Form 3160-3 (June 2015)	une 2015) UNITED STATES					PPROVED 1004-0137 ary 31, 2018		
	DEPARTMENT OF THE I BUREAU OF LAND MAN	NTERIOF			5. Lease Serial No.	5. Lease Serial No. NML C0026874F		
APPL	ICATION FOR PERMIT TO D				6. If Indian, Allotee or Tribe Name			
1a. Type of work:		EENTER			7. If Unit or CA Agreement, Name and No.			
1b. Type of Well:	✓ Oil Well Gas Well O	ther			8. Lease Name and We	ell No		
1c. Type of Completion:	: Hydraulic Fracturing 🖌 Si	RED LAKE 33 FEDE						
2. Name of Operator SPUR ENERGY PAR	TNERS LLC				9. API Well No. 30-015-4950			
3a. Address 9655 KATY FREEWA	Y, SUITE 500 Houston TX 77024	3b. Phone (832)930-	No. (include area coa 8548	le)	10. Field and Pool, or RED LAKE / GLORIE			
At surface NENW	port location clearly and in accordance v 7 / 793 FNL / 1521 FWL / LAT 32.794 one NWNW / 1485 FNL / 50 FWL / L	304 / LONG	G -104.279957	089188	11. Sec., T. R. M. or B SEC 33 / T17S / R27	•		
14. Distance in miles and direction from nearest town or post office*				12. County or Parish EDDY	13. State			
15. Distance from propo	nced*	16 No of	acres in lease	17 Spaci	cing Unit dedicated to this well			
location to nearest property or lease line (Also to nearest drig.	e, ft.	10. 100 01	16. No of acres in lease 17. Spacin 240					
18. Distance from proposed location* 19 to nearest well, drilling, completed, and the second			ed Depth / 10764 feet	20. BLM	I/BIA Bond No. in file			
21. Elevations (Show wh 3498 feet	nether DF, KDB, RT, GL, etc.)	22. Appro: 02/01/202	ximate date work will 2	start*	23. Estimated duration 10 days			
		24. Atta	chments					
The following, complete (as applicable)	d in accordance with the requirements of	Onshore O	il and Gas Order No.	1, and the H	Iydraulic Fracturing rule	e per 43 CFR 3162.3-3		
<ol> <li>Well plat certified by a</li> <li>A Drilling Plan.</li> </ol>			Item 20 above).	ne operatior	as unless covered by an e	xisting bond on file (see		
	f the location is on National Forest System with the appropriate Forest Service Office	· · · · ·	1		rmation and/or plans as m	ay be requested by the		
25. Signature (Electronic Submissio	n)		e (Printed/Typed) AH CHAPMAN / Ph	: (832)930		ate 4/19/2019		
Title Regulatory Directory								
Approved by (Signature) (Electronic Submission)			e <i>(Printed/Typed)</i> y Layton / Ph: (575)	234-5959		ate 4/22/2022		
Title Assistant Field Manag	ger Lands & Minerals	Offic CAR	ce ISBAD					
Application approval do applicant to conduct ope Conditions of approval, i		t holds lega	l or equitable title to t	hose rights	in the subject lease whic	h would entitle the		
	1001 and Title 43 U.S.C. Section 1212, m false, fictitious or fraudulent statements			0,		department or agency		



(Continued on page 2)

1625 N. French Dr., Hobbs, NM 88240

811 S. First St., Artesia, NM 88210

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

District 1

District II

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

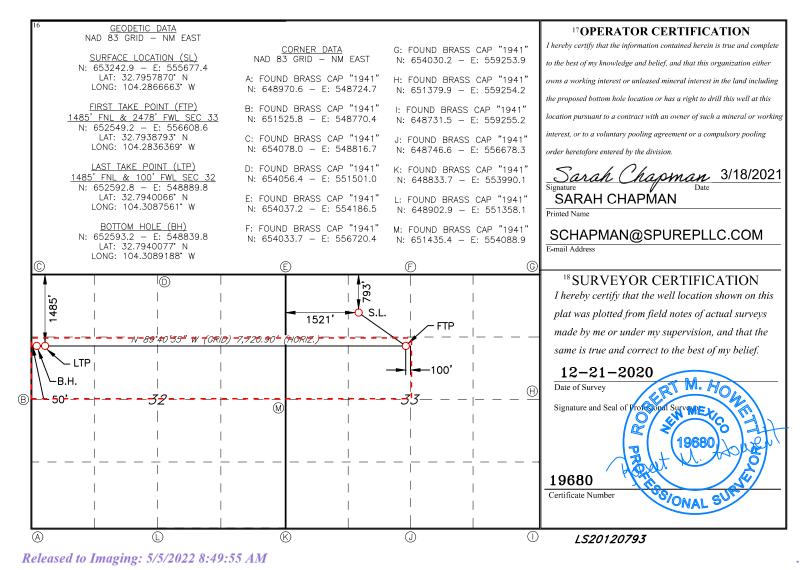
Phone: (575) 748-1283 Fax: (575) 748-9720 **District Office** 1220 South St. Francis Dr. District III 1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 Santa Fe, NM 87505 AMENDED REPORT District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462 WELL LOCATION AND ACREAGE DEDICATION PLAT 1 API Number 2 Pool Code <sup>3</sup> Pool Name 30-015- 49504 51120 RED LAKE; GLORIETA-YESO 6 Well Number 4Property Code 5 Property Name **RED LAKE 33 FEDERAL COM** 332720 14H 7 OGRID NO. 8 Operator Name 9Elevation SPUR ENERGY PARTNERS LLC. 3498' 328947 <sup>10</sup> Surface Location UL or lot no. Lot Idn Feet from the North/South line Feet From the East/West line Township County Section Range С 17S 793 NORTH 33 27E 1521WEST EDDY <sup>11</sup> Bottom Hole Location If Different From Surface UL or lot no. Lot Idn Feet from the North/South line Feet from the East/West line Section Township Range County 32 NORTH WEST Ε 17S27E 148550 EDDY 12 Dedicated Acres 13 Joint or Infill 14 Consolidation Code 15 Order No. 240

State of New Mexico

OIL CONSERVATION DIVISION

Energy, Minerals & Natural Resources Department

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.



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 / 28 / 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	Anticipated	Anticipated
				Oil BBL/D	Gas MCF/D	Produced Water
						BBL/D
RED LAKE 33 FEDERAL COM 14H	30-015-	C-33-17S-27E	793' FNL 1521' FWL	207 BBL/D	145 MCF/D	1425 BBL/D
RED LAKE 33 FEDERAL COM 15H	30-015-	C-33-17S-27E	793' FNL 1561' FWL	143 BBL/D	730 MCF/D	2738 BBL/D
RED LAKE 33 FEDERAL COM 16H	30-015-	C-33-17S-27E	793' FNL 1601' FWL	259 BBL/D	181 MCF/D	1425 BBL/D
RED LAKE 33 FEDERAL COM 17H	30-015-	C-33-17S-27E	793' FNL 1621' FWL	207 BBL/D	145 MCF/D	1425 BBL/D
RED LAKE 33 FEDEARL COM 18H	30-015-	C-33-17S-27E	793' FNL 1581' FWL	304 BBL/D	608 MCF/D	2738 BBL/D
RED LAKE 33 FEDERAL COM 19H	30-015-	C-33-17S-27E	793' FNL 1541' FWL	259 BBL/D	181 MCF/D	1425 BBL/D

### IV. Central Delivery Point Name: <u>RED LAKE 33 FEDERAL COM SOUTH TANK BATTERY</u>[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	Completion	Initial Flow	First Production
		_	Date	Commencement Date	Back Date	Date
RED LAKE 33 FEDERAL COM 14H	30-015-	02/15/2024	02/23/2024	04/12/2024	04/28/2024	04/28/2024
RED LAKE 33 FEDERAL COM 15H	30-015-	02/23/2024	03/04/2024	04/12/2024	04/28/2024	04/28/2024
RED LAKE 33 FEDERAL COM 16H	30-015-	03/04/2024	03/15/2024	04/12/2024	04/28/2024	04/28/2024
RED LAKE 33 FEDERAL COM 17H	30-015-	03/15/2024	03/23/2024	04/12/2024	04/28/2024	04/28/2024
RED LAKE 33 FEDEARL COM 18H	30-015-	03/23/2024	04/01/2024	04/12/2024	04/28/2024	04/28/2024
RED LAKE 33 FEDERAL COM 19H	30-015-	04/01/2024	04/10/2024	04/12/2024	04/28/2024	04/28/2024

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

VII. Operational Practices: X 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: X 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.

