

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> 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 STATE COM</b>  <b>21H</b> 9. API Well No.
2. Name of Operator <b>SPUR ENERGY PARTNERS LLC</b> 3a. Address <b>9655 KATY FREEWAY, SUITE 500, Houston, TX 77024</b> 3b. Phone No. (include area code) <b>(832) 930-8548</b>		10. Field and Pool, or Exploratory <b>FREN/GLORIETA -YESO</b> 11. Sec., T. R. M. or Blk. and Survey or Area <b>SEC 2/T17S/R31E/NMP</b>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface <b>NWSW / 2455 FSL / 255 FWL / LAT 32.86314 / LONG -103.8480917</b> At proposed prod. zone <b>SENE / 2310 FNL / 50 FEL / LAT 32.8645853 / LONG -103.8318906</b>		12. County or Parish <b>EDDY</b> 13. State <b>NM</b>
14. Distance in miles and direction from nearest town or post office* <b>5 miles</b>		15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>255 feet</b> 16. No of acres in lease  17. Spacing Unit dedicated to this well <b>319.6</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>155 feet</b> 19. Proposed Depth <b>5475 feet / 11174 feet</b> 20. BLM/BIA Bond No. in file <b>FED: NMB001783</b>		21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>3978 feet</b> 22. Approximate date work will start* <b>04/01/2024</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)  Title <b>President</b>	Name (Printed/Typed) <b>BRIAN WOOD / Ph: (832) 930-8548</b>	Date <b>04/17/2023</b>
Approved by (Signature) (Electronic Submission)  Title <b>Assistant Field Manager Lands &amp; Minerals</b>	Name (Printed/Typed) <b>CODY LAYTON / Ph: (575) 234-5959</b>  Office <b>Carlsbad Field Office</b>	Date <b>08/02/2023</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)



Approval Date: 08/02/2023

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>26770</b>	<sup>3</sup> Pool Name <b>FREN; GLORIETA-YESO</b>
<sup>4</sup> Property Code	<sup>5</sup> Property Name <b>BIG N TASTY 2 STATE COM</b>	<sup>6</sup> Well Number <b>21H</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>3978'</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>L</b>	<b>2</b>	<b>17S</b>	<b>31E</b>		<b>2445</b>	<b>SOUTH</b>	<b>255</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>H</b>	<b>2</b>	<b>17S</b>	<b>31E</b>		<b>2310</b>	<b>NORTH</b>	<b>50</b>	<b>EAST</b>	<b>EDDY</b>

<sup>12</sup> Dedicated Acres <b>319.6</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> <u>GEODETIC DATA</u> NAD 83 GRID - NM EAST</p> <p><u>SURFACE LOCATION (SL)</u> N: 678086.2 - E: 690331.2 LAT: 32.8631400° N LONG: 103.8480917° W</p> <p><u>KICK OFF POINT (KOP) - SEC 3</u> 2372' FNL &amp; 695' FEL N: 678531.1 - E: 689378.6 LAT: 332.8643750° N LONG: 103.8511874° W</p> <p><u>FIRST TAKE POINT (FTP) - SEC 2</u> 2310' FNL &amp; 100' FWL N: 678598.9 - E: 690173.2 LAT: 32.8645513° N LONG: 103.8485984° W</p> <p><u>LAST TAKE POINT (LTP) - SEC 2</u> 2310' FNL &amp; 100' FEL N: 678634.9 - E: 695253.3 LAT: 32.8645850° N LONG: 103.8320534° W</p> <p><u>BOTTOM HOLE (BH) - SEC 2</u> N: 678635.2 - E: 695303.3 LAT: 32.8645853° N LONG: 103.8318906° W</p> <p><u>CORNER DATA</u> 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><sup>17</sup> <b>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><sup>18</sup> <b>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>11-04-2020</b> Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p><b>19680</b> Certificate Number</p> <p>REV: ADD KOP - 05/09/2023</p> <p><b>19680</b> Job No.: LS20100607R3</p>

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

Submit Electronically  
Via E-permitting

## 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 / 23 / 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 21H	30-015-	L-2-17S-31E	2455' FSL 255' FWL	399 BBL/D	482 MCF/D	1196 BBL/D

**IV. Central Delivery Point Name:** BIG N TASTY STATE COM SOUTH 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 21H	30-015-	07/24/2024	08/01/2024	08/18/2024	09/02/2024	09/12/2024

**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:	01/23/2023
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:	



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

# Drilling Plan Data Report

08/03/2023

**APD ID:** 10400091629

**Submission Date:** 04/17/2023

Highlighted data  
reflects the most  
recent changes

**Operator Name:** SPUR ENERGY PARTNERS LLC

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

**Well Number:** 21H

**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
10230702	QUATERNARY	3978	0	0	DOLOMITE, OTHER : Caliche	USEABLE WATER	N
10230703	RUSTLER	3323	655	655	ANHYDRITE, DOLOMITE, SHALE	OTHER : Brackish Water	N
10230704	TOP SALT	3138	840	840	ANHYDRITE	OTHER : Salt	N
10230705	BASE OF SALT	2178	1800	1840	ANHYDRITE	OTHER : Salt	N
10230706	TANSILL	2113	1865	1908	DOLOMITE, SANDSTONE	NONE	N
10230707	YATES	2013	1965	2008	DOLOMITE, LIMESTONE, SHALE, SILTSTONE	NONE	N
10230708	SEVEN RIVERS	1708	2270	2325	DOLOMITE, LIMESTONE	NATURAL GAS, OIL	N
10230709	QUEEN	1088	2890	2970	ANHYDRITE, DOLOMITE, SANDSTONE	NATURAL GAS, OIL	N
10230710	GRAYBURG	678	3300	3400	ANHYDRITE	NATURAL GAS, OIL	N
10230701	SAN ANDRES	373	3605	3710	DOLOMITE	NATURAL GAS, OIL	N
10230711	GLORIETA	-1127	5105	5290	DOLOMITE, SILTSTONE	NATURAL GAS, OIL	N
10230712	YESO	-1217	5195	5415	DOLOMITE, LIMESTONE	NATURAL GAS, OIL	Y

## Section 2 - Blowout Prevention

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

**Rating Depth:** 6000

**Equipment:** A 5000-psi 6000' 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



**Operator Name:** SPUR ENERGY PARTNERS LLC**Well Name:** BIG N TASTY 2 STATE COM**Well Number:** 21H

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, 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\_20230413141653.pdf

