Sante Fe Main Office Phone: (505) 476-3441 General Information Phone: (505) 629-6116

Online Phone Directory https://www.emnrd.nm.gov/ocd/contact-us

# 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 388521

		APPLICA <sup>*</sup>	TION FOR PERMIT	TO DRILL, RE	-ENTER, DEEPEN	N, PLUGBACH	K, OR ADD A Z	ONE		
Operator Name     Spur	and Address Energy Partners	LLC					2. 0	GRID Number 328947		
	Katy Freeway ton, TX 77024						3. A	PI Number 30-015-5679	3	
4. Property Code 33733		5	5. Property Name PEAKY 8 9 STA	TE COM			6. \	Vell No. 020H		
				7. Sur	face Location					
UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County	
С	8	17S	29E	С	1015	N	1960	W		Eddy
				8. Proposed I	Bottom Hole Location	n			•	
UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County	

#### 9. Pool Information

EMPIRE: GLORIETA-YESO FAST	96610

#### **Additional Well Information**

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3626
16. Multiple N	17. Proposed Depth 12407	18. Formation Paddock	19. Contractor	20. Spud Date 12/2/2026
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

#### ${\ensuremath{\overline{\boxtimes}}}$ 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	17.5	13.375	54.5	350	218	0
Int1	12.25	9.625	36	1525	395	0
Prod	8.75	7	32	4400	0	2278
Prod	8.75	5.5	20	12407	2278	0

#### Casing/Cement Program: Additional Comments

#### THIS WILL BE ON A 480 ACRES HSU.

#### 22. Proposed Blowout Prevention Program

22.1 Toposou Biomout Tovoltion Trogram							
Type	Working Pressure	Test Pressure	Manufacturer				
Double Ram	5	5000	SHAFFER				

knowledge and be	elief.	s true and complete to the best of my  NMAC ⊠ and/or 19.15.14.9 (B) NMAC		OIL CONSERVATI	ON DIVISION	
Signature:						
Printed Name:	Electronically filed by Sarah Cha	apman	Approved By:	Jeffrey Harrison		
Title:	Regulatory Director		Title:	Petroleum Specialist III		
Email Address:	schapman@spurenergy.com		Approved Date:	6/16/2025	Expiration Date: 6/16/2027	
Date:	5/1/2025	Phone: 832-930-8613	Conditions of Approval Attached			

<u>C-102</u>	_		Ener	rgy, Mine	State of Ne erals & Natur	ew Mexico ral Resources Dep	oartmei	nt			Revised Ju	uly 9, 2024		
	Electronica CD Permittir	,		OIL (	CONSERVA	TION DIVISION	[				Initial Submitt	tal		
via OC	D Permittir	ıg							Subm		☐ Amended Rep			
									Type:		☐ As Drilled	Oft		
					***************************************	TO STREET STREET					As Dinica			
4 DI M-			B 10.1.			TION INFORMATIO	)N							
API Nu	30-0	015- <u>56793</u>		96610		Pool Name EMPI	RE; G	GLORIE	ΓΑ-ΥΕ	1				
Property	Code 3	37337	Property Na	ime	PEAKY 8	8−9 STATE C	OM			Well	Number	20H		
OGRID	No. 32	8947	Operator Na	ame SI	PUR ENEF	RGY PARTNEF	RS LI	LC.		Grou	and Level Elevation	3626'		
Surface	Owner:	State Kee	Tribal □ Fe	ederal		Mineral Owner:	tate	Fee [	] Tribal	□Fe	deral			
					Sur	face Location								
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitud	de		Long	gitude	County		
C	8	17S	29E		1015 FN				1°N	_	.0992343°W			
-	-					n Hole Location								
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitud	de		Long	gitude	County		
A	9	17S	29E		455 FNI				4°N	_	.0714439°W	-		
	_	• • •		<u> </u>	100	.   00					•••••			
Dedicate	ed Acres	Infill or Defir	ning Well	Defining	Well API	Overlapping Spa	cing Un	nit (Y/N)	onsoli	dation	Code			
480		INFILL	-	_	IDING	Y	ionis on	III (1/1/)		= & C				
480 INFILL Order Numbers. PENDING				1	<u> </u>	Well setbacks are	e under	Common (			& C : XYes □ No			
	4.110	I ENDING	<u> </u>		Kick (					-1 ,	<u>`</u>			
TIT	G. dian	Trlain	D	T <sub>T of</sub>		Off Point (KOP)	T	1.		T ame		Country		
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitud		GONT	_	gitude	· -		
C	8	17S	29E		564 FNI		3≈.0	854791	0.11	104	.0997196°W	EDDI		
* **		Ι	Ι.,	Ι.,		Cake Point (FTP)	Τ			r_				
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitud		- ~ 03.T	_	gitude	l -		
В	8	17S	29E		455 FNI		32.0	355080	9-IV	104	.0966788°W	EDDX		
	<del></del>	T	T	г		ake Point (LTP)	<del> </del>					Г		
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitud		~ ^ > 7	Long				
A	9	17S	29E		455 FNI	L 100 FEL	32.8	355131 	9°N	104	.0716067°W	EDDY		
TT 141	1 4 4	CTI:6	*	T Caraina I	II.ia Tema <b>W</b> Ha	-ital [] Vartical		T. C	1 171	F14				
Unitized	l Area or Ai	rea of Uniform	Interest Y	Spacing	Unit Type 🔼 Fio.	rizontal   Vertical		Ground	Floor	Elevai	3626' GL			
				1										
OPER.	ATOR CER	TIFICATIONS	;			SURVEYOR CER	RTIFICA	ATIONS						
					plete to the best of						as plotted from field not			
		ef, and , if the well ns a working intere				surveys made by me u my belief.	nder my s	supervision,	and that	the san	ne is true and correct to	20H On 3626'  County EDDY  County EDDY  County EDDY  County EDDY  County EDDY  County EDDY		
including	the proposed	bottom hole locati	ion or has a righ	ht to drill this		<i>,</i>					J.F.E.	D.		
interest,	or to a volunta	ary pooling agreem									ALL			
	y the division.										W MEX	<b>%)</b> \		
		tal well, I further o lessee or owner of			has received the ed mineral interest					- 1	/ × (14400	7.0		
		get pool or format or obtained a com								1	P (14400	$I \cup I \cup I$		
	erah (	harma		30/2025						•	04/15/20	)25/5/		
Signature	eun C	sug-in	Date	00/2020		Signature and Seal of Prot	fessional S	Surveyor			130			
SAR	AH CHAF	PMAN				1/1/1/2	2/51	ell			SONAL	50/		
Printed Na	ime					Certificate Number		Date of Survey						
SCH	APMAN@	SPURENE	RGY.COM	i		14400			ſ	19/5	21/2025			
Email Add	lress					14400			U	, ~ / ~	11/2025			

#### ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is a directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.

#### 89°56'40" W 2646.76' D S 89°57'33" W 2643.34' E S 89°39'43" W 2628.81' E 455 FTP ດ໌ 5 кфр BH SL 50 1960 00 **B** (H) 2640 01 10,00, 1.00 9 (A) S 89°55'35" W 5287.83 (K) S 89°41'16" W 2627.77'(J) S 89°40'44" $\Box$

# PEAKY 8-9 STATE COM #20H

NAD 83 GRID - NM EAST

<u>SURFACE LOCATION (SL)</u> N: 674335.2 - E: 613225.2

> LAT: 32.8535521° N LONG: 104.0992343° W

<u>KICK OFF POINT (KOP)</u> N: 674785.8 - E: 613075.2

LAT: 32.8547916° N LONG: 104.0997196° W

FIRST TAKE POINT (FTP)
N: 674896.1 - E: 614008.7

LAT: 32.8550889° N LONG: 104.0966788° W

<u>LAST TAKE POINT (LTP)</u> N: 674929.9 - E: 621707.7

LAT: 32.8551319° N LONG: 104.0716067° W

BOTTOM HOLE (BH)
N: 674930.2 - E: 621757.7

LAT: 32.8551324° N LONG: 104.0714439° W CORNER DATA
NAD 83 GRID - NM EAST

A: FOUND BRASS CAP "1914" N: 670067.1 - E: 611279.1

B: FOUND BRASS CAP "1914" N: 672706.4 - E: 611271.3

C: FOUND BRASS CAP "1914" N: 675348.3 - E: 611261.3

D: FOUND BRASS CAP "1914" N: 675350.9 - E: 613907.4

E: FOUND 1/2" REBAR W/ RED PLASTIC CAP "HOWETT 19680" N: 675352.8 — E: 616550.1