 $\bigotimes$  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
			Start Date	or system segment rie-in

**XI. Map.**  $\Box$  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  $\Box$  will  $\Box$  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  $\Box$  does  $\Box$  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:**  $\Box$  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:

 $\checkmark$  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

 $\Box$  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.**  $\Box$  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.**  $\Box$  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: Sarah Chapman
Printed Name: SARAH CHAPMAN
Title: REGULATORY DIRECTOR
E-mail Address: SCHAPMAN@SPURENERGY.COM
Date: 03/28/2022
Phone: 832-930-8613
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

# **1. Geologic Formations**

TVD of target	3850'
MD at TD	10764'

Formation	Depth	Lithology	Expected Fluids
Quaternary	0'	Dolomite, other: Caliche	Useable Water
Grayburg	950'	Anhydrite	Natural Gas, Oil
San Andres	1475'	Dolomite	Natural Gas, Oil
Lower San Andres	2300'	Dolomite	Natural Gas, Oil
Glorieta	2825'	Dolomite, Siltstone	Natural Gas, Oil
Top Yeso	2990'	Dolomite	Natural Gas, Oil
Drinkard	4600'	Dolomite	Natural Gas, Oil
Base of Yeso	5050'	Dolomite	Natural Gas, Oil

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

# 2. Casing Program

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

# Primary Plan:

Hala Siza (in)	Casing Interval C		Csg. Size	Weight	Crada Conn	- Grade Conn	eight Crode	SF	SE Dunet	Body SF	Joint SF
Hole Size (in)	From (ft)	To (ft)	(in)	(lbs)	Grade	Conn.	Collapse	SF Burst	Tension	Tension	
12.25	0	1200	9.625	36	J-55	BTC	1.125	1.2	1.4	1.4	
8.75	0	4250	7	32	L-80	BK-HT	1.125	1.2	1.4	1.4	
8.75	4250	10764	5.5	20	L-80	BK-HT	1.125	1.2	1.4	1.4	
								SF Values will	meet or Exceed	l	

	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.					
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?	Y				
If yes, are there two strings cemented to surface?	Y				
Is well located in critical Cave/Karst?	N				
If yes, are there three strings cemented to surface?					

# 3. Cementing Program

# **Primary Plan:**

Casing String	Top (ft)	Bottom (ft)	% Excess
Surface (Lead)	0	950	100%
Surface (Tail)	950	1200	165%
Production (Lead)	0	3250	0%
Production (Tail)	3250	10764	50%

Casing String	# Sks	Wt. (lb/gal)	Yld (ft3/sack)	H20 (gal/sk)	500# Comp. Strength (hours)	Slurry Description
Surface (Lead)	270	12.2	2.31	13.48	8:12	Clas C Premium Plus Cement
Surface (Tail)	123	13.2	1.84	9.92	6:59	Clas C Premium Plus Cement
Production (Lead)	201	11.8	2.54	15.29	N/A	Clas C Premium Plus Cement
Production (Tail)	1492	13.2	1.81	9.81	N/A	Clas C Premium Plus Cement

# 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	Туре		1	Tested to:
		5M	Annular		~	70% of working pressure
12.25" Hole	13-5/8"		Blind Ram	ı	✓	
	15-3/8	5M	Pipe Ram		✓	250 psi / 3000 psi
			Double Ram			
			Other*			
		5M	Annular		~	70% of working pressure
8.75" Hole	13-5/8"		Blind Ram		✓	
8.75 Hole		514	Pipe Ram		✓	250
		5M	Double Rai	n		250 psi / 3000 psi
			Other*			

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

Condition	Specify what type and where?
BH Pressure at deepest TVD	1820 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	112°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?
A con	ventional 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 in	nstallation on the surface casing which will cover testing requirements for a maximum
of 30 d	lays.
See at	tached schematics.

### 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.

De	pth	Trme	Weight	Viscosity	Water Loss
From (ft)	To (ft)	Туре	(ppg)	viscosity	water Loss
0	1200	Water-Based Mud	8.6-8.9	32-36	N/C
1200	10764	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
---	-----------------------------

7.	Logging and	<b>Testing Procedures</b>	
----	-------------	---------------------------	--

Logg	ing, Coring and Testing	•			
Yes	Will run GR from TD to	o surface (horizontal well – vertical p	ortion of hole). Stated logs		
	run will be in the Comp	letion Report and submitted to the Bl	LM.		
No	Logs are planned based on well control or offset log information. Drill stem test? If yes, explain				
No	Drill stem test? If yes, explain				
No	Coring? If yes, explain				
Addi	tional logs planned	Interval			
No	Resistivity				
No	Density				
No	CBL				
Yes	Mud log	ICP - TD			
No	PEX				

### 8. Drilling Conditions

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

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

N H2S is present

Y H2S Plan attached

Total estimated cuttings volume: 975.5 bbls.

# 9. Other facets of operation

	Yes/No
Will more than one drilling rig be used for drilling operations? If yes, describe.	Yes
Spur Energy Partners LLC. requests the option to contract a Surface Rig to drill,	
set surface 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.	

Attachments

- \_x\_\_ Directional Plan
- \_x\_\_ H2S Contingency Plan
- \_x\_\_Akita 57 Attachments
- \_x\_\_ BOP Schematics
- \_x\_\_ Transcend Spudder Rig Attachments

# **10. Company Personnel**

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



# Spur Energy Partners, LLC

Eddy County, NM (NAD 83 - NME) RED LAKE 33 FED COM 14H

Wellbore #1

Plan: Plan #1

# **Standard Planning Report**

25 March, 2021



				Planning Ro	eport				WELLBENDERS DIRECTIONAL SERVICES
Database: Company: Project: Site: Vell: Vellbore: Design:	Eddy Cou	gy Partners, L nty, NM (NAD E 33 FED COM	83 - NME)	TVD Refe MD Refe North Re	ence:		Well 14H RKB = 20' @ 3 RKB = 20' @ 3 Grid Minimum Curv	518.00usft (Al	
Project	Eddy Coun	nty, NM (NAD 8	33 - NME)						
Map System: Geo Datum: Map Zone:		ane 1983 can Datum 198 Eastern Zone		System Da	atum:	N	lean Sea Level		
Site	RED LAKE	33 FED COM							
Site Position: From: Position Uncertai	Map nty:	0.00 usft	Northing: Easting: Slot Radius:		77.40 usft	Latitude: Longitude: Grid Conve			32.7957871 -104.2866662 0.025 °
Well	14H								
Well Position	+N/-S +E/-W	0.00 usfi 0.00 usfi	Easting:		653,242.90 u 555,677.40 u	usft <b>Lo</b>	titude: ongitude:		32.7957871 -104.2866662
Position Uncertai		0.00 usfl	t Wellhead El	evation:		Gr	ound Level:		3,498.00 usft
Wellbore	Wellbore #	<i>‡</i> 1							
Magnetics	Model N	Name	Sample Date 3/24/2021	Declina (°)	tion 6.948		Angle (°) 60.320	Field Str (nT	
	10	111 2020	5/24/2021		0.940		00.320	47,779	92200343
Design	Plan #1								
Audit Notes: Version:			Phase:	PLAN	Tie	On Depth:		0.00	
Vertical Section:		•	From (TVD) usft)	+N/-S (usft)	+E/ (us			ection (°)	
			0.00	0.00	0.0	00	27	0.32	
Plan Survey Tool Depth From (usft)	Program Depth To (usft)	Date 3/25 Survey (We		Tool Name		Remarks			
1 0.00	10,763.85	Plan #1 (We	llbore #1)	MWD+IGRF					
				OWSG MWD	+ IGRF or W	/N			
Plan Sections									
		Vert muth Dej (°) (us	pth +N/-S	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00 300.00	0.00 0.00	0.00 0.00 3	0.00 0.00		0.00 0.00	0.00 0.00		0.000 0.000	