**BOP Diagram Attachment:**

Choke\_BOP\_Diagram\_20230413141701.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	3978	3253	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	2392	3991	1586	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	5800	0	5398	3991	-1420	5800	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	5800	11174	5398	5475	-1420	-1497	5374	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 STATE COM**Well Number:** 21H**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\_20230413141735.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\_20230413141817.pdf

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**Casing ID:** 3      **String**      PRODUCTION**Inspection Document:****Spec Document:**

7in\_CasingSpec\_BKHT\_32\_HCL80\_20230413141844.pdf

**Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**

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Operator Name: SPUR ENERGY PARTNERS LLC

Well Name: BIG N TASTY 2 STATE COM

Well Number: 21H

## Casing Attachments

Casing ID: 4 String PRODUCTION

Inspection Document:

Spec Document:

5.5in\_CasingSpec\_BKHT\_20\_HCL80\_20230413141918.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing\_Design\_Assumptions\_Sheet\_20230413141930.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	4800	901	2.42	11.4	2180	100	C Premium Plus	6% Bentonite + 5% Salt + 0.25 lbs/sk LCM + 5% Gypsum + 0.1% Retarder + 0.4% Defoamer
PRODUCTION	Tail		4800	11174	1214	1.56	13.2	1894	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 STATE COM**Well Number:** 21H**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	11174	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 STATE COM**Well Number:** 21H

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 2534**Anticipated Surface Pressure:** 1329**Anticipated Bottom Hole Temperature(F):** 124**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\_South\_H2S\_Plan\_20230413142205.pdf

## Section 8 - Other Information

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

BNT\_21H\_Directional\_Plan\_20230413142220.pdf

**Other proposed operations facets description:****Other proposed operations facets attachment:**

BNT\_21H\_Drill\_Plan\_20230413142229.pdf

BNT\_21H\_Anticollision\_Report\_20230413142239.pdf

CoFlex\_Hose\_Cert\_20230413142256.pdf

**Other Variance attachment:**

Spudder\_Rig\_Variance\_20230413142306.pdf





Company: Spur Energy Partners, LLC  
Project: Eddy County, NM (NAD 83 - NME)  
Site: BIG N TASTY 2 STATE COM  
Well: 21H  
Wellbore: Wellbore #1  
Rig: AKITA 57  
Design: PERMIT / 14:33, October 14 2022



WELL DETAILS: 21H

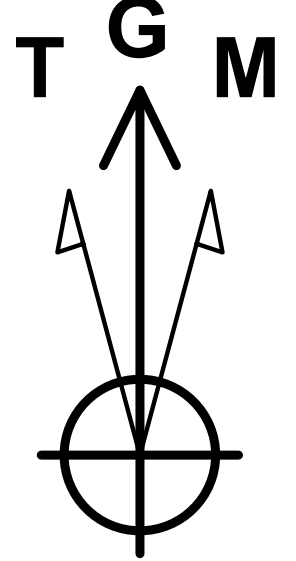
RKB = 20' @ 3998.00usft (AKITA 57)					
3978.00					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	678086.20	690331.20	32.8631401	-103.8480917

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00
3	1075.03	15.50	295.04	1065.61	44.09	-94.41	2.00	-94.09
4	4619.25	15.50	295.04	4480.92	444.93	-952.60	0.00	-949.40
5	5546.35	60.00	89.59	5273.25	509.47	-614.88	8.00	-611.22
6	5746.35	60.00	89.59	5373.25	510.69	-441.68	0.00	-438.01
7	6043.56	89.72	89.59	5450.00	512.70	-158.00	10.00	-154.33
8	11123.85	89.72	89.59	5474.76	548.65	4922.10	0.00	4925.90
9	11173.85	89.72	89.59	5475.00	549.00	4972.10	0.00	4975.90

