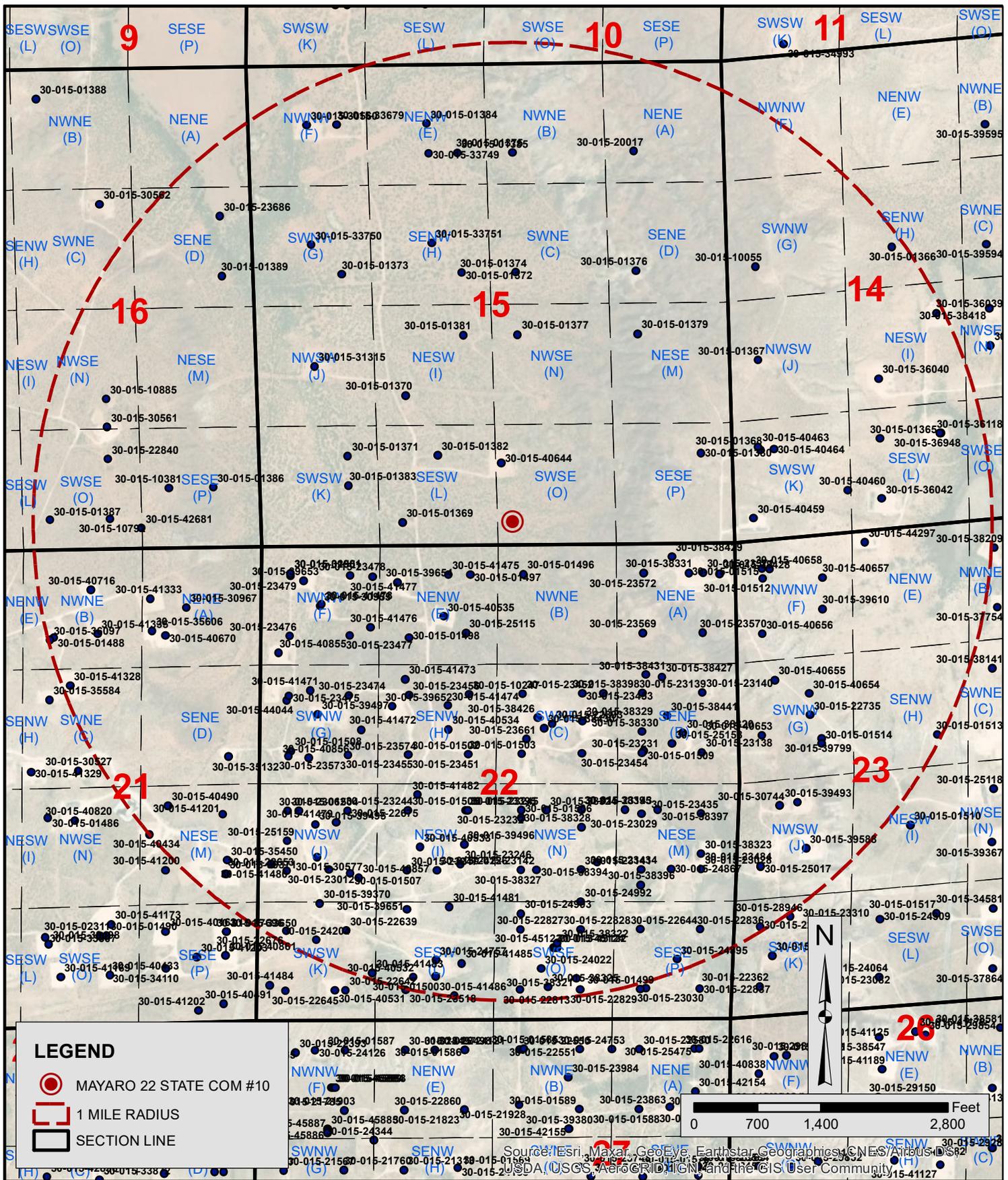
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 BEARINGS ARE  
 NAD 83 GRID - NM EAST  
 DISTANCES ARE GROUND

NO.	REVISION	DATE
JOB NO.: LS22060696		
DWG. NO.: 22060696-4		



701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 06/23/2022
SURVEYED BY: JF/JM/IW
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 1 OF 1



**RRC**  
**SURVEYING**  
 701 S. Cecil Hobbs, NM 88240  
 (575) 964-8200

MAYARO 22 STATE COM #10H  
 (283' FSL & 2438' FEL)  
 Section 15, Township 17 South, Range 28 East,  
 N. M. P. M., Eddy County, New Mexico

**SPUR**  
**ENERGY**  
**PARTNERS**

Date: 06/23/2022  
 Surveyed By: JF/JM/IW

Job No. LS22060696

ONE MILE RADIUS MAP  
 Dwg. No. 1-MILE (5,280 Ft.) - RADIUS

Approved By: RMH  
 Drawn By: RQ

## **Mayaro 22 State Com 10H and 70H Facility Development**

### **CTB Site:**

All wells will have the ability to be routed to the Mayaro 22 West State Com Tank Battery. These wells are co-located with proposed tank battery.

### **Production Flowlines:**

Each well will have two (2) 4" surface flowlines operating around 90 psi from the well sites to the tank battery. The flowlines for the Mayaro wells will be routed to the Mayaro 22 West State Com Tank Battery. The wells will produce into this battery at any given time.

### **Salt Water Disposal:**

Produced water will be pumped into two (2) 4" HDPE SDR 7 surface lines operating around 100 psi. The produced water line will also connect to Spur's SWD System to be disposed of at a Spur operated SWD.

### **Frac Water System:**

Water for the Mayaro 70H-10H will be trucked from the Halberd pond owned by Spur in Unit H (SENE) Section 27, Township 17 South, Range 28 East.

### **Gas Sales**

Gas will be sold via one (1) 4" HDPE SDR 7 surface line operating around 100 psi and tie in to an existing DCP line west of the Mayaro 22 West State Com battery.

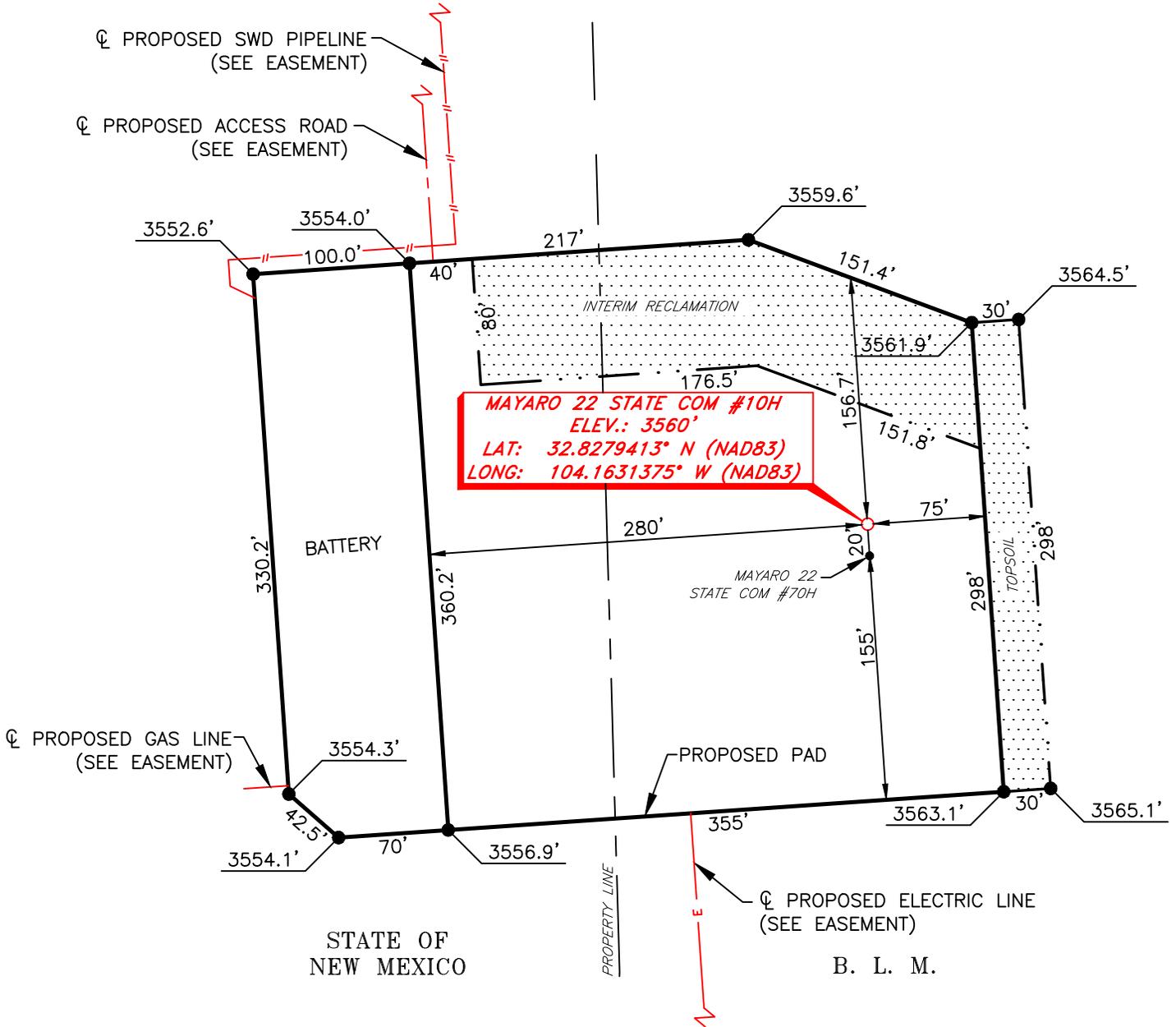
### **Oil Sales:**

Oil will be sold through a LACT and trucked from the Mayaro 22 West State Com battery.

### **Electrical System:**

3-phase electric lines will be constructed from existing CVE lines per the survey plats to the Mayaro 22 West State Com battery.

SPUR ENERGY PARTNERS LLC.  
 MAYARO 22 STATE COM #10H  
 (283' FSL & 2438' FEL)  
 SECTION 15, T17S, R28E  
 N. M. P. M., EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of U.S. Hwy. 82 and CR #208 (Red Lake Rd.);  
 Go North on CR #208 approx. 2.3 miles to a lease road on the right;  
 Turn right and go East approx. 0.1 miles to a proposed road on the right;  
 Turn right and go South approx. 0.1 miles to location on the left.