3,976.45 60.00 270.32 3,754.39 -687.38 -91.15 8.00 5.36 13.72 121.862 4,176.45 60.00 270.32 3,854.39 -686.41 -264.35 0.00 0.00 0.00 0.000 4,483.85 0.000 90.74 270.32 3,931.11 -684.77 -558.22 10.00 10.00 0.00 10,763.85 90.74 270.32 3,850.00 -649.70 -6,837.60 0.00 0.00 0.00 0.000 PLAT 14H BHL: 14{

3/25/2021 2:41:32PM



### Planning Report



Da	tabase:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 14H
Co	mpany:	Spur Energy Partners, LLC	TVD Reference:	RKB = 20' @ 3518.00usft (Akita 57)
Pro	oject:	Eddy County, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3518.00usft (Akita 57)
Sit	e:	RED LAKE 33 FED COM	North Reference:	Grid
We	ell:	14H	Survey Calculation Method:	Minimum Curvature
We	ellbore:	Wellbore #1		
De	sign:	Plan #1		

### 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
	SHL: 793' FNL								
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	155.04	399.98	-1.58	0.74	-0.75	2.00	2.00	0.00
500.00	4.00	155.04	499.84	-6.33	2.95	-2.98	2.00	2.00	0.00
600.00	6.00	155.04	599.45	-14.23	6.62	-6.70	2.00	2.00	0.00
700.00	8.00	155.04	698.70	-25.28	11.77	-11.91	2.00	2.00	0.00
800.00	10.00	155.04	797.47	-39.46	18.37	-18.59	2.00	2.00	0.00
900.00	12.00	155.04	895.62	-56.75	26.42	-26.74	2.00	2.00	0.00
1,000.00	14.00	155.04	993.06	-77.15	35.91	-36.34	2.00	2.00	0.00
1,049.98	15.00	155.04	1,041.44	-88.49	41.20	-41.69	2.00	2.00	0.00
1,100.00	15.00	155.04	1,089.76	-100.23	46.66	-47.22	0.00	0.00	0.00
1,200.00	15.00	155.04	1,186.35	-123.69	57.58	-58.27	0.00	0.00	0.00
1,300.00	15.00	155.04	1,282.94	-147.15	68.51	-69.33	0.00	0.00	0.00
1,400.00	15.00	155.04	1,379.54	-170.62	79.43	-80.38	0.00	0.00	0.00
1,500.00	15.00	155.04	1,476.13	-194.08	90.35	-91.43	0.00	0.00	0.00
1,600.00	15.00	155.04	1,572.72	-217.54	101.28	-102.49	0.00	0.00	0.00
1,700.00	15.00	155.04	1,669.31	-241.01	112.20	-113.54	0.00	0.00	0.00
1,800.00	15.00	155.04	1,765.91	-264.47	123.12	-124.60	0.00	0.00	0.00
1,900.00 2,000.00	15.00 15.00 15.00	155.04 155.04 155.04	1,862.50 1,959.09	-287.93 -311.40	134.04 144.97	-135.65 -146.70	0.00	0.00	0.00
2,100.00	15.00	155.04	2,055.69	-334.86	155.89	-157.76	0.00	0.00	0.00
2,200.00	15.00	155.04	2,152.28	-358.32	166.81	-168.81	0.00	0.00	0.00
2,300.00	15.00	155.04	2,248.87	-381.79	177.74	-179.87	0.00	0.00	0.00
2,400.00	15.00	155.04	2,345.46	-405.25	188.66	-190.92	0.00	0.00	0.00
2,500.00	15.00	155.04	2,442.06	-428.71	199.58	-201.97	0.00	0.00	0.00
2,600.00	15.00	155.04	2,538.65	-452.18	210.51	-213.03	0.00	0.00	0.00
2,700.00	15.00	155.04	2,635.24	-475.64	221.43	-224.08	0.00	0.00	0.00
2,800.00	15.00	155.04	2,731.83	-499.10	232.35	-235.14	0.00	0.00	0.00
2,900.00	15.00	155.04	2,828.43	-522.57	243.28	-246.19	0.00	0.00	0.00
3,000.00	15.00	155.04	2,925.02	-546.03	254.20	-257.24	0.00	0.00	0.00
3,100.00	15.00	155.04	3,021.61	-569.49	265.12	-268.30	0.00	0.00	0.00
3,136.24	15.00 KOP @ 3136.2	155.04	3,056.62	-578.00	269.08	-272.30	0.00	0.00	0.00
3,150.00	14.45	158.79	3,069.93	-581.21	270.45	-273.69	8.00	-4.01	27.25
3,200.00	13.03	174.60	3,118.51	-592.64	273.24	-276.55	8.00	-2.83	31.63
3,250.00	12.74	192.56	3,167.27	-603.64	272.57	-275.94	8.00	-0.58	35.92
3,300.00	13.65	209.70	3,215.97	-614.15	268.45	-271.87	8.00	1.82	34.27
3,350.00	15.55	223.72	3,264.37	-624.13	260.89	-264.37	8.00	3.80	28.05
3,400.00	18.13	234.31	3,312.23	-633.51	249.93	-253.47	8.00	5.16	21.18
3,450.00	21.15	242.16	3,359.33	-642.26	235.63	-239.22	8.00	6.03	15.70
3,500.00	24.43	248.06	3,405.42	-650.34	218.06	-221.69	8.00	6.58	11.80
3,550.00	27.90	252.61	3,450.30	-657.70	197.29	-200.96	8.00	6.93	9.09
3,600.00	31.48 FTP: 1485' FN	252.61 256.20 L & 2478' FW	3,493.73	-664.32	173.44	-177.15	8.00	6.93 7.17	7.20
3,650.00	35.15	259.13	3,535.51	-670.15	146.62	-150.36	8.00	7.33	5.85
3,700.00	38.87	261.56	3,575.43	-675.17	116.96	-120.72	8.00	7.45	4.87
3,750.00	42.63	263.63	3,613.30	-679.35	84.59	-88.39	8.00	7.53	4.13
3,800.00	46.43	265.42	3,648.94	-682.68	49.70	-53.51	8.00	7.60	3.58
3,800.00	46.43	265.42	3,648.94	-682.68	49.70	-53.51	8.00	7.60	3.58
3,850.00	50.26	267.00	3,682.17	-685.13	12.43	-16.25	8.00	7.65	3.15
3,900.00	54.10	268.41	3,712.82	-686.70	-27.03	23.19	8.00	7.68	2.82

3/25/2021 2:41:32PM



### Planning Report



Database: Company:	WBDS_SQL_2 Spur Energy Partners, LLC	Local Co-ordinate Reference: TVD Reference:	Well 14H RKB = 20' @ 3518.00usft (Akita 57)
Project:	Eddy County, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3518.00usft (Akita 57)
Site: Well:	RED LAKE 33 FED COM 14H	North Reference: Survey Calculation Method:	Grid Minimum Curvature
Wellbore:	Wellbore #1	···· <b>,</b> · · · · · · · ·	
Design:	Plan #1		