DESIGN TARGET DETAILS

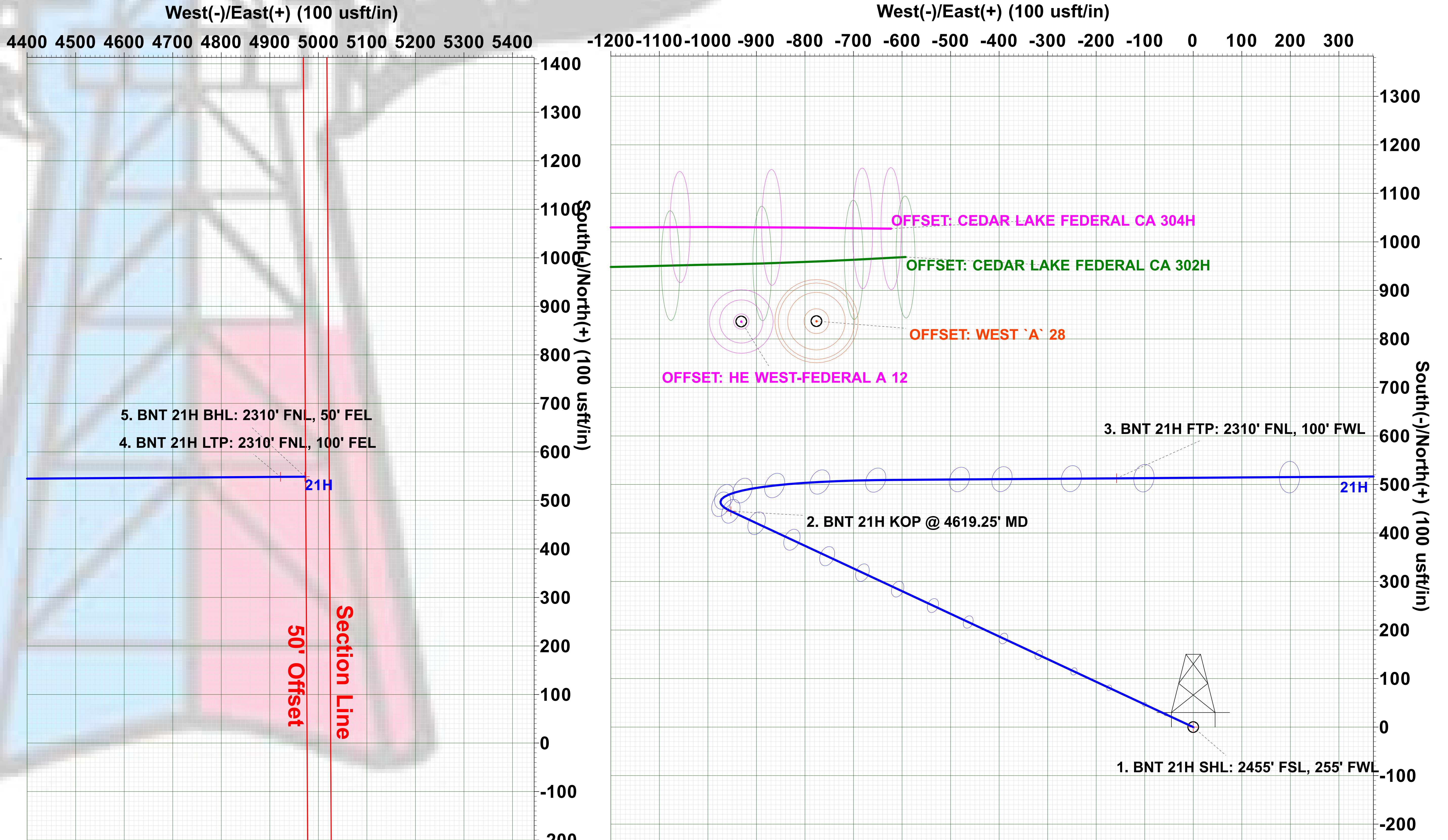
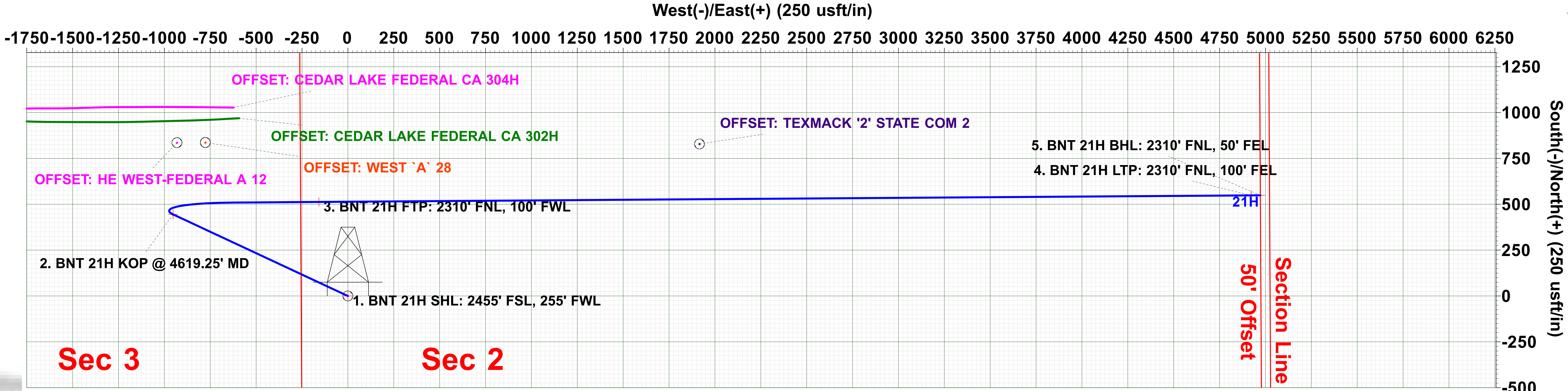
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
1. BNT 21H SHL: 2455' FSL, 255' FWL	0.00	0.00	0.00	678086.20	690331.20	32.8631401	-103.8480917
2. BNT 21H KOP @ 4619.25' MD	4480.92	444.93	-952.60	678531.13	689378.60	32.8643750	-103.8511874
3. BNT 21H FTP: 2310' FNL, 100' FWL	5450.00	512.70	-158.00	678598.90	690173.20	32.8645513	-103.8485986
4. BNT 21H LTP: 2310' FNL, 100' FEL	5474.76	548.70	4922.10	678634.90	695253.30	32.8645850	-103.8320535
5. BNT 21H BHL: 2310' FNL, 50' FEL	5475.00	549.00	4972.10	678635.20	695303.30	32.8645852	-103.8318906



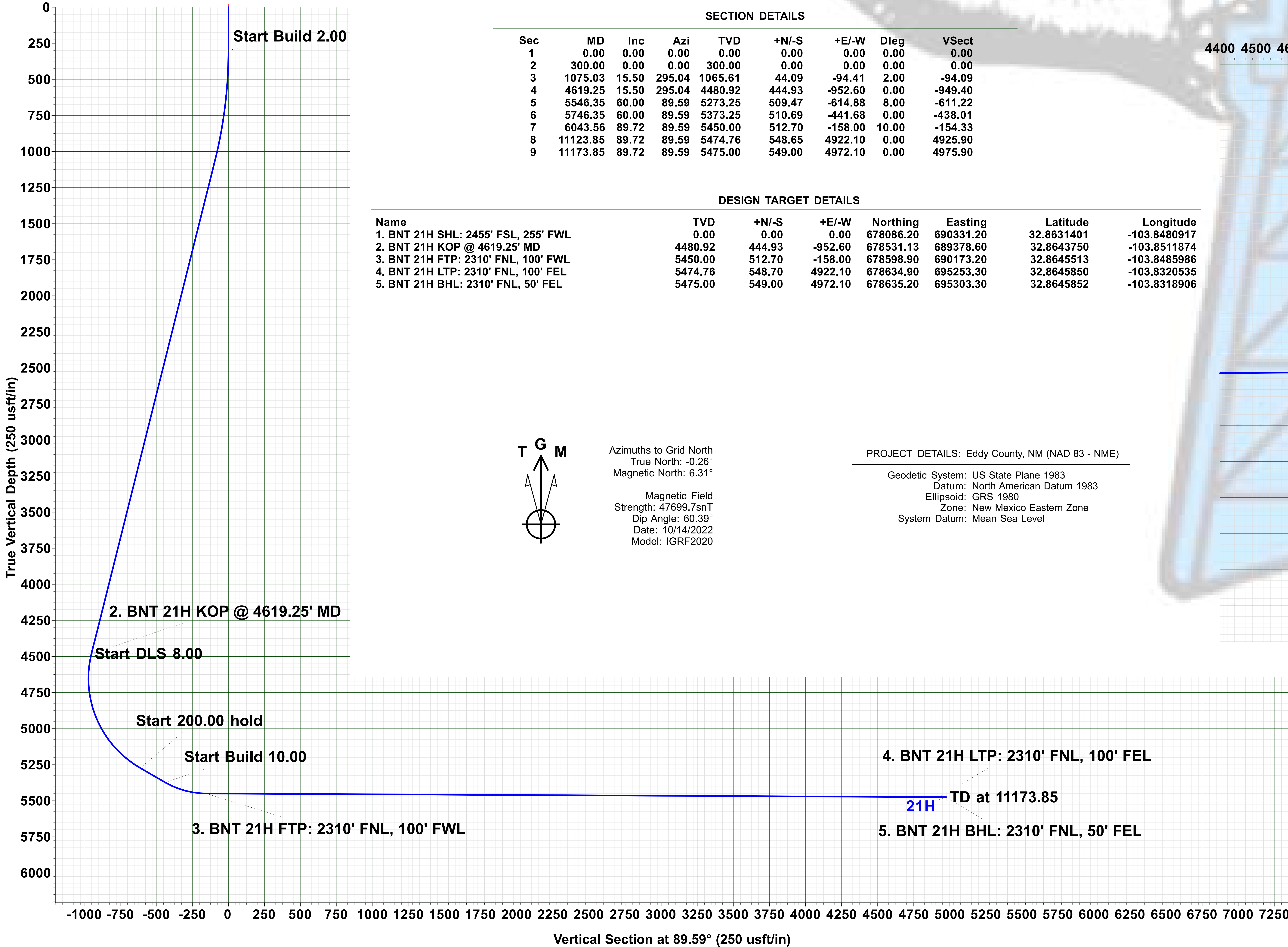
Azimuths to Grid North  
True North: -0.26°  
Magnetic North: 6.31°  
  