I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this unclassified survey of a well location from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

*Robert M. Howett*  
 Robert M. Howett NM PS 19680



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SCALE: 1" = 100'  
 0 50 100  
 BEARINGS ARE  
 NAD 83 GRID - NM EAST  
 DISTANCES ARE GROUND

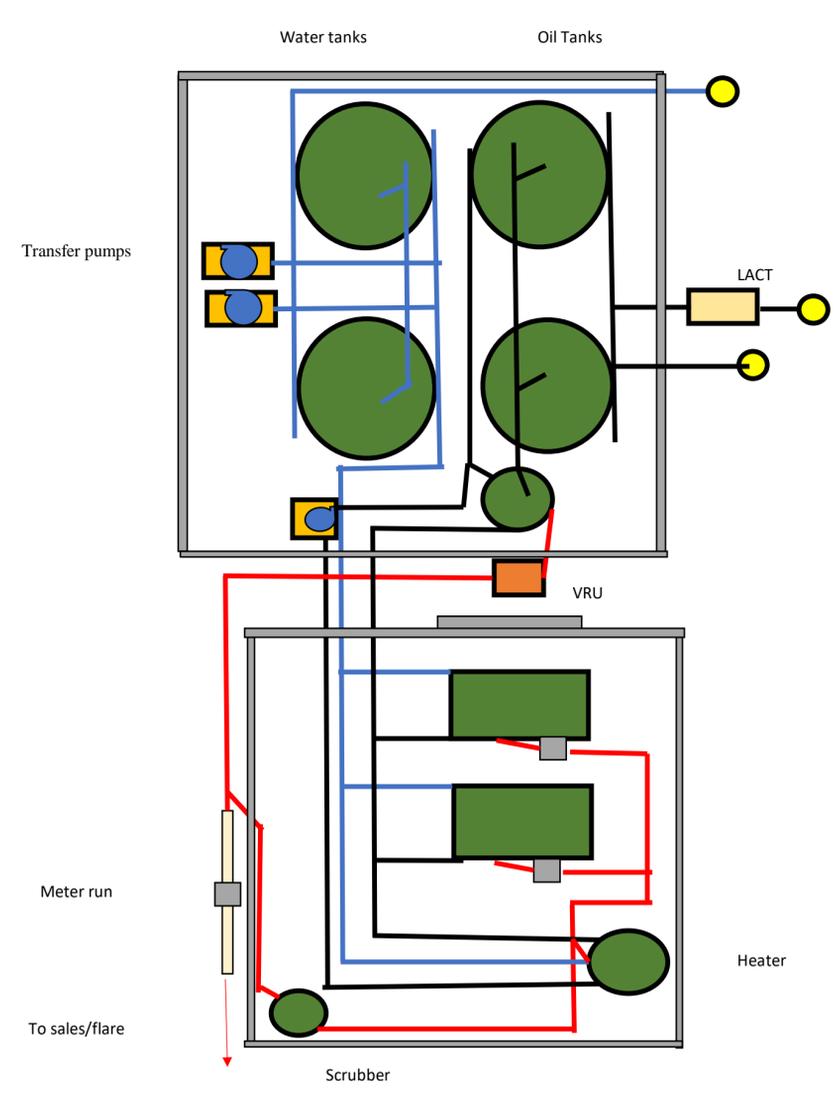
NO.	REVISION	DATE
JOB NO.: LS22060696		
DWG. NO.: 22060696-4		



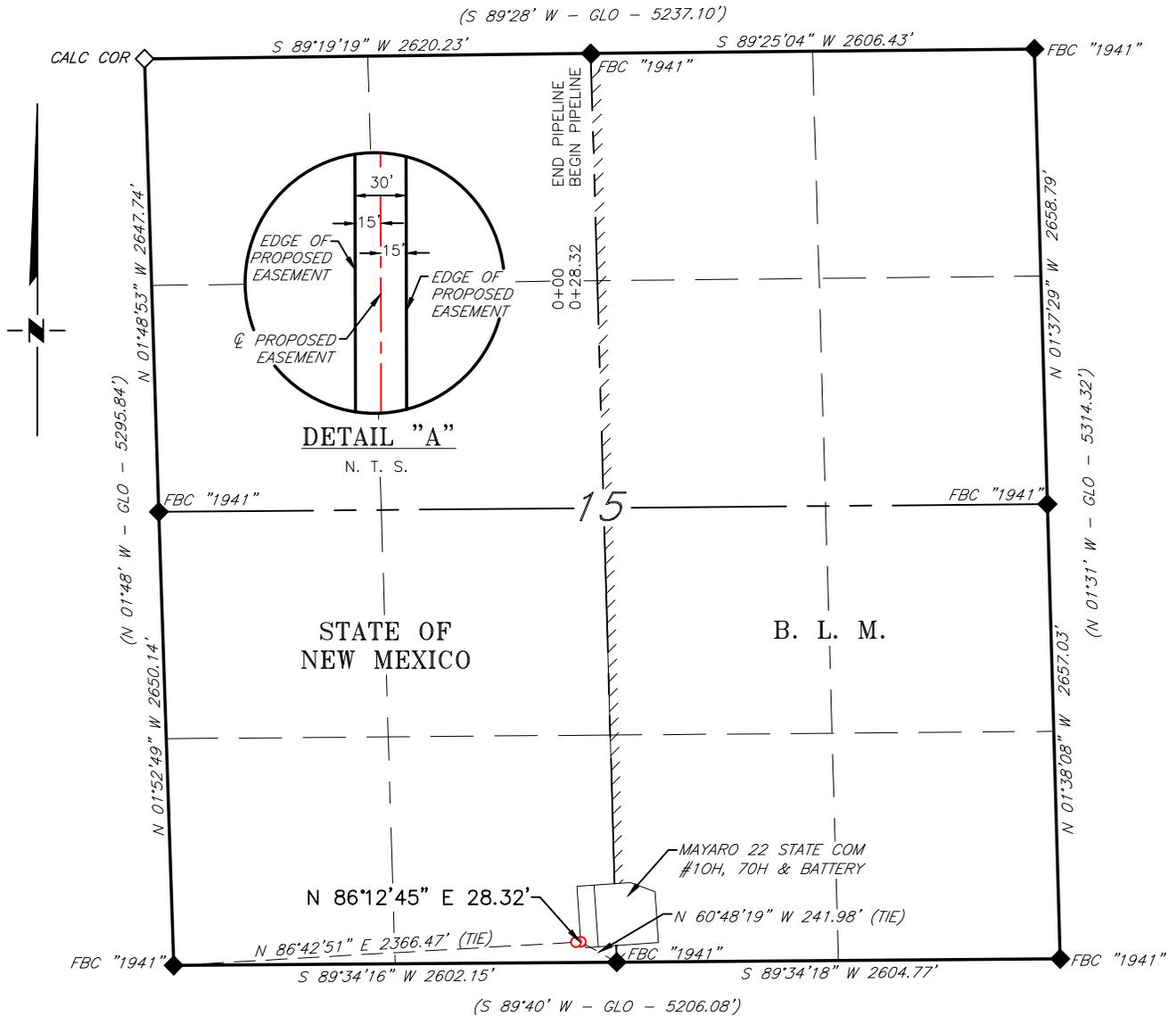
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 06/23/2022
SURVEYED BY: JF/JM/IW
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 1 OF 1

### Mayaro West 2 Well Facility Diagram



**SPUR ENERGY PARTNERS, LLC.  
 PROPOSED GAS PIPELINE FOR THE MAYARO WELL LOCATIONS  
 SECTION 15, T17S, R28E  
 N. M. P. M., EDDY COUNTY, NEW MEXICO**



**DESCRIPTION**

A strip of land 30 feet wide, being 28.32 feet or 1.716 rods in length, lying in Section 15, Township 17 South, Range 28 East, N. M. P. M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across State of New Mexico land:

BEGINNING at Engr. Sta. 0+00, a point in the Southwest quarter of Section 15, which bears, N 86°12'45" W, 2,366.47 feet from a brass cap, stamped "1941", found for the Southwest corner of Section 15;

Thence N 86°12'45" E, 28.32 feet, to Engr. Sta. 0+28.32, the End of Survey, a point in the Southwest quarter of Section 15, which bears, N 60°48'19" W, 241.98 feet from a brass cap, stamped "1941", found for the South quarter corner of Section 15.

Said strip of land contains 0.020 acres, more or less, and is allocated by forties as follows:

SE 1/4 SW 1/4	1.716 Rods	0.020 Acres
---------------	------------	-------------

SCALE: 1" = 1000'



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

LEGEND

- ( ) RECORD DATA - GLO
- ◇ CALCULATED CORNER
- ◆ FOUND MONUMENT AS NOTED
- PROPOSED PIPELINE

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

*Robert M. Howett*  
 Robert M. Howett NM PS 19680



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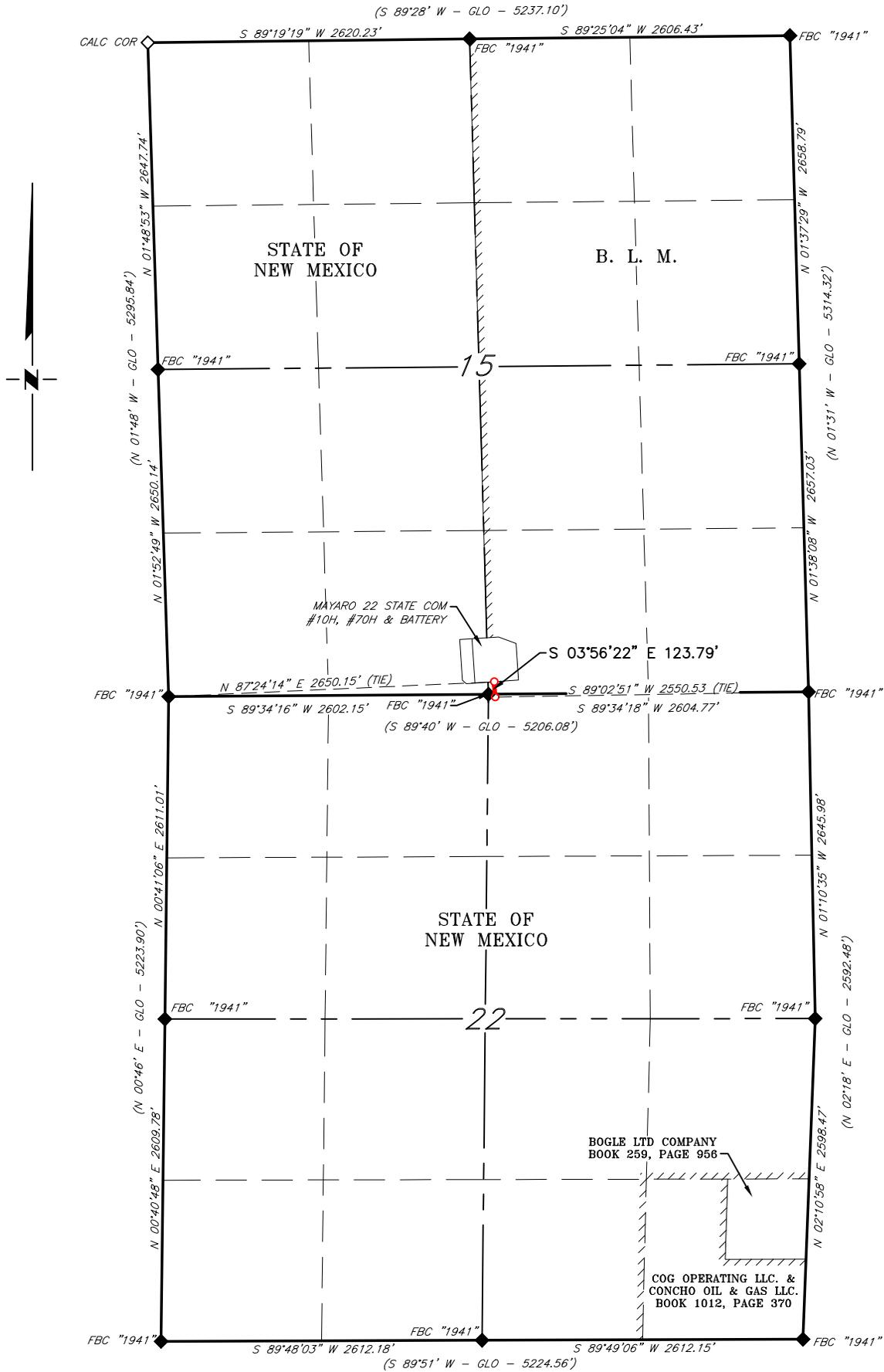
NO.	REVISION	DATE
JOB NO.: LS22060704		
DWG. NO.: 22060704-1		



701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 06/23/2022
SURVEYED BY: JF/JM/IW
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 1 OF 1

**SPUR ENERGY PARTNERS, LLC.  
 PROPOSED ELECTRIC LINE FOR THE MAYARO WELL LOCATIONS  
 SECTIONS 15 & 22, T17S, R28E  
 N. M. P. M., EDDY COUNTY, NEW MEXICO**