F: FOUND BRASS CAP "1914" N: 675368.3 - E: 619178.2

G: FOUND BRASS CAP "1914" N: 675385.4 - E: 621807.5

H: FOUND BRASS CAP "1914" N: 672745.1 - E: 621808.9

I: FOUND 1/2" REBAR N: 670102.9 - E: 621822.7

J: FOUND BRASS CAP "1914" N: 670088.2 - E: 619192.6

K: FOUND BRASS CAP "1914" N: 670073.9 - E: 616565.6



Released to Imaging: 6/16/2025 1:19:56 PM

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

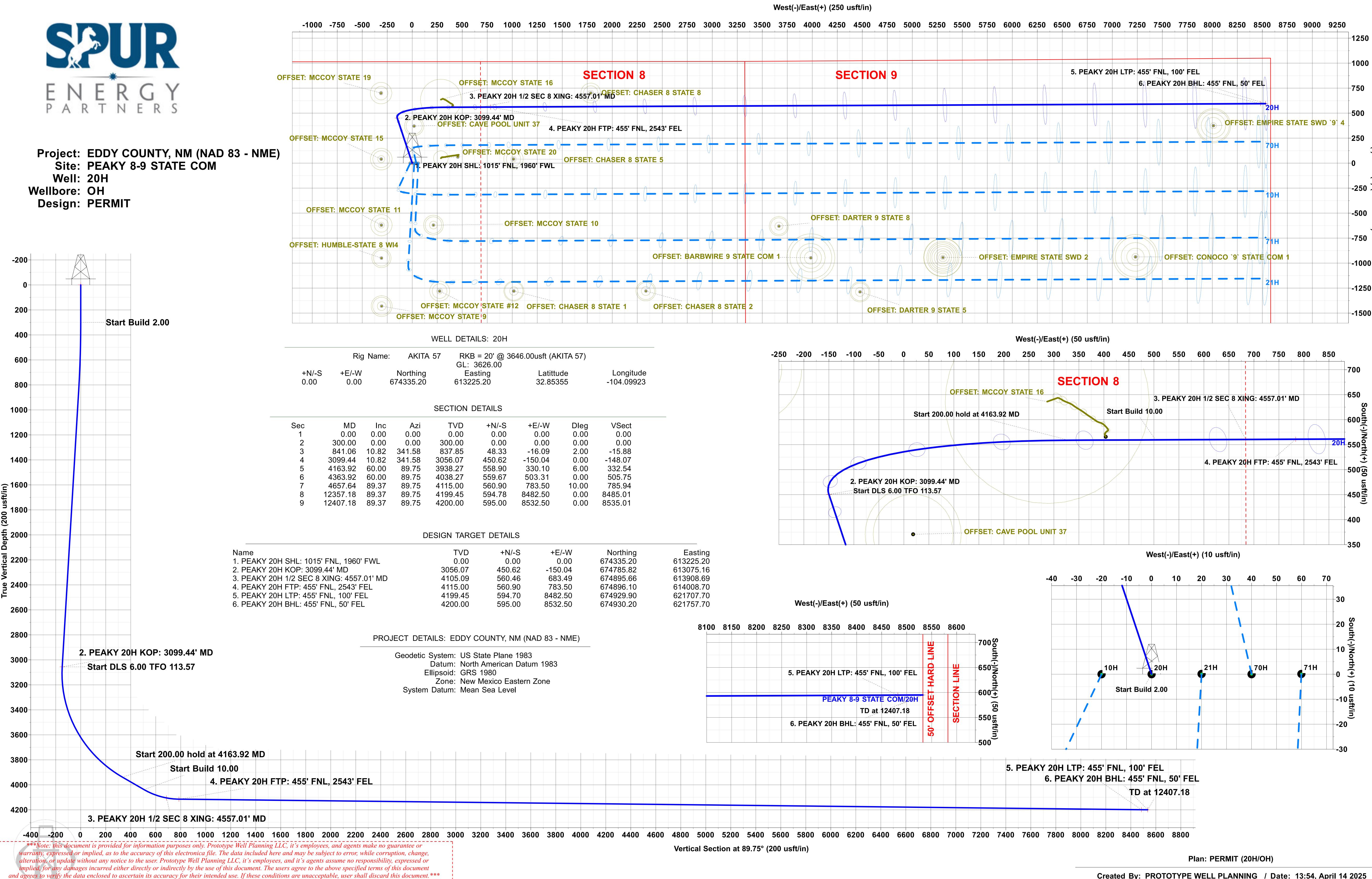
Form APD Conditions

Permit 388521

#### PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
Spur Energy Partners LLC [328947]	30-015-56793
9655 Katy Freeway	Well:
Houston, TX 77024	PEAKY 8 9 STATE COM #020H

OCD Reviewer	Condition
jeffrey.harrison	Notify the OCD 24 hours prior to casing & cement.
jeffrey.harrison	A [C-103] Sub. Drilling (C-103N) is required within (10) days of spud.
	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.
jeffrey.harrison	Cement is required to circulate on both surface and intermediate1 strings of casing.
jeffrey.harrison	File As Drilled C-102 and a directional Survey with C-104 completion packet.
	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.
jeffrey.harrison	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.



