

**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**

Form C-101

August 1, 2011

Permit 311782

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

1. Operator Name and Address Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024		2. OGRID Number 328947
		3. API Number 30-015-49363
4. Property Code 326714	5. Property Name HALBERD 27 STATE COM	6. Well No. 090H

**7. Surface Location**

UL - Lot M	Section 26	Township 17S	Range 28E	Lot Idn	Feet From 1003	N/S Line S	Feet From 669	E/W Line W	County Eddy
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**8. Proposed Bottom Hole Location**

UL - Lot M	Section 27	Township 17S	Range 28E	Lot Idn M	Feet From 1075	N/S Line S	Feet From 50	E/W Line W	County Eddy
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**9. Pool Information**

ARTESIA; GLORIETA-YESO (O)	96830
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**Additional Well Information**

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3675
16. Multiple N	17. Proposed Depth 10428	18. Formation Yeso	19. Contractor	20. Spud Date 7/26/2022
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12.25	9.625	36	1200	353	0
Prod	8.75	7	32	5100	1647	0
Prod	8.75	5.5	20	10428	1647	0

**Casing/Cement Program: Additional Comments**

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**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5	5000	Shaffer

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable.	<b>OIL CONSERVATION DIVISION</b>	
Signature:		
Printed Name: Electronically filed by Sarah Chapman	Approved By: Katherine Pickford	
Title: Regulatory Director	Title: Geoscientist	
Email Address: schapman@spurenergy.com	Approved Date: 3/14/2022	Expiration Date: 3/14/2024
Date: 3/10/2022	Phone: 832-930-8613	Conditions of Approval Attached

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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- 49363</b>	<sup>2</sup> Pool Code <b>96830</b>	<sup>3</sup> Pool Name <b>ARTESIA; GLORIETA-YESO</b>
<sup>4</sup> Property Code <b>326714</b>	<sup>5</sup> Property Name <b>HALBERD 27 STATE COM</b>	<sup>6</sup> Well Number <b>90H</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>3675'</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>M</b>	<b>26</b>	<b>17S</b>	<b>28E</b>		<b>1003</b>	<b>SOUTH</b>	<b>669</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>M</b>	<b>27</b>	<b>17S</b>	<b>28E</b>		<b>1075</b>	<b>SOUTH</b>	<b>50</b>	<b>WEST</b>	<b>EDDY</b>

<sup>12</sup> Dedicated Acres <b>160</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

<p><sup>16</sup> <b>GEODETIC DATA</b> NAD 83 GRID - NM EAST</p> <p><b>SURFACE LOCATION (SL)</b> N: 655333.1 - E: 596653.6 LAT: 32.8014116° N LONG: 104.1533040° W</p> <p><b>FIRST TAKE POINT (FTP)</b> 1075' FSL &amp; 100' FEL - SEC 27 N: 655371.5 - E: 595885.8 LAT: 32.8015209° N LONG: 104.1558027° W</p> <p><b>LAST TAKE POINT (LTP)</b> 1075' FSL &amp; 100' FWL - SEC 27 N: 655310.8 - E: 590853.1 LAT: 32.8013762° N LONG: 104.1721823° W</p> <p><b>BOTTOM HOLE (BH)</b> N: 655310.2 - E: 590803.1 LAT: 32.8013747° N LONG: 104.1723450° W</p> <p><b>CORNER DATA</b> NAD 83 GRID - NM EAST</p> <p>A: FOUND BRASS CAP "1941" N: 654235.0 - E: 590741.9</p> <p>B: FOUND BRASS CAP "1941" N: 656846.0 - E: 590769.0</p> <p>C: FOUND BRASS CAP "1941" N: 659457.7 - E: 590794.9</p> <p>D: FOUND BRASS CAP "1941" N: 659466.8 - E: 593406.4</p> <p>E: FOUND BRASS CAP "1941" N: 659475.1 - E: 596017.9</p> <p>F: FOUND BRASS CAP "1941" N: 659675.9 - E: 598617.6</p> <p>G: FOUND BRASS CAP "1941" N: 659870.2 - E: 601205.0</p> <p>H: FOUND BRASS CAP "1941" N: 657214.4 - E: 601209.0</p> <p>I: FOUND BRASS CAP "1941" N: 654552.6 - E: 601197.1</p> <p>J: FOUND BRASS CAP "1941" N: 654424.1 - E: 598586.6</p> <p>K: FOUND BRASS CAP "1941" N: 654298.0 - E: 595977.3</p> <p>L: FOUND BRASS CAP "1941" N: 654266.7 - E: 593360.1</p> <p>M: FOUND BRASS CAP "1941" N: 656886.5 - E: 595997.7</p>	<p><b><sup>17</sup> OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Sarah Chapman</i> 03/01/2022 Signature Date <b>SARAH CHAPMAN</b> Printed Name <b>SCHAPMAN@SPURENERGY.COM</b> E-mail Address</p> <p><b><sup>18</sup> SURVEYOR CERTIFICATION</b> I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p><b>12/28/21</b> Date of Survey Signature and Seal of Professional Surveyor  <b>19680</b> Certificate Number <b>LS21121329</b></p>
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**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form APD Conditions

Permit 311782

**PERMIT CONDITIONS OF APPROVAL**

Operator Name and Address: Spur Energy Partners LLC [328947] 9655 Katy Freeway Houston, TX 77024	API Number: 30-015-49363
	Well: HALBERD 27 STATE COM #090H

OCD Reviewer	Condition
kpickford	Will require a administrative order for non-standard location prior to placing the well on production
kpickford	Notify OCD 24 hours prior to casing & cement
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104
kpickford	The Operator is to notify NMOCDD by sundry (Form C-103) within ten (10) days of the well being spud
kpickford	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
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing
kpickford	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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Submit Electronically  
Via E-permitting