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,950.00 3,976.45 4,000.00 4,100.00 4,176.45	57.95 60.00 60.00 60.00 60.00	269.69 270.32 270.32 270.32 270.32 270.32	3,740.76 3,754.39 3,766.17 3,816.17 3,854.39	-687.38 -687.38 -687.27 -686.78 -686.41	-68.48 -91.15 -111.54 -198.14 -264.35	64.64 87.31 107.70 194.30 260.51	8.00 8.00 0.00 0.00 0.00	7.71 7.73 0.00 0.00 0.00	2.56 2.40 0.00 0.00 0.00
4,200.00 4,250.00 4,300.00 4,350.00 4,400.00	62.35 67.35 72.35 77.35 82.35	270.32 270.32 270.32 270.32 270.32 270.32	3,865.74 3,886.98 3,904.20 3,917.26 3,926.06	-686.30 -686.04 -685.78 -685.51 -685.24	-284.97 -330.22 -377.15 -425.39 -474.60	281.14 326.38 373.31 421.56 470.76	10.00 10.00 10.00 10.00 10.00	10.00 10.00 10.00 10.00 10.00	0.00 0.00 0.00 0.00 0.00 0.00
4,450.00 4,483.85	87.35 90.74	270.32 270.32	3,930.54 3,931.11	-684.96 -684.77	-524.38 -558.22	520.54 554.39	10.00 10.00	10.00 10.00	0.00 0.00
14H PLAN	LP @ 4483.85	' MD							
4,500.00 4,600.00 4,700.00	90.74 90.74 90.74	270.32 270.32 270.32	3,930.90 3,929.61 3,928.32	-684.68 -684.12 -683.56	-574.37 -674.36 -774.35	570.53 670.52 770.52	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
4,800.00 4,900.00 5,000.00 5,100.00 5,200.00	90.74 90.74 90.74 90.74 90.74	270.32 270.32 270.32 270.32 270.32 270.32	3,927.02 3,925.73 3,924.44 3,923.15 3,921.86	-683.01 -682.45 -681.89 -681.33 -680.77	-874.34 -974.33 -1,074.32 -1,174.31 -1,274.30	870.51 970.50 1,070.49 1,170.48 1,270.47	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
5,300.00 5,400.00 5,500.00 5,600.00 5,700.00	90.74 90.74 90.74 90.74 90.74	270.32 270.32 270.32 270.32 270.32 270.32	3,920.57 3,919.27 3,917.98 3,916.69 3,915.40	-680.21 -679.65 -679.10 -678.54 -677.98	-1,374.29 -1,474.28 -1,574.27 -1,674.26 -1,774.25	1,370.47 1,470.46 1,570.45 1,670.44 1,770.43	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
5,800.00 5,900.00 6,000.00 6,100.00 6,200.00	90.74 90.74 90.74 90.74 90.74	270.32 270.32 270.32 270.32 270.32 270.32	3,914.11 3,912.82 3,911.53 3,910.23 3,908.94	-677.42 -676.86 -676.30 -675.75 -675.19	-1,874.24 -1,974.23 -2,074.22 -2,174.21 -2,274.20	1,870.42 1,970.42 2,070.41 2,170.40 2,270.39	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
6,300.00 6,400.00 6,500.00 6,600.00 6,700.00	90.74 90.74 90.74 90.74 90.74	270.32 270.32 270.32 270.32 270.32 270.32	3,907.65 3,906.36 3,905.07 3,903.78 3,902.49	-674.63 -674.07 -673.51 -672.95 -672.39	-2,374.19 -2,474.18 -2,574.17 -2,674.16 -2,774.15	2,370.38 2,470.37 2,570.37 2,670.36 2,770.35	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
6,800.00 6,900.00 7,000.00 7,100.00 7,200.00	90.74 90.74 90.74 90.74 90.74	270.32 270.32 270.32 270.32 270.32 270.32	3,901.19 3,899.90 3,898.61 3,897.32 3,896.03	-671.84 -671.28 -670.72 -670.16 -669.60	-2,874.14 -2,974.13 -3,074.12 -3,174.11 -3,274.10	2,870.34 2,970.33 3,070.32 3,170.32 3,270.31	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
7,300.00 7,400.00 7,500.00 7,600.00 7,700.00	90.74 90.74 90.74 90.74 90.74	270.32 270.32 270.32 270.32 270.32 270.32	3,894.74 3,893.44 3,892.15 3,890.86 3,889.57	-669.04 -668.49 -667.93 -667.37 -666.81	-3,374.09 -3,474.08 -3,574.07 -3,674.06 -3,774.05	3,370.30 3,470.29 3,570.28 3,670.27 3,770.27	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
7,800.00 7,900.00 8,000.00 8,100.00 8,200.00	90.74 90.74 90.74 90.74 90.74	270.32 270.32 270.32 270.32 270.32 270.32	3,888.28 3,886.99 3,885.70 3,884.40 3,883.11	-666.25 -665.69 -665.13 -664.58 -664.02	-3,874.04 -3,974.03 -4,074.02 -4,174.01 -4,274.00	3,870.26 3,970.25 4,070.24 4,170.23 4,270.22	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
8,300.00 8,400.00 8,500.00	90.74 90.74 90.74	270.32 270.32 270.32	3,881.82 3,880.53 3,879.24	-663.46 -662.90 -662.34	-4,373.99 -4,473.98 -4,573.97	4,370.22 4,470.21 4,570.20	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00

3/25/2021 2:41:32PM

COMPASS 5000.14 Build 85







Database: Company: Project:	WBDS_SQL_2 Spur Energy Partners, LLC Eddy County, NM (NAD 83 - NME)	Local Co-ordinate Reference: TVD Reference: MD Reference:	Well 14H RKB = 20' @ 3518.00usft (Akita 57) RKB = 20' @ 3518.00usft (Akita 57)
Site:	RED LAKE 33 FED COM	North Reference:	Grid
Well:	14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

### 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)
8,600.0 8,700.0		270.32 270.32	3,877.95 3,876.65	-661.78 -661.23	-4,673.96 -4,773.95	4,670.19 4,770.18	0.00 0.00	0.00 0.00	0.00 0.00
8,800.00 8,900.00 9,000.00 9,100.00 9,200.00	90.7490.7490.7490.74	270.32 270.32 270.32 270.32 270.32 270.32	3,875.36 3,874.07 3,872.78 3,871.49 3,870.20	-660.67 -660.11 -659.55 -658.99 -658.43	-4,873.94 -4,973.93 -5,073.92 -5,173.91 -5,273.90	4,870.17 4,970.17 5,070.16 5,170.15 5,270.14	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
9,300.00 9,400.00 9,500.00 9,600.00 9,700.00	90.74           90.74           90.74           90.74           90.74           90.74	270.32 270.32 270.32 270.32 270.32 270.32	3,868.91 3,867.61 3,866.32 3,865.03 3,863.74	-657.87 -657.32 -656.76 -656.20 -655.64	-5,373.89 -5,473.88 -5,573.87 -5,673.86 -5,773.85	5,370.13 5,470.12 5,570.12 5,670.11 5,770.10	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
9,800.00 9,900.00 10,000.00 10,100.00 10,200.00	90.7490.7490.7490.74	270.32 270.32 270.32 270.32 270.32 270.32	3,862.45 3,861.16 3,859.87 3,858.57 3,857.28	-655.08 -654.52 -653.97 -653.41 -652.85	-5,873.84 -5,973.83 -6,073.82 -6,173.81 -6,273.80	5,870.09 5,970.08 6,070.07 6,170.07 6,270.06	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
10,300.0 10,400.0 10,500.0 10,600.0 10,700.0	90.74           90.74           90.74           90.74           90.74           90.74	270.32 270.32 270.32 270.32 270.32 270.32	3,855.99 3,854.70 3,853.41 3,852.12 3,850.82	-652.29 -651.73 -651.17 -650.62 -650.06	-6,373.79 -6,473.78 -6,573.77 -6,673.76 -6,773.75	6,370.05 6,470.04 6,570.03 6,670.02 6,770.02	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
PLAT 14 10,763.8	H LTP: 1485' FN 5 90.74	NL & 100' FWL 270.32	- 3,850.00	-649.70	-6,837.60	6,833.86	0.00	0.00	0.00
PLAT 14	H BHL: 1485' FN	NL & 50' FWL							