Created By: PROTOTYPE WELL PLANNING / Date: 13:54, April 14 2025

# SPUR ENERGY PARTNERS, LLC

EDDY COUNTY, NM (NAD 83 - NME) PEAKY 8-9 STATE COM 20H

OH

**Plan: PERMIT** 

# **Standard Planning Report**

14 April, 2025

Database: EDM 5000.17 Single User Db Company: SPUR ENERGY PARTNERS, LLC Project:

EDDY COUNTY, NM (NAD 83 - NME) PEAKY 8-9 STATE COM

Well: 20H Wellbore: OH Design: **PERMIT** 

Site:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference: **Survey Calculation Method:**  Well 20H

RKB = 20' @ 3646.00usft (AKITA 57) RKB = 20' @ 3646.00usft (AKITA 57)

Minimum Curvature

**Project** EDDY COUNTY, NM (NAD 83 - NME)

Map System: US State Plane 1983 North American Datum 1983 Geo Datum: Map Zone: New Mexico Eastern Zone

System Datum:

Mean Sea Level

Well 20H

**Well Position** +N/-S 0.00 usft Northing: 674,335.20 usft Latitude: 32.85355 +E/-W 0.00 usft Easting: 613,225.20 usft Longitude: -104.09924 **Position Uncertainty** 0.00 usft Wellhead Elevation: **Ground Level:** 3,626.00 usft usf

**Grid Convergence:** 0.13°

Design **PERMIT** 

**Audit Notes:** 

Version: Phase: **PLAN** Tie On Depth: 0.00

**Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (usft) (usft) (usft) (°) 89.75 0.00 0.00 0.00

**Plan Survey Tool Program** Date 4/7/2025

**Depth From Depth To** 

(usft) (usft) **Tool Name** Survey (Wellbore) Remarks

0.00 12,407.18 PERMIT (OH) MWD+IGRF

OWSG MWD + IGRF or WN

Plan Section	s									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
841.06	10.82	341.58	837.85	48.33	-16.09	2.00	2.00	0.00	341.58	
3,099.44	10.82	341.58	3,056.07	450.62	-150.04	0.00	0.00	0.00	0.00	
4,163.92	60.00	89.75	3,938.27	558.90	330.10	6.00	4.62	10.16	113.57	
4,363.92	60.00	89.75	4,038.27	559.67	503.31	0.00	0.00	0.00	0.00	
4,657.64	89.37	89.75	4,115.00	560.90	783.50	10.00	10.00	0.00	0.00 4	. PEAKY 20H FTP
12,357.18	89.37	89.75	4,199.45	594.78	8,482.50	0.00	0.00	0.00	0.00 5	. PEAKY 20H LTP
12,407.18	89.37	89.75	4,200.00	595.00	8,532.50	0.00	0.00	0.00	0.00 6	. PEAKY 20H BHL

EDM 5000.17 Single User Db Database: Company: Project:

SPUR ENERGY PARTNERS, LLC EDDY COUNTY, NM (NAD 83 - NME)

PEAKY 8-9 STATE COM

Well: 20H Wellbore:  $\mathsf{OH}$ Design: **PERMIT** 

Site:

**Local Co-ordinate Reference:** 

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well 20H

RKB = 20' @ 3646.00usft (AKITA 57) RKB = 20' @ 3646.00usft (AKITA 57)

