

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 checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		5. Lease Serial No. <b>NMLC029426A</b>
2. Name of Operator <b>SPUR ENERGY PARTNERS LLC</b>		6. If Indian, Allottee or Tribe Name  7. If Unit or CA Agreement, Name and No.  8. Lease Name and Well No. <b>BIG N TASTY 2 SA STATE COM</b> <b>10H</b>
3a. Address <b>9655 KATY FREEWAY, SUITE 500, Houston, TX 77024</b>	3b. Phone No. (include area code) <b>(832) 930-8548</b>	9. API Well No.  10. Field and Pool, or Exploratory <b>GRAYBURG JACKSON/SR-Q-G-SA</b>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface <b>LOT 4 / 935 FNL / 120 FWL / LAT 32.8683299 / LONG -103.8485378</b> At proposed prod. zone <b>LOT 1 / 580 FNL / 50 FEL / LAT 32.8693391 / LONG -103.8318941</b>		11. Sec., T. R. M. or Blk. and Survey or Area <b>SEC 2/T17S/R31E/NMP</b>
14. Distance in miles and direction from nearest town or post office* <b>5 miles</b>		12. County or Parish <b>EDDY</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>120 feet</b>		13. State <b>NM</b>
16. No of acres in lease		17. Spacing Unit dedicated to this well <b>159.6</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>20 feet</b>		20. BLM/BIA Bond No. in file <b>FED: NMB001783</b>
21. Elevations (Show whether DF, KDB, RT, GL., etc.) <b>3991 feet</b>	22. Approximate date work will start* <b>09/01/2024</b>	23. Estimated duration <b>60 days</b>

24. Attachments

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

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

25. Signature (Electronic Submission)	Name (Printed/Typed) <b>BRIAN WOOD / Ph: (832) 930-8548</b>	Date <b>04/17/2023</b>
Title <b>President</b>		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) <b>CODY LAYTON / Ph: (575) 234-5959</b>	Date <b>08/02/2023</b>
Title <b>Assistant Field Manager Lands &amp; Minerals</b> Office <b>Carlsbad Field Office</b>		

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)

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

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-015-</b>		<sup>2</sup> Pool Code <b>28509</b>		<sup>3</sup> Pool Name <b>GRAYBURG JACKSON; SA-Q-G-SA</b>	
<sup>4</sup> Property Code		<sup>5</sup> Property Name <b>BIG N TASTY 2 SA STATE COM</b>			<sup>6</sup> Well Number <b>10H</b>
<sup>7</sup> OGRID NO. <b>328947</b>		<sup>8</sup> Operator Name <b>SPUR ENERGY PARTNERS LLC.</b>			<sup>9</sup> Elevation <b>3991'</b>

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
<b>4</b>	<b>2</b>	<b>17S</b>	<b>31E</b>		<b>935</b>	<b>NORTH</b>	<b>120</b>	<b>WEST</b>	<b>EDDY</b>

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>1</b>	<b>2</b>	<b>17S</b>	<b>31E</b>		<b>580</b>	<b>NORTH</b>	<b>50</b>	<b>EAST</b>	<b>EDDY</b>

<sup>12</sup> Dedicated Acres <b>159.6</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

<p><sup>16</sup> <b>GEODETTIC DATA</b> NAD 83 GRID - NM EAST</p> <p><b>SURFACE LOCATION (SL) - SEC 2</b> N: 679973.7 - E: 690185.6 LAT: 32.8683299° N LONG: 103.8485378° W</p> <p><b>KICK OFF POINT (KOP)</b> 772' FNL &amp; 336' FEL - SEC 3 N: 680133.6 - E: 689729.0 LAT: 32.8687751° N LON: 103.8500223° W</p> <p><b>FIRST TAKE POINT (FTP)</b> 580' FNL &amp; 100' FWL - SEC 2 N: 680328.5 - E: 690163.6 LAT: 32.8693051° N LONG: 103.8486041° W</p> <p><b>LAST TAKE POINT (LTP)</b> 580' FNL &amp; 100' FEL - SEC 2 N: 680364.4 - E: 695244.0 LAT: 32.8693388° N LONG: 103.8320569° W</p>	<p><b>BOTTOM HOLE (BH) - SEC 2</b> N: 680364.8 - E: 695294.0 LAT: 32.8693391° N LONG: 103.8318941° W</p> <p><b>CORNER DATA</b> NAD 83 GRID - NM EAST</p> <p>A: FOUND 1/2" REBAR N: 675594.5 - E: 684811.1</p> <p>B: CALCULATED CORNER N: 680870.9 - E: 684780.1</p> <p>C: FOUND BRASS CAP "1916" N: 680888.4 - E: 687419.6</p> <p>D: FOUND BRASS CAP "1916" N: 680907.6 - E: 690060.3</p> <p>E: FOUND BRASS CAP "1916" N: 680926.1 - E: 692700.3</p> <p>F: FOUND BRASS CAP "1916" N: 680945.0 - E: 695340.9</p> <p>G: FOUND BRASS CAP "1916" N: 678307.8 - E: 695355.0</p> <p>H: FOUND BRASS CAP "1916" N: 675668.0 - E: 695369.9</p> <p>I: FOUND BRASS CAP "1916" N: 675650.7 - E: 692730.3</p> <p>J: FOUND BRASS CAP "1916" N: 675630.4 - E: 690091.1</p> <p>K: FOUND BRASS CAP "1916" N: 678270.8 - E: 690075.1</p>	<p><b><sup>17</sup> OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Sarah Chapman</i> 05/16/2023 Signature Date <b>SARAH CHAPMAN</b> Printed Name <b>SCHAPMAN@SPURENERGY.COM</b> E-mail Address</p>
<p>N 89°35'39" E 5081.84' (FTP-LTP)</p> <p>120'</p> <p>50'</p> <p>580'</p>		<p><b><sup>18</sup> SURVEYOR CERTIFICATION</b> I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p><b>10/05/2022</b> Date of Survey</p> <p><b>DALE E. BELL</b> Signature and Seal of Professional Surveyor NEW MEXICO 14400 05/12/2023 PROFESSIONAL SURVEYOR</p> <p><b>14400</b> Certificate Number</p> <p>REV: ADD KOP - 05/09/2023</p>

Job No.: LS22040378R3

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:** 01// 26 / 2023

**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
BIG N TASTY 2 STATE COM 12H	30-015-	4-2-17S-31E	975' FNL 120' FWL	399 BBL/D	482 MCF/D	1196 BBL/D
BIG N TASTY 2 STATE COM SA 10H	30-015-	4-2-17S-31E	935' FNL 120' FWL	399 BBL/D	482 MCF/D	1196 BBL/D
BIG N TASTY 2 STATE COM 22H	30-015-	4-2-17S-31E	915' FNL 120' FWL	399 BBL/D	482 MCF/D	1196 BBL/D
BIG N TASTY 2 STATE COM 52H	30-015-	4-2-17S-31E	955' FNL 120' FWL	307 BBL/D	372 MCF/D	1536 BBL/D
BIG N TASTY 2 STATE COM 71H	30-015-	4-2-17S-31E	9965' FNL 120' FWL	307 BBL/D	372 MCF/D	1536 BBL/D

**IV. Central Delivery Point Name:** BIG N TASTY 2 STATE COM NORTH 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
BIG N TASTY 2 STATE COM 12H	30-015-	10/27/2024	11/06/2024	01/23/2025	02/21/2025	02/27/2025
BIG N TASTY 2 STATE COM SA 10H	30-015-	11/07/2024	11/15/2024	01/23/2025	02/21/2025	02/27/2025
BIG N TASTY 2 STATE COM 22H	30-015-	11/16/2024	11/24/2024	01/23/2025	02/21/2025	02/27/2025
BIG N TASTY 2 STATE COM 52H	30-015-	11/25/2024	12/04/2024	01/23/2025	02/21/2025	02/27/2025
BIG N TASTY 2 STATE COM 71H	30-015-	12/05/2024	12/14/2024	01/23/2025	02/21/2025	02/27/2025

**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:	JANUARY 26, 2023
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.



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

# Drilling Plan Data Report

08/03/2023

APD ID: 10400091608

Submission Date: 04/17/2023

Highlighted data reflects the most recent changes

Operator Name: SPUR ENERGY PARTNERS LLC

Well Name: BIG N TASTY 2 SA 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
10224843	QUATERNARY	3991	0	0	DOLOMITE, OTHER : Caliche	USEABLE WATER	N
10224844	RUSTLER	3321	670	670	ANHYDRITE, DOLOMITE, SHALE	OTHER : Brackish Water	N
10224845	TOP SALT	3136	855	855	ANHYDRITE	OTHER : Salt	N
10224846	BASE OF SALT	2179	1812	1838	ANHYDRITE	OTHER : Salt	N
10224847	TANSILL	2113	1878	1902	DOLOMITE, SANDSTONE	NONE	N
10224848	YATES	2007	1984	2010	DOLOMITE, LIMESTONE, SHALE, SILTSTONE	NONE	N
10224849	SEVEN RIVERS	1703	2288	2318	DOLOMITE, LIMESTONE	NATURAL GAS, OIL	N
10224850	QUEEN	1091	2900	2945	ANHYDRITE, DOLOMITE, SANDSTONE	NATURAL GAS, OIL	N
10224851	GRAYBURG	676	3315	3360	ANHYDRITE	NATURAL GAS, OIL	N
10224938	SAN ANDRES	379	3612	3690	DOLOMITE	NATURAL GAS, OIL	Y

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 5000

**Equipment:** A 5000-psi 5000' rated BOP stack with annular preventer and blind and pipe rams will be used before drilling the intermediate hole and continuously to TD.

**Requesting Variance?** YES

**Variance request:** Spur requests a variance to use a flex line from the BOP to the choke manifold. A typical flex line certificate is attached. Certificate for actual flex line in use will be on site. Flex line will have no external damage. Flex line will be installed as straight as possible to avoid bends. Spur requests a variance to adjust the BOP break testing requirements as follows: BOP break test will be conducted 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 3rd 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 the skid, then 4 tests will be performed. - The void between the wellhead and the spool (this consists of 2 tests) - The spool between the kill lines and choke manifold (also 2 tests) If the kill line is not broken before the skid,

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** BIG N TASTY 2 SA STATE COM

**Well Number:** 10H

then 2 tests will be performed. - The void between the well head and the pipe rams.