### **Design Targets**

Target Name - hit/miss target Dip - Shape	Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PLAT 14H SHL: 793' ł - plan hits target cente - Point	0.00 r	0.00	0.00	0.00	0.00	653,242.90	555,677.40	32.7957871	-104.2866662
14H PLAN KOP @ 31 - plan hits target cente - Point	0.00 r	0.00	3,056.62	-578.00	269.08	652,664.91	555,946.48	32.7941981	-104.2857914
PLAT 14H BHL: 1485' - plan hits target cente - Point	0.00 r	0.00	3,850.00	-649.70	-6,837.60	652,593.20	548,839.80	32.7940077	-104.3089187
PLAT 14H LTP: 1485 - plan misses target ce - Point	0.00 enter by		- ,	-650.10 usft MD (385	-6,787.60 50.82 TVD, -6	652,592.80 650.06 N, -6773.7	548,889.80 75 E)	32.7940065	-104.3087560
14H PLAN LP @ 448( - plan hits target cente - Point	0.00 r	0.00	3,931.11	-684.77	-558.22	652,558.13	555,119.18	32.7939056	-104.2884838
PLAT 14H FTP: 1485' - plan misses target ca - Point	0.00 enter by		3,950.00 at 3600.00	-693.70 usft MD (349	931.20 93.73 TVD, -6	652,549.20 664.32 N, 173.44	556,608.60 E)	32.7938792	-104.2836368







Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 14H
Company:	Spur Energy Partners, LLC	TVD Reference:	RKB = 20' @ 3518.00usft (Akita 57)
Project:	Eddy County, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3518.00usft (Akita 57)
Site:	RED LAKE 33 FED COM	North Reference:	Grid
Well:	14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1	-	
Design:	Plan #1		
-		-	

.



Company: Spur Energy Partn Project: Eddy County, NM ( Site: RED LAKE 33 FED Well: 14H Wellbore: Wellbore #1 Rig: Akita 57 Design: Plan #1 / 14:36,

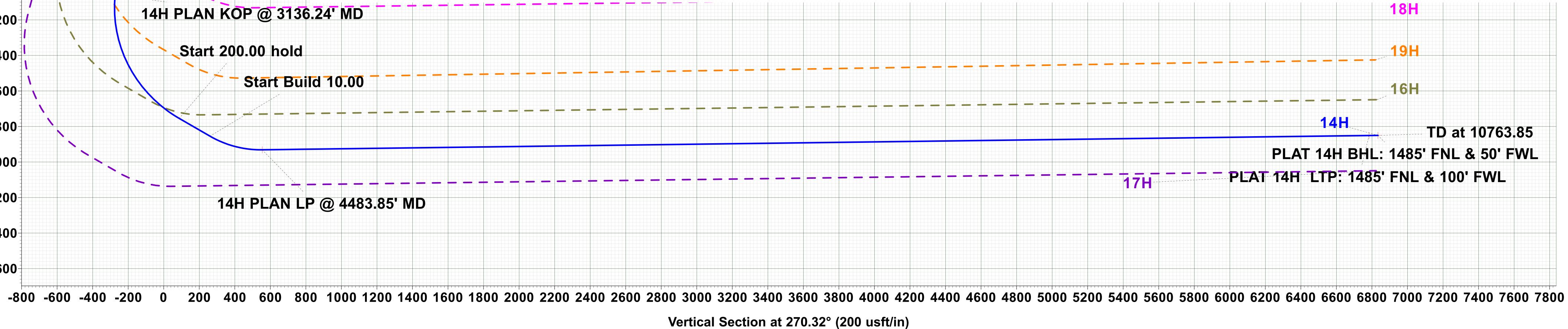
**DESIGN TARGET DETAILS** 

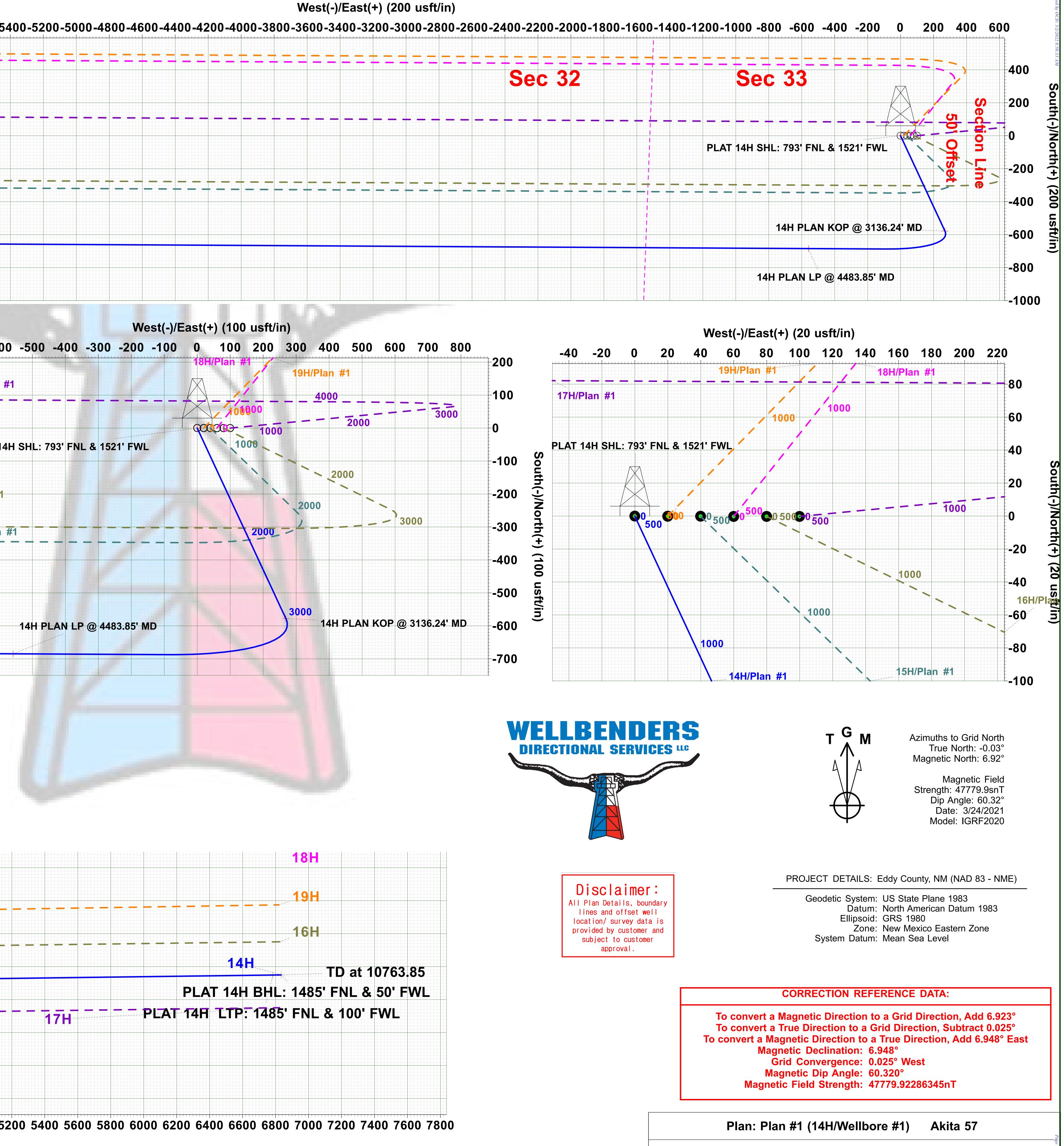
14H PLAN L PLAT 14H L PLAT 14H B PLAT 14H F PLAT 14H S	TVD         XOP @ 3136.24' MD       3056.62         .P @ 4483.85' MD       3931.11         .TP: 1485' FNL & 100' FWL       3850.66         HL: 1485' FNL & 50' FWL       3850.00         TP: 1485' FNL & 2478' FWL       3950.00         HL: 793' FNL & 1521' FWL       0.00	-684.77-558.22652558.13555119.1832.7939056-104.2884839-650.10-6787.60652592.80548889.8032.7940065-104.3087560-649.70-6837.60652593.20548839.8032.7940076-104.3089187	15H/Plan #1 14H/Plan #1 PLAT 14H BHL: 1485' FN PLAT 14H LTP: 1485' F
-200	PLAT 14H SHL: 793' FNL & 1521' FWL	WELL DETAILS: 14H	
0		RKB = 20' @ 3518.00usft (Akita 57)	
200		3498.00 +N/-S +E/-W Northing Easting Latittude Longitude 0.00 0.00 653242.90 555677.40 32.7957871 -104.2866663	
400	Start Build 2.00		
600		SECTION DETAILS	
800		Sec         MD         Inc         Azi         TVD         +N/-S         +E/-W         Dleg         VSect           1         0.00 <td></td>	
1000		2       300.00       0.00       300.00       0.00       0.00       0.00       0.00         3       1049.98       15.00       155.04       1041.44       -88.49       41.20       2.00       -41.69         4       3136.24       15.00       155.04       3056.62       -578.00       269.08       0.00       -272.30	
1200		5 3976.45 60.00 270.32 3754.39 -687.38 -91.15 8.00 87.31 6 4176.45 60.00 270.32 3854.39 -686.41 -264.35 0.00 260.51	
		7 4483.85 90.74 270.32 3931.11 -684.77 -558.22 10.00 554.39 8 10763.85 90.74 270.32 3850.00 -649.70 -6837.60 0.00 6833.86	
1400			
1600		West(-)/East(+) (50 usft/in)	
<u> </u>		-7000-6950-6900-6850-6800-6750-6700-6650-6600-6550-6500-6450-6400-6	3350-6300-6250
stt/jr 2000		PLAT 14H BHL: 1485' FNL & 50' FWL	-550
5 00 2200		PLAT 14H LTP: 1485' FNL & 100' FWL 14H/Plan #1	-600 →
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2600			-700 S
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1	Start DLS 8.00 14H PLAN KOP @ 3136	<b>74' MD</b>	
3200 / 			
3400	Start 200.00 hold		
3600	Start Bui	d 10.00	
3800			
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4200	14H PLAN L	P@ 4483.85' MD	
4400			
4600			