**LEGEND**

- ( ) RECORD DATA - GLO
- ◇ CALCULATED CORNER
- ◆ FOUND MONUMENT AS NOTED
- PROPOSED ELECTRIC

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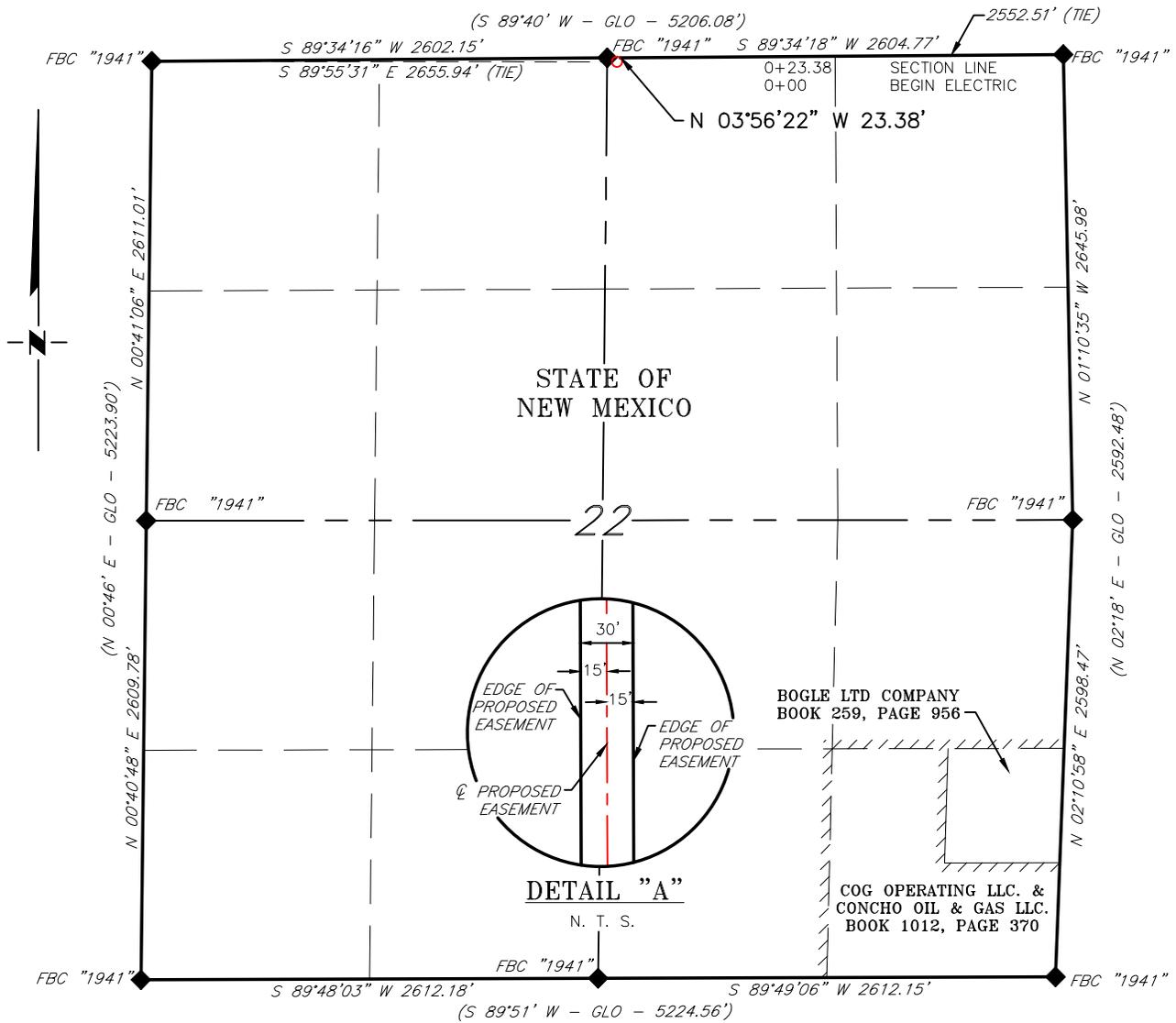
SCALE: 1" = 1200'  
 0 600' 1200'  
 BEARINGS ARE GRID NAD 83  
 NM EAST  
 DISTANCES ARE HORIZ. GROUND.

NO.	REVISION	DATE
JOB NO.: LS22060702		
DWG. NO.: 22060702-1		

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

SCALE: 1" = 1200'
DATE: 06/23/2022
SURVEYED BY: JF/JM/IW
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 1 OF 3

**SPUR ENERGY PARTNERS, LLC.  
PROPOSED ELECTRIC LINE FOR THE MAYARO WELL LOCATIONS  
SECTION 22, T17S, R28E  
N. M. P. M., EDDY COUNTY, NEW MEXICO**



**DESCRIPTION**

A strip of land 30 feet wide, being 23.38 feet or 1.417 rods in length, lying in Section 22, Township 17 South, Range 28 East, N. M. P. M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across State of New Mexico land:

BEGINNING at Engr. Sta. 0+00, a point in the Northeast quarter of Section 22, which bears, S 89°55'31" E, 2,655.94 feet from a brass cap, stamped "1941", found for the Northwest corner of Section 22;

Thence N 03°56'22" W, 23.38 feet, to Engr. Sta. 0+23.38, a point on the North line of Section 22, which bears, S 89°34'18" W, 2,552.51 feet from a brass cap, stamped "1941", found for the Northeast corner of Section 22.

Said strip of land contains 0.016 acres, more or less, and is allocated by forties as follows:

NW 1/4 NE 1/4      1.417 Rods      0.016 Acres

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

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

LEGEND

- ( ) RECORD DATA - GLO
- ◆ FOUND MONUMENT AS NOTED
- PROPOSED ELECTRIC

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

*Robert M. Howett*  
Robert M. Howett      NM PS 19680



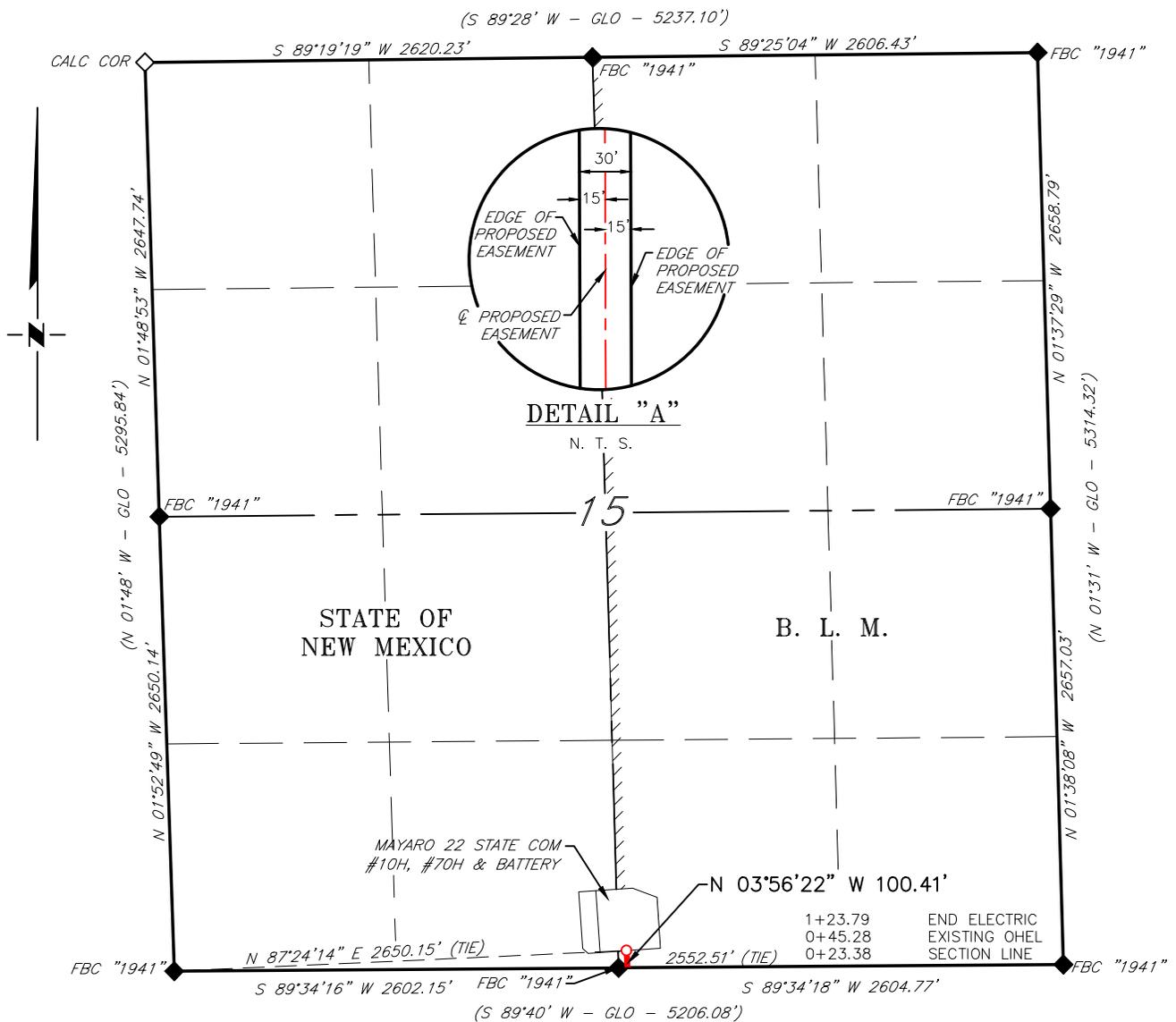
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NO.	REVISION	DATE
JOB NO.: LS22060702		
DWG. NO.: 22060702-2		



SCALE: 1" = 1000'
DATE: 06/23/2022
SURVEYED BY: JF/JM/IW
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 2 OF 3

**SPUR ENERGY PARTNERS, LLC.  
PROPOSED ELECTRIC LINE FOR THE MAYARO WELL LOCATIONS  
SECTION 15, T17S, R28E  
N. M. P. M., EDDY COUNTY, NEW MEXICO**



**DESCRIPTION**

A strip of land 30 feet wide, being 100.41 feet or 6.085 rods in length, lying in Section 15, Township 17 South, Range 28 East, N. M. P. M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 0+23.38, a point on the South line of Section 15, which bears, S 89°34'18" W, 2,552.51 feet from a brass cap, stamped "1941", found for the Southeast corner of Section 15;

Thence N 03°56'22" W, 100.41 feet, to Engr. Sta. 1+23.79, the End of Survey, a point in the Southeast quarter of Section 15, which bears, N 87°24'14" E, 2,650.15 feet from a brass cap, stamped "1941", found for the Southwest corner of Section 15.