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

## NATURAL GAS MANAGEMENT PLAN

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

### Section 1 – Plan Description Effective May 25, 2021

**I. Operator:** SPUR ENERGY PARTNERS LLC **OGRID:** 328947 **Date:** 03 / 09 / 2022

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

If Other, please describe: \_\_\_\_\_

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
HALBERD 27 STATE COM 72H	30-015-	M-26-17S-28E	993' FSL 631' FWL	283 BBL/D	468 MCF/D	1695 BBL/D
HALBERD 27 STATE COM 90H	30-015-	M-26-17S-28E	1003' FSL 669' FWL	283 BBL/D	468 MCF/D	1695 BBL/D

**IV. Central Delivery Point Name:** HALBERD SOUTH STATE COM 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
HALBERD 27 STATE COM 72H	30-015-	07/17/2022	07/25/2022	08/13/2022	09/07/2022	09/07/2022
HALBERD 27 STATE COM 90H	30-015-	07/26/2022	08/04/2022	08/13/2022	09/07/2022	09/07/2022

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

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

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

## **Section 2 – Enhanced Plan**

### **EFFECTIVE APRIL 1, 2022**

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

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

#### **IX. Anticipated Natural Gas Production:**

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

#### **X. Natural Gas Gathering System (NGGS):**

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

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

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

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

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

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

### **Section 3 - Certifications**

**Effective May 25, 2021**

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

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

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

***If Operator checks this box, Operator will select one of the following:***

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

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

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

### **Section 4 - Notices**

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

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

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

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

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

Signature:	<i>Sarah Chapman</i>
Printed Name:	SARAH CHAPMAN
Title:	REGULATORY DIRECTOR
E-mail Address:	SCHAPMAN@SPUREENERGY.COM
Date:	03/09/2022
Phone:	832-930-8613
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>	
Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	



# **Spur Energy Partners, LLC**

**Eddy County, NM (NAD 83 - NME)  
HALBERD 27 STATE COM  
90H**

**Wellbore #1**

**Plan: PLAN #2**

## **Standard Planning Report**

**06 March, 2022**





## Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 90H
<b>Company:</b>	Spur Energy Partners, LLC	<b>TVD Reference:</b>	RKB = 20' @ 3695.00usft (AKITA 57)
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 20' @ 3695.00usft (AKITA 57)
<b>Site:</b>	HALBERD 27 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	90H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #2		

<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		HALBERD 27 STATE COM			
Site Position:		Northing:	658,818.90 usft	Latitude:	32.8109953
From:	Map	Easting:	596,124.80 usft	Longitude:	-104.1550059
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.097

Well	90H					
Well Position	+N/-S	-3,485.80 usft	Northing:	655,333.10 usft	Latitude:	32.8014117
	+E/-W	528.80 usft	Easting:	596,653.60 usft	Longitude:	-104.1533041
Position Uncertainty	0.00 usft		Wellhead Elevation:		Ground Level:	3,675.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	02/15/22	6.783	60.316	47,702.66686146

Design	PLAN #2			
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	269.31

<b>Plan Survey Tool Program</b>	<b>Date</b>	03/06/22			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	10,427.85	PLAN #2 (Wellbore #1)	MWD+IFR1+SAG+FDIR	
				OWSG MWD + IFR1 + Sag	

<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	
478.82	3.58	59.65	478.71	2.82	4.81	2.00	2.00	0.00	59.650	
3,776.21	3.58	59.65	3,769.67	106.75	182.32	0.00	0.00	0.00	0.000	
4,828.25	60.00	269.31	4,648.41	119.11	-294.07	6.00	5.36	-14.29	-151.286	
5,028.25	60.00	269.31	4,748.41	117.02	-467.26	0.00	0.00	0.00	0.000	
5,342.34	91.41	269.31	4,825.00	113.40	-767.80	10.00	10.00	0.00	0.000	3. FTP 90H: 1150' F
10,377.83	91.41	269.31	4,701.23	52.69	-5,801.40	0.00	0.00	0.00	0.000	4. LTP 90H: 1150' F
10,427.85	91.41	269.31	4,700.00	52.09	-5,851.40	0.00	0.00	0.00	0.000	5. BHL 90H: 1150' F



## Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 90H
<b>Company:</b>	Spur Energy Partners, LLC	<b>TVD Reference:</b>	RKB = 20' @ 3695.00usft (AKITA 57)
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 20' @ 3695.00usft (AKITA 57)
<b>Site:</b>	HALBERD 27 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	90H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #2		