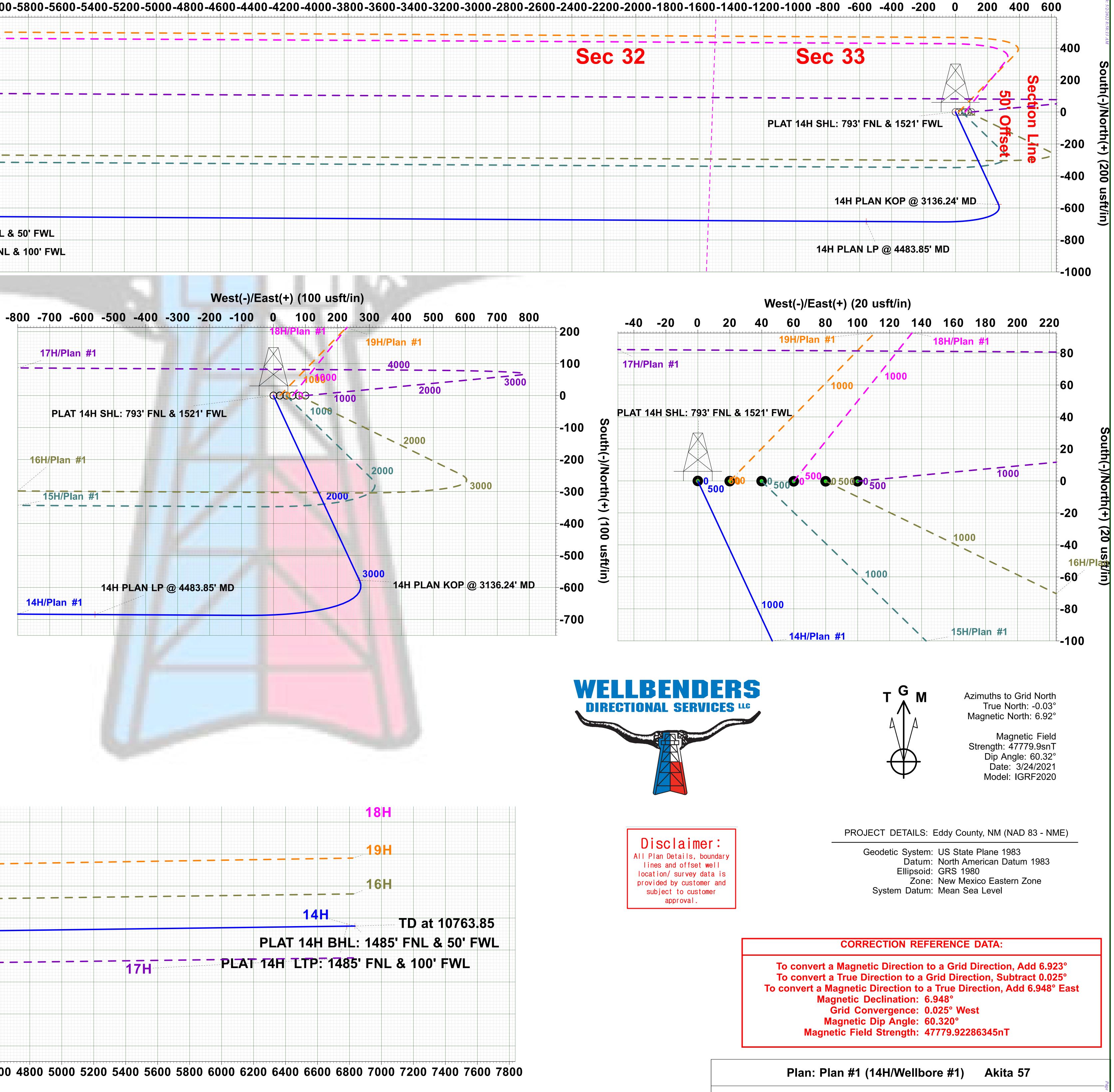
(NAD 83 - D COM	NME)			19H/Plan #1
				18H/Plan #1
March 25	2021		Sectio	<b>17H/Plan #1</b>
	Section.		tion O F	16H/Plan #1
Easting 555946.48 555119.18	Latitude 32.7941981 32.7939056	Longitude -104.2857914 -104.2884839		
548889.80 548839.80 556608.60	32.7940065 32.7940076 32.7938792	-104.3087560 -104.3089187 -104.2836369		14H/Plan #1
555677.40	32.7957871	-104.2866663		PLAT 14H BHL: 1485' FNL & 50' FWL
				PLAT 14H LTP: 1485' FNL & 100' FWL

16H/Plan #1

14H/Plan #1







Created By: Matthew May Date: 14:36, March 25 2021

# **Pecos District**

# **Application for Permit to Drill**

# **Conditions of Approval**

# **Geology Concerns**

Potash	⊠ None	□ Secretary	□ R-111-P
Cave/Karst	□ Medium	🖂 High	□ Critical
H2S	□ None	□ Below 100 PPM	⊠ Above 100 PPM
Other	□ 4 String Area	□ Capitan Reef	□ 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: 1,200 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 to witness:
  - a. Well spudding (minimum 24 hours notice)
  - b. Setting and cementing of all casing strings (minimum 4 hours notice)
  - c. BOPE tests (minimum 4 hours notice)

Eddy County 620 East Greene Street, Carlsbad, NM 88220 (575) 361-2822

<u>Lea County</u> 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 Onshore Oil and Gas Order No. 2 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; 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**

- All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. 5M or higher system requires an HCR valve, remote kill line, and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 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 Onshore Order No. 2.
- 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. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- 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.