Said strip of land contains 0.069 acres, more or less, and is allocated by forties as follows:

SW 1/4 SE 1/4	6.085 Rods	0.069 Acres
---------------	------------	-------------

SCALE: 1" = 1000'

0 500' 1000'

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

LEGEND

- ( ) RECORD DATA - GLO
- ◇ CALCULATED CORNER
- ◆ FOUND MONUMENT AS NOTED
- PROPOSED ELECTRIC

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*Robert M. Howett*

Robert M. Howett NM PS 19680



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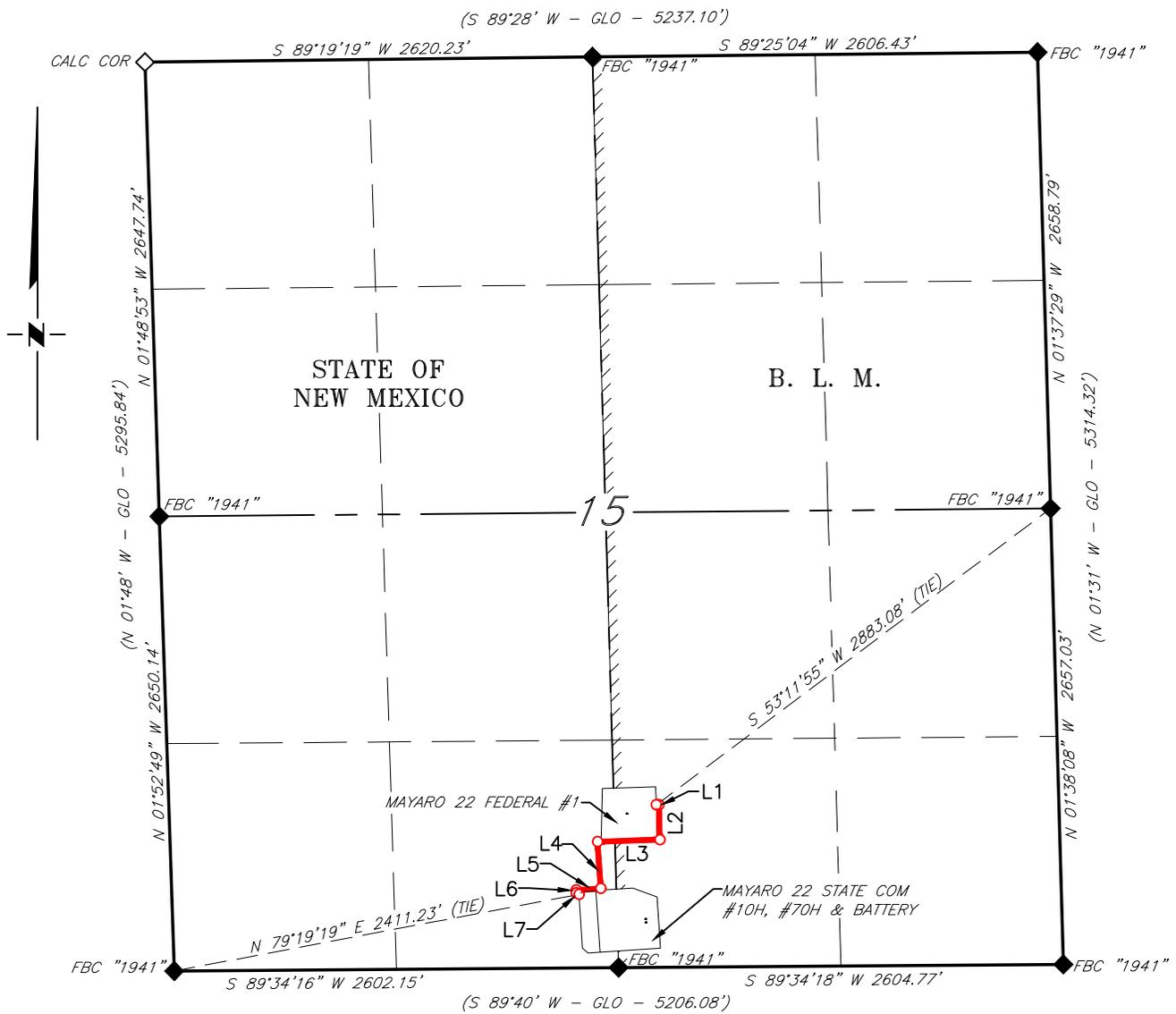
NO.	REVISION	DATE
JOB NO.: LS22060702		
DWG. NO.: 22060702-3		



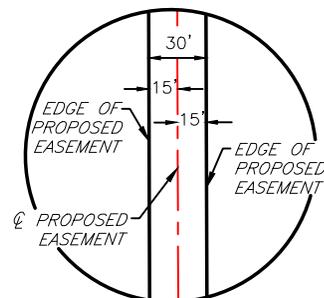
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 06/08/2022
SURVEYED BY: JF/JM/IW
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 3 OF 3

**SPUR ENERGY PARTNERS, LLC.  
PROPOSED SWD PIPELINE FOR THE MAYARO WELL LOCATIONS  
SECTION 15, T17S, R28E  
N. M. P. M., EDDY COUNTY, NEW MEXICO**



LINE TABLE		
LINE	BEARING	LENGTH
L1	N 89°58'47" E	15.01'
L2	S 01°33'53" E	202.24'
L3	S 88°01'54" W	364.22'
L4	S 03°54'25" E	272.89'
L5	S 86°03'54" W	145.18'
L6	S 03°50'15" E	16.68'
L7	S 64°26'20" E	17.38'



**DETAIL "A"**

N. T. S.

SCALE: 1" = 1000'



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

LEGEND

- ( ) RECORD DATA - GLO
- ◇ CALCULATED CORNER
- ◆ FOUND MONUMENT AS NOTED
- PROPOSED PIPELINE

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*Robert M. Howett*

Robert M. Howett NM PS 19680



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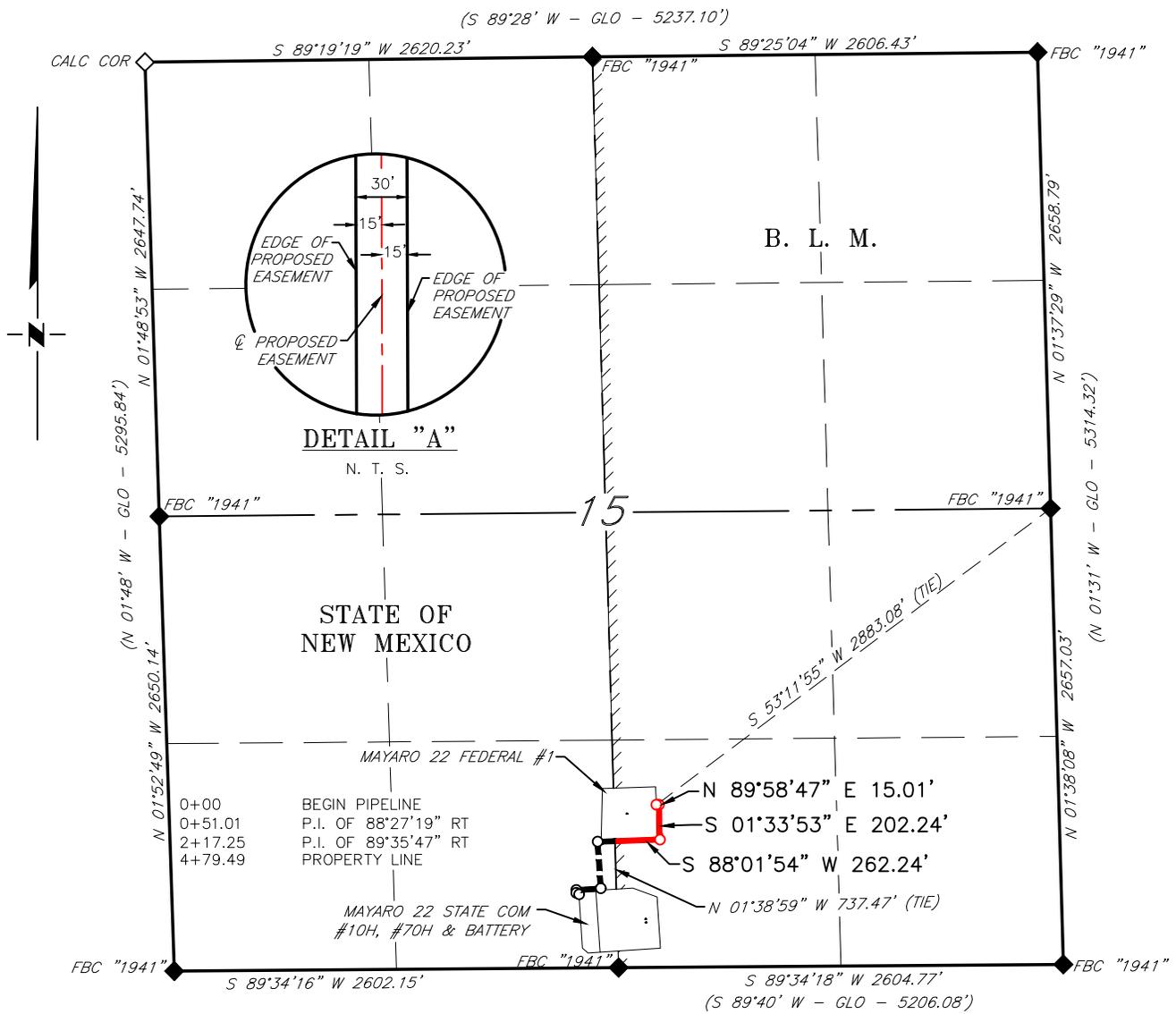
NO.	REVISION	DATE
JOB NO.: LS22060705		
DWG. NO.: 22060705-1		



701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 07/12/2022
SURVEYED BY: JM/DC
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 1 OF 4

**SPUR ENERGY PARTNERS, LLC.  
PROPOSED SWD PIPELINE FOR THE MAYARO WELL LOCATIONS  
SECTION 15, T17S, R28E  
N. M. P. M., EDDY COUNTY, NEW MEXICO**



**DESCRIPTION**

A strip of land 30 feet wide, being 479.49 feet or 29.060 rods in length, lying in Section 15, Township 17 South, Range 28 East, N. M. P. M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in the Southeast quarter of Section 15, which bears, S 53°11'55" W, 2,883.08 feet from a brass cap, stamped "1941", found for the East quarter corner of Section 15;

Thence N 89°58'47" E, 15.01 feet, to Engr. Sta. 0+15.01, a P. I. of 88°27'19" right;

Thence S 01°33'53" E, 202.24 feet, to Engr. Sta. 2+17.25, a P. I. of 89°35'47" right;

Thence S 88°01'54" W, 262.24 feet, to Engr. Sta. 4+79.49, a point on the West line of the East half of Section 15, which bears, N 01°38'59" W, 737.47 feet from a brass cap, stamped "1941", found for the South quarter corner of Section 15.

Said strip of land contains 0.330 acres, more or less, and is allocated by forties as follows:

SW 1/4 SE 1/4                      29.060 Rods                      0.330 Acres

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

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

LEGEND

- ( ) RECORD DATA - GLO
- ◇ CALCULATED CORNER
- ◆ FOUND MONUMENT AS NOTED
- PROPOSED PIPELINE

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*Robert M. Howett*  
Robert M. Howett                      NM PS 19680