**Testing Procedure:** BOP/BOPE will be tested by an independent service company. Annular will be tested to 70% of its working pressure. Rams will be tested to 250 psi low and 3000 psi high. The system may be upgraded to a higher pressure, but still tested to the above listed working pressure. If the system is upgraded, then all the installed components 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 BOP accessories will include a Kelly cock and floor safety valve (inside BOP), choke lines, and choke manifold. A conventional wellhead system will be used. 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.

**Choke Diagram Attachment:**

Choke\_BOP\_Diagram\_20230413082201.pdf

**BOP Diagram Attachment:**

Choke\_BOP\_Diagram\_20230413082209.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	725	0	725	3991	3266	725	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	2450	0	2417	3991	1574	2450	J-55	36	BUTT	1.125	1.2	DRY	1.4	DRY	1.4
3	PRODUCTION	8.75	7.0	NEW	NON API	N	0	4300	0	3988	3991	3	4300	L-80	32	OTHER - BK-HT	1.125	1.2	DRY	1.4	DRY	1.4
4	PRODUCTION	8.75	5.5	NEW	NON API	N	4300	9296	3988	4100	3	-109	4996	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:** BIG N TASTY 2 SA STATE COM

**Well Number:** 10H

**Casing Attachments**

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Casing\_Design\_Assumptions\_Sheet\_20230414145033.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Casing\_Design\_Assumptions\_Sheet\_20230414145052.pdf

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

**Inspection Document:**

**Spec Document:**

7in\_CasingSpec\_BKHT\_32\_HCL80\_20230413083059.pdf

**Tapered String Spec:**

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

Casing\_Design\_Assumptions\_Sheet\_20230414145110.pdf

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**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** BIG N TASTY 2 SA STATE COM

**Well Number:** 10H

**Casing Attachments**

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

**Inspection Document:**

**Spec Document:**

5.5in\_CasingSpec\_BKHT\_20\_HCL80\_20230413135526.pdf

**Tapered String Spec:**

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

Casing\_Design\_Assumptions\_Sheet\_20230414145125.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
SURFACE	Lead		0	0	0	0	0	0	0	None	None
SURFACE	Tail		0	725	700	1.87	13.2	1309	165	C Premium Plus	0.25 lbs/sk LCM
INTERMEDIATE	Lead		0	725	110	2.4	12	264	100	C Premium Plus	5% Salt + 0.4% Defoamer + 6% Bentonite
INTERMEDIATE	Tail		725	2450	588	1.87	13.2	1100	100	C Premium Plus	1% CaCl + 0.4% Defoamer + 4% Bentonite
PRODUCTION	Lead		0	3300	714	2.42	11.4	1728	100	C Premium Plus	6% Bentonite + 5% Salt + 0.25 lbs/sk LCM + 5% Gypsum + 0.1% Retarder + 0.4% Defoamer
PRODUCTION	Tail		3300	9296	1138	1.56	13.2	1775	25	C Premium Plus	0.3% Fluid Loss Additive + 0.1% Dispersant + 0.4% Defoamer + 0.252lbs/sk LCM + 0.1% Retarder

**Operator Name:** SPUR ENERGY PARTNERS LLC

**Well Name:** BIG N TASTY 2 SA 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:** 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
0	725	OTHER : Water-Based Mud	8.6	8.9							
725	2450	OTHER : Brine	10	10.5							
2450	9296	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:** BIG N TASTY 2 SA STATE COM

**Well Number:** 10H

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 1898

**Anticipated Surface Pressure:** 995

**Anticipated Bottom Hole Temperature(F):** 113

**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**

BNT\_North\_H2S\_Plan\_20230413093048.pdf

### Section 8 - Other Information

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

BNT\_10H\_Directional\_Plan\_20230413093100.pdf

**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

BNT\_10H\_Drill\_Plan\_20230413093118.pdf

BNT\_10H\_Anticollision\_Report\_20230413093146.pdf

CoFlex\_Hose\_Cert\_20230413093201.pdf

**Other Variance attachment:**

Spudder\_Rig\_Variance\_20230413093213.pdf

# SPUR ENERGY PARTNERS LLC.

Project: Eddy County, NM (NAD83) NMEZ Grid  
 Site: BIG N TASTY 2 STATE COM  
 Well: BNT 2 STATE COM 10H  
 Wellbore: 10H LATERAL  
 Design: Plan #3



Azimuths to Grid North  
 True North: -0.26°  
 Magnetic North: 6.30°

Magnetic Field  
 Strength: 47694.6nT  
 Dip Angle: 60.40°  
 Date: 11/11/2022  
 Model: IGRF2020

PROJECT DETAILS: Eddy County, NM (NAD83) NMEZ Grid  
 Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Eastern Zone  
 System Datum: Mean Sea Level

Magnetic North is 6.30° East of Grid North (Magnetic Convergence)  
 Magnetic North is 6.56° East of True North (Magnetic Declination)

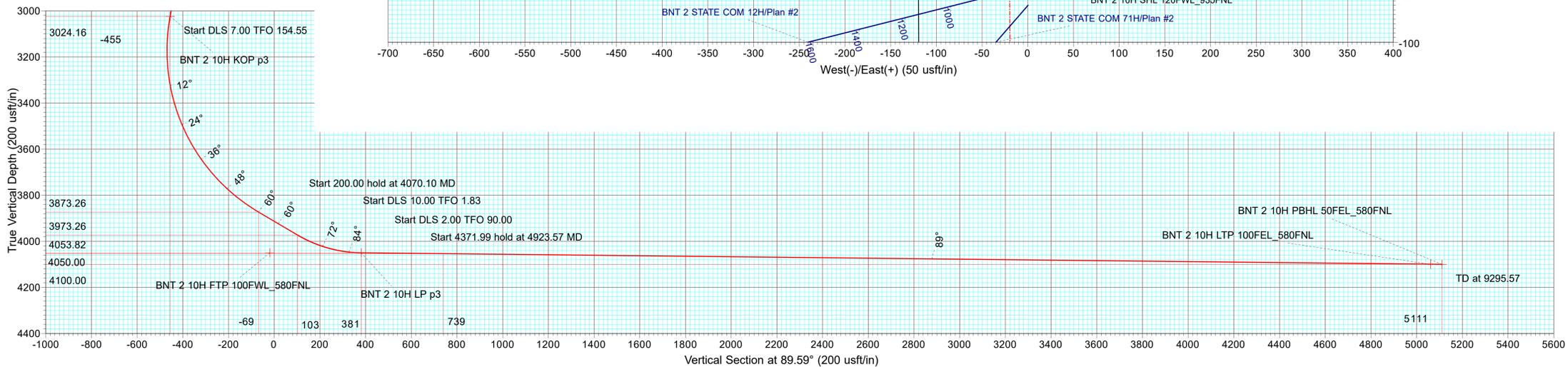
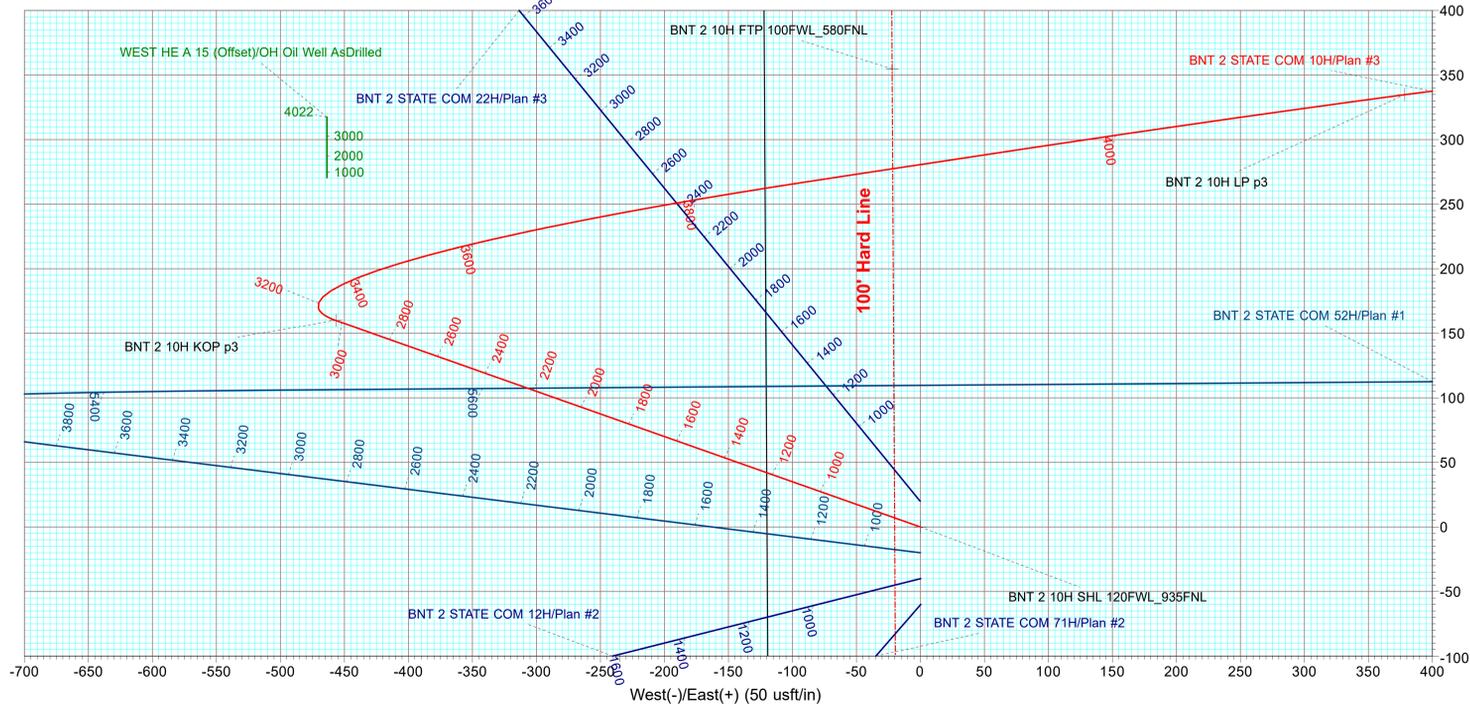
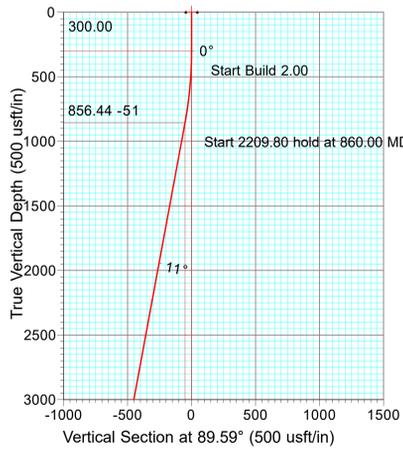
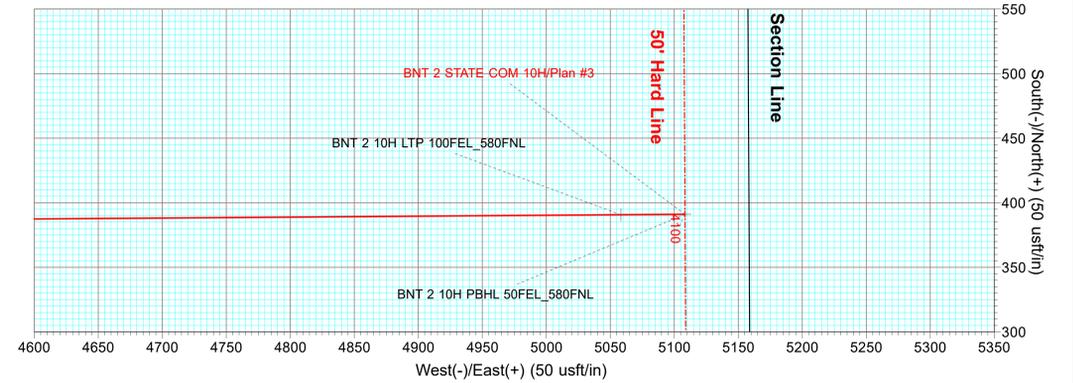
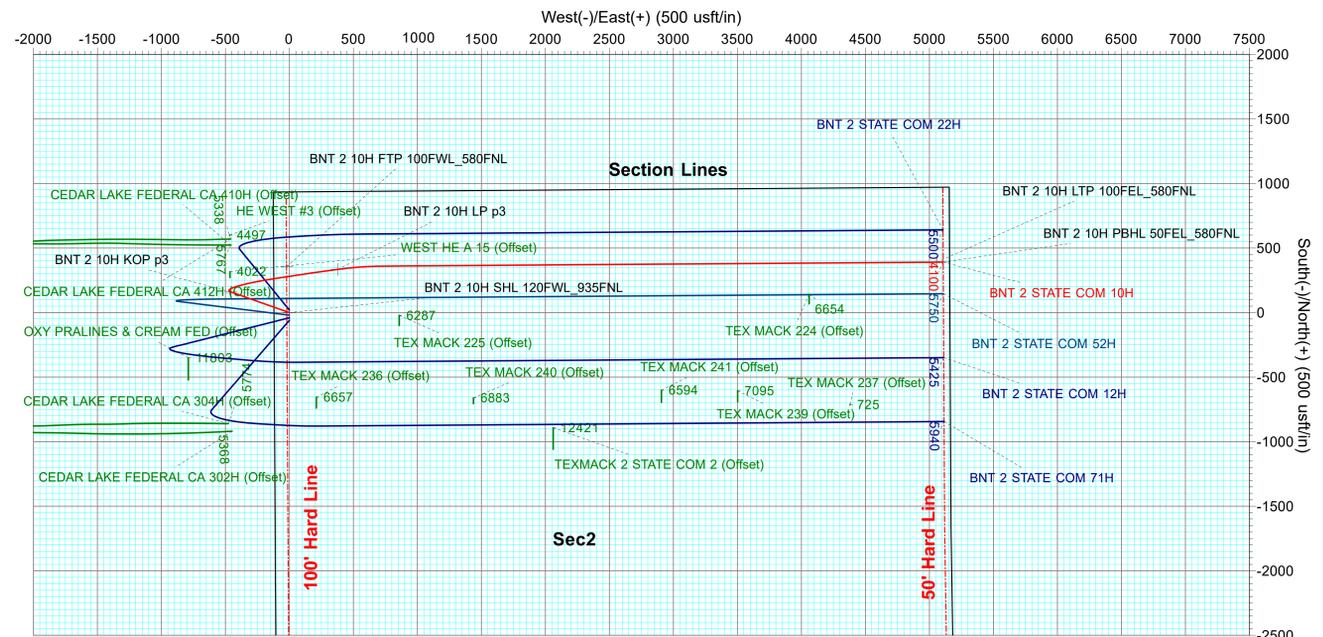
To convert a Magnetic Direction to a Grid Direction, Add 6.30°