Magnetic Field  
Strength: 47699.7snT  
Dip Angle: 60.39°  
Date: 10/14/2022  
Model: IGRF2020

PROJECT DETAILS: Eddy County, NM (NAD 83 - NME)

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: New Mexico Eastern Zone  
System Datum: Mean Sea Level



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







# **Spur Energy Partners, LLC**

**Eddy County, NM (NAD 83 - NME)**

**BIG N TASTY 2 STATE COM**

**21H**

**Wellbore #1**

**Plan: PERMIT**

## **Standard Planning Report**

**14 October, 2022**





## Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 21H
<b>Company:</b>	Spur Energy Partners, LLC	<b>TVD Reference:</b>	RKB = 20' @ 3998.00usft (AKITA 57)
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 20' @ 3998.00usft (AKITA 57)
<b>Site:</b>	BIG N TASTY 2 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	21H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PERMIT		

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

Site		BIG N TASTY 2 STATE COM			
Site Position:		Northing:	679,892.30 usft	Latitude:	32.8681115
From:	Map	Easting:	689,755.20 usft	Longitude:	-103.8499406
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.262

Well	21H					
Well Position	+N/-S	-1,806.10 usft	Northing:	678,086.20 usft	Latitude:	32.8631401
	+E/-W	576.00 usft	Easting:	690,331.20 usft	Longitude:	-103.8480917
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,978.00 usft

Design	PERMIT			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	89.59

<b>Plan Survey Tool Program</b>	<b>Date</b>	10/14/22			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	11,173.85	PERMIT (Wellbore #1)	MWD+IGRF	
				OWSG MWD + IGRF or WM	

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,075.03	15.50	295.04	1,065.61	44.09	-94.41	2.00	2.00	0.00	295.036	
4,619.25	15.50	295.04	4,480.92	444.93	-952.60	0.00	0.00	0.00	0.000	
5,546.35	60.00	89.59	5,273.25	509.47	-614.88	8.00	4.80	16.67	157.251	
5,746.35	60.00	89.59	5,373.25	510.69	-441.68	0.00	0.00	0.00	0.000	
6,043.56	89.72	89.59	5,450.00	512.70	-158.00	10.00	10.00	0.00	0.000	3. BNT 21H FTP: 2
11,123.85	89.72	89.59	5,474.76	548.65	4,922.10	0.00	0.00	0.00	0.000	4. BNT 21H LTP: 2
11,173.85	89.72	89.59	5,475.00	549.00	4,972.10	0.00	0.00	0.00	0.000	5. BNT 21H BHL: 2





## Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 21H
<b>Company:</b>	Spur Energy Partners, LLC	<b>TVD Reference:</b>	RKB = 20' @ 3998.00usft (AKITA 57)
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 20' @ 3998.00usft (AKITA 57)
<b>Site:</b>	BIG N TASTY 2 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	21H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PERMIT		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	295.04	399.98	0.74	-1.58	-1.58	2.00	2.00	0.00
500.00	4.00	295.04	499.84	2.95	-6.32	-6.30	2.00	2.00	0.00
600.00	6.00	295.04	599.45	6.64	-14.22	-14.17	2.00	2.00	0.00
700.00	8.00	295.04	698.70	11.80	-25.26	-25.18	2.00	2.00	0.00
800.00	10.00	295.04	797.47	18.42	-39.43	-39.30	2.00	2.00	0.00
900.00	12.00	295.04	895.62	26.49	-56.72	-56.53	2.00	2.00	0.00
1,000.00	14.00	295.04	993.06	36.01	-77.10	-76.84	2.00	2.00	0.00
1,075.03	15.50	295.04	1,065.61	44.09	-94.41	-94.09	2.00	2.00	0.00
1,100.00	15.50	295.04	1,089.67	46.92	-100.46	-100.12	0.00	0.00	0.00
1,200.00	15.50	295.04	1,186.03	58.23	-124.67	-124.25	0.00	0.00	0.00
1,300.00	15.50	295.04	1,282.40	69.54	-148.88	-148.38	0.00	0.00	0.00
1,400.00	15.50	295.04	1,378.76	80.85	-173.10	-172.51	0.00	0.00	0.00
1,500.00	15.50	295.04	1,475.12	92.16	-197.31	-196.65	0.00	0.00	0.00
1,600.00	15.50	295.04	1,571.49	103.47	-221.53	-220.78	0.00	0.00	0.00
1,700.00	15.50	295.04	1,667.85	114.78	-245.74	-244.91	0.00	0.00	0.00
1,800.00	15.50	295.04	1,764.21	126.09	-269.95	-269.04	0.00	0.00	0.00
1,900.00	15.50	295.04	1,860.57	137.39	-294.17	-293.18	0.00	0.00	0.00
2,000.00	15.50	295.04	1,956.94	148.70	-318.38	-317.31	0.00	0.00	0.00
2,100.00	15.50	295.04	2,053.30	160.01	-342.59	-341.44	0.00	0.00	0.00
2,200.00	15.50	295.04	2,149.66	171.32	-366.81	-365.57	0.00	0.00	0.00
2,300.00	15.50	295.04	2,246.03	182.63	-391.02	-389.71	0.00	0.00	0.00
2,400.00	15.50	295.04	2,342.39	193.94	-415.24	-413.84	0.00	0.00	0.00
2,500.00	15.50	295.04	2,438.75	205.25	-439.45	-437.97	0.00	0.00	0.00
2,600.00	15.50	295.04	2,535.11	216.56	-463.66	-462.10	0.00	0.00	0.00
2,700.00	15.50	295.04	2,631.48	227.87	-487.88	-486.24	0.00	0.00	0.00
2,800.00	15.50	295.04	2,727.84	239.18	-512.09	-510.37	0.00	0.00	0.00
2,900.00	15.50	295.04	2,824.20	250.49	-536.31	-534.50	0.00	0.00	0.00
3,000.00	15.50	295.04	2,920.56	261.80	-560.52	-558.63	0.00	0.00	0.00
3,100.00	15.50	295.04	3,016.93	273.11	-584.73	-582.76	0.00	0.00	0.00
3,200.00	15.50	295.04	3,113.29	284.42	-608.95	-606.90	0.00	0.00	0.00
3,300.00	15.50	295.04	3,209.65	295.73	-633.16	-631.03	0.00	0.00	0.00
3,400.00	15.50	295.04	3,306.02	307.04	-657.38	-655.16	0.00	0.00	0.00
3,500.00	15.50	295.04	3,402.38	318.35	-681.59	-679.29	0.00	0.00	0.00
3,600.00	15.50	295.04	3,498.74	329.66	-705.80	-703.43	0.00	0.00	0.00
3,700.00	15.50	295.04	3,595.10	340.96	-730.02	-727.56	0.00	0.00	0.00
3,800.00	15.50	295.04	3,691.47	352.27	-754.23	-751.69	0.00	0.00	0.00
3,900.00	15.50	295.04	3,787.83	363.58	-778.45	-775.82	0.00	0.00	0.00
4,000.00	15.50	295.04	3,884.19	374.89	-802.66	-799.96	0.00	0.00	0.00
4,100.00	15.50	295.04	3,980.56	386.20	-826.87	-824.09	0.00	0.00	0.00
4,200.00	15.50	295.04	4,076.92	397.51	-851.09	-848.22	0.00	0.00	0.00
4,300.00	15.50	295.04	4,173.28	408.82	-875.30	-872.35	0.00	0.00	0.00
4,400.00	15.50	295.04	4,269.64	420.13	-899.51	-896.49	0.00	0.00	0.00
4,500.00	15.50	295.04	4,366.01	431.44	-923.73	-920.62	0.00	0.00	0.00
4,600.00	15.50	295.04	4,462.37	442.75	-947.94	-944.75	0.00	0.00	0.00
4,619.25	15.50	295.04	4,480.92	444.93	-952.60	-949.40	0.00	0.00	0.00
4,650.00	13.27	299.18	4,510.70	448.39	-959.41	-956.17	8.00	-7.27	13.49
4,700.00	9.86	309.76	4,559.69	453.92	-967.71	-964.44	8.00	-6.82	21.15
4,750.00	7.09	329.71	4,609.15	459.33	-972.56	-969.25	8.00	-5.54	39.91
4,800.00	5.93	4.13	4,658.84	464.57	-973.93	-970.58	8.00	-2.31	68.84
4,850.00	7.21	37.87	4,708.53	469.63	-971.81	-968.43	8.00	2.56	67.47



## Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 21H
<b>Company:</b>	Spur Energy Partners, LLC	<b>TVD Reference:</b>	RKB = 20' @ 3998.00usft (AKITA 57)
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 20' @ 3998.00usft (AKITA 57)
<b>Site:</b>	BIG N TASTY 2 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	21H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PERMIT		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,900.00	10.04	57.09	4,757.97	474.47	-966.23	-962.81	8.00	5.65	38.45
4,950.00	13.47	67.32	4,806.92	479.09	-957.19	-953.74	8.00	6.86	20.46
5,000.00	17.14	73.35	4,855.14	483.45	-944.75	-941.27	8.00	7.35	12.06
5,050.00	20.94	77.27	4,902.40	487.53	-928.97	-925.46	8.00	7.58	7.85
5,100.00	24.79	80.03	4,948.46	491.31	-909.93	-906.39	8.00	7.71	5.52
5,150.00	28.68	82.09	4,993.11	494.78	-887.71	-884.15	8.00	7.78	4.11
5,200.00	32.60	83.68	5,036.12	497.91	-862.43	-858.84	8.00	7.83	3.20
5,250.00	36.53	84.97	5,077.29	500.70	-834.21	-830.60	8.00	7.87	2.58
5,300.00	40.48	86.04	5,116.41	503.13	-803.18	-799.56	8.00	7.89	2.14
5,350.00	44.43	86.95	5,153.29	505.18	-769.50	-765.87	8.00	7.91	1.82
5,400.00	48.39	87.74	5,187.76	506.85	-733.33	-729.69	8.00	7.92	1.58
5,450.00	52.35	88.44	5,219.65	508.13	-694.85	-691.20	8.00	7.93	1.40
5,500.00	56.32	89.06	5,248.80	509.01	-654.25	-650.59	8.00	7.93	1.25
5,546.35	60.00	89.59	5,273.25	509.47	-614.88	-611.22	8.00	7.94	1.15
5,600.00	60.00	89.59	5,300.07	509.80	-568.42	-564.76	0.00	0.00	0.00
5,700.00	60.00	89.59	5,350.07	510.41	-481.82	-478.16	0.00	0.00	0.00
5,746.35	60.00	89.59	5,373.25	510.69	-441.68	-438.01	0.00	0.00	0.00
5,750.00	60.36	89.59	5,375.06	510.72	-438.52	-434.85	10.00	10.00	0.00
5,800.00	65.36	89.59	5,397.86	511.03	-394.03	-390.37	10.00	10.00	0.00
5,850.00	70.36	89.59	5,416.69	511.36	-347.74	-344.07	10.00	10.00	0.00
5,900.00	75.36	89.59	5,431.42	511.70	-299.97	-296.30	10.00	10.00	0.00
5,950.00	80.36	89.59	5,441.92	512.04	-251.11	-247.43	10.00	10.00	0.00
6,000.00	85.36	89.59	5,448.13	512.39	-201.51	-197.84	10.00	10.00	0.00
6,043.56	89.72	89.59	5,450.00	512.70	-158.00	-154.33	10.00	10.00	0.00
6,100.00	89.72	89.59	5,450.28	513.10	-101.56	-97.89	0.00	0.00	0.00
6,200.00	89.72	89.59	5,450.76	513.81	-1.57	2.11	0.00	0.00	0.00
6,300.00	89.72	89.59	5,451.25	514.51	98.43	102.11	0.00	0.00	0.00
6,400.00	89.72	89.59	5,451.74	515.22	198.43	202.11	0.00	0.00	0.00
6,500.00	89.72	89.59	5,452.22	515.93	298.42	302.11	0.00	0.00	0.00
6,600.00	89.72	89.59	5,452.71	516.64	398.42	402.11	0.00	0.00	0.00
6,700.00	89.72	89.59	5,453.20	517.34	498.41	502.10	0.00	0.00	0.00
6,800.00	89.72	89.59	5,453.69	518.05	598.41	602.10	0.00	0.00	0.00
6,900.00	89.72	89.59	5,454.17	518.76	698.41	702.10	0.00	0.00	0.00
7,000.00	89.72	89.59	5,454.66	519.47	798.40	802.10	0.00	0.00	0.00
7,100.00	89.72	89.59	5,455.15	520.17	898.40	902.10	0.00	0.00	0.00
7,200.00	89.72	89.59	5,455.64	520.88	998.40	1,002.10	0.00	0.00	0.00
7,300.00	89.72	89.59	5,456.12	521.59	1,098.39	1,102.10	0.00	0.00	0.00
7,400.00	89.72	89.59	5,456.61	522.30	1,198.39	1,202.10	0.00	0.00	0.00
7,500.00	89.72	89.59	5,457.10	523.01	1,298.39	1,302.09	0.00	0.00	0.00
7,600.00	89.72	89.59	5,457.58	523.71	1,398.38	1,402.09	0.00	0.00	0.00
7,700.00	89.72	89.59	5,458.07	524.42	1,498.38	1,502.09	0.00	0.00	0.00
7,800.00	89.72	89.59	5,458.56	525.13	1,598.37	1,602.09	0.00	0.00	0.00
7,900.00	89.72	89.59	5,459.05	525.84	1,698.37	1,702.09	0.00	0.00	0.00
8,000.00	89.72	89.59	5,459.53	526.54	1,798.37	1,802.09	0.00	0.00	0.00
8,100.00	89.72	89.59	5,460.02	527.25	1,898.36	1,902.09	0.00	0.00	0.00
8,200.00	89.72	89.59	5,460.51	527.96	1,998.36	2,002.09	0.00	0.00	0.00
8,300.00	89.72	89.59	5,461.00	528.67	2,098.36	2,102.09	0.00	0.00	0.00
8,400.00	89.72	89.59	5,461.48	529.37	2,198.35	2,202.08	0.00	0.00	0.00
8,500.00	89.72	89.59	5,461.97	530.08	2,298.35	2,302.08	0.00	0.00	0.00
8,600.00	89.72	89.59	5,462.46	530.79	2,398.34	2,402.08	0.00	0.00	0.00
8,700.00	89.72	89.59	5,462.95	531.50	2,498.34	2,502.08	0.00	0.00	0.00
8,800.00	89.72	89.59	5,463.43	532.20	2,598.34	2,602.08	0.00	0.00	0.00
8,900.00	89.72	89.59	5,463.92	532.91	2,698.33	2,702.08	0.00	0.00	0.00
9,000.00	89.72	89.59	5,464.41	533.62	2,798.33	2,802.08	0.00	0.00	0.00



## Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 21H
<b>Company:</b>	Spur Energy Partners, LLC	<b>TVD Reference:</b>	RKB = 20' @ 3998.00usft (AKITA 57)
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 20' @ 3998.00usft (AKITA 57)
<b>Site:</b>	BIG N TASTY 2 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	21H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PERMIT		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,100.00	89.72	89.59	5,464.89	534.33	2,898.33	2,902.08	0.00	0.00	0.00	
9,200.00	89.72	89.59	5,465.38	535.03	2,998.32	3,002.07	0.00	0.00	0.00	
9,300.00	89.72	89.59	5,465.87	535.74	3,098.32	3,102.07	0.00	0.00	0.00	
9,400.00	89.72	89.59	5,466.36	536.45	3,198.32	3,202.07	0.00	0.00	0.00	
9,500.00	89.72	89.59	5,466.84	537.16	3,298.31	3,302.07	0.00	0.00	0.00	
9,600.00	89.72	89.59	5,467.33	537.86	3,398.31	3,402.07	0.00	0.00	0.00	
9,700.00	89.72	89.59	5,467.82	538.57	3,498.30	3,502.07	0.00	0.00	0.00	
9,800.00	89.72	89.59	5,468.31	539.28	3,598.30	3,602.07	0.00	0.00	0.00	
9,900.00	89.72	89.59	5,468.79	539.99	3,698.30	3,702.07	0.00	0.00	0.00	
10,000.00	89.72	89.59	5,469.28	540.69	3,798.29	3,802.07	0.00	0.00	0.00	
10,100.00	89.72	89.59	5,469.77	541.40	3,898.29	3,902.06	0.00	0.00	0.00	
10,200.00	89.72	89.59	5,470.25	542.11	3,998.29	4,002.06	0.00	0.00	0.00	
10,300.00	89.72	89.59	5,470.74	542.82	4,098.28	4,102.06	0.00	0.00	0.00	
10,400.00	89.72	89.59	5,471.23	543.52	4,198.28	4,202.06	0.00	0.00	0.00	
10,500.00	89.72	89.59	5,471.72	544.23	4,298.27	4,302.06	0.00	0.00	0.00	
10,600.00	89.72	89.59	5,472.20	544.94	4,398.27	4,402.06	0.00	0.00	0.00	
10,700.00	89.72	89.59	5,472.69	545.65	4,498.27	4,502.06	0.00	0.00	0.00	
10,800.00	89.72	89.59	5,473.18	546.35	4,598.26	4,602.06	0.00	0.00	0.00	
10,900.00	89.72	89.59	5,473.67	547.06	4,698.26	4,702.05	0.00	0.00	0.00	
11,000.00	89.72	89.59	5,474.15	547.77	4,798.26	4,802.05	0.00	0.00	0.00	
11,100.00	89.72	89.59	5,474.64	548.48	4,898.25	4,902.05	0.00	0.00	0.00	
11,123.85	89.72	89.59	5,474.76	548.65	4,922.10	4,925.90	0.00	0.00	0.00	
11,173.85	89.72	89.59	5,475.00	549.00	4,972.10	4,975.90	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	
1. BNT 21H SHL: 245 - hit/miss target - Shape - Point	0.00	0.00	0.00	0.00	0.00	678,086.20	690,331.20	32.8631401	-103.8480917	
2. BNT 21H KOP @ 4 - plan hits target center - Point	0.00	0.00	4,480.92	444.93	-952.60	678,531.12	689,378.59	32.8643750	-103.8511874	
3. BNT 21H FTP: 231 - plan hits target center - Point	0.00	0.00	5,450.00	512.70	-158.00	678,598.90	690,173.20	32.8645513	-103.8485986	
4. BNT 21H LTP: 231 - plan misses target center by 0.05usft at 11123.85usft MD (5474.76 TVD, 548.65 N, 4922.10 E) - Point	0.00	0.01	5,474.76	548.70	4,922.10	678,634.90	695,253.30	32.8645851	-103.8320534	
5. BNT 21H BHL: 231 - plan hits target center - Point	0.00	0.00	5,475.00	549.00	4,972.10	678,635.20	695,303.30	32.8645852	-103.8318906	