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
<b>1. SHL 90H: 1003' FSL, 669' FWL</b>									
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	59.65	399.98	0.88	1.51	-1.52	2.00	2.00	0.00
478.82	3.58	59.65	478.71	2.82	4.81	-4.85	2.00	2.00	0.00
500.00	3.58	59.65	499.84	3.49	5.95	-6.00	0.00	0.00	0.00
600.00	3.58	59.65	599.65	6.64	11.34	-11.42	0.00	0.00	0.00
700.00	3.58	59.65	699.45	9.79	16.72	-16.84	0.00	0.00	0.00
800.00	3.58	59.65	799.26	12.94	22.10	-22.26	0.00	0.00	0.00
900.00	3.58	59.65	899.06	16.09	27.49	-27.68	0.00	0.00	0.00
1,000.00	3.58	59.65	998.87	19.25	32.87	-33.10	0.00	0.00	0.00
1,100.00	3.58	59.65	1,098.67	22.40	38.25	-38.52	0.00	0.00	0.00
1,200.00	3.58	59.65	1,198.48	25.55	43.64	-43.94	0.00	0.00	0.00
1,300.00	3.58	59.65	1,298.28	28.70	49.02	-49.36	0.00	0.00	0.00
1,400.00	3.58	59.65	1,398.09	31.85	54.40	-54.78	0.00	0.00	0.00
1,500.00	3.58	59.65	1,497.90	35.01	59.79	-60.20	0.00	0.00	0.00
1,600.00	3.58	59.65	1,597.70	38.16	65.17	-65.62	0.00	0.00	0.00
1,700.00	3.58	59.65	1,697.51	41.31	70.55	-71.05	0.00	0.00	0.00
1,800.00	3.58	59.65	1,797.31	44.46	75.94	-76.47	0.00	0.00	0.00
1,900.00	3.58	59.65	1,897.12	47.61	81.32	-81.89	0.00	0.00	0.00
2,000.00	3.58	59.65	1,996.92	50.77	86.70	-87.31	0.00	0.00	0.00
2,100.00	3.58	59.65	2,096.73	53.92	92.09	-92.73	0.00	0.00	0.00
2,200.00	3.58	59.65	2,196.53	57.07	97.47	-98.15	0.00	0.00	0.00
2,300.00	3.58	59.65	2,296.34	60.22	102.85	-103.57	0.00	0.00	0.00
2,400.00	3.58	59.65	2,396.14	63.37	108.23	-108.99	0.00	0.00	0.00
2,500.00	3.58	59.65	2,495.95	66.53	113.62	-114.41	0.00	0.00	0.00
2,600.00	3.58	59.65	2,595.75	69.68	119.00	-119.83	0.00	0.00	0.00
2,700.00	3.58	59.65	2,695.56	72.83	124.38	-125.25	0.00	0.00	0.00
2,800.00	3.58	59.65	2,795.36	75.98	129.77	-130.67	0.00	0.00	0.00
2,900.00	3.58	59.65	2,895.17	79.13	135.15	-136.09	0.00	0.00	0.00
3,000.00	3.58	59.65	2,994.97	82.29	140.53	-141.51	0.00	0.00	0.00
3,100.00	3.58	59.65	3,094.78	85.44	145.92	-146.94	0.00	0.00	0.00
3,200.00	3.58	59.65	3,194.58	88.59	151.30	-152.36	0.00	0.00	0.00
3,300.00	3.58	59.65	3,294.39	91.74	156.68	-157.78	0.00	0.00	0.00
3,400.00	3.58	59.65	3,394.19	94.89	162.07	-163.20	0.00	0.00	0.00
3,500.00	3.58	59.65	3,494.00	98.04	167.45	-168.62	0.00	0.00	0.00
3,600.00	3.58	59.65	3,593.81	101.20	172.83	-174.04	0.00	0.00	0.00
3,700.00	3.58	59.65	3,693.61	104.35	178.22	-179.46	0.00	0.00	0.00
3,776.21	3.58	59.65	3,769.67	106.75	182.32	-183.59	0.00	0.00	0.00
<b>2. KOP 90H @ 3776.21' MD</b>									
3,800.00	2.42	43.21	3,793.43	107.49	183.30	-184.58	6.00	-4.85	-69.10
3,850.00	2.15	321.40	3,843.40	109.00	183.44	-184.74	6.00	-0.55	-163.62
3,900.00	4.62	290.10	3,893.31	110.42	180.97	-182.28	6.00	4.95	-62.61
3,950.00	7.49	281.50	3,943.03	111.76	175.88	-177.21	6.00	5.74	-17.19
4,000.00	10.43	277.69	3,992.42	113.02	168.20	-169.55	6.00	5.88	-7.62
4,050.00	13.40	275.55	4,041.33	114.18	157.95	-159.31	6.00	5.94	-4.29
4,100.00	16.38	274.17	4,089.65	115.26	145.15	-146.53	6.00	5.96	-2.75
4,150.00	19.36	273.21	4,137.23	116.23	129.84	-131.23	6.00	5.97	-1.92
4,200.00	22.35	272.50	4,183.95	117.11	112.06	-113.46	6.00	5.98	-1.43
4,250.00	25.34	271.95	4,229.68	117.89	91.86	-93.27	6.00	5.98	-1.10
4,300.00	28.34	271.50	4,274.28	118.57	69.30	-70.72	6.00	5.99	-0.88



## Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 90H
<b>Company:</b>	Spur Energy Partners, LLC	<b>TVD Reference:</b>	RKB = 20' @ 3695.00usft (AKITA 57)
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 20' @ 3695.00usft (AKITA 57)
<b>Site:</b>	HALBERD 27 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	90H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #2		