## PLAN SECTIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
0.00	0.00	0.00	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
860.00	11.20	289.30	856.44	18.03	-51.49	2.00	289.30	-51.36
3069.80	11.20	289.30	3024.16	159.90	-456.59	0.00	0.00	-455.43
4070.10	60.00	81.50	3873.26	270.10	-70.62	7.00	154.55	-68.68
4270.10	60.00	81.50	3973.26	295.70	100.69	0.00	0.00	102.80
4564.04	89.39	82.40	4050.00	334.81	378.36	10.00	1.83	380.75
4923.57	89.39	89.59	4053.82	359.90	736.76	2.00	90.00	739.32
9295.57	89.39	89.59	4100.00	391.10	5108.40	0.00	0.00	5111.07

## TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
BNT 2 10H SHL 120FWL_935FNL	0.00	0.00	0.00	679973.700	690185.600
BNT 2 10H KOP p3	3024.16	159.90	-456.59	680133.600	689729.010
BNT 2 10H FTP 100FWL_580FNL	4050.00	354.80	-22.00	680328.500	690163.600
BNT 2 10H LP p3	4050.00	334.81	378.36	680308.510	690563.960
BNT 2 10H LTP 100FEL_580FNL	4100.00	390.70	5058.40	680364.400	695244.000
BNT 2 10H PBHL 50FEL_580FNL	4100.00	391.10	5108.40	680364.800	695294.000



# **SPUR ENERGY PARTNERS LLC.**

**Eddy County, NM (NAD83) NMEZ Grid**

**BIG N TASTY 2 STATE COM**

**BNT 2 STATE COM 10H**

**10H LATERAL**

**Plan: Plan #3**

## **Standard Planning Report**

**08 January, 2023**

Planning Report

<b>Database:</b>	PRIME_EDM	<b>Local Co-ordinate Reference:</b>	Well BNT 2 STATE COM 10H
<b>Company:</b>	SPUR ENERGY PARTNERS LLC.	<b>TVD Reference:</b>	3993+20 @ 4013.00usft (AKITA57)
<b>Project:</b>	Eddy County, NM (NAD83) NMEZ Grid	<b>MD Reference:</b>	3993+20 @ 4013.00usft (AKITA57)
<b>Site:</b>	BIG N TASTY 2 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	BNT 2 STATE COM 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	10H LATERAL		
<b>Design:</b>	Plan #3		

<b>Project</b>	Eddy County, NM (NAD83) NMEZ Grid		
<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>	BIG N TASTY 2 STATE COM				
<b>Site Position:</b>	<b>Northing:</b>	679,933.700 usft	<b>Latitude:</b>	32.8682199	
<b>From:</b> Map	<b>Easting:</b>	690,185.800 usft	<b>Longitude:</b>	-103.8485376	
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.26 °

<b>Well</b>	BNT 2 STATE COM 10H					
<b>Well Position</b>	<b>+N/-S</b>	40.00 usft	<b>Northing:</b>	679,973.700 usft	<b>Latitude:</b>	32.8683298
	<b>+E/-W</b>	-0.20 usft	<b>Easting:</b>	690,185.600 usft	<b>Longitude:</b>	-103.8485376
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	3,993.00 usft	

<b>Wellbore</b>	10H LATERAL				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	11/11/22	6.56	60.40	47,694.59618029

<b>Design</b>	Plan #3			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<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	89.59

<b>Plan Survey Tool Program</b>	<b>Date</b>	01/08/23		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	9,295.05 Plan #3 (10H LATERAL)	MWD+SAG+FDIR	OWSG MWD + Sag Correction

<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 (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</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	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
860.00	11.20	289.30	856.44	18.03	-51.49	2.00	2.00	0.00	289.30	
3,069.80	11.20	289.30	3,024.16	159.90	-456.59	0.00	0.00	0.00	0.00	
4,070.10	60.00	81.50	3,873.26	270.10	-70.62	7.00	4.88	15.22	154.55	
4,270.10	60.00	81.50	3,973.26	295.70	100.69	0.00	0.00	0.00	0.00	
4,564.04	89.39	82.40	4,050.00	334.81	378.36	10.00	10.00	0.31	1.83	
4,923.57	89.39	89.59	4,053.82	359.90	736.76	2.00	0.00	2.00	90.00	
9,295.57	89.39	89.59	4,100.00	391.10	5,108.40	0.00	0.00	0.00	0.00	BNT 2 10H PBHL 50F