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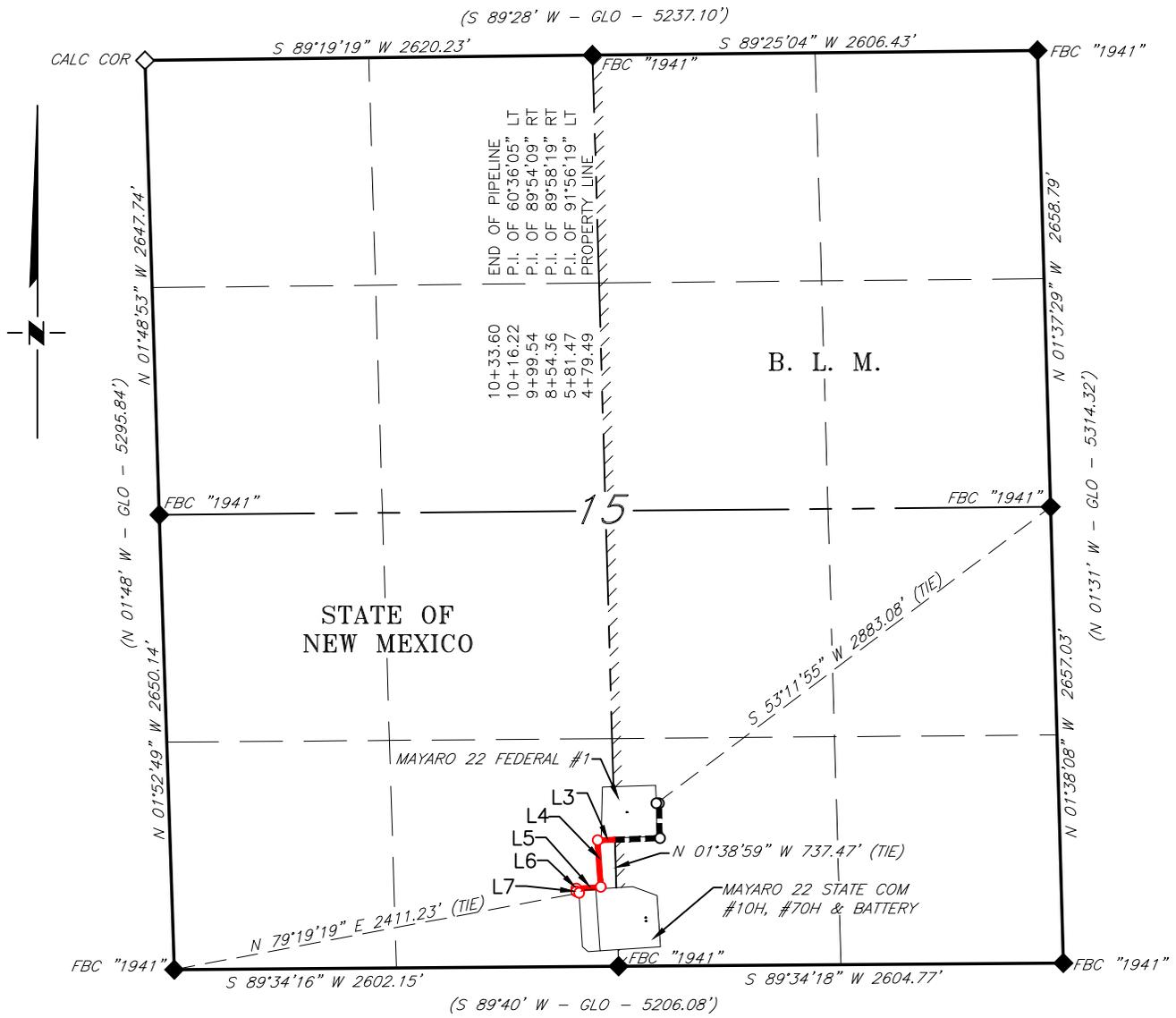
NO.	REVISION	DATE
JOB NO.: LS22060705		
DWG. NO.: 22060705-2		



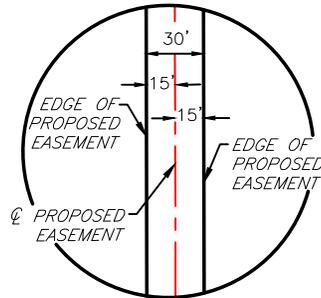
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 07/12/2022
SURVEYED BY: JM/DC
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 2 OF 4

**SPUR ENERGY PARTNERS, LLC.  
PROPOSED SWD PIPELINE FOR THE MAYARO WELL LOCATIONS  
SECTION 15, T17S, R28E  
N. M. P. M., EDDY COUNTY, NEW MEXICO**



LINE TABLE		
LINE	BEARING	LENGTH
L3	S 88°01'54" W	101.98'
L4	S 03°54'25" E	272.89'
L5	S 86°03'54" W	145.18'
L6	S 03°50'15" E	16.68'
L7	S 64°26'20" E	17.38'



**DETAIL "A"**

N. T. S.

SCALE: 1" = 1000'



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

LEGEND

- ( ) RECORD DATA - GLO
- ◇ CALCULATED CORNER
- ◆ FOUND MONUMENT AS NOTED
- PROPOSED PIPELINE

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*Robert M. Howett*

Robert M. Howett NM PS 19680



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NO.	REVISION	DATE
JOB NO.: LS22060705		
DWG. NO.: 22060705-3		



701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 07/12/2022
SURVEYED BY: JM/DC
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 3 OF 4

**SPUR ENERGY PARTNERS, LLC.  
 PROPOSED SWD PIPELINE FOR THE MAYARO WELL LOCATIONS  
 SECTION 15, T17S, R28E  
 N. M. P. M., EDDY COUNTY, NEW MEXICO**

DESCRIPTION

A strip of land 30 feet wide, being 554.11 feet or 33.582 rods in length, lying in Section 15, Township 17 South, Range 28 East, N. M. P. M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across State of New Mexico land:

BEGINNING at Engr. Sta. 4+79.49, a point on the East line of the West half of Section 15, which bears, N 01°38'59" W, 737.47 feet from a brass cap, stamped "1941", found for the South quarter corner of Section 15;

Thence S 88°01'54" W, 101.98 feet, to Engr. Sta. 5+81.47, a P. I. of 91°56'19" left;

Thence S 03°54'25" E, 272.89 feet, to Engr. Sta. 8+54.36, a P. I. of 89°58'19" right;

Thence S 86°03'54" W, 145.18 feet, to Engr. Sta. 9+99.54, a P. I. of 89°54'09" left;

Thence S 03°50'15" E, 16.68 feet, to Engr. Sta. 10+16.22, a P. I. of 60°36'05" left;

Thence S 64°26'20" E, 17.38 feet, to Engr. Sta. 10+33.60, the End of Survey, a point in the Southwest quarter of Section 15, which bears, N 79°19'19" E, 2,411.23 feet from a brass cap, stamped "1941", found for the Southwest corner of Section 15.

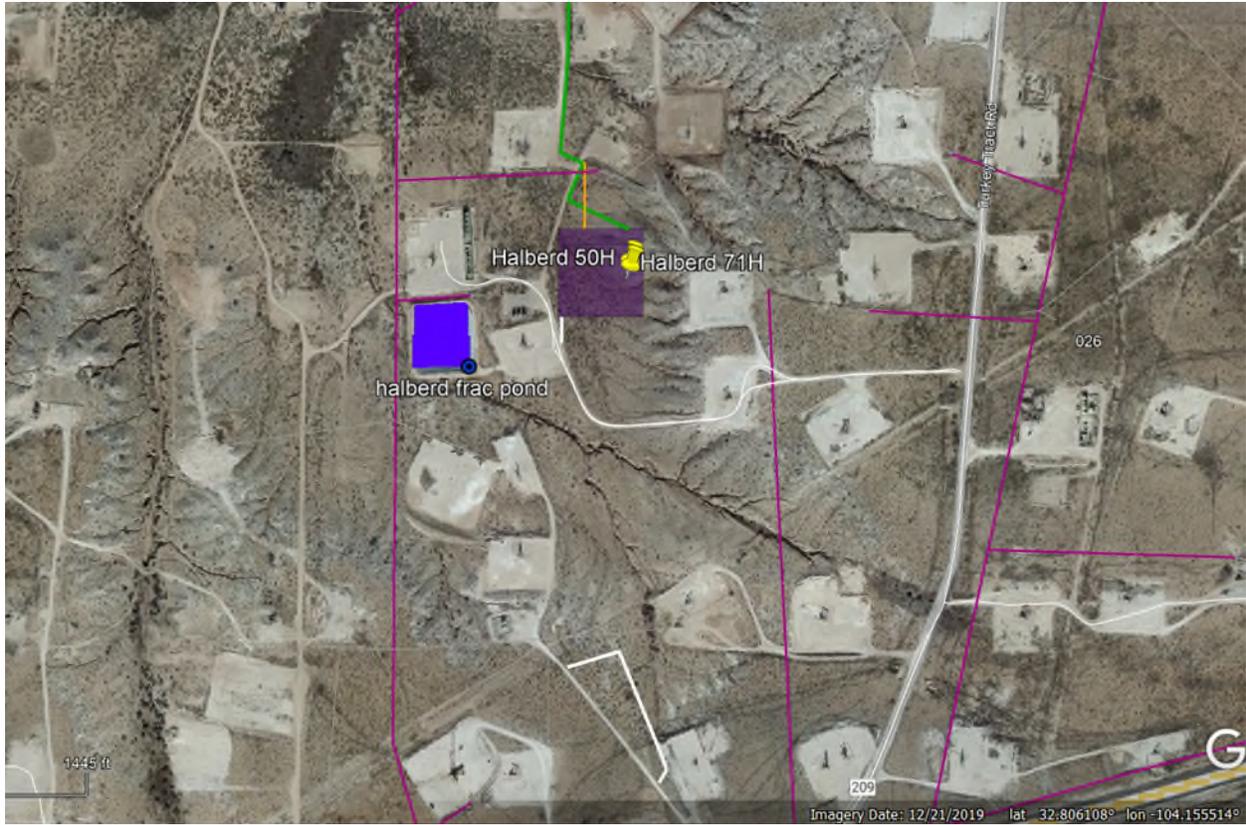
Said strip of land contains 0.382 acres, more or less, and is allocated by forties as follows:

SE 1/4 SW 1/4                      33.582 Rods                      0.382 Acres

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			 <p><b>RRC</b> ENERGY SERVICES LLC. 701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200</p>	SCALE: 1" = 1000'
				DATE: 07/12/2022
				SURVEYED BY: JM/DC
				DRAWN BY: RQ
				APPROVED BY: RMH
NO.	REVISION	DATE		SHEET: 4 OF 4
JOB NO.: LS22060705				
DWG. NO.: 22060705-4				

\*\*Water will be trucked from the existing Halberd Pond owned by Spur in Unit H (SENE) Section 27, Township 17 South, Range 28 East.\*\*



# Mayaro & Sierra Nevada Development

Caliche Source - Construction Material  
2.82147778, -104.14556944  
Surface  
W4/NE4, NW4/SE4 Section 23  
Township 17 South, Range 28 East  
Sandoval County, NM

Monoco Phillips - Horse Pasture Caliche Pit

Ruler

Line Path Polygon Circle 3D path 3D polygon

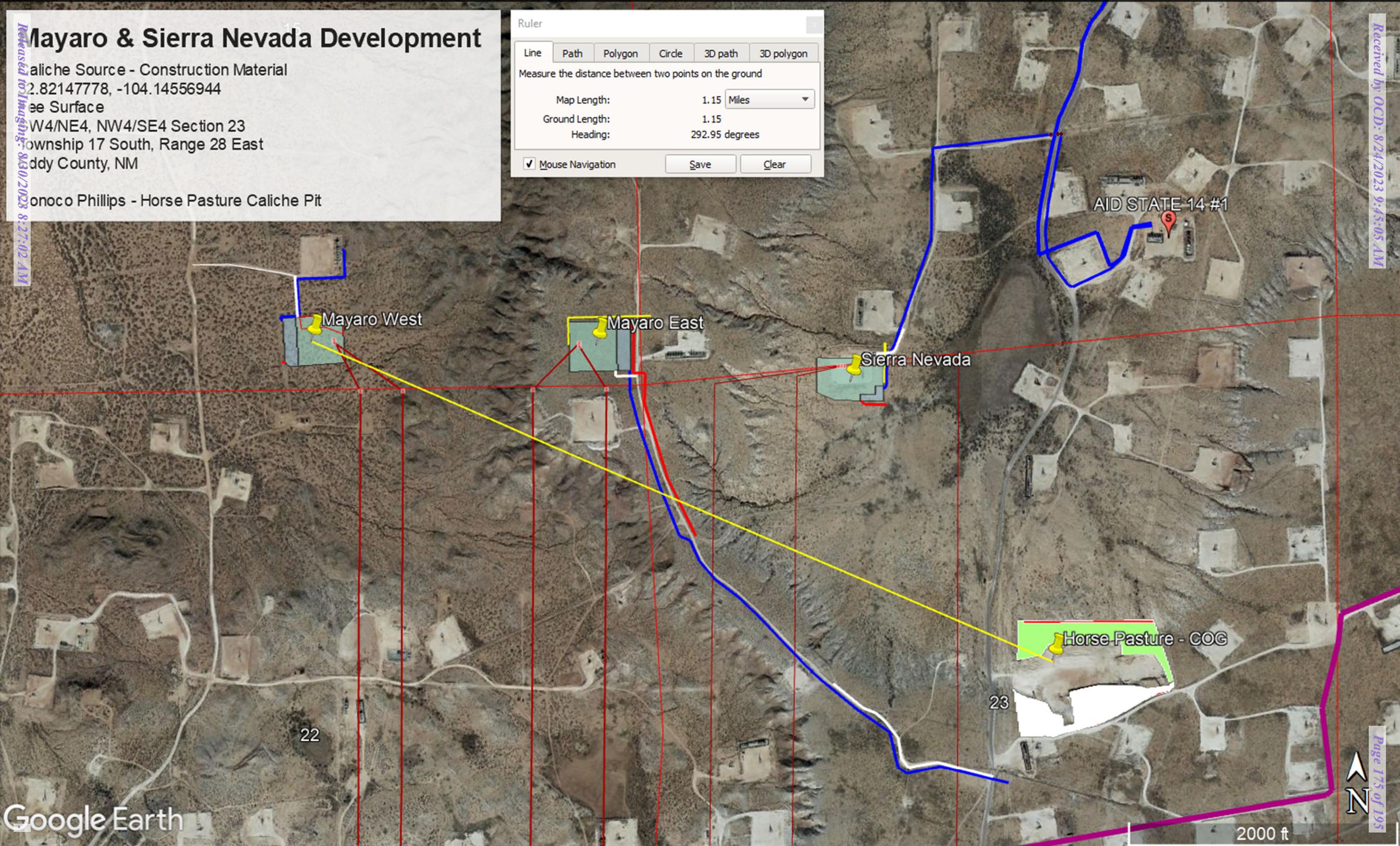
Measure the distance between two points on the ground