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)
4,350.00	31.33	271.14	4,317.65	119.14	44.43	-45.86	6.00	5.99	-0.73
4,400.00	34.33	270.83	4,359.66	119.60	17.33	-18.77	6.00	5.99	-0.61
4,450.00	37.32	270.57	4,400.20	119.96	-11.93	10.48	6.00	5.99	-0.53
4,500.00	40.32	270.34	4,439.15	120.20	-43.27	41.82	6.00	5.99	-0.46
4,550.00	43.32	270.14	4,476.41	120.34	-76.60	75.15	6.00	5.99	-0.40
4,600.00	46.31	269.96	4,511.87	120.37	-111.84	110.38	6.00	5.99	-0.36
4,650.00	49.31	269.79	4,545.44	120.29	-148.88	147.42	6.00	6.00	-0.33
4,700.00	52.31	269.64	4,577.03	120.10	-187.63	186.17	6.00	6.00	-0.30
4,750.00	55.31	269.51	4,606.56	119.80	-227.98	226.52	6.00	6.00	-0.28
4,800.00	58.31	269.38	4,633.93	119.39	-269.81	268.36	6.00	6.00	-0.26
4,828.25	60.00	269.31	4,648.41	119.11	-294.07	292.61	6.00	6.00	-0.24
4,900.00	60.00	269.31	4,684.29	118.36	-356.20	354.75	0.00	0.00	0.00
5,000.00	60.00	269.31	4,734.29	117.32	-442.79	441.35	0.00	0.00	0.00
5,028.25	60.00	269.31	4,748.41	117.02	-467.26	465.82	0.00	0.00	0.00
5,050.00	62.17	269.31	4,758.93	116.80	-486.29	484.85	10.00	10.00	0.00
5,100.00	67.17	269.31	4,780.31	116.25	-531.47	530.03	10.00	10.00	0.00
5,150.00	72.17	269.31	4,797.67	115.68	-578.34	576.90	10.00	10.00	0.00
5,200.00	77.17	269.31	4,810.88	115.10	-626.54	625.11	10.00	10.00	0.00
5,250.00	82.17	269.31	4,819.84	114.51	-675.71	674.29	10.00	10.00	0.00
5,300.00	87.17	269.31	4,824.48	113.91	-725.48	724.05	10.00	10.00	0.00
5,342.34	91.41	269.31	4,825.00	113.40	-767.80	766.38	10.00	10.00	0.00
<b>3. FTP 90H: 1150' FSL, 100' FEL</b>									
5,343.24	91.41	269.31	4,824.98	113.39	-768.70	767.28	0.00	0.00	0.00
<b>3. FTP 90H: 1075' FSL, 100' FEL</b>									
5,400.00	91.41	269.31	4,823.58	112.70	-825.44	824.02	0.00	0.00	0.00
5,500.00	91.41	269.31	4,821.12	111.50	-925.40	923.99	0.00	0.00	0.00
5,600.00	91.41	269.31	4,818.67	110.29	-1,025.37	1,023.96	0.00	0.00	0.00
5,700.00	91.41	269.31	4,816.21	109.09	-1,125.33	1,123.93	0.00	0.00	0.00
5,800.00	91.41	269.31	4,813.75	107.88	-1,225.29	1,223.90	0.00	0.00	0.00
5,900.00	91.41	269.31	4,811.29	106.68	-1,325.25	1,323.87	0.00	0.00	0.00
6,000.00	91.41	269.31	4,808.83	105.47	-1,425.22	1,423.84	0.00	0.00	0.00
6,100.00	91.41	269.31	4,806.38	104.27	-1,525.18	1,523.81	0.00	0.00	0.00
6,200.00	91.41	269.31	4,803.92	103.06	-1,625.14	1,623.78	0.00	0.00	0.00
6,300.00	91.41	269.31	4,801.46	101.85	-1,725.10	1,723.75	0.00	0.00	0.00
6,400.00	91.41	269.31	4,799.00	100.65	-1,825.07	1,823.72	0.00	0.00	0.00
6,500.00	91.41	269.31	4,796.55	99.44	-1,925.03	1,923.69	0.00	0.00	0.00
6,600.00	91.41	269.31	4,794.09	98.24	-2,024.99	2,023.66	0.00	0.00	0.00
6,700.00	91.41	269.31	4,791.63	97.03	-2,124.95	2,123.63	0.00	0.00	0.00
6,800.00	91.41	269.31	4,789.17	95.83	-2,224.92	2,223.60	0.00	0.00	0.00
6,900.00	91.41	269.31	4,786.71	94.62	-2,324.88	2,323.57	0.00	0.00	0.00
7,000.00	91.41	269.31	4,784.26	93.42	-2,424.84	2,423.54	0.00	0.00	0.00
7,100.00	91.41	269.31	4,781.80	92.21	-2,524.80	2,523.51	0.00	0.00	0.00
7,200.00	91.41	269.31	4,779.34	91.00	-2,624.77	2,623.48	0.00	0.00	0.00
7,300.00	91.41	269.31	4,776.88	89.80	-2,724.73	2,723.45	0.00	0.00	0.00
7,400.00	91.41	269.31	4,774.42	88.59	-2,824.69	2,823.42	0.00	0.00	0.00
7,500.00	91.41	269.31	4,771.97	87.39	-2,924.65	2,923.39	0.00	0.00	0.00
7,600.00	91.41	269.31	4,769.51	86.18	-3,024.62	3,023.36	0.00	0.00	0.00
7,700.00	91.41	269.31	4,767.05	84.98	-3,124.58	3,123.33	0.00	0.00	0.00
7,800.00	91.41	269.31	4,764.59	83.77	-3,224.54	3,223.30	0.00	0.00	0.00
7,900.00	91.41	269.31	4,762.13	82.56	-3,324.50	3,323.27	0.00	0.00	0.00
8,000.00	91.41	269.31	4,759.68	81.36	-3,424.47	3,423.24	0.00	0.00	0.00
8,100.00	91.41	269.31	4,757.22	80.15	-3,524.43	3,523.21	0.00	0.00	0.00
8,200.00	91.41	269.31	4,754.76	78.95	-3,624.39	3,623.18	0.00	0.00	0.00
8,300.00	91.41	269.31	4,752.30	77.74	-3,724.35	3,723.15	0.00	0.00	0.00