Planning Report

<b>Database:</b>	PRIME_EDM	<b>Local Co-ordinate Reference:</b>	Well BNT 2 STATE COM 10H
<b>Company:</b>	SPUR ENERGY PARTNERS LLC.	<b>TVD Reference:</b>	3993+20 @ 4013.00usft (AKITA57)
<b>Project:</b>	Eddy County, NM (NAD83) NMEZ Grid	<b>MD Reference:</b>	3993+20 @ 4013.00usft (AKITA57)
<b>Site:</b>	BIG N TASTY 2 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	BNT 2 STATE COM 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	10H LATERAL		
<b>Design:</b>	Plan #3		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	289.30	399.98	0.58	-1.65	-1.64	2.00	2.00	0.00	0.00
500.00	4.00	289.30	499.84	2.31	-6.59	-6.57	2.00	2.00	0.00	0.00
600.00	6.00	289.30	599.45	5.19	-14.81	-14.77	2.00	2.00	0.00	0.00
700.00	8.00	289.30	698.70	9.21	-26.31	-26.25	2.00	2.00	0.00	0.00
800.00	10.00	289.30	797.47	14.38	-41.08	-40.97	2.00	2.00	0.00	0.00
860.00	11.20	289.30	856.44	18.03	-51.49	-51.36	2.00	2.00	0.00	0.00
900.00	11.20	289.30	895.68	20.60	-58.83	-58.68	0.00	0.00	0.00	0.00
1,000.00	11.20	289.30	993.77	27.02	-77.16	-76.96	0.00	0.00	0.00	0.00
1,100.00	11.20	289.30	1,091.87	33.44	-95.49	-95.25	0.00	0.00	0.00	0.00
1,200.00	11.20	289.30	1,189.97	39.86	-113.82	-113.53	0.00	0.00	0.00	0.00
1,300.00	11.20	289.30	1,288.06	46.28	-132.15	-131.82	0.00	0.00	0.00	0.00
1,400.00	11.20	289.30	1,386.16	52.70	-150.49	-150.10	0.00	0.00	0.00	0.00
1,500.00	11.20	289.30	1,484.25	59.12	-168.82	-168.39	0.00	0.00	0.00	0.00
1,600.00	11.20	289.30	1,582.35	65.54	-187.15	-186.68	0.00	0.00	0.00	0.00
1,700.00	11.20	289.30	1,680.44	71.96	-205.48	-204.96	0.00	0.00	0.00	0.00
1,800.00	11.20	289.30	1,778.54	78.38	-223.81	-223.25	0.00	0.00	0.00	0.00
1,900.00	11.20	289.30	1,876.63	84.80	-242.14	-241.53	0.00	0.00	0.00	0.00
2,000.00	11.20	289.30	1,974.73	91.22	-260.48	-259.82	0.00	0.00	0.00	0.00
2,100.00	11.20	289.30	2,072.82	97.64	-278.81	-278.10	0.00	0.00	0.00	0.00
2,200.00	11.20	289.30	2,170.92	104.06	-297.14	-296.39	0.00	0.00	0.00	0.00
2,300.00	11.20	289.30	2,269.02	110.48	-315.47	-314.67	0.00	0.00	0.00	0.00
2,400.00	11.20	289.30	2,367.11	116.90	-333.80	-332.96	0.00	0.00	0.00	0.00
2,500.00	11.20	289.30	2,465.21	123.32	-352.14	-351.24	0.00	0.00	0.00	0.00
2,600.00	11.20	289.30	2,563.30	129.74	-370.47	-369.53	0.00	0.00	0.00	0.00
2,700.00	11.20	289.30	2,661.40	136.16	-388.80	-387.82	0.00	0.00	0.00	0.00
2,800.00	11.20	289.30	2,759.49	142.58	-407.13	-406.10	0.00	0.00	0.00	0.00
2,900.00	11.20	289.30	2,857.59	149.00	-425.46	-424.39	0.00	0.00	0.00	0.00
3,000.00	11.20	289.30	2,955.68	155.41	-443.80	-442.67	0.00	0.00	0.00	0.00
3,069.80	11.20	289.30	3,024.16	159.90	-456.59	-455.43	0.00	0.00	0.00	0.00
3,100.00	9.33	294.91	3,053.87	161.90	-461.58	-460.41	7.00	-6.18	18.57	18.57
3,150.00	6.58	310.81	3,103.39	165.48	-467.43	-466.23	7.00	-5.50	31.81	31.81
3,200.00	4.90	342.20	3,153.15	169.39	-470.25	-469.03	7.00	-3.37	62.78	62.78
3,250.00	5.39	21.67	3,202.96	173.60	-470.04	-468.78	7.00	0.99	78.94	78.94
3,300.00	7.65	45.71	3,252.65	178.11	-466.79	-465.50	7.00	4.53	48.08	48.08
3,350.00	10.61	57.71	3,302.01	182.89	-460.51	-459.19	7.00	5.91	23.99	23.99
3,400.00	13.82	64.36	3,350.88	187.94	-451.23	-449.88	7.00	6.42	13.31	13.31
3,450.00	17.14	68.51	3,399.06	193.22	-438.99	-437.60	7.00	6.64	8.30	8.30
3,500.00	20.52	71.34	3,446.37	198.73	-423.83	-422.39	7.00	6.76	5.65	5.65
3,550.00	23.93	73.39	3,492.65	204.43	-405.80	-404.33	7.00	6.83	4.11	4.11
3,600.00	27.37	74.96	3,537.72	210.32	-384.98	-383.46	7.00	6.87	3.13	3.13
3,650.00	30.82	76.20	3,581.41	216.35	-361.43	-359.88	7.00	6.90	2.48	2.48
3,700.00	34.27	77.21	3,623.55	222.53	-335.26	-333.66	7.00	6.91	2.02	2.02
3,750.00	37.74	78.06	3,663.99	228.81	-306.55	-304.90	7.00	6.93	1.69	1.69
3,800.00	41.21	78.78	3,702.58	235.18	-275.42	-273.73	7.00	6.94	1.45	1.45
3,850.00	44.68	79.41	3,739.18	241.62	-241.97	-240.24	7.00	6.95	1.26	1.26
3,900.00	48.16	79.97	3,773.64	248.10	-206.34	-204.56	7.00	6.95	1.11	1.11
3,950.00	51.64	80.47	3,805.84	254.59	-168.66	-166.83	7.00	6.96	1.00	1.00
4,000.00	55.12	80.92	3,835.67	261.07	-129.06	-127.19	7.00	6.96	0.91	0.91
4,050.00	58.60	81.34	3,863.00	267.52	-87.70	-85.79	7.00	6.97	0.83	0.83
4,070.10	60.00	81.50	3,873.26	270.10	-70.62	-68.68	7.00	6.97	0.79	0.79

Planning Report

<b>Database:</b>	PRIME_EDM	<b>Local Co-ordinate Reference:</b>	Well BNT 2 STATE COM 10H
<b>Company:</b>	SPUR ENERGY PARTNERS LLC.	<b>TVD Reference:</b>	3993+20 @ 4013.00usft (AKITA57)
<b>Project:</b>	Eddy County, NM (NAD83) NMEZ Grid	<b>MD Reference:</b>	3993+20 @ 4013.00usft (AKITA57)
<b>Site:</b>	BIG N TASTY 2 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	BNT 2 STATE COM 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	10H LATERAL		
<b>Design:</b>	Plan #3		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,100.00	60.00	81.50	3,888.21	273.92	-45.00	-43.04	0.00	0.00	0.00
4,200.00	60.00	81.50	3,938.21	286.72	40.65	42.70	0.00	0.00	0.00
4,270.10	60.00	81.50	3,973.26	295.70	100.69	102.80	0.00	0.00	0.00
4,300.00	62.99	81.61	3,987.53	299.56	126.68	128.82	10.00	10.00	0.36
4,350.00	67.99	81.77	4,008.26	306.13	171.68	173.87	10.00	10.00	0.34
4,400.00	72.99	81.93	4,024.96	312.80	218.32	220.55	10.00	10.00	0.31
4,450.00	77.99	82.08	4,037.48	319.53	266.24	268.52	10.00	10.00	0.30
4,500.00	82.99	82.22	4,045.75	326.26	315.07	317.40	10.00	10.00	0.29
4,550.00	87.99	82.36	4,049.68	332.95	364.45	366.82	10.00	10.00	0.28
4,564.04	89.39	82.40	4,050.00	334.81	378.36	380.75	10.00	10.00	0.28
4,600.00	89.39	83.12	4,050.38	339.34	414.03	416.45	2.00	0.00	2.00
4,700.00	89.39	85.12	4,051.45	349.59	513.50	515.99	2.00	0.00	2.00
4,800.00	89.39	87.12	4,052.51	356.35	613.26	615.79	2.00	0.00	2.00
4,900.00	89.39	89.12	4,053.57	359.63	713.19	715.75	2.00	0.00	2.00
4,923.57	89.39	89.59	4,053.82	359.90	736.76	739.32	2.00	0.00	2.00
5,000.00	89.39	89.59	4,054.63	360.44	813.18	815.74	0.00	0.00	0.00
5,100.00	89.39	89.59	4,055.68	361.16	913.18	915.74	0.00	0.00	0.00
5,200.00	89.39	89.59	4,056.74	361.87	1,013.17	1,015.73	0.00	0.00	0.00
5,300.00	89.39	89.59	4,057.79	362.59	1,113.16	1,115.73	0.00	0.00	0.00
5,400.00	89.39	89.59	4,058.85	363.30	1,213.15	1,215.72	0.00	0.00	0.00
5,500.00	89.39	89.59	4,059.91	364.01	1,313.14	1,315.71	0.00	0.00	0.00
5,600.00	89.39	89.59	4,060.96	364.73	1,413.14	1,415.71	0.00	0.00	0.00
5,700.00	89.39	89.59	4,062.02	365.44	1,513.13	1,515.70	0.00	0.00	0.00
5,800.00	89.39	89.59	4,063.08	366.15	1,613.12	1,615.70	0.00	0.00	0.00
5,900.00	89.39	89.59	4,064.13	366.87	1,713.11	1,715.69	0.00	0.00	0.00
6,000.00	89.39	89.59	4,065.19	367.58	1,813.10	1,815.69	0.00	0.00	0.00
6,100.00	89.39	89.59	4,066.24	368.29	1,913.09	1,915.68	0.00	0.00	0.00
6,200.00	89.39	89.59	4,067.30	369.01	2,013.09	2,015.68	0.00	0.00	0.00
6,300.00	89.39	89.59	4,068.36	369.72	2,113.08	2,115.67	0.00	0.00	0.00
6,400.00	89.39	89.59	4,069.41	370.44	2,213.07	2,215.66	0.00	0.00	0.00
6,500.00	89.39	89.59	4,070.47	371.15	2,313.06	2,315.66	0.00	0.00	0.00
6,600.00	89.39	89.59	4,071.53	371.86	2,413.05	2,415.65	0.00	0.00	0.00
6,700.00	89.39	89.59	4,072.58	372.58	2,513.05	2,515.65	0.00	0.00	0.00
6,800.00	89.39	89.59	4,073.64	373.29	2,613.04	2,615.64	0.00	0.00	0.00
6,900.00	89.39	89.59	4,074.70	374.00	2,713.03	2,715.64	0.00	0.00	0.00
7,000.00	89.39	89.59	4,075.75	374.72	2,813.02	2,815.63	0.00	0.00	0.00
7,100.00	89.39	89.59	4,076.81	375.43	2,913.01	2,915.63	0.00	0.00	0.00
7,200.00	89.39	89.59	4,077.86	376.14	3,013.01	3,015.62	0.00	0.00	0.00
7,300.00	89.39	89.59	4,078.92	376.86	3,113.00	3,115.61	0.00	0.00	0.00
7,400.00	89.39	89.59	4,079.98	377.57	3,212.99	3,215.61	0.00	0.00	0.00
7,500.00	89.39	89.59	4,081.03	378.29	3,312.98	3,315.60	0.00	0.00	0.00
7,600.00	89.39	89.59	4,082.09	379.00	3,412.97	3,415.60	0.00	0.00	0.00
7,700.00	89.39	89.59	4,083.15	379.71	3,512.96	3,515.59	0.00	0.00	0.00
7,800.00	89.39	89.59	4,084.20	380.43	3,612.96	3,615.59	0.00	0.00	0.00
7,900.00	89.39	89.59	4,085.26	381.14	3,712.95	3,715.58	0.00	0.00	0.00
8,000.00	89.39	89.59	4,086.31	381.85	3,812.94	3,815.58	0.00	0.00	0.00
8,100.00	89.39	89.59	4,087.37	382.57	3,912.93	3,915.57	0.00	0.00	0.00
8,200.00	89.39	89.59	4,088.43	383.28	4,012.92	4,015.56	0.00	0.00	0.00
8,300.00	89.39	89.59	4,089.48	384.00	4,112.92	4,115.56	0.00	0.00	0.00
8,400.00	89.39	89.59	4,090.54	384.71	4,212.91	4,215.55	0.00	0.00	0.00
8,500.00	89.39	89.59	4,091.60	385.42	4,312.90	4,315.55	0.00	0.00	0.00
8,600.00	89.39	89.59	4,092.65	386.14	4,412.89	4,415.54	0.00	0.00	0.00
8,700.00	89.39	89.59	4,093.71	386.85	4,512.88	4,515.54	0.00	0.00	0.00