nned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00 <b>1. PEAK</b> Y	0.00 <b>7 20H SHL: 101</b>	0.00 <b>5' FNL, 1960'</b>	0.00 <b>FWL</b>	0.00	0.00	0.00	0.00	0.00	0.00
100.00		0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00		0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00		0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00		341.58	399.98	1.66	-0.55	-0.54	2.00	2.00	0.00
500.00		341.58	499.84	6.62	-2.20	-2.18	2.00	2.00	0.00
600.00		341.58	599.45	14.89	-4.96	-4.89	2.00	2.00	0.00
700.00		341.58	698.70	26.45	-8.81	-8.69	2.00	2.00	0.00
800.00 841.06		341.58 341.58	797.47 837.85	41.29 48.33	-13.75 -16.09	-13.57 -15.88	2.00 2.00	2.00 2.00	0.00 0.00
900.00		341.58	895.74	58.83	-19.59	-19.33	0.00	0.00	0.00
1,000.00		341.58	993.96	76.65 04.46	-25.52	-25.19	0.00	0.00	0.00
1,100.00 1,200.00		341.58 341.58	1,092.18 1,190.41	94.46 112.27	-31.45 -37.38	-31.04 -36.89	0.00 0.00	0.00 0.00	0.00 0.00
1,300.00		341.58	1,190.41	130.08	-37.36 -43.31	-30.69 -42.75	0.00	0.00	0.00
•			•						
1,400.00 1.500.00		341.58	1,386.85	147.90	-49.24 55.19	-48.60 -54.45	0.00 0.00	0.00	0.00
1,600.00		341.58 341.58	1,485.07 1,583.29	165.71 183.52	-55.18 -61.11	-54.45 -60.31	0.00	0.00 0.00	0.00 0.00
1,700.00		341.58	1,681.52	201.34	-67.04	-66.16	0.00	0.00	0.00
1,800.00		341.58	1,779.74	219.15	-72.97	-72.01	0.00	0.00	0.00
1,900.00		341.58	1,877.96	236.96	-78.90	-77.86	0.00	0.00	0.00
2,000.00		341.58	1,976.18	254.77	-84.83	-83.72	0.00	0.00	0.00
2,100.00		341.58	2,074.40	272.59	-90.76	-89.57	0.00	0.00	0.00
2,200.00		341.58	2,172.62	290.40	-96.69	-95.42	0.00	0.00	0.00
2,300.00		341.58	2,270.85	308.21	-102.62	-101.28	0.00	0.00	0.00
2,400.00	10.82	341.58	2,369.07	326.03	-108.55	-107.13	0.00	0.00	0.00
2,500.00	10.82	341.58	2,467.29	343.84	-114.49	-112.98	0.00	0.00	0.00
2,600.00		341.58	2,565.51	361.65	-120.42	-118.84	0.00	0.00	0.00
2,700.00		341.58	2,663.73	379.46	-126.35	-124.69	0.00	0.00	0.00
2,800.00	10.82	341.58	2,761.96	397.28	-132.28	-130.54	0.00	0.00	0.00
2,900.00		341.58	2,860.18	415.09	-138.21	-136.40	0.00	0.00	0.00
3,000.00		341.58	2,958.40	432.90	-144.14	-142.25	0.00	0.00	0.00
3,099.44		341.58	3,056.07	450.62	-150.04	-148.07	0.00	0.00	0.00
2. PEAKY 3,150.00	<b>7 20H KOP: 309</b> 10.00	<b>9.44' MD</b> 357.81	3,105.81	459.51	-151.71	-149.70	6.00	-1.63	32.09
3,150.00		15.11	3,105.81	459.51 468.06	-151.71 -150.74	-149.70 -148.69	6.00	0.10	32.09 34.60
3,250.00	10.94	30.89	3,204.23	476.34	-147.16	-145.08	6.00	1.79	31.57
3,300.00		43.56	3,253.19	484.33	-141.00	-138.88	6.00	3.12	25.32
3,350.00	14.52	53.11	3,301.82	492.02	-132.25	-130.10	6.00	4.03	19.11
3,400.00		60.24	3,349.96	499.37	-120.96	-118.78	6.00	4.61	14.26
3,450.00	19.31	65.64	3,397.49	506.38	-107.14	-104.93	6.00	4.98	10.80
3,500.00		69.82	3,444.29	513.01	-90.84	-88.60	6.00	5.23	8.36
3,550.00		73.14	3,490.21	519.25	-72.10	-69.84	6.00	5.40	6.63
3,600.00		75.83	3,535.15	525.09	-50.98	-48.69	6.00	5.52	5.39
3,650.00		78.06	3,578.97	530.51	-27.52	-25.21	6.00	5.60	4.46
3,700.00		79.95	3,621.55	535.49	-1.80	0.53	6.00	5.67	3.77
3,750.00		81.56	3,662.77	540.02	26.11	28.47	6.00	5.72	3.23
3,800.00		82.97	3,702.53	544.09	56.15	58.52	6.00	5.75	2.81
3,850.00		84.21	3,740.72	547.68 550.70	88.21	90.60	6.00	5.78 5.91	2.48
3,900.00 3,950.00		85.32 86.31	3,777.22 3,811.95	550.79 553.41	122.23 158.10	124.63 160.52	6.00 6.00	5.81 5.83	2.21 2.00
4,000.00		87.22	3,844.80	555.52 557.14	195.73	198.15	6.00	5.84	1.82
4,050.00	53.31	88.06	3,875.68	557.14	235.01	237.44	6.00	5.85	1.67

Database: EDM 5000.17 Single User Db SPUR ENERGY PARTNERS, LLC

Project: EDDY COUNTY, NM (NAD 83 - NME)
Site: PEAKY 8-9 STATE COM

Well: 20H
Wellbore: OH
Design: PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well 20H

RKB = 20' @ 3646.00usft (AKITA 57) RKB = 20' @ 3646.00usft (AKITA 57)