Map Length: 1.15 Miles

Ground Length: 1.15

Heading: 292.95 degrees

Mouse Navigation Save Clear



Received by Imaging: 8/30/2023 8:27:02 AM

Received by OCD: 8/24/2023 9:45:05 AM

Page 175 of 195

TRANSCEND RIG 4	Contractor Specification
Make	Schram
Model	TXD 130
Year of Manufacture	2006
Truck Mounted	YES
Rated Drilling Depth	130,000# hook load
Rated Depth with Tubing	
Derrick Height	69' 9"
Derrick Type	Telescoping Hydraulic
Derrick Capacity	130,000#
Elevators	N/A
Drawworks	760 HP Detroit
Wire Diameter	Hydraulic
Workfloor Max Height	8'
Tongs	Hydraulic Iron Roughneck
Slips	Manual Slips
Included Tubing Handling Tools	<ul style="list-style-type: none"> <li>• 13 3/8" handling tools</li> </ul>
Included Rod Handling Tools	85jts of 4.5" drill pipe
BOP Class Compatibility	
Weight Indicator	Hydraulic
Rig Safety Equipment	Eye wash station, fire extengushers, wind sock
Pad Size Requirements/Limitations	60' x 60'
Guy Line Spacing	N/A
Other Supplied Rig Equipment	<p>Standard Rig Hand Tools:</p> <ul style="list-style-type: none"> <li>• (2) 36" pipe wrenches</li> <li>• (2) 24" pipe wrenches</li> <li>• (2) 18" pipe wrenches</li> <li>• (1) 24" crescent wrench</li> <li>• (2) 12" crescent wrenches</li> <li>• (1) 4 lb shop hammer</li> <li>• (1) 12 lb sledge hammer</li> <li>• (1) 4 foot pry bar</li> <li>• Vehicles for Contractor personnel</li> <li>• Air Impact Wrench with Sockets</li> <li>• Mud Scales (as needed)</li> </ul> <p>1- F800 pump  1- Pill pit 80bbl  1- 400 bbl mud mix  1- Shaker 150mesh  1- 500 bbl fresh water frac tank</p>





# RIG # 57 1,150 HP Double Mast Drilling Rig

**SUBSTRUCTURE**

One Piece Step Down  
 Floor Height: 18' 9" (on 4' pony sub moving system)  
 Clear Height (beneath rotary beams): 15' 5"  
 Rotary Capacity: 400,000 lbf  
 Max Pipe Setback: 400,000 lbf  
*Note: All floor heights above are based on the substructure sitting on 6" mats & 4' pony sub moving system*

**MAST**

106' telescoping, Drill Line: 1-1/8"  
 Static Hook Load: 440,000 lbf  
 Racking Capacity: 18,000' of 4" DP, 12,500' of 5" DP

**DRAWWORKS**

TSM 850 425,000lbs w/ 10 Lines  
 Input Power: 1,150 hp AC traction motor  
 Main Brake: 1,150 hp AC traction motor (Dynamic)  
 Aux Parking Brake: Eaton brake & drum / band brake system

**TOP DRIVE**

Tesco EXI 600 AC 350 Ton: Max speed 220 rpm,  
 Continuous Drill Torque: 30,000 ft-lbs  
 Max Torque (Make / Break): 45,000 ft-lbs  
 600 hp AC induction motor & drive system with PLC  
 250 Ton 5 x 36" Becket Block Assembly

**IRON ROUGHNECK**

NOV ST-80C Conn Range: 4 1/2" to 8 1/2"  
 Spin Speed: 75 rpm nominal on 5" drill pipe  
 Spin Torque: 1,750 ft-lbs  
 Maximum Make-up torque: 60,000 ft-lbs  
 Maximum Break-out torque: 80,000 ft-lbs

**ROTARY TABLE**

National 27 1/2" 500 Ton with hydraulic drive to position tools only  
 27 1/2" Diameter opening

**POWER SYSTEM**

VFD, MCC, Eaton Drives, Current Power Systems Controls, three Caterpillar C32 gen sets, 1220 BHP.

**MUD PUMP #1**

HHF1600 Triplex Rated Power: 1600 hp  
 Stroke: 12"  
 Input Power: 1500 hp AC traction motor  
 Pressure Rating: 5000 psi

**MUD PUMP #2**

HHF1600 Triplex Rated Power: 1600 hp  
 Stroke: 12"  
 Input Power: 1500 hp AC traction motor  
 Pressure Rating: 5000 psi

**MUD TANKS**

Two Tank system w/ 1200 bbls total capacity  
 Shakers: Three MI Swaco Mongoose 4 panel dual motion  
 Mud Gas Separator: MI Swaco 4' OD x 12' tall  
 Pili Tank: 54 bbls

**MUD SYSTEM**

5000 psi Max Pressure  
 5" Main plumbing and standpipe

**SCALPING TANK**

Main Tank: 186 bbls capacity  
 Trip Tank: 24 bbls capacity  
 Shakers: Three NOV Venom shakers dual motion

**BOP (NACE)**

11" x 5000 psi WP Spherical Annular  
 11" x 5000 psi WP Double Ram  
 11" x 5000 psi WP Single Ram (Optional)

**MANIFOLD**

3-1/8" 5,000 psi c/w two 3 1/8" manual chokes

**ACCUMULATOR**

CTI: 160 gal 6 station 3000 psi, c/w N2 Backup & electric triplex pump

**CATWALK**

Ja-co Power Catwalk, tubular max length 47' 6", max OD 13 3/8", max weight 10,000lbs

**TUBULARS**

Drill Pipe: Supplied as needed, per availability  
 Drill Collars & heaviwate: Supplied as needed, per availability

**MISC.**

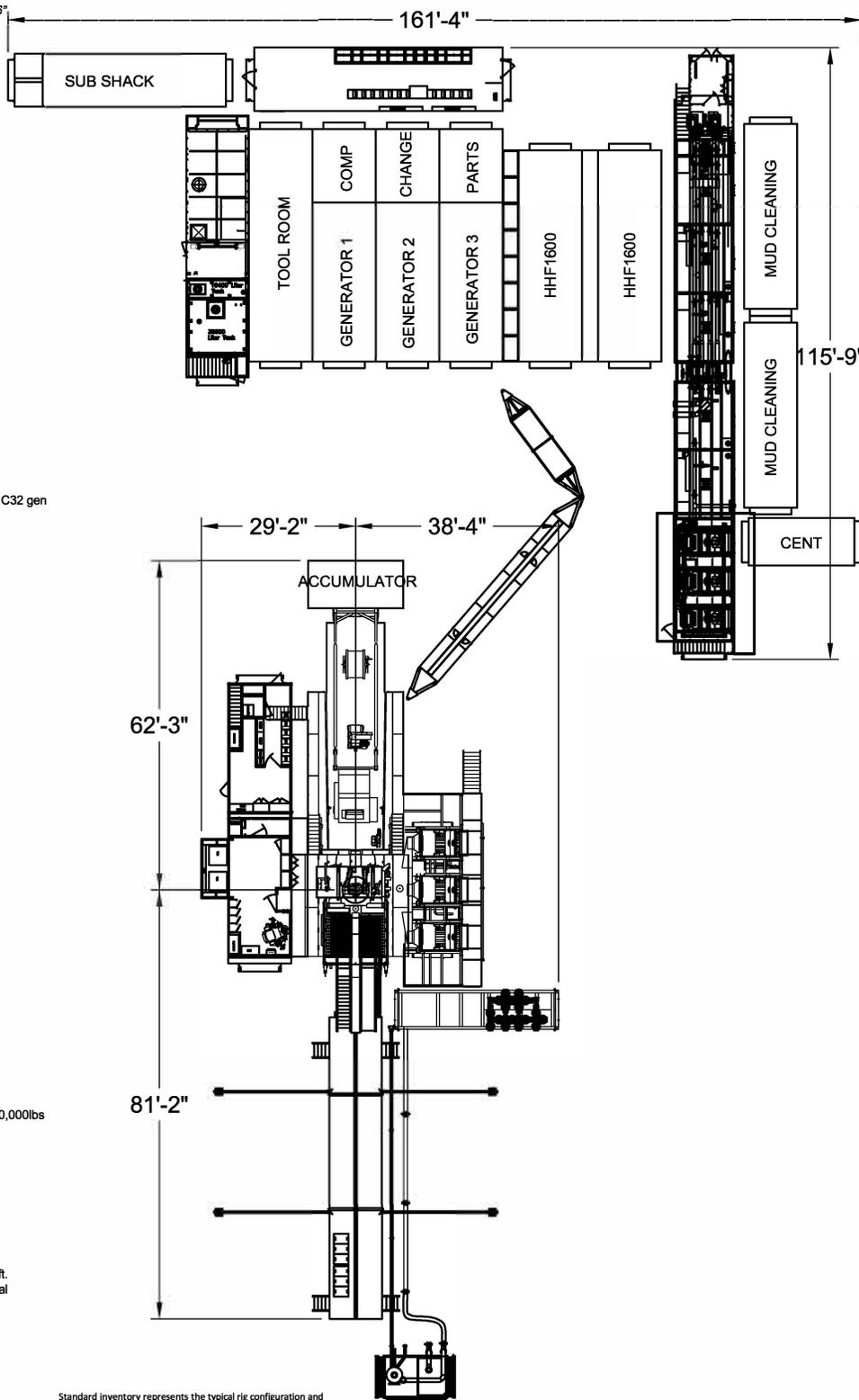
Water Tank: 409 bbls; Fuel Tank 189 bbls; Screw Compressor  
 Boiler: 125 hp with Full Winterization

**MOVING SYSTEM:**

Walking beam hydraulic pony sub moving system for linear motion & side shift.  
 350' of Utility Suitcase style [50' lengths] connection for hydraulic and electrical supply.