Planning Report

<b>Database:</b>	PRIME_EDM	<b>Local Co-ordinate Reference:</b>	Well BNT 2 STATE COM 10H
<b>Company:</b>	SPUR ENERGY PARTNERS LLC.	<b>TVD Reference:</b>	3993+20 @ 4013.00usft (AKITA57)
<b>Project:</b>	Eddy County, NM (NAD83) NMEZ Grid	<b>MD Reference:</b>	3993+20 @ 4013.00usft (AKITA57)
<b>Site:</b>	BIG N TASTY 2 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	BNT 2 STATE COM 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	10H LATERAL		
<b>Design:</b>	Plan #3		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,800.00	89.39	89.59	4,094.77	387.56	4,612.88	4,615.53	0.00	0.00	0.00	
8,900.00	89.39	89.59	4,095.82	388.28	4,712.87	4,715.52	0.00	0.00	0.00	
9,000.00	89.39	89.59	4,096.88	388.99	4,812.86	4,815.52	0.00	0.00	0.00	
9,100.00	89.39	89.59	4,097.93	389.70	4,912.85	4,915.51	0.00	0.00	0.00	
9,200.00	89.39	89.59	4,098.99	390.42	5,012.84	5,015.51	0.00	0.00	0.00	
9,295.57	89.39	89.59	4,100.00	391.10	5,108.40	5,111.07	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
BNT 2 10H SHL 120FWI - hit/miss target - Shape - Point	0.00	0.01	0.00	0.00	0.00	679,973.700	690,185.600	32.8683298	-103.8485376	
BNT 2 10H KOP p3 - plan hits target center - Point	0.00	0.01	3,024.16	159.90	-456.59	680,133.600	689,729.010	32.8687751	-103.8500223	
BNT 2 10H FTP 100FWI - plan misses target center by 144.69usft at 4210.95usft MD (3943.68 TVD, 288.13 N, 50.03 E) - Point	0.00	0.01	4,050.00	354.80	-22.00	680,328.500	690,163.600	32.8693053	-103.8486040	
BNT 2 10H LP p3 - plan hits target center - Point	0.00	0.01	4,050.00	334.81	378.36	680,308.510	690,563.960	32.8692453	-103.8473003	
BNT 2 10H PBHL 50FEL - plan hits target center - Point	0.00	0.01	4,100.00	391.10	5,108.40	680,364.800	695,294.000	32.8693392	-103.8318941	
BNT 2 10H LTP 100FEL - plan misses target center by 45.57usft at 9200.00usft MD (4098.99 TVD, 390.42 N, 5012.84 E) - Point	0.00	0.01	4,100.00	390.70	5,058.40	680,364.400	695,244.000	32.8693387	-103.8320570	

## 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 type="checkbox"/> None	<input type="checkbox"/> Below 100 PPM	<input checked="" 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: 725 feet

Intermediate casing must be set at: 2417 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.



## **Permian Drilling**

### **Hydrogen Sulfide Drilling Operations Plan**

#### **Big N Tasty 2 State Com North Pad**

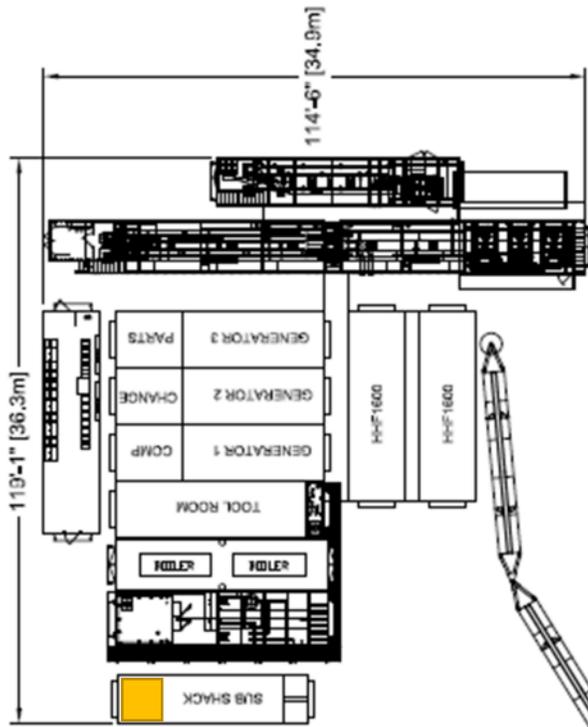
Open drill site. No homes or buildings are near the proposed location.

1. Escape

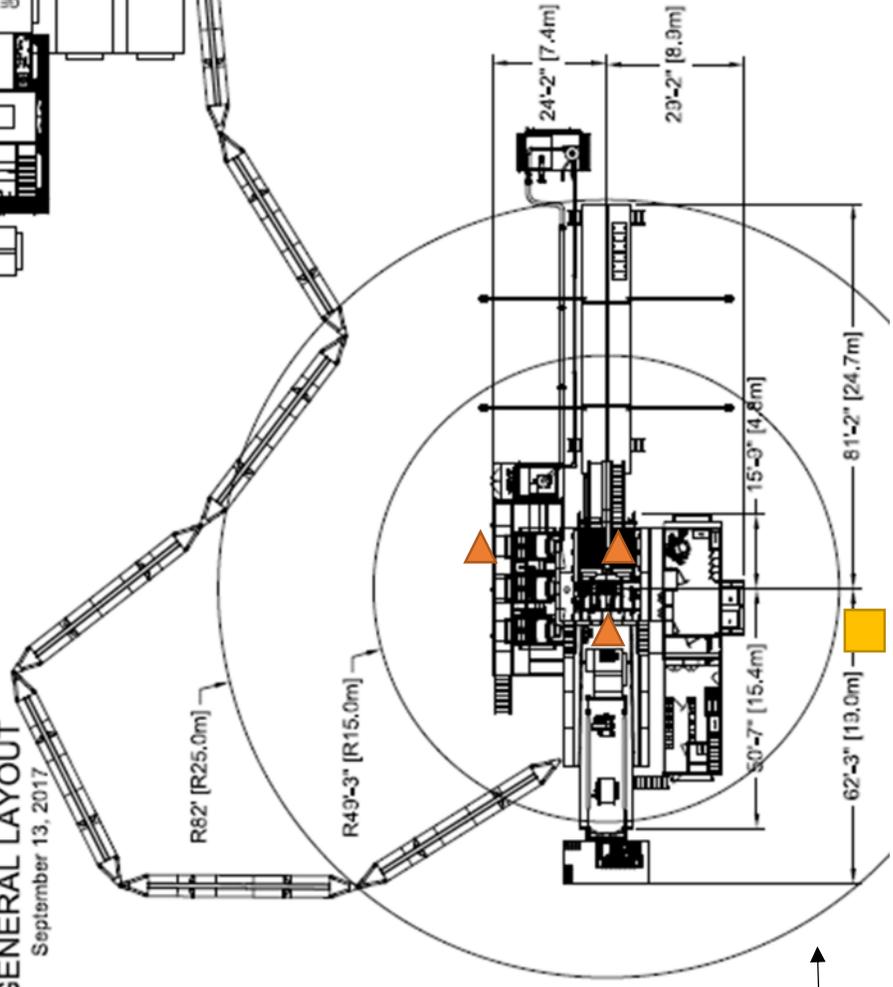
Personnel shall escape upwind of wellbore in the even of an emergency gas release.

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 secondary egress route should be taken.



-  H2S Detectors. At least three detectors will be installed: bell nipple, rig floor, and Shakers.
  -  Briefing Areas. At least two briefing areas will be placed, 9 deg off.
  -  Wind direction indicators. Visible from rig floor and from the mud pits area.
- A gas buster is connected to both the choke manifold and the flowline outlets.