Grid

lanned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,100.00	56.24	88.83	3,904.52	558.24	275.84	278.27	6.00	5.87	1.55
4,150.00	59.18	89.55	3,931.22	558.83	318.10	320.53	6.00	5.87	1.45
4,163.92	60.00	89.75	3,938.27	558.90	330.10	332.54	6.00	5.88	1.39
4,200.00	60.00	89.75	3,956.31	559.04	361.35	363.78	0.00	0.00	0.00
4,300.00	60.00	89.75	4,006.31	559.42	447.95	450.39	0.00	0.00	0.00
4,363.92	60.00	89.75	4,038.27	559.67	503.31	505.75	0.00	0.00	0.00
4,400.00	63.61	89.75	4,055.32	559.81	535.10	537.53	10.00	10.00	0.00
4,450.00	68.61	89.75	4,075.56	560.01	580.80	583.24	10.00	10.00	0.00
4,500.00	73.61	89.75	4,091.74	560.22	628.09	630.53	10.00	10.00	0.00
4,550.00	78.61	89.75	4,103.75	560.43	676.61	679.05	10.00	10.00	0.00
4,557.01	79.31	89.75	4,105.09	560.46	683.49	685.93	10.00	10.00	0.00
	20H 1/2 SEC 8			500.05	705.00	700.40	10.00	40.00	0.00
4,600.00	83.61	89.75	4,111.47	560.65	725.99	728.43	10.00	10.00	0.00
4,650.00	88.61	89.75	4,114.87	560.87	775.86	778.30	10.00	10.00	0.00
4,657.64	89.37	89.75	4,115.00	560.90	783.50	785.94	10.00	10.00	0.00
4,700.00 4,800.00 4,900.00 5,000.00	89.37 89.37 89.37 89.37 89.37 89.37	89.75 89.75 89.75 89.75 89.75	4,115.46 4,116.56 4,117.66 4,118.76	561.09 561.53 561.97 562.41	825.86 925.85 1,025.84 1,125.84	828.30 928.29 1,028.29 1,128.28	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
5,100.00	89.37	89.75	4,119.85	562.85	1,225.83	1,228.27	0.00	0.00	0.00
5,200.00	89.37	89.75	4,120.95	563.29	1,325.82	1,328.27	0.00	0.00	0.00
5,300.00	89.37	89.75	4,122.05	563.73	1,425.81	1,428.26	0.00	0.00	0.00
5,400.00	89.37	89.75	4,123.14	564.17	1,525.81	1,528.26	0.00	0.00	0.00
5,500.00	89.37	89.75	4,124.24	564.61	1,625.80	1,628.25	0.00	0.00	0.00
5,600.00	89.37	89.75	4,125.34	565.05	1,725.79	1,728.24	0.00	0.00	0.00
5,700.00	89.37	89.75	4,126.43	565.49	1,825.79	1,828.24	0.00	0.00	0.00
5,800.00	89.37	89.75	4,127.53	565.93	1,925.78	1,928.23	0.00	0.00	0.00
5,900.00	89.37	89.75	4,128.63	566.37	2,025.77	2,028.23	0.00	0.00	0.00
6,000.00	89.37	89.75	4,129.72	566.81	2,125.77	2,128.22	0.00	0.00	0.00
6,100.00	89.37	89.75	4,130.82	567.25	2,225.76	2,228.21	0.00	0.00	0.00
6,200.00	89.37	89.75	4,131.92	567.69	2,325.75	2,328.21	0.00	0.00	0.00
6,300.00	89.37	89.75	4,133.01	568.13	2,425.75	2,428.20	0.00	0.00	0.00
6,400.00	89.37	89.75	4,134.11	568.57	2,525.74	2,528.19	0.00	0.00	0.00
6,500.00	89.37	89.75	4,135.21	569.01	2,625.73	2,628.19	0.00	0.00	0.00
6,600.00	89.37	89.75	4,136.30	569.45	2,725.72	2,728.18	0.00	0.00	0.00
6,700.00	89.37	89.75	4,137.40	569.89	2,825.72	2,828.18	0.00	0.00	0.00
6,800.00	89.37	89.75	4,138.50	570.33	2,925.71	2,928.17	0.00	0.00	0.00
6,900.00	89.37	89.75	4,139.60	570.77	3,025.70	3,028.16	0.00	0.00	0.00
7,000.00	89.37	89.75	4,140.69	571.21	3,125.70	3,128.16	0.00	0.00	0.00
7,100.00	89.37	89.75	4,141.79	571.65	3,225.69	3,228.15	0.00	0.00	0.00
7,200.00	89.37	89.75	4,142.89	572.09	3,325.68	3,328.15	0.00	0.00	0.00
7,300.00	89.37	89.75	4,143.98	572.53	3,425.68	3,428.14	0.00	0.00	0.00
7,400.00	89.37	89.75	4,145.08	572.97	3,525.67	3,528.13	0.00	0.00	0.00
7,500.00	89.37	89.75	4,146.18	573.41	3,625.66	3,628.13	0.00	0.00	0.00
7,600.00	89.37	89.75	4,147.27	573.85	3,725.65	3,728.12	0.00	0.00	0.00
7,700.00	89.37	89.75	4,148.37	574.29	3,825.65	3,828.12	0.00	0.00	0.00
7,800.00	89.37	89.75	4,149.47	574.73	3,925.64	3,928.11	0.00	0.00	0.00
7,900.00	89.37	89.75	4,150.56	575.17	4,025.63	4,028.10	0.00	0.00	0.00
8,000.00	89.37	89.75	4,151.66	575.61	4,125.63	4,128.10	0.00	0.00	0.00
8,100.00	89.37	89.75	4,152.76	576.05	4,225.62	4,228.09	0.00	0.00	0.00
8,200.00	89.37	89.75	4,153.85	576.49	4,325.61	4,328.09	0.00	0.00	0.00
8,300.00	89.37	89.75	4,154.95	576.93	4,425.61	4,428.08	0.00	0.00	0.00
8,400.00	89.37	89.75	4,156.05	577.37	4,525.60	4,528.07	0.00	0.00	0.00