Page 3 of 9

- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
- e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 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. A full BOP test shall be performed every 21 days (at a minimum).
  - c. 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.
  - d. A full BOP test is required prior to drilling the first production hole section. If any subsequent production hole interval is deeper than the first, a full BOP test shall be required.
  - e. While in transfer, the BOP shall be secured by the hydraulic carrier or cradle.
  - f. 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.
  - g. 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.
  - h. 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.
  - i. The appropriate Bureau of Land Management (BLM) office shall be notified a minimum of 4 hours before testing occurs.
- 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, to 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. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 10. No pea gravel permitted for remedial cement or fall back remedial cement without prior authorization from a BLM petroleum engineer.
- 11. 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.
- 12. 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.
    - 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.
- 13. Wait on cement (WOC) for 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.
- 14. 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.
- 15. Wait on cement (WOC) for Medium and High Cave/Karst Areas:
  - a. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
- 16. If cement does not circulate to surface on the first two casing strings, the cement on the 3rd 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 Carlsbad Field Office (620 E Greene St. Carlsbad, New Mexico 88220), 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. 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 (H2S)
  - a. If H2S is encountered, provide measured values and formations to the BLM.
  - b. An H2S area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items.
  - c. An H2S Drilling Plan shall be activated 500 feet prior to drilling into the 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 Onshore Order 6 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 4 string well ensure fresh water based mud 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.



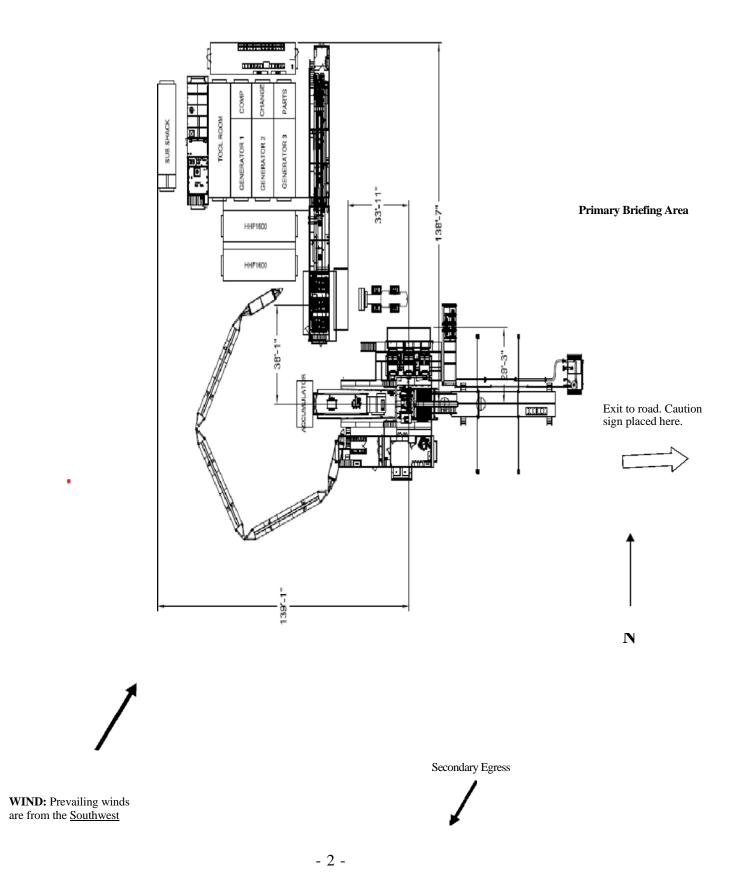
# Permian Drilling Hydrogen Sulfide Drilling Operations Plan Red Lake Federal Com 14H

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

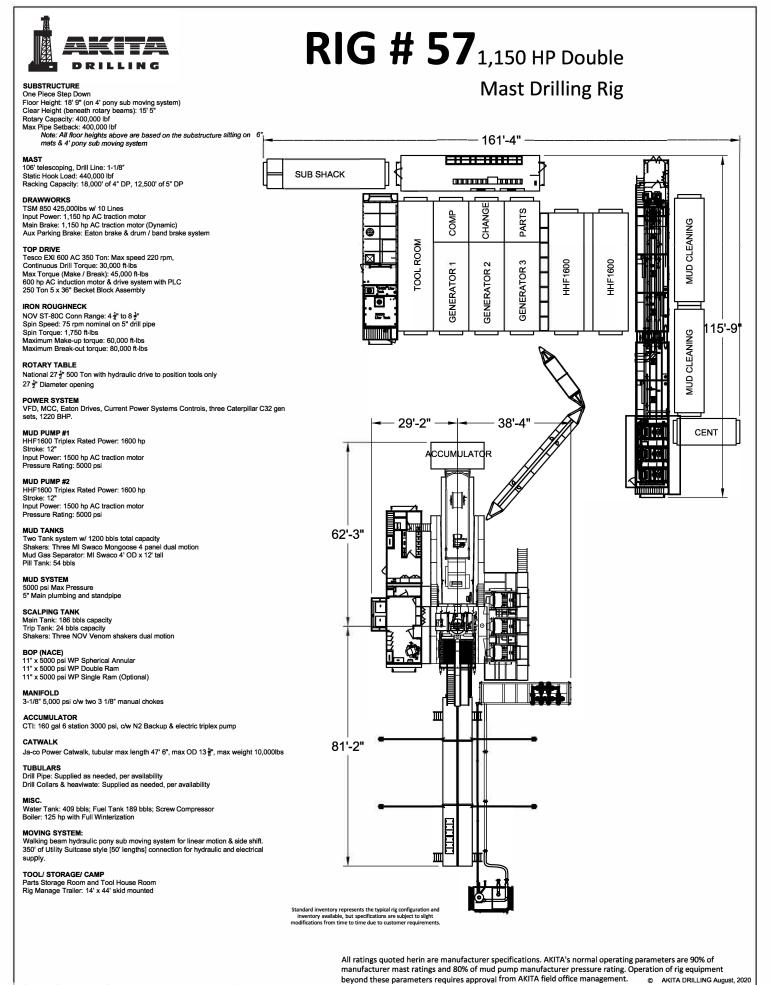
1. Escape

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.