**AKITA DRILLING LTD.**

**RIG 57**

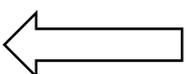
GENERAL LAYOUT

September 13, 2017

**Wind:** Prevailing winds are from the Southwest.

 Primary Briefing Area

 Secondary Briefing Area



Exit to road. Caution sign placed here.

Secondary Egress

N

## **Spur Energy Partners New Mexico Operations Hydrogen Sulfide Operation Plan**

### **A. Introduction:**

The Safety of all personnel at Spur Energy Partners Facilities is of utmost importance to the company, and therefor management and employees must take responsibility for their safety and for the safety of all employees and others at a facility. If you have any concerns about the safe operations of the facility, contract personnel, or vendors, please contact the Company's Safety Contact, Superintendent, or Production Foreman immediately.

The objective of this contingency plan is to provide an organized plan of action for alerting, responding to and protecting employees, other workers and the public from H<sub>2</sub>S exposure in the event of a release of a potentially hazardous volume of H<sub>2</sub>S to the atmosphere. This plan should be activated immediately if any such release occurs. The Superintendent is responsible for initiating and carrying out the plan.

### **B. Scope:**

Prevent the uncontrolled release of H<sub>2</sub>S into the atmosphere. Provide proper procedures and equipment to alert and respond to emergencies.

Provide immediate and adequate medical attention should an injury occur.

To provide Company employees working at actual or potential Hydrogen Sulfide (H<sub>2</sub>S) facilities with a safe procedure to comply with applicable Federal, State and Company requirements.

This document is intended to provide general policy, procedures and expectations surrounding elevated levels of H<sub>2</sub>S. The intent is to promote sound and safe operations, while seeking effective communication surrounding operational considerations working around H<sub>2</sub>S.

This procedure applies to all Company employees and contractors working at facilities that have the potential to release 100 ppm or higher concentrations of H<sub>2</sub>S.

The plan establishes guidelines for all personnel whose work activity may involve exposure to Hydrogen Sulfide Gas (H<sub>2</sub>S).

### **C. Hydrogen Sulfide Gas (H<sub>2</sub>S) Characteristics:**

1. H<sub>2</sub>S is a toxic, poisonous gas that could cause death or injury. And it is also flammable.
2. H<sub>2</sub>S is an irritant and extremely toxic gas that is several times deadlier than carbon monoxide (CO).
3. H<sub>2</sub>S is heavier than air with a specific gravity of 1.1895 @ 600 F. so it will tend to lie in lower areas. Wind movement or air currents can readily disperse H<sub>2</sub>S since wind currents can easily overcome the heavier weight. On calm days, with no wind, the H<sub>2</sub>S will tend to accumulate in dangerous concentrations; however, if the H<sub>2</sub>S is warmer than the surrounding air it may rise.
4. H<sub>2</sub>S is colorless.
5. In small concentrations, H<sub>2</sub>S has the characteristic odor of rotten eggs. It may be detected by smell at a concentration in air of about 2 ppm but may NOT be detected

at high concentrations. DO NOT DEPEND ON THE SENSE OF SMELL TO DETECT H<sub>2</sub>S! H<sub>2</sub>S will paralyze the olfactory nerve causing a loss of the sense of smell within 2 – 15 minutes of an exposure in concentrations as low as 100-150 ppm.

6. H<sub>2</sub>S burns with a blue flame and has an auto ignition temperature of 5000 F. H<sub>2</sub>S forms an explosive mixture in the range of 4.3% to 45% by volume with air. H<sub>2</sub>S, when ignited, produces Sulfur Dioxide (SO<sub>2</sub>). SO<sub>2</sub> is another toxic gas but less toxic than H<sub>2</sub>S.
7. Physiological Effects
  - 1,000-2,000+ ppm: Loss of consciousness and possible death.
  - 100-1,000 ppm: Serious respiratory, central nervous, and cardiovascular system effects.
  - 150-200 ppm: Olfactory fatigue (sense of smell is significantly impaired).
  - 100 ppm: Immediately Dangerous to Life and Health (IDLH concentration).
  - 5-30 ppm: Moderate irritation of the eyes.
  - 5-10 ppm: Relatively minor metabolic changes in exercising individuals during short-term exposures.
  - Less than 5 ppm: Metabolic changes observed in exercising individuals, but not clinically significant.
  - 5 ppm: Increase in anxiety symptoms (single exposure).
  - 5 ppm: Start of the dose-response curve (short-term exposure).
  - 0.032-0.02 ppm: Olfactory threshold (begin to smell).

#### D. H<sub>2</sub>S Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing work at an effected facility:

1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.
5. The procedures for operating process equipment.

In addition, supervisory personnel will be trained in the following areas:

1. Corrective action and shutdown procedures when a release or leak occurs.
2. Notification process

Annual drills will be conducted to utilize the procedures and make improvements as needed. It will also serve as refresher training on the process.

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when operation commences.

#### **E. Protective equipment controls:**

Any facility that has the potential to emit H<sub>2</sub>S at 100 ppm or higher will be required to install and utilize the below controls:

1. Where applicable, area air monitors will be installed and function tested and calibrated no less than monthly and set on a quarterly basis PM schedule.
2. Facility operators will use self contained breathing apparatuses (SCBA's ) to perform routine operations in areas where H<sub>2</sub>S may be present.
3. Trigger of 100 PPM or more must be communicated and work proceeding the trigger must use the buddy system.
4. Visible windsocks must be installed at key locations surrounding the facility.
5. H<sub>2</sub>S warning signs must be placed at the entrance to the facility as well as other key locations.
6. Personal H<sub>2</sub>S Monitor are required to be worn by all personnel on locations.
7. Stairs and ladders leading to the top of a tank or vessel containing 300 ppm or greater shall be chained or marked to restrict entry.

#### **F. Emergency Procedures**

##### **1. Spill or Release of H<sub>2</sub>S gas**

If a spill or leak releases H<sub>2</sub>S the following action must be initiated and completed:

- a. Internally – Employee contacts supervisor and HSE Department and performs “d” below.
- b. Externally - Someone identifies a possible H<sub>2</sub>S emergency and reports it to Company Management, via the listed phone number on posted facility signs.
- c. The Company dispatches an employee to investigate possible H<sub>2</sub>S emergency and will secure situation or initiate emergency call for backup.
- d. If the Radius of Exposure has been breached begin the following:
  - Establish safe command center.
  - Call for additional personnel and delegate the following:
    - i. Notifying public safety agencies (Sheriff, Fire Department, Department of Public Safety, Hwy. Department).
    - ii. Safeguarding the facility and effected area.
    - iii. Blocking roads as needed.
    - iv. Notifying/evacuating public.
    - v. Notifying regulatory agencies.
    - vi. Gathering additional information about release ie., location, flowrate, quantity, etc.
    - vii. Stopping release if safe to do so (use 2 trained persons)
    - viii. Notifying company management.
    - ix. Cleanup/repair facilities.

- e. Facility Standard Operating Procedure
  - Evacuate the area, travel crosswind then proceed upwind.
  - Gather at muster point. Ensure Primary Muster point is upwind
  - Notify managers & appropriate EMS if required.
  - Safely shut down (ESD) facility if the facility hasn't already shut in.
  - Pick up SCBA (should be a 30 minute - 1 hour pack, located at Muster point.)
  - Use buddy system for man down scenario with rescuers assigned.
    - 1 person to mask up to operate facility controls as needed.
    - 1 person for rescue if needed.
    - 1 person for calling EMS and company management
  - Investigate area and isolate release of gas if safe to do and ensure closure using 4 gas monitor.
  - If venting gas can't be isolated, return to muster point, and re-evaluate path forward.
  - Give detailed description where/how gas is being released.
  - After isolation verify that area monitors return to 0 and are not in alarm.
  - Resume normal operations, once managers agree the ROOT CAUSE has been addressed and corrected.

## **G. Contacting Authorities**

Company personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the NM Emergency Response Commission must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Spur Energy Partners response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER).

## H. Call List

<b>Spur Energy Partners 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 - Braidy Moulder	Artesia	575-616-5400	713-264-2517
Superintendent - Jerry Mathews	Artesia	575-616-5400	575-748-5234
Asst. Superintendent - Kenny Kidd	Artesia	575-616-5400	575-703-5851
Regulatory Director - Sarah Chapman	Houston	832-930-8613	281-642-5503
<b>Regulatory Agencies</b>			
Bureau of Land Management	Carlsbad	575-886-6544	
Bureau of Land Management	Hobbs	575-393-3612	
Bureau of Land Management	Roswell	575-622-5335	
Bureau of Land Management	Santa Fe	505-954-2000	
DOT Judicial Pipelines - 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 Quality Bureau	Santa Fe	505-827-1494	
New Mexico Oil Conservation Division	Artesia	575-748-1283 575-370-7545After	
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