Database: Company: Project: Site: EDM 5000.17 Single User Db SPUR ENERGY PARTNERS, LLC EDDY COUNTY, NM (NAD 83 - NME)

PEAKY 8-9 STATE COM

Well: 20H
Wellbore: OH
Design: PERMIT

**Local Co-ordinate Reference:** 

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well 20H

RKB = 20' @ 3646.00usft (AKITA 57) RKB = 20' @ 3646.00usft (AKITA 57)

Grid

anned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,500.00	89.37	89.75	4,157.14	577.81	4,625.59	4,628.07	0.00	0.00	0.00
•						•			
8,600.00	89.37	89.75	4,158.24	578.25	4,725.58	4,728.06	0.00	0.00	0.00
8,700.00 8,800.00	89.37 89.37	89.75 89.75	4,159.34 4,160.44	578.69 579.13	4,825.58 4,925.57	4,828.06 4,928.05	0.00 0.00	0.00 0.00	0.00 0.00
8,900.00	89.37	89.75	4,160.44	579.13 579.57	5,025.56	5,028.04	0.00	0.00	0.00
9,000.00	89.37	89.75	4,161.53	580.01	5,025.56	5,028.04	0.00	0.00	0.00
•			•			•			
9,100.00	89.37	89.75	4,163.73	580.45	5,225.55	5,228.03	0.00	0.00	0.00
9,200.00	89.37	89.75	4,164.82	580.89	5,325.54	5,328.03	0.00	0.00	0.00
9,300.00	89.37	89.75	4,165.92	581.33	5,425.54	5,428.02	0.00	0.00	0.00
9,400.00	89.37	89.75	4,167.02	581.77	5,525.53	5,528.01	0.00	0.00	0.00
9,500.00	89.37	89.75	4,168.11	582.21	5,625.52	5,628.01	0.00	0.00	0.00
9,600.00	89.37	89.75	4,169.21	582.65	5,725.51	5,728.00	0.00	0.00	0.00
9,700.00	89.37	89.75	4,170.31	583.09	5,825.51	5,828.00	0.00	0.00	0.00
9,800.00	89.37	89.75	4,171.40	583.53	5,925.50	5,927.99	0.00	0.00	0.00
9,900.00	89.37	89.75	4,172.50	583.97	6,025.49	6,027.98	0.00	0.00	0.00
10,000.00	89.37	89.75	4,173.60	584.41	6,125.49	6,127.98	0.00	0.00	0.00
10,100.00	89.37	89.75	4,174.69	584.85	6,225.48	6,227.97	0.00	0.00	0.00
10,200.00	89.37	89.75	4,175.79	585.29	6,325.47	6,327.97	0.00	0.00	0.00
10,300.00	89.37	89.75	4,176.89	585.73	6,425.47	6,427.96	0.00	0.00	0.00
10,400.00	89.37	89.75	4,177.98	586.17	6,525.46	6,527.95	0.00	0.00	0.00
10,500.00	89.37	89.75	4,179.08	586.61	6,625.45	6,627.95	0.00	0.00	0.00
10,600.00	89.37	89.75	4,180.18	587.05	6,725.44	6,727.94	0.00	0.00	0.00
10,700.00	89.37	89.75	4,181.28	587.49	6,825.44	6,827.94	0.00	0.00	0.00
10,800.00	89.37	89.75	4,182.37	587.93	6,925.43	6,927.93	0.00	0.00	0.00
10,900.00	89.37	89.75	4,183.47	588.37	7,025.42	7,027.92	0.00	0.00	0.00
11,000.00	89.37	89.75	4,184.57	588.81	7,125.42	7,127.92	0.00	0.00	0.00
11,100.00	89.37	89.75	4,185.66	589.25	7,225.41	7,227.91	0.00	0.00	0.00
11,200.00	89.37	89.75	4,186.76	589.69	7,325.40	7,327.91	0.00	0.00	0.00
11,300.00	89.37	89.75	4,187.86	590.13	7,425.40	7,427.90	0.00	0.00	0.00
11,400.00	89.37	89.75	4,188.95	590.57	7,525.39	7,527.89	0.00	0.00	0.00
11,500.00	89.37	89.75	4,190.05	591.01	7,625.38	7,627.89	0.00	0.00	0.00
11,600.00	89.37	89.75	4,191.15	591.45	7,725.38	7,727.88	0.00	0.00	0.00
11,700.00	89.37	89.75	4,191.15	591.45 591.89	7,725.36	7,727.88	0.00	0.00	0.00
11,800.00	89.37	89.75	4,193.34	592.33	7,925.36	7,927.87	0.00	0.00	0.00
11,900.00	89.37	89.75	4,194.44	592.77	8,025.35	8,027.86	0.00	0.00	0.00
12,000.00	89.37	89.75	4,195.53	593.21	8,125.35	8,127.86	0.00	0.00	0.00
•			•			•	0.00	0.00	
12,100.00	89.37 89.37	89.75 89.75	4,196.63	593.65	8,225.34	8,227.85	0.00	0.00	0.00
12,200.00 12,300.00	89.37 89.37	89.75 89.75	4,197.73 4,198.82	594.09 594.53	8,325.33 8,425.33	8,327.85 8,427.84	0.00	0.00	0.00 0.00
12,300.00	89.37 89.37	89.75 89.75	4,198.82 4,199.45	594.53 594.78	8,425.33 8,482.50	8,427.84 8,485.01	0.00	0.00	0.00
•		09.75 FNL, 100' FEL	•	J#4.10	0,402.00	0,400.01	0.00	0.00	0.00
12,407.18	89.37	FNL, 100 FEL 89.75	4,200.00	595.00	8,532.50	8,535.02	0.00	0.00	0.00
		09 (0	4.200.00	ວອວ.ບບ	0.332.30	0.000.02	0.00	0.00	0.00