## Planning Report



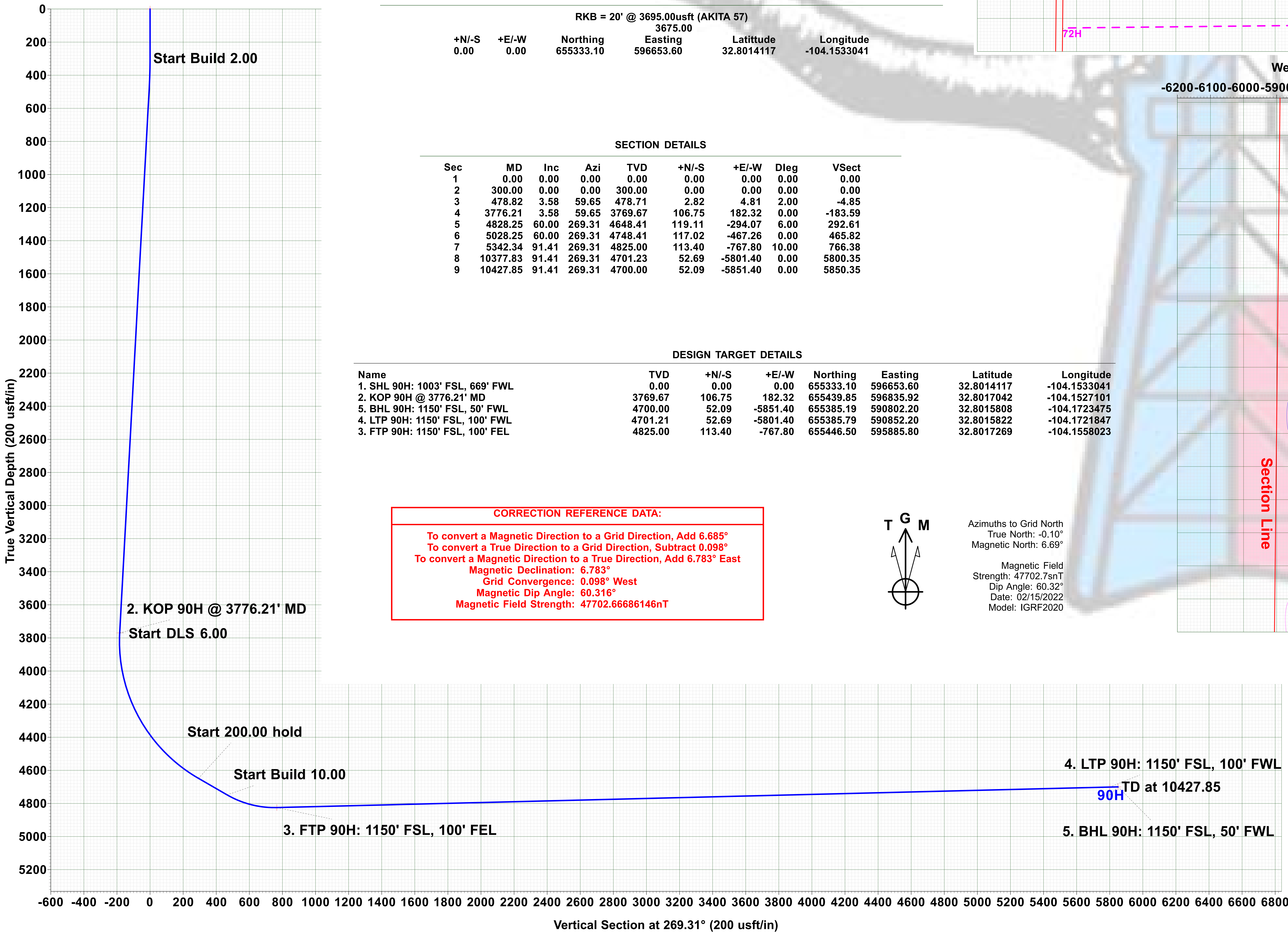
<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 90H
<b>Company:</b>	Spur Energy Partners, LLC	<b>TVD Reference:</b>	RKB = 20' @ 3695.00usft (AKITA 57)
<b>Project:</b>	Eddy County, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 20' @ 3695.00usft (AKITA 57)
<b>Site:</b>	HALBERD 27 STATE COM	<b>North Reference:</b>	Grid
<b>Well:</b>	90H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #2		

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)	
8,400.00	91.41	269.31	4,749.84	76.54	-3,824.32	3,823.12	0.00	0.00	0.00	
8,500.00	91.41	269.31	4,747.39	75.33	-3,924.28	3,923.09	0.00	0.00	0.00	
8,600.00	91.41	269.31	4,744.93	74.13	-4,024.24	4,023.06	0.00	0.00	0.00	
8,700.00	91.41	269.31	4,742.47	72.92	-4,124.20	4,123.03	0.00	0.00	0.00	
8,800.00	91.41	269.31	4,740.01	71.71	-4,224.17	4,223.00	0.00	0.00	0.00	
8,900.00	91.41	269.31	4,737.55	70.51	-4,324.13	4,322.97	0.00	0.00	0.00	
9,000.00	91.41	269.31	4,735.10	69.30	-4,424.09	4,422.94	0.00	0.00	0.00	
9,100.00	91.41	269.31	4,732.64	68.10	-4,524.05	4,522.91	0.00	0.00	0.00	
9,200.00	91.41	269.31	4,730.18	66.89	-4,624.02	4,622.88	0.00	0.00	0.00	
9,300.00	91.41	269.31	4,727.72	65.69	-4,723.98	4,722.85	0.00	0.00	0.00	
9,400.00	91.41	269.31	4,725.26	64.48	-4,823.94	4,822.82	0.00	0.00	0.00	
9,500.00	91.41	269.31	4,722.81	63.28	-4,923.90	4,922.79	0.00	0.00	0.00	
9,600.00	91.41	269.31	4,720.35	62.07	-5,023.87	5,022.76	0.00	0.00	0.00	
9,700.00	91.41	269.31	4,717.89	60.86	-5,123.83	5,122.73	0.00	0.00	0.00	
9,800.00	91.41	269.31	4,715.43	59.66	-5,223.79	5,222.70	0.00	0.00	0.00	
9,900.00	91.41	269.31	4,712.97	58.45	-5,323.75	5,322.66	0.00	0.00	0.00	
10,000.00	91.41	269.31	4,710.52	57.25	-5,423.72	5,422.63	0.00	0.00	0.00	
10,100.00	91.41	269.31	4,708.06	56.04	-5,523.68	5,522.60	0.00	0.00	0.00	
10,200.00	91.41	269.31	4,705.60	54.84	-5,623.64	5,622.57	0.00	0.00	0.00	
10,300.00	91.41	269.31	4,703.14	53.63	-5,723.61	5,722.54	0.00	0.00	0.00	
10,377.83	91.41	269.31	4,701.23	52.69	-5,801.40	5,800.35	0.00	0.00	0.00	
4. LTP 90H: 1075' FSL, 100' FWL - 4. LTP 90H: 1150' FSL, 100' FWL										
10,400.00	91.41	269.31	4,700.68	52.42	-5,823.57	5,822.51	0.00	0.00	0.00	
10,427.85	91.41	269.31	4,700.00	52.09	-5,851.40	5,850.35	0.00	0.00	0.00	
5. BHL 90H: 1075' FSL, 50' FWL - 5. BHL 90H: 1150' FSL, 50' FWL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
1. SHL 90H: 1003' FS - hit/miss target - Shape - Point	0.00	0.00	0.00	0.00	0.00	655,333.10	596,653.60	32.8014117	-104.1533041	
2. KOP 90H @ 3776.1 - plan hits target center - Point	0.00	0.00	3,769.67	106.75	182.32	655,439.85	596,835.92	32.8017042	-104.1527101	
5. BHL 90H: 1150' FS - plan hits target center - Point	0.00	0.00	4,700.00	52.09	-5,851.40	655,385.19	590,802.20	32.8015808	-104.1723474	
4. LTP 90H: 1150' FSL - plan misses target center by 0.02usft at 10377.83usft MD (4701.23 TVD, 52.69 N, -5801.40 E) - Point	0.00	0.00	4,701.21	52.69	-5,801.40	655,385.80	590,852.20	32.8015822	-104.1721847	
3. FTP 90H: 1150' FSL - plan hits target center - Point	0.00	0.00	4,825.00	113.40	-767.80	655,446.50	595,885.80	32.8017269	-104.1558023	