**I. List of Facilities with the potential for 500ppm or higher H2S exposure.**

**ATTACHMENT 1: SPUR FACILITIES WITH ROE REVIEW**

ALASKA 29 FEE TANK BATTERY  
ARABIAN 6 FEE TANK BATTERY  
ARCO 26 A STATE OIL BATTERY  
ARCO B FEDERAL COM NO. 001  
ARKANSAS STATE 23 TANK BATTERY  
AVALON FEDERAL #001  
B&B/ROSS RANCH OIL TANK BATTERY  
BC FEDERAL 10 (9-13) TNK BTY  
BC FEDERAL 1-8 &14 TNK BTY  
BC FEDERAL 42 TNK BTY  
BEE FED OIL BATTERY  
BEECH 25 FEDERAL #9H BATTERY  
BEECH FEDERAL 1  
BEECH FEDERAL 2 BATTERY  
BERRY A FEDERAL #005 SWB  
BERRY A FEDERAL PADD BATTERY  
BIG BOY STATE TB  
BLUETAIL 8 FEDERAL 2 TANK BATTERY  
BONE YARD 11 FEE TANK BATTERY  
BOOT HILL 25 1H SWB  
BOSE IKARD 4 ST COM 18H BATTERY  
BRANTLEY FEDERAL #001  
BR-549 STATE BATTERY  
BRADLEY 8 FEE #3H-BATTERY  
BRADLEY 8 FEE BATTERY  
BRAGG 10 FEE 1 BATTERY  
BRIGHAM H 2  
BRIGHAM H FED (NORTH) BATTERY  
BURCH KEELY 13C TK BTY  
BURCH KEELY 18A TK BATT  
BURCH KEELY 19A OIL BATT  
BURCH KEELY 23A TK BATT  
BURCH KEELY EAST 18B TANK BAT  
BURCH KEELY SEC 13A NORTH BTTY  
BURCH KEELY SEC 13B SOUTH BTTY  
BURCH KEELY UNIT CTB BTTY  
BURCH KEELY UNIT E BATTERY  
BURKETT 16 STATE  
CADDO FEDERAL BATTERY  
CADILLAC ST 4 BATTERY  
CALIFORNIA 29 FEE 1  
CARMEN 3 FEDERAL BATTERY  
CARRINGTON 12 ST 3,4,7 BATTERY  
CHASER 8 STATE 2 TANK BATTERY  
CHEYENNE FEDERAL TNK BTY  
CLYDESDALE 1 FEE #1H BAT  
CLYDESDALE 1 FEE 6H - BATTERY  
COAL TRAIN FEDERAL COM #1  
COFFIN STATE #1  
COLLIER 22 STATE COM #43H  
COLLIER STATE OIL BATTERY  
CONOCO 8 STATE 4 TB  
CONTINENTAL A STATE TNK BTY  
CONTINENTAL B YESO TANK BTY  
CONTINENTAL STATE 15A TNK BTY  
CRYPT 30 STATE #1H  
DAGGER DRAW FED/FOSTER FED TANK BATTERY  
DARNER 9 STATE 1 TANK BATTERY  
DARNER 9 STATE 2  
DARTER 9 STATE 8 TANK BATTERY  
DARNER 9 STATE CTB  
DEXTER FEDERAL PAD TNK BTY  
DODD 10A OIL BATTERY  
DODD 10B TK BTTY  
DODD FED #14C TK BATT  
DODD FED 11A BATTERY  
DODD FED UNIT 980H BATTERY  
DODD FEDERAL 14A-TB  
DODD FEDERAL UNIT 15A BTTY  
DODD FEDERAL UNIT NORTH BTTY  
DODD FEDERAL UNIT SOUTH BTTY  
DOGWOOD FEDERAL TNK BTY  
DORAMI 33 FEDERAL COM 2H.4H.9H TANK BATTERY  
EBONY STATE TB  
EDWARD STATE TNK BTY  
ELECTRA FEDERAL 33 (NORTH) BATTERY  
ELECTRA FEDERAL 5 (SWEET) TNK BTY  
ELECTRA FEDERAL SOUR TNK BTY  
EMPIRE SOUTH DEEP UNIT 21  
FALABELLA 31 FEE #1H TK BATT  
FALABELLA 31 FEE 8H TK BTY  
FAT TIRE 12 COM FEDERAL CTB  
FEDERAL BA COM NO. 001  
FEDERAL BB NO. 001  
FLAT HEAD FED COM 6H TANK BATTERY  
FLAT HEAD FED COM 27H TANK BATTERY

**ATTACHMENT 1: SPUR FACILITIES WITH ROE REVIEW**

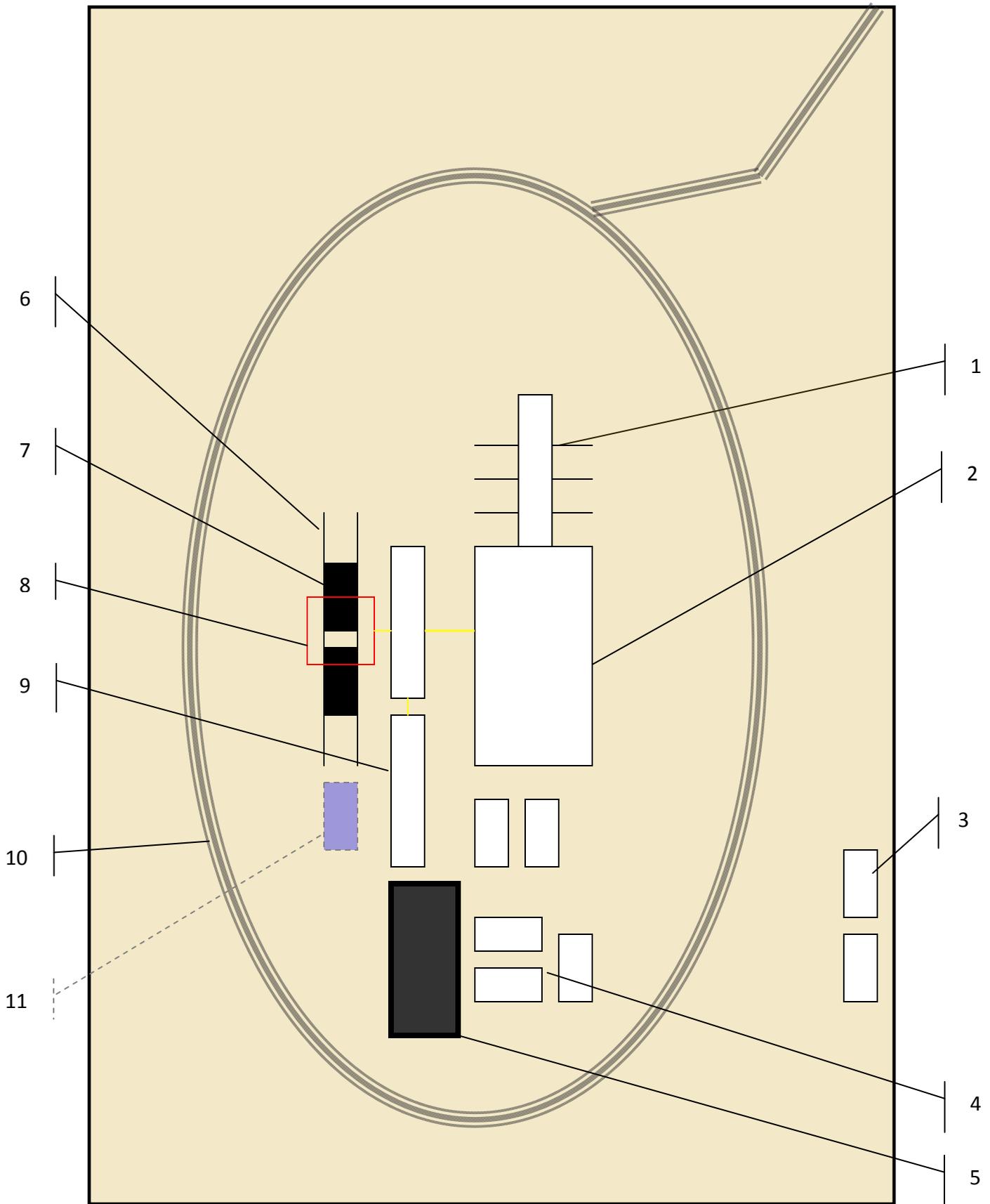
FIR FEDERAL TNK BTY  
FIRECRACKER STATE TB  
FLEMMING STATE OIL BATTERY  
FOLK FEDERAL B TNK BTY  
FOLK FEDERAL TNK BTY  
FOLK STATE TANK BATTERY  
FORAN STATE OIL BATTERY  
GC FEDERAL 11 TNK BTY  
GC FEDERAL 27 TNK BTY  
GC FEDERAL TNK BTY  
GILLESPIE STATE OIL BATTERY  
GISSLER FEDERAL 13H TANK BATT  
GJ WEST COOP SOUTH TB  
GJ WEST COOP UNIT 092 BTY  
GJ WEST COOP UNIT 191 BTY  
GJ WEST COOP UNIT 210 BTY  
GJ WEST COOP UNIT CENTRAL  
GJ WEST COOP UNIT N TNK BTY  
GOLD STAR TNK BTY  
GOODMAN 22 TANK BATTERY  
GRAVE DIGGER FEDERAL COM TANK BATTERY  
GRAVE DIGGER ST COM #3H TANK BATTERY  
GRAVE DIGGER STATE COM #8H SWB  
HALBERD 27 ST 3H BATTERY  
HANOVER STATE #3 (YESO)  
HARPER STATE TNK BTY  
HARVARD FEDERAL TNK BTY  
HATFIELD B TB  
HEARSE 36 ST COM TANK BATTERY  
HOBGOBLIN 7 FED COM 4H TK BAT  
HOLDER CB 11 TNK BTY  
HOLDER CB FEDERAL 6&7 TNK BTY  
HOLIDAY  
HOUMA STATE TNK BTY  
HT 18 FED 01.05.04 TANK BATTERY  
HT 18 FEDERAL 8  
HUBER 10,11,12 FEDERAL OIL TANK BATTERY  
HUBER 3 FEDERAL OIL TANK BATTERY  
HUBER 5 FEDERAL OIL TANK BATTERY  
HYDRUS 10 FED 03.07.08.11 TANK BATTERY  
HYDRUS 10 FED 04.05 TANK BATTERY  
HYDRUS 10 FED 06.09.10.12 TANK BATTERY  
IMPERIAL STATE TNK BTY  
IVAR THE BONELESS FED 11H - BATTERY  
JC FEDERAL 13 TNK BTY  
JC FEDERAL 2 (SOUR) TNK BTY  
JC FEDERAL 27 TNK BTY  
JENKINS B FEDERAL TNK BTY  
JG STATE 16 1 TANK BATTERY  
JG STATE 16 7 TANK BATTERY  
JON BOB 1  
JUNIPER STATE TNK BTY  
KIOWA OIL BATTERY  
KOOL AID STATE  
LAKEWOOD NORTH TANK BATTERY  
LAKEWOOD SOUTH TANK BATTERY  
LARA MICHELLE STATE OIL BTTY  
LEAKER CC STATE TB  
LEE 3 FEE 6H - TK BATT  
LIVE OAK TANK BATTERY  
MALCO 23 FEDERAL COM #13H  
MAPLE STATE  
MARACAS 22 STATE TANK BATTERY  
MARY FEDERAL OIL BATTERY  
MAYARO 22 STATE TANK BATTERY  
MC FEDERAL 14 TANK BATTERY  
MC FEDERAL 6 DEVONIAN  
MC FEDERAL PADDOCK TNK BTY  
MC SOUTHEAST BATTERY  
MC STATE OIL BATTERY  
MCCOY STATE TB  
MCINTYRE A EAST TANK BATTERY  
MCINTYRE B 10  
MCINTYRE B 4  
MCINTYRE B TNK BTY  
MCINTYRE DK 15 TNK BTY  
MCINTYRE DK FEDERAL 28H SWB  
MEADOWHAWK 5 FEDERAL 3  
MELROSE FEDERAL TNK BTY  
MERAK 7 FEDERAL 8 TANK BATTERY  
MESILLA STATE 3 & 5 TNK BTY  
MESILLA STATE TNK BTY  
MESQUITE STATE TANK BATTERY  
MIMOSA STATE TNK BTY  
MIRANDA FEDERAL B TNK BTY  
MIRANDA FEDERAL TB