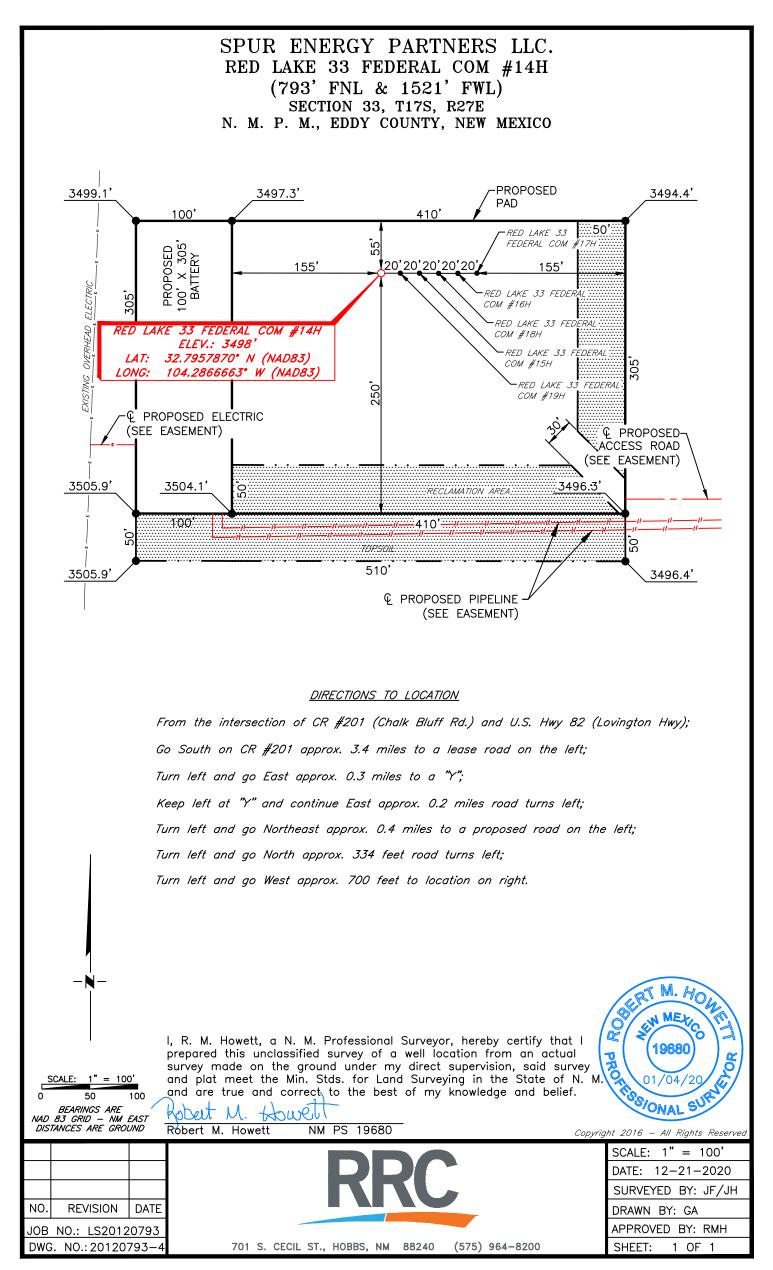
Secondary Briefing Area



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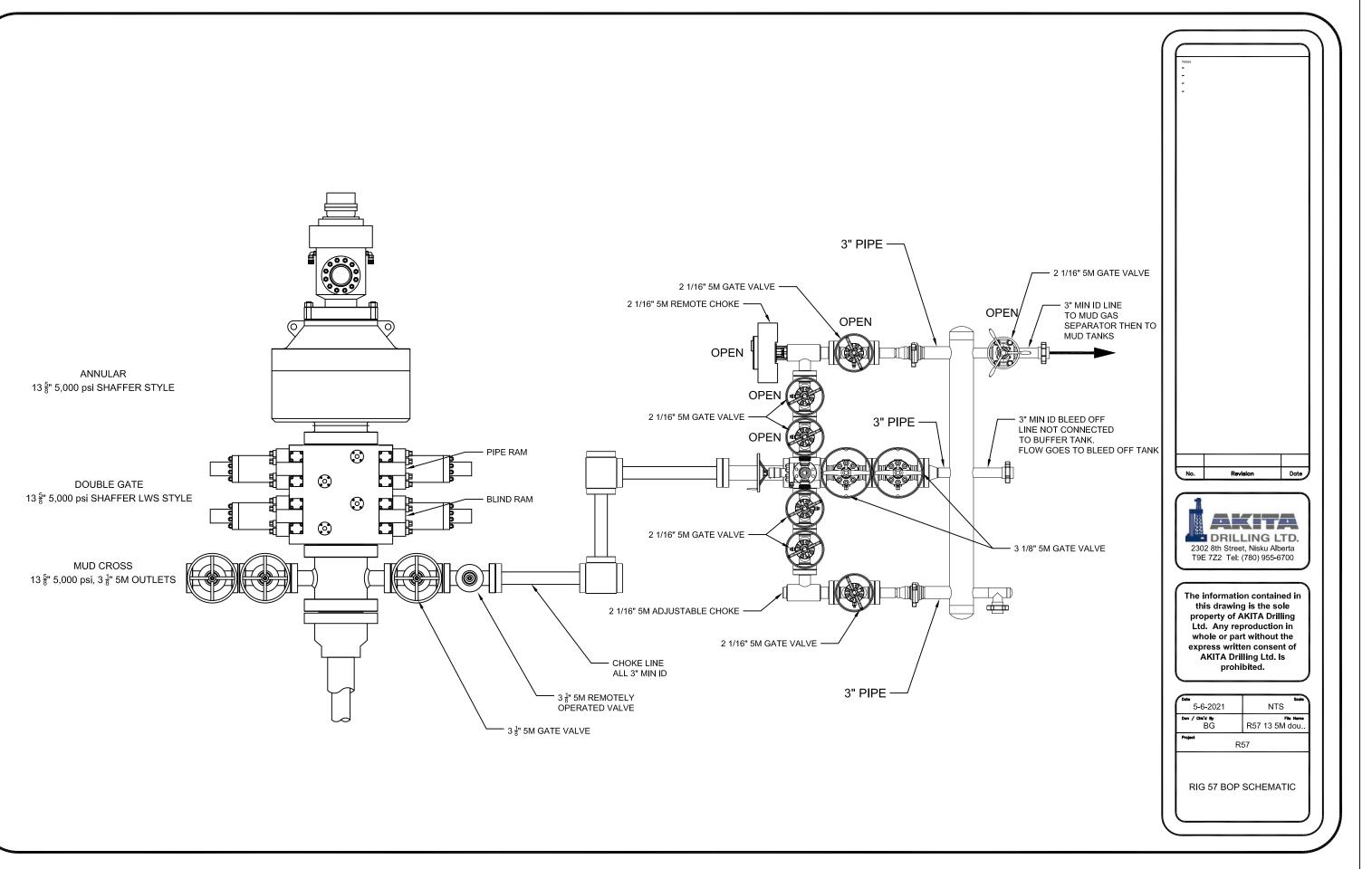


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TRANSCEND RIG 4	Contractor Specification
Make	Schram
Model	TXD 130
Year of Manufacture	2006
Truck Mounted	YES
Rated Drilling Depth	130,000# hook load
Rated Depth with Tubing	
Derrick Height	69' 9''
Derrick Type	Telescoping Hydraulic
Derrick Capacity	130,000#
Elevators	N/A
Drawworks	760 HP Detroit
Wire Diameter	Hydraulic
Workfloor Max Height	8'
Tongs	Hydraulic Iron Roughneck
Slips	Manual Slips
Included Tubing Handling	• 13 3/8" handling tools
Tools	
Included Rod Handling	85jts of 4.5" drill pipe
Tools	
BOP Class Compatibility	
Weight Indicator	Hydraulic
Rig Safety Equipment	Eye wash station, fire extengushers,
	wind sock
Pad Size	60' x 60'
Requirements/Limitations	
Guy Line Spacing	N/A
Other Supplied Rig Equipment	Standard Rig Hand Tools:
1 5000	• (2) 36" pipe wrenches
1- F800 pump	• (2) 24" pipe wrenches
1- Pill pit 80bbl	• (2) 18" pipe wrenches
1- 400 bbl mud mix	• (1) 24" crescent wrench
<ol> <li>Shaker 150mesh</li> <li>500 bbl fresh water frac</li> </ol>	• (2) 12" crescent wrenches
tank	• (1) 4 lb shop hammer
tallK	• (1) 12 lb sledge hammer
	• (1) 4 foot pry bar
	<ul> <li>Vehicles for Contractor personnel</li> </ul>
	• Air Impact Wrench with Sockets
	• Mud Scales (as needed)



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

Operator:	OGRID:
Spur Energy Partners LLC	328947
9655 Katy Freeway	Action Number:
Houston, TX 77024	103045
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

### CONDITIONS

CONDITION		
Created By	Condition	Condition Date
kpickford	Will require a administrative order for non-standard location prior to placing the well on production	5/5/2022
kpickford	Notify OCD 24 hours prior to casing & cement	5/5/2022
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	5/5/2022
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	5/5/2022
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	5/5/2022
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	5/5/2022

Page 35 of 35

Action 103045