Company: Spur Energy Partners, LLC  
Project: Eddy County, NM (NAD 83 - NME)  
Site: HALBERD 27 STATE COM  
Well: 90H  
Wellbore: Wellbore #1  
Rig: AKITA 57  
Design: PLAN #2 / 21:11, March 06 2022



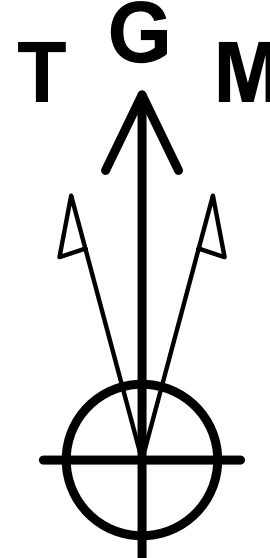
WELL DETAILS: 90H								
RKB = 20' @ 3695.00usft (AKITA 57)								
3675.00								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	655333.10	596653.60	32.8014117	-104.1533041			

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	478.82	3.58	59.65	478.71	2.82	4.81	2.00	-4.85
4	3776.21	3.58	59.65	3769.67	106.75	182.32	0.00	-183.59
5	4828.25	60.00	269.31	4648.41	119.11	-294.07	6.00	292.61
6	5028.25	60.00	269.31	4748.41	117.02	-467.26	0.00	465.82
7	5342.34	91.41	269.31	4825.00	113.40	-767.80	10.00	766.38
8	10377.83	91.41	269.31	4701.23	52.69	-5801.40	0.00	5800.35
9	10427.85	91.41	269.31	4700.00	52.09	-5851.40	0.00	5850.35

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
1. SHL 90H: 1003' FSL, 669' FWL	0.00	0.00	0.00	655333.10	596653.60	32.8014117	-104.1533041	
2. KOP 90H @ 3776.21' MD	3769.67	106.75	182.32	655439.85	596835.92	32.8017042	-104.1527101	
5. BHL 90H: 1150' FSL, 50' FWL	4700.00	52.09	-5851.40	655385.19	590802.20	32.8015808	-104.1723475	
4. LTP 90H: 1150' FSL, 100' FWL	4701.21	52.69	-5801.40	655385.79	590852.20	32.8015822	-104.1721847	
3. FTP 90H: 1150' FSL, 100' FEL	4825.00	113.40	-767.80	655446.50	595885.80	32.8017269	-104.1558023	

**CORRECTION REFERENCE DATA:**

To convert a Magnetic Direction to a Grid Direction, Add 6.685°  
To convert a True Direction to a Grid Direction, Subtract 0.098°  
To convert a Magnetic Direction to a True Direction, Add 6.783° East  
Magnetic Declination: 6.783°  
Grid Convergence: 0.098° West  
Magnetic Dip Angle: 60.316°  
Magnetic Field Strength: 47702.66686146nT