## 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: 2392 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 South Pad**

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

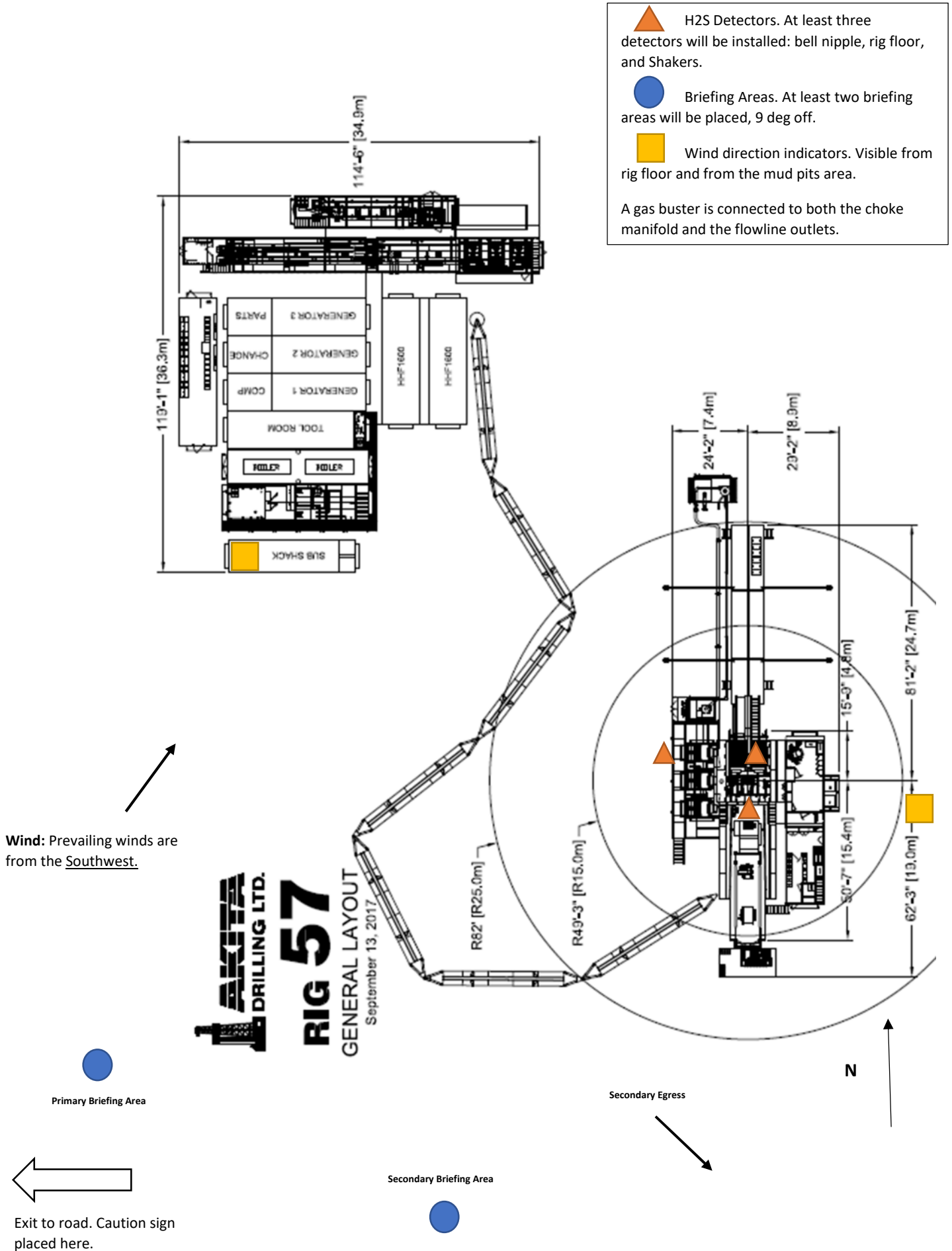
1. Escape

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.





## **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	

Medical Facilities		
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
Law Enforcement - Sheriff		
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 Sherri's Department	Eunice	575-384-2020
Lea County Sherri's Department	Hobbs	575-393-2515
Lea County Sherri'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
Law Enforcement - Police		
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 H<sub>2</sub>S exposure.**