**TOOL/ STORAGE/ CAMP**

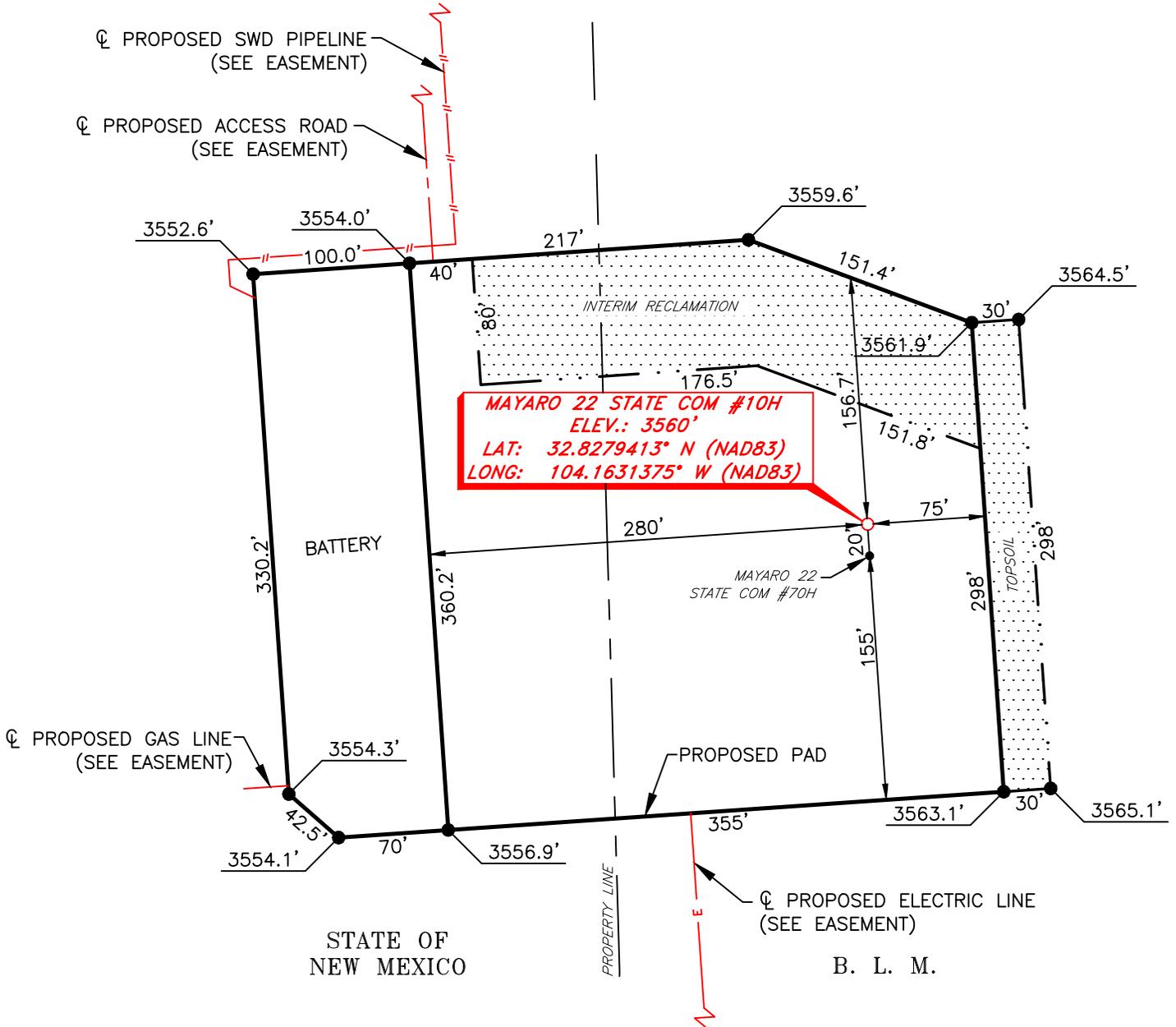
Parts Storage Room and Tool House Room  
 Rig Manage Trailer: 14' x 44' skid mounted



Standard inventory represents the typical rig configuration and inventory available, but specifications are subject to slight modifications from time to time due to customer requirements.

All ratings quoted herein are manufacturer specifications. AKITA's normal operating parameters are 90% of manufacturer mast ratings and 80% of mud pump manufacturer pressure rating. Operation of rig equipment beyond these parameters requires approval from AKITA field office management. © AKITA DRILLING August, 2020

**SPUR ENERGY PARTNERS LLC.  
MAYARO 22 STATE COM #10H  
(283' FSL & 2438' FEL)  
SECTION 15, T17S, R28E  
N. M. P. M., EDDY COUNTY, NEW MEXICO**



DIRECTIONS TO LOCATION

From the intersection of U.S. Hwy. 82 and CR #208 (Red Lake Rd.);  
 Go North on CR #208 approx. 2.3 miles to a lease road on the right;  
 Turn right and go East approx. 0.1 miles to a proposed road on the right;  
 Turn right and go South approx. 0.1 miles to location on the left.



I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this unclassified survey of a well location from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

*Robert M. Howett*  
 Robert M. Howett NM PS 19680



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SCALE: 1" = 100'  
 0 50 100  
 BEARINGS ARE  
 NAD 83 GRID - NM EAST  
 DISTANCES ARE GROUND

NO.	REVISION	DATE
JOB NO.: LS22060696		
DWG. NO.: 22060696-4		

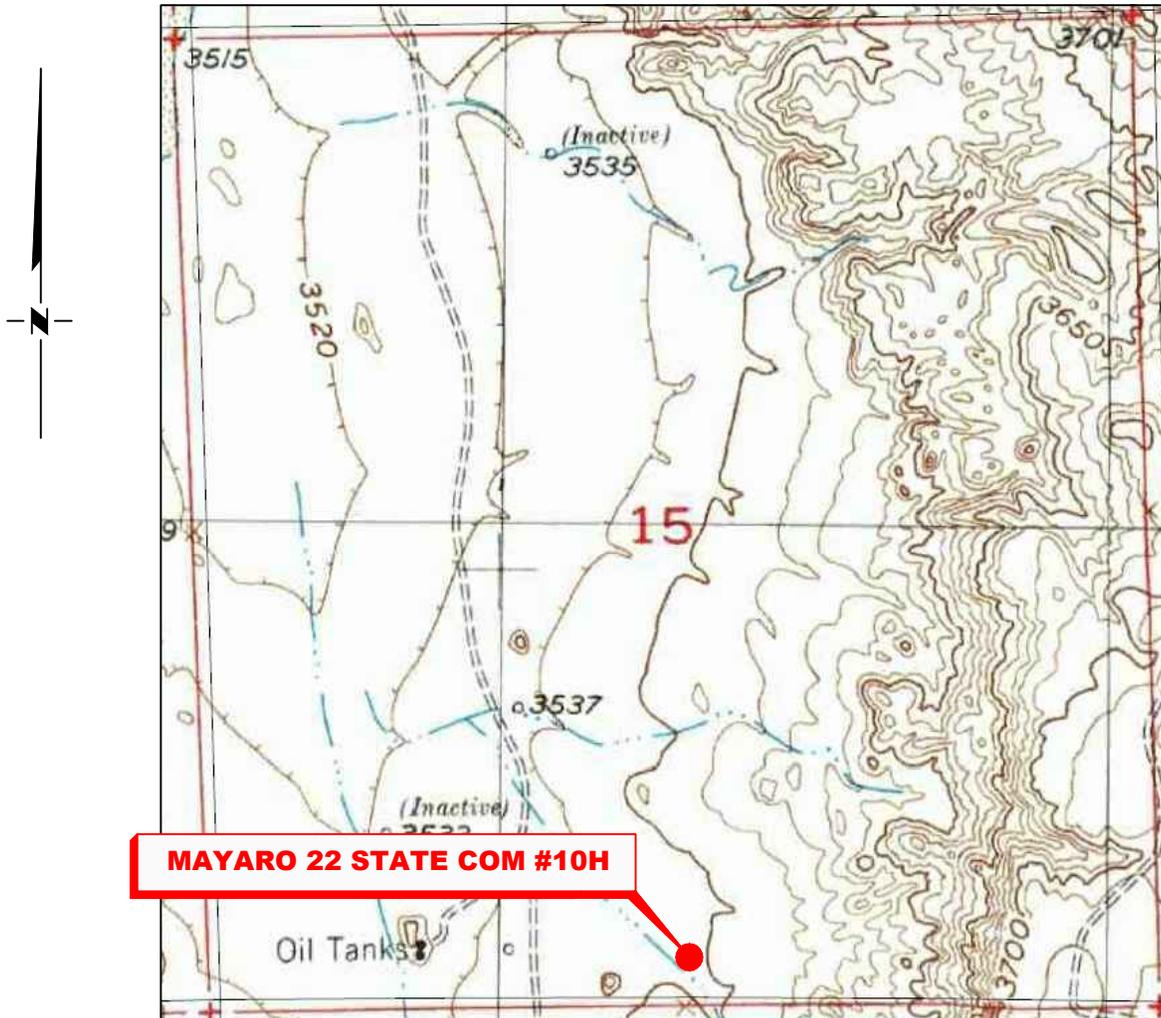


701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 06/23/2022
SURVEYED BY: JF/JM/IW
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 1 OF 1

# LOCATION VERIFICATION MAP

NOT TO SCALE



**MAYARO 22 STATE COM #10H**

*SECTION 15, TWP. 17 SOUTH, RGE. 28 EAST,  
N. M. P. M., EDDY COUNTY, NEW MEXICO*

OPERATOR: Spur Energy Partners LLC.  
 LEASE: Mayaro 22 State Com  
 WELL NO.: 10H  
 ELEVATION: 3560'

LOCATION: 283' FSL & 2438' FEL  
 CONTOUR INTERVAL: 10'  
 USGS TOPO. SOURCE MAP:  
Red Lake, NM (1955)

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NO.	REVISION	DATE
JOB NO.: LS22060696		
DWG. NO.: 22060696-2		



701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 06/23/2022
SURVEYED BY: JF/JM/IW
DRAWN BY: RQ
APPROVED BY: RMH
SHEET: 1 OF 1

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:** SPUR ENERGY PARTNERS LLC **OGRID:** 328947 **Date:** 08 / 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
MAYARO 22 STATE COM 10H	30-015-	O-15-17S-28E	283' FSL 2438' FEL	265 BBL/D	290 MCF/D	1855 BBL/D
MAYARO 22 STATE COM 70H	30-015-	O-15-17S-28E	263' FSL 2438' FEL	253 BBL/D	407 MCF/D	1519 BBL/D

**IV. Central Delivery Point Name:** MAYARO 22 WEST STATE TANK BATTERY [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
MAYARO 22 STATE COM 10H	30-015-	04/01/2023	04/09/2023	05/01/2022	05/11/2022	05/11/2022
MAYARO 22 STATE COM 70H	30-015-	04/09/2023	04/17/2023	05/01/2022	05/11/2022	05/11/2022

**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:	<i>Sarah Chapman</i>
Printed Name:	SARAH CHAPMAN
Title:	REGULATORY DIRECTOR
E-mail Address:	SCHAPMAN@SPUREENERGY.COM
Date:	AUGUST 18, 2022
Phone:	832-930-8613
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>	
Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	



## Natural Gas Management Plan – Attachment

VI. Separation equipment will be sized by construction engineering staff based on anticipated daily production to ensure adequate capacity.