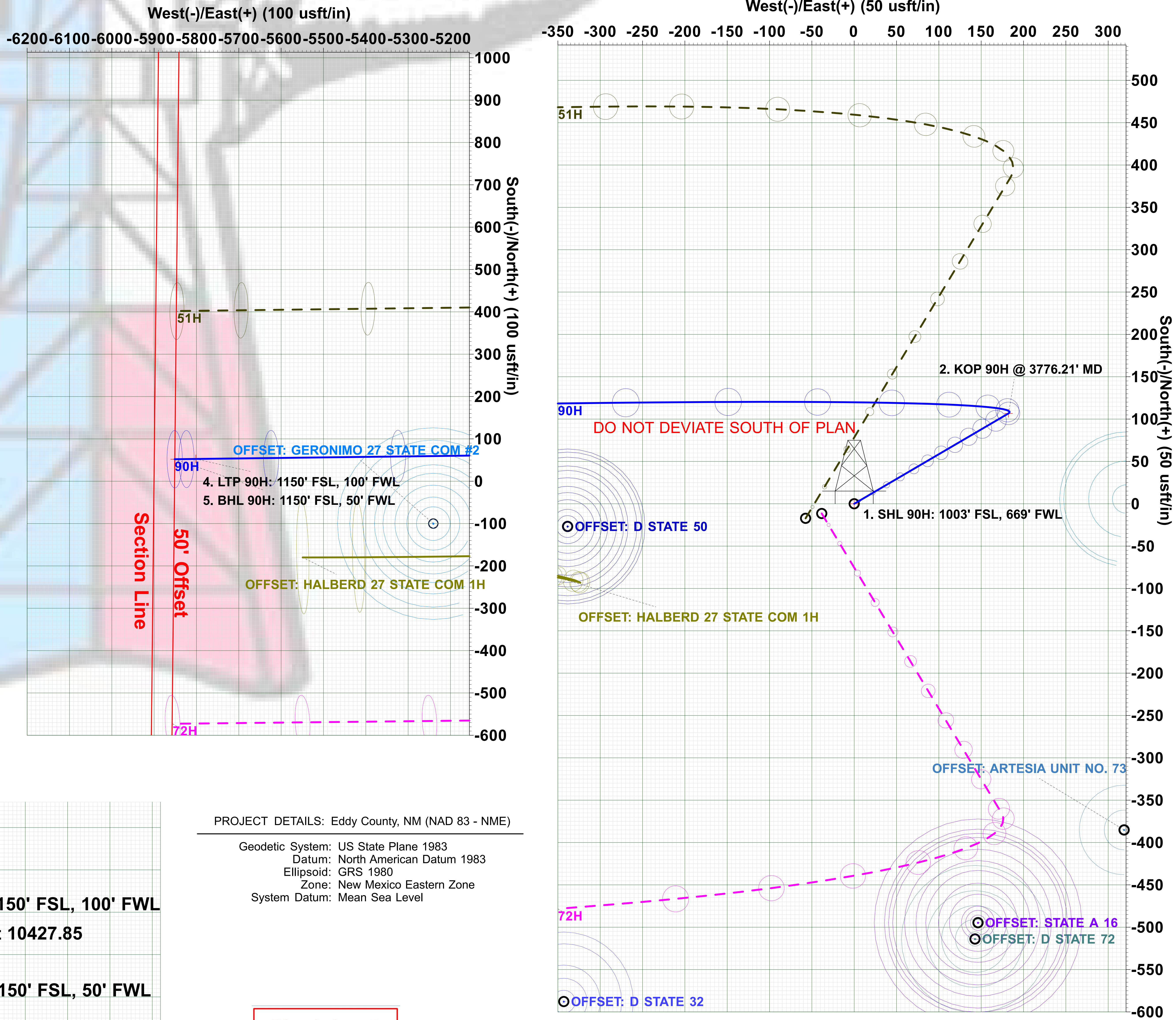
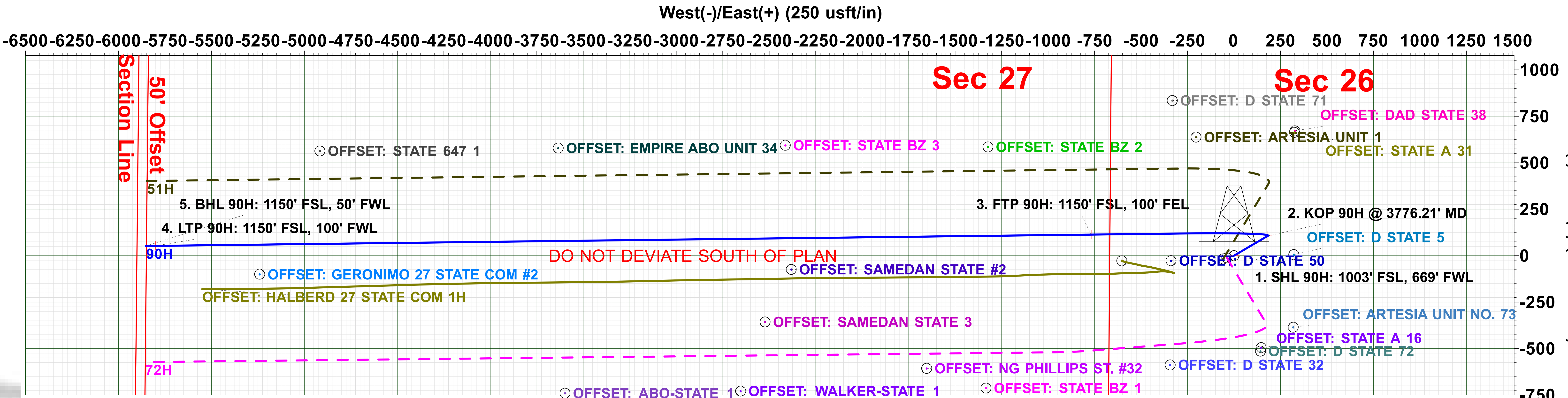
Azimuths to Grid North  
True North: -0.10°  
Magnetic North: 6.69°

Magnetic Field  
Strength: 47702.7nT  
Dip Angle: 60.32°  
Date: 02/15/2022  
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 – Halberd 27 State Com 90H

### 1. Geologic Formations

TVD of Target	4,700'
MD at TD	10,428'

Formation	Depth	Lithology	Expected Fluids
Quaternary	0'	Dolomite, other: Caliche	Useable Water
Tansill	465'	Sandstone, Dolomite	None
Yates	570'	Dolomite, Limestone, Shale, Siltstone	None
Seven Rivers	825'	Dolomite, Limestone	Natural Gas, Oil
Queen	1405'	Sandstone, Dolomite, Anhydrite	Natural Gas, Oil
Grayburg	1825'	Sandstone, Dolomite, Anhydrite	Natural Gas, Oil
San Andres	2130'	Dolomite	Natural Gas, Oil
Glorieta	3615'	Dolomite, Siltstone	Natural Gas, Oil
Yeso	3710'	Dolomite	Natural Gas, Oil

\*H<sub>2</sub>S, water flows, loss of circulation, abnormal pressures, etc.

### 2. Casing Program

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

Hole Size (in)	Casing Interval		Csg. Size (in)	Weight (lbs)	Grade	Conn.	SF	SF Burst	Body SF	Joint SF
	From (ft)	To (ft)					Collapse		Tension	Tension
12.25	0	1200	9.625	36	J-55	BTC	1.125	1.2	1.4	1.4
8.75	0	5100	7	32	L-80	BK-HT	1.125	1.2	1.4	1.4
8.75	5100	10428	5.5	20	L-80	BK-HT	1.125	1.2	1.4	1.4
SF Values will meet or Exceed										

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

**3. Cementing Program**

Casing String	Top (ft)	Bottom (ft)	% Excess
Surface (Lead)	0	950	100%
Surface (Tail)	950	1200	100%
Production (Lead)	0	4100	100%
Production (Tail)	4100	10428	25%

Casing String	# Sks	Wt. (lb/gal)	Yld (ft3/sack)	H2O (gal/sk)	500# Comp. Strength (hours)	Slurry Description
Surface (Lead)	259	12	2.4	13.48	8:12	Clas C Premium Plus Cement
Surface (Tail)	94	13.2	1.87	9.92	6:59	Clas C Premium Plus Cement
Production (Lead)	444	11.4	2.42	15.29	N/A	Clas C Premium Plus Cement
Production (Tail)	1203	13.2	1.56	9.81	N/A	Clas C Premium Plus Cement

**Spur Energy Partners LLC – Halberd 27 State Com 90H****4. Pressure Control Equipment****\*Spur Energy Partners LLC variance for flex hose\***

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

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12.25" Hole	13-5/8"	5M	Annular	✓	70% of working pressure
		5M	Blind Ram	✓	250 psi / 3000 psi
			Pipe Ram	✓	
			Double Ram		
			Other*		
8.75" Hole	13-5/8"	5M	Annular	✓	70% of working pressure
		5M	Blind Ram	✓	250 psi / 3000 psi
			Pipe Ram	✓	
			Double Ram		
			Other*		

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

Condition	Specify what type and where?
BH Pressure at deepest TVD	2234 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	119°F

\*Specify if additional ram is utilized.