**ATTACHMENT 1: SPUR FACILITIES WITH ROE REVIEW**

MOE FEDERAL OIL BATTERY  
MOHAWK FEDERAL TNK BTY  
MONCRIEF 3 OIL BATTERY  
MOORE STATE OIL BATTERY  
MORRIS BOYD 26 FEE COM 1H  
MORRIS BOYD TANK BATTERY  
MORRIS E & F TANK BATTERY  
MUSKEGON SOUTH STATE OIL BATTERY  
NAVAHO FEDERAL TNK BTY  
NELSON 13.23. TNK BATT  
NEWCASTLE 6 FED COM - TANK BATTERY  
NIRVANA TANK BATTERY  
NOOSE FED 10 TANK BATTERY  
NOOSE FED 5 TANK BATTERY  
OKLAHOMA 32 TANK BATTERY  
OSAGE BOYD 15 FED 09.12.13.14 TANK BATTERY  
OSAGE BOYD YESO TANK BATTERY  
PAINT 32 FEE OIL BATTERY  
PAN CANADIAN A2-B3 TANK BATTERY  
PASSION 1 FED PDK 5H TK BATT  
PATTON 5 FEE 2H OIL BATTERY  
PATTON 5 FEE 8H OIL BATTERY  
PAWNEE STATE TNK BTY  
PEACEMAKER 25 FEDERAL TANK BATTERY  
PERE MARQUETTE 18 FEDERAL 1 TANK BATTERY  
PILUM 15 FEE 2H BATTERY  
PINTO 36 STATE COM 1H TNK BTY  
PINTO 36 STATE COM 4H TNK BTY  
PINTO 36 STATE TB  
POLARIS B 5-10 TANK BTTY  
POSEIDON 3 FEDERAL 4 TANK BATTERY  
POSEIDON 3 FEDERAL 05.07.17.18 TANK BATTERY  
PUCKETT 13 FEDERAL COM 35H  
PUCKETT 13 FEDERAL TB  
RAGNAR FED COM 25H - BATTERY  
RANDALL FED 3 BATTERY  
RED LAKE 32 TANK BATTERY  
REDBUD FEDERAL TNK BTY  
RINCON STATE TANK BATTERY  
RJ UNIT NORTH TANK BATTERY  
RJ UNIT SOUTH TANK BATTERY  
RONCO FEDERAL #1  
ROSE 02.03.04.05.06 TANK BATTERY  
ROSE SOUTH TANK BATTERY  
ROSS RANCH 09.13.14 BATTERY  
SAM ADAMS 12 FED 4H UBB TK BATT  
SANDY CROSSING 32 STATE COM 1  
SCHLEY FEDERAL TNK BTY  
SHAWNEE FEDERAL TNK BTY  
SHELBY 23 BATTERY  
SHERMAN 4 FEE 4H BATTERY  
SHERMAN 4 FEE 6H BATTERY  
SHORTY 2 STATE COM TANK BATTERY  
SINCLAIR PARKE (PADDOCK) TNK BTY  
SKELLY 605 BATTERY  
SKELLY 942 BATTERY  
SKELLY 968 BATTERY  
SKELLY 973 BATTERY  
SKELLY 989 BATTERY  
SKELLY UNIT 907 CTB BATTERY  
SKELLY UNIT 940 BATTERY  
SOUTH BOYD FED COM OIL TANK BATTERY  
SOUTH EMPIRE STATE COM 1  
SPIKETAIL 5 STATE 2 TANK BATTERY  
SPRUCE FEDERAL TNK BTY  
STATE B GAS COM NO. 001  
STATE S-19 YESO (SOUR) TNK BTY  
STONEWALL 9 FEE #1H TBAT  
STONEWALL 9 FEE 8H BATTERY  
SUBMARINE 10 FED COM 2H OIL BAT  
TAYLOR D TANK BATTEY  
TENNECO STATE TNK BTY  
TEX MACK FED  
TEXACO BE TNK BTY  
TEXAS 32 FEE TANK BATTERY  
TEXMACK 36 STATE COM #1  
TH STATE #1  
THO STATE OIL BATTERY  
THORNTAIL 31 FEDERAL 1  
THUNDER ROAD FEDERAL OIL BTTY  
TUMAK FED 3 BAT  
VEGA 9 FED TANK BATTERY  
VT 36 STATE #1H  
W D MCINTYRE C 10  
WAUKEE 36 STATE COME CTB  
WD MCINTYRE C 8-9 TNK BTY

**ATTACHMENT 1: SPUR FACILITIES WITH ROE REVIEW**

WD MCINTYRE E TNK BTY  
WELCH A 28 10.20.50 CTB  
WESTERN FEDERAL TNK BTY  
WHITE OAK STATE B TB  
WHITE OAK STATE TNK BTY  
WHITE STAR FEDERAL TNK BTY  
WICHITA STATE TNK BTY  
WILLOW STATE TNK BTY  
YALE B OIL BATTERY  
YALE STATE TANK BTY  
YUCCA STATE TNK BTY



### Schematic Closed Loop Drilling Rig\*

- 1. Pipe Rack
- 2. Drill Rig
- 3. House Trailers/ Offices
- 4. Generator/Fuel/Storage
- 5. Overflow-Frac Tank
- 6. Skids
- 7. Roll Offs
- 8. Hopper or Centrifuge
- 9. Mud Tanks
- 10. Loop Drive
- 11. Generator (only for use with centrifuge)

\*Not drawn to scale: Closed loop system requires at least 30 feet beyond mud tanks. Ideally 60 feet would be available



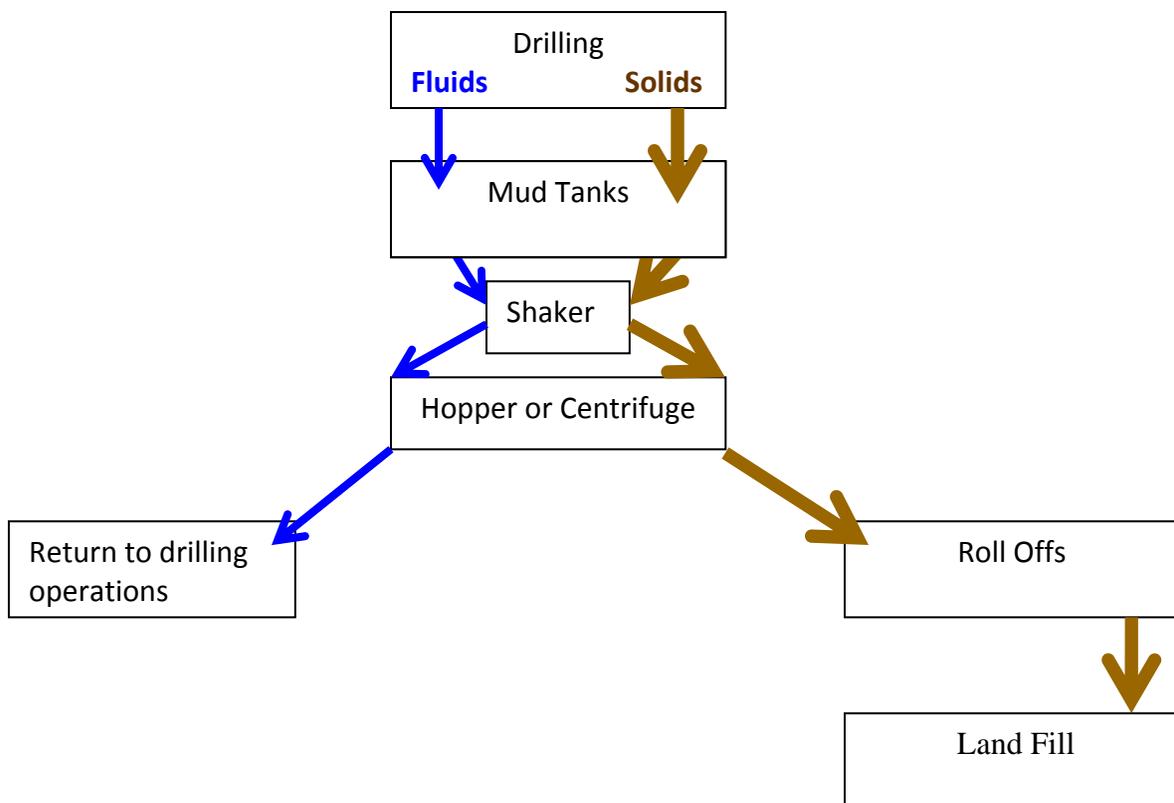
Above: Centrifugal Closed Loop System

**PERMITS WEST, INC.**  
 PROVIDING PERMITS for LAND USERS  
 37Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120



- Closed Loop Drilling System: Mud tanks to right (1)**
- Hopper in air to settle out solids (2)**
- Water return pipe (3)**
- Shaker between hopper and mud tanks (4)**
- Roll offs on skids (5)**

**Flow Chart for Drilling Fluids and Solids**



Photos Courtesy of Gandy Corporation Oil Field Service



**District I**  
 1625 N. French Dr., Hobbs, NM 88240  
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**District II**  
 811 S. First St., Artesia, NM 88210  
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**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 247797

**CONDITIONS**

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 247797
	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	8/3/2023
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	8/3/2023
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	8/3/2023
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	8/3/2023
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	8/3/2023