VII. Spur Energy Partners LLC (“Spur”) will take the following actions to comply with the regulations listed in 19.15.27.8:

- A. Spur will maximize the recovery of natural gas by minimizing waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. Spur will ensure that our wells will be connected to a natural gas gathering system with sufficient capacity to transport natural gas.
- B. All drilling operations will be equipped with a rig flare at least 100 feet from the nearest surface hole location. Rig flare will be utilized to combust any natural gas that is brought to surface during normal operations. In the case of emergency, flaring volumes will be reported appropriately.
- C. During completion operations any natural gas brought to surface will be flared. Immediately following completion operations, wells will flow to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. If natural gas does not meet gathering pipeline specifications, Spur will flare for 60 days or until natural gas meets the pipeline specifications. Spur will ensure flare is properly sized and is equipped with an automatic igniter or continuous pilot. Gas samples will be taken twice per week and natural gas will be routed into a gathering system as soon as the pipeline specifications are met.
- D. Natural gas will not be flared with the exception of 19.15.27.8(D)(1-4). If there is no adequate takeaway for the separator gas, wells will be shut-in until that natural gas gathering system is available with exception of emergency or malfunction situations. Volumes will be reported appropriately.
- E. Spur will comply with performance standards pursuant to 19.15.27.8(E)(1-8). All equipment will be designed and sized to handle maximum pressures to minimize waste. Storage tanks constructed after May 25, 2021 will be equipped with an automatic gauging system that reduces venting of natural gas. Flare stacks installed or replaced after May 25, 2021 will be equipped with an automatic igniter or continuous pilot. Spur will conduct AVO inspections as described in 19.15.27.8(E)(5)(a) with frequencies specified in 19.15.27.8(E)(5)(b) and (c). All emergencies or malfunctions will be resolved as quickly and safely as possible to minimize waste.
- F. The volume of natural gas that is vented or flared as the result of an emergency or malfunction during drilling and/or completion operations will be estimated and reported accordingly. The volume of natural gas that is vented, flared or beneficially used during production operations, will be measured and reported accordingly. Spur will install equipment to measure the volume of natural gas flared from existing piping or a flowline piped from equipment such as high-pressure separators, heater treaters, or VRUs associated with a well or facility associated with a well authorized by an APD after May 25, 2021 that has an average daily production of less than 60,000 cubic feet of natural gas. If metering is not practicable due to circumstances such as low flow rate or low pressure venting or flaring, Spur will estimate the volume of flared or vented natural gas. Measuring equipment will conform to industry standards and will not be equipped with a manifold



that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing equipment.

VIII. For maintenance activities involving production equipment and compression, venting be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production equipment, the associated producing wells will be shut-in to eliminate venting. For maintenance of VRUs, all natural gas normally routed to the VRU will be routed to flare.

**Surface Use Plan of Operations****Operator Name/Number: Spur Energy Partners LLC – 328947****Lease Name/Well Number: Mayaro 22 State Com 10H****Pool Name/Number: Empire; Glorieta-Yeso (96210)****Surface Location: 283' FSL 2438' FEL SWSE (O) Sec 15 T17S R28E – NMNM0080268****Bottom Location: 1125' FSL 2247' FEL SWSE (O) Sec 22 T17S R28E – STATE****1. Existing Roads**

- a. A copy of the Vicinity Map is attached showing the proposed location. The well location is spotted on the map, which shows the existing road system.
- b. This well was staked by Robert Howett, Certificate No. 19680 on June 8, 2022, certified on August 16, 2022.
- c. Directions to location: From the intersection of U.S. CR #208 (Red Lake Rd.); go north on CR #208 approx. 2.3 miles to a lease road on the right; turn right and go east approx. 0.1 miles to a proposed road on the left; turn right and go south approx. 0.1 miles to location on the left.

**2. New or Reconstructed Access Roads**

- a. A new access road will be built as follows: A strip of land 30 feet wide, being 305.97 feet in length, lying in Section 15, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the centerline survey
- b. The maximum width of the road will be 14'. It will be crowned and made up of 6" compacted caliche. Water will be deflected as necessary, to avoid accumulation and prevent surface erosion.
- c. Surface material will be native caliche obtained from a BLM approved pit nearest proximity to the location. The maximum grade will be 2%.
- d. No cattle guards will be required.
- e. Blade, water, and repair existing caliche roads when necessary.

**3. Location of Existing Wells**

- a. Existing wells within one-mile radius of proposed well are shown on attached plat.

**4. Location of Proposed Facilities**

- a. In the event the well is found to be productive, Mayaro 22 West State Com Tank Battery would be utilized and the necessary production equipment will be installed at the well site. See proposed facilities layout diagram.
- b. Each well will have two (2) 4" surface flowlines operating around 90 psi from the well sites to the tank battery. The flowlines for Mayaro 22 West State Com wells will be routed to the Mayaro 22 West State Com tank battery (on lease). The wells will produce into this battery at any given time.
- c. Gas line will follow a route approved by the BLM. Survey a strip of land 30 feet wide, being 28.32 feet in length, lying in Section 15, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico being 15 feet left and 15 feet right of the centerline survey.
- d. Electric line will follow a route approved by the BLM. Survey a strip of land 30 feet wide, being 23.38 feet in length, lying in Section 22, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the centerline survey. Survey a strip of land 30 feet wide, being 100.41 feet in length, lying in Section 15, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the centerline survey.

- e. SWD line will follow a route approved by the BLM. Survey a strip of land 30 feet wide, being 479.49 feet in length, lying in Section 15, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico being 15 feet left and 15 feet right of the centerline survey. Survey a strip of land 30 feet wide, being 554.11 feet in length, lying in Section 15, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico being 15 feet left and 15 feet right of the centerline survey.
- f. See attached for additional information on the Mayaro 22 West State Com Tank Battery.

#### **5. Location and types of Water Supply**

- a. This well will be drilled using a combination of water mud systems. It will be obtained from commercial water stations in the area and will be hauled to location by truck using existing and proposed roads.

#### **6. Construction Materials**

- a. All caliche for the drilling pad and proposed access road will be obtained from an existing BLM/State/Fee approved pit from prevailing deposits found on location. Will use BLM recommended caliche from other locations close by for roads, if available.
- b. The secondary way obtaining caliche to build locations and roads will be by “turning over” the location. Amount will vary for each pad. The procedure below has been approved by BLM personnel:
  - i. The top 6” of topsoil is pushed off and stockpiled along the side of location
  - ii. An approximate 298’ X 30’ area on the eastern side of the well pad will be used within the proposed well site to remove caliche
  - iii. Subsoil will be removed and piled alongside the 298’ X 30’ within the pad site
  - iv. When caliche is found, material will be stockpiled within the pad site to build location and road
  - v. Once the well is drilled, the stockpiled topsoil will be used for interim reclamation and spread along areas where caliche is picked up and the location size is reduced. Neither the caliche nor subsoil will be stockpiled outside of the well pad. Topsoil will be stockpiled along the eastern edge of the pad as depicted in our Site Plan

#### **7. Methods of Handling Waste Material**

- a. A closed loop system will be utilized consisting of above ground steel tanks and haul-off bins. Disposal of drilling fluids and cuttings will be disposed of at an approved facility. Solids and Liquids – R360.
- b. All trash, junk and other waste material will be contained in trash cans or bins to prevent scattering. When the job is completed, all contents will be removed and disposed of in an approved sanitary landfill.
- c. The supplier, including broken sacks, will pick up remaining slats after the completion of the well.
- d. A port-a-potty will be provided for the rig crews. The equipment will be properly maintained during the drilling and completion operations and removed when the operations are complete.
- e. Disposal of fluids will be transported by the following companies:
  - i. Mulholland
  - ii. R360
  - iii. AR Services

#### **8. Ancillary Facilities: None needed**

#### **9. Well-Site Layout**

V-Door: South

CL Tanks: Central

Pad: 425’ X 330’ – 2 well pad

**10. Plans for Surface Reclamation**

- a. After concluding drilling and/or completion operations, if the well is non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM COAs. The original topsoil will again be returned to the pad and contoured, as close as possible to the original topography, and the area will be seeded with an approved BLM mixture to re-establish vegetation.
- b. If the well is deemed commercially productive, caliche from the areas of the pad site will not be required for operations will be reclaimed. The original topsoil will be returned to the area of the drill pad not necessary to operate the well. The unused areas of the drill pad will be re-contoured as close as possible to the original topography, and the area will be seeded with an approved BLM mixture to re-establish vegetation.

**11. Surface Ownership**

- a. The surface is owned by the U.S. Government and is administered to the BLM. The primary uses of the surface are for grazing of livestock and the production of oil and gas. The surface is leased to Key Livestock, LLC, 1012 E. 2<sup>nd</sup> Street, Roswell, NM 88201. They will be notified of our intention to drill prior to any activity.

**12. Other Information**

- a. The vegetation cover is generally sparse consisting of mesquite, yucca, shinary oak, sandsage and perennial native range grass. The topsoil is sandy in nature. Wildlife in the area is also sparse consisting of deer, coyotes, rabbits, reptiles, dove and quail.
- b. There is no permanent or live water in the general proximity of the location.
- c. There are no dwellings within one mile of the proposed well site.
- d. Cultural Resources Examination – This well will be covered by Rein Archaeology. Payment to be determined by the BLM. This well shares a well pad with the Mayaro 22 State Com 70H well.

**13. Bond Information**

- a. Bond coverage is individual – NMB001783

**14. Operator Representatives**

Jerry Mathews  
Superintendent of Operations  
2407 Pecos Avenue  
Artesia, NM 88210  
Cellular: 575-748-5234

John Nabors  
Senior VP of Operations  
9655 Katy Freeway, Suite 500  
Houston, TX 77024  
Cellular: 281-904-8811  
Office: 832-930-8526

Nash Bell  
VP Land  
9655 Katy Freeway, Suite 500  
Houston, TX 77024  
Cellular: 512-461-1874  
Office: 832-930-8582



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

# PWD Data Report

08/24/2023

**APD ID:** 10400087415

**Submission Date:** 08/18/2022

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

**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

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**

**Pit liner description:**

**Pit liner manufacturers**

**Precipitated solids disposal:**

**Decribe precipitated solids disposal:**

**Precipitated solids disposal**

**Lined pit precipitated solids disposal schedule:**

**Lined pit precipitated solids disposal schedule**

**Lined pit reclamation description:**

**Lined pit reclamation**

**Leak detection system description:**

**Leak detection system**

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

**Lined pit Monitor description:**

Lined pit Monitor

**Lined pit: do you have a reclamation bond for the pit?**

**Is the reclamation bond a rider under the BLM bond?**

**Lined pit bond number:**

**Lined pit bond amount:**

**Additional bond information**

**Section 3 - Unlined**

**Would you like to utilize Unlined Pit PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD disturbance (acres):**

**PWD surface owner:**

**Unlined pit PWD on or off channel:**

**Unlined pit PWD discharge volume (bbl/day):**

**Unlined pit**

**Precipitated solids disposal:**

**Describe precipitated solids disposal:**

**Precipitated solids disposal**

**Unlined pit precipitated solids disposal schedule:**

**Unlined pit precipitated solids disposal schedule**

**Unlined pit reclamation description:**

**Unlined pit reclamation**

**Unlined pit Monitor description:**

**Unlined pit Monitor**

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

**Beneficial use user**

**Estimated depth of the shallowest aquifer (feet):**

**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**

**State**

**Unlined Produced Water Pit Estimated**

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

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

**Is the reclamation bond a rider under the BLM bond?**

**Unlined pit bond number:**

**Unlined pit bond amount:**

**Additional bond information**

**Section 4 -**

**Would you like to utilize Injection PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Injection PWD discharge volume (bbl/day):**

**Injection well mineral owner:**

**Injection well type:**

**Injection well number:**

**Injection well name:**

**Assigned injection well API number?**

**Injection well API number:**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection**

**Underground Injection Control (UIC) Permit?**

**UIC Permit**

**Section 5 - Surface**

**Would you like to utilize Surface Discharge PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**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 -**

**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:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

**Other PWD type description:**

**Other PWD type**

**Have other regulatory requirements been met?**

**Other regulatory requirements**



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

# Bond Info Data

08/24/2023

**APD ID:** 10400087415

**Submission Date:** 08/18/2022

Highlighted data reflects the most recent changes  
[Show Final Text](#)

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** MAYARO 22 STATE COM

**Well Number:** 10H

**Well Type:** OIL WELL

**Well Work Type:** Drill

## Bond

**Federal/Indian APD:** FED

**BLM Bond number:** NMB001783

**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**

**Reclamation bond number:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information**

**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 Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 257123

**CONDITIONS**

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 257123
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

**CONDITIONS**

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	8/30/2023
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	8/30/2023
ward.rikala	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	8/30/2023
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	8/30/2023
ward.rikala	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	8/30/2023