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

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

	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.	
Y	Are anchors required by manufacturer?	

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

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

BOP break test under the following conditions:

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

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

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

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

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

**6. Mud Program**

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

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From (ft)	To (ft)				
0	1200	Water-Based Mud	8.6-8.9	32-36	N/C
1200	10428	Water-Based Mud	8.6-8.9	32-36	N/C

What will be used to monitor the loss or gain of fluid?	PVT/PASON/Visual Monitoring
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**Spur Energy Partners LLC – Halberd 27 State Com 90H****7. Logging and Testing Procedures**

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

**8. Drilling Conditions**

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

Hydrogen Sulfide (H <sub>2</sub> S) monitors will be installed prior to drilling out the surface shoe. If H <sub>2</sub> S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H <sub>2</sub> S is present
Y	H <sub>2</sub> S Plan attached

**Total estimated cuttings volume:** 950.5 bbls.

**Spur Energy Partners LLC – Halberd 27 State Com 90H****9. Other facets of operation**

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

## Attachments

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

**10. Company Personnel**

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



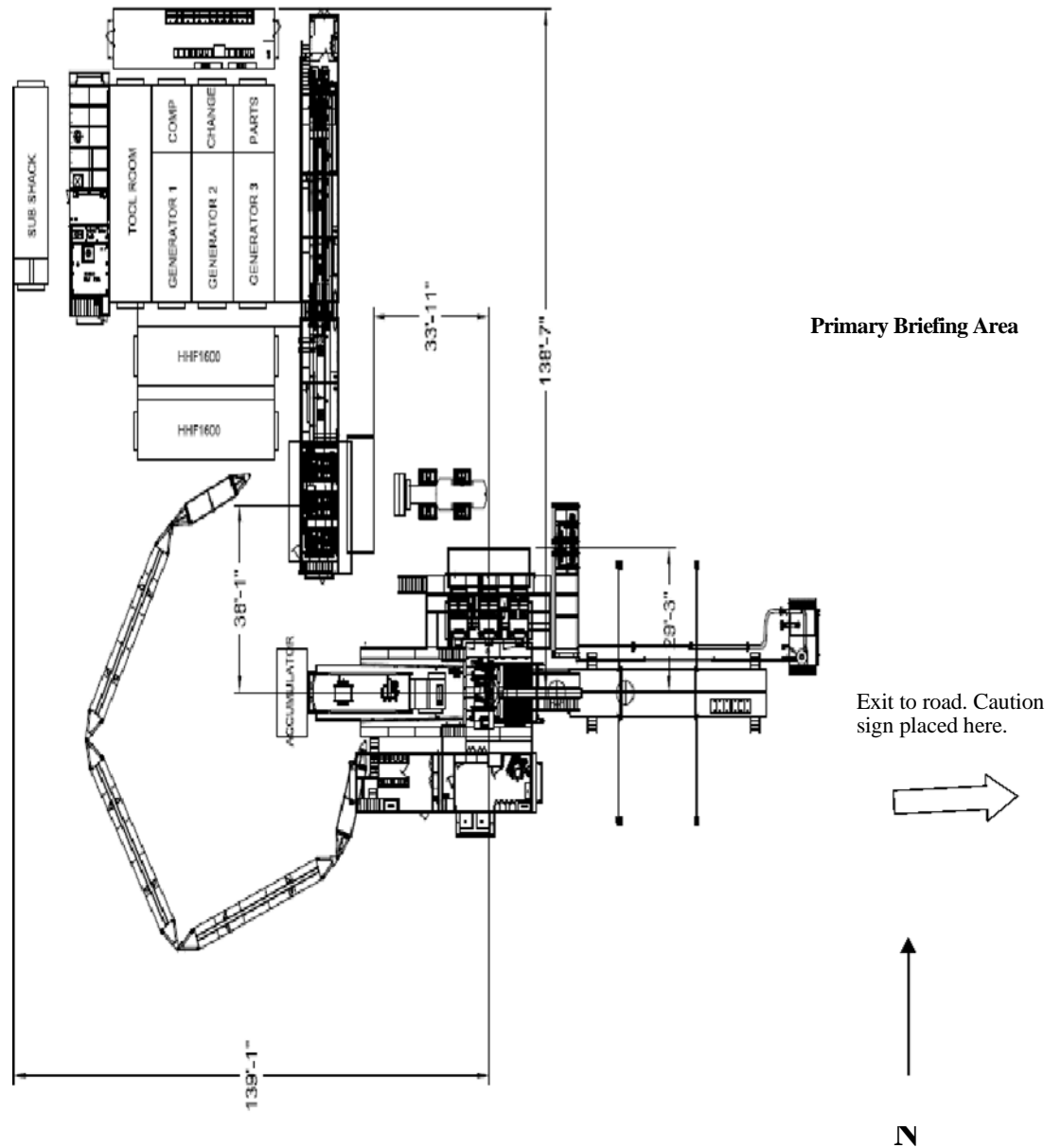
## **Permian Drilling Hydrogen Sulfide Drilling Operations Plan Halberd 27 State Com 90H**

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

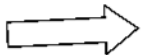
### **1. Escape**

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

Secondary Briefing Area



Exit to road. Caution sign placed here.



N

Secondary Egress



WIND: Prevailing winds are from the Southwest