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

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

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

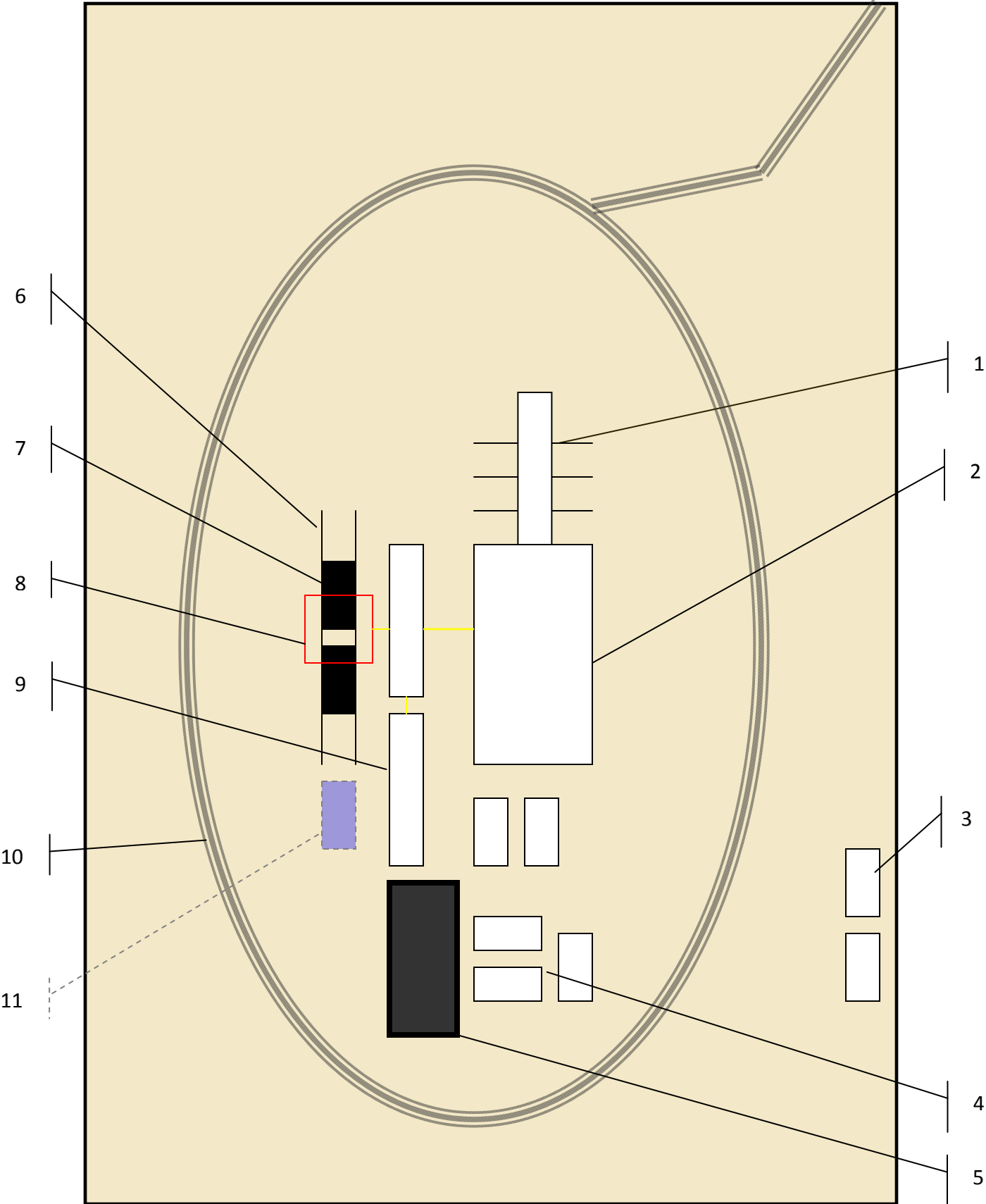
FIR FEDERAL TNK BTY	IVAR THE BONELESS FED 11H - BATTERY
FIRECRACKER STATE TB	JC FEDERAL 13 TNK BTY
FLEMMING STATE OIL BATTERY	JC FEDERAL 2 (SOUR) TNK BTY
FOLK FEDERAL B TNK BTY	JC FEDERAL 27 TNK BTY
FOLK FEDERAL TNK BTY	JENKINS B FEDERAL TNK BTY
FOLK STATE TANK BATTERY	JG STATE 16 1 TANK BATTERY
FORAN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

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

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



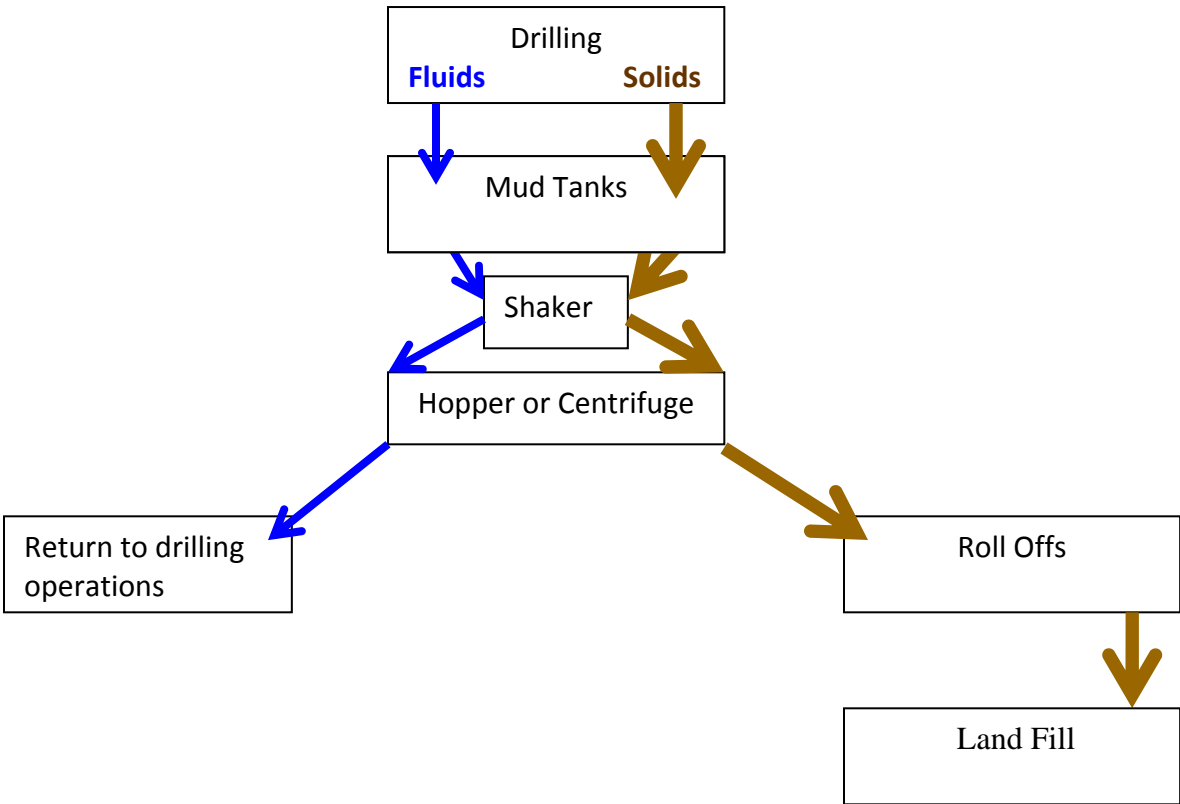
**PERMITS WEST, INC.**  
PROVIDING PERMITS for LAND USERS  
37Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120





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  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 247809

**CONDITIONS**

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 247809
	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	8/4/2023
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	8/4/2023
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	8/4/2023
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	8/4/2023
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	8/4/2023