Database:EDM 5000.17 Single User DbCompany:SPUR ENERGY PARTNERS,

SPUR ENERGY PARTNERS, LLC EDDY COUNTY, NM (NAD 83 - NME)

Site: PEAKY 8-9 STATE COM

Well: 20H
Wellbore: OH
Design: PERMIT

Project:

**Local Co-ordinate Reference:** 

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well 20H

RKB = 20' @ 3646.00usft (AKITA 57) RKB = 20' @ 3646.00usft (AKITA 57)

Grid

Design Targets									
	Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PEAKY 20H SHL: 1     plan hits target cente     Point	0.00	0.00	0.00	0.00	0.00	674,335.20	613,225.20	32.85355	-104.09924
2. PEAKY 20H KOP: ( - plan hits target cente - Point	0.00	0.00	3,056.07	450.62	-150.04	674,785.81	613,075.16	32.85479	-104.09972
3. PEAKY 20H 1/2 SE - plan hits target cente - Point	0.00	0.00	4,105.09	560.46	683.49	674,895.65	613,908.69	32.85509	-104.09701
4. PEAKY 20H FTP: 4 - plan hits target cente - Point	0.00	0.00	4,115.00	560.90	783.50	674,896.10	614,008.70	32.85509	-104.09668
5. PEAKY 20H LTP: 4 - plan misses target ce - Point	0.00 nter by		4,199.45 12357.18us	594.70 oft MD (4199	8,482.50 9.45 TVD, 594	674,929.90 4.78 N, 8482.50 I	621,707.70 ≣)	32.85513	-104.07161
6. PEAKY 20H BHL: 4 - plan hits target cente - Point	0.00	0.00	4,200.00	595.00	8,532.50	674,930.20	621,757.70	32.85513	-104.07145

# 1. Geologic Formations

TVD of Target	4,200'
MD at TD	12,407'

Formation	Depth	Lithology	Expected Fluids
Quaternary	0'	Dolomite, other: Caliche	Useable Water
Rustler	225'	Dolomite, Shale, Anhydrite	Other: Brackish Water
Base Salt	650'	Anhydrite	Other: Salt
Tansill	725'	Sandstone, Dolomite	None
Yates	845'	Dolomite, Limestone, Shale, Siltstone	None
Seven Rivers	1090'	Dolomite, Limestone	None
Queen	1640'	Anhydrite, Dolomite, Sandstone	None
Grayburg	2055'	Anhydrite	Natural Gas, Oil
San Andres	2400'	Dolomite	Natural Gas, Oil
Glorieta	3810'	Dolomite, Siltstone	Natural Gas, Oil
Paddock	3895'	Dolomite, Limestone	Natural Gas, Oil
Blinebry	4280'	Dolomite, Limestone	Natural Gas, Oil
Tubb	5185'	Dolomite, Limestone	Natural Gas, Oil

<sup>\*</sup>H2S, water flows, loss of circulation, abnormal pressures, etc.

# 2. Casing Program

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

Casing Formation Set	Hole Size (in)	Holo Sizo (in)	Casing Inter	val	Csg. Size	Weight	Grade	Conn.	SF	SF Burst	Body SF	Joint SF
Interval		From (ft)	To (ft)	(in)	(lbs)	Grade	Com.	Collapse	Sr Durst	Tension	Tensio n	
Rustler	17.5	0	350	13.375	54.5	J-55	BTC	1.125	1.2	1.4	1.4	
Seven Rivers	12.25	0	1525	9.625	36	J-55	BTC	1.125	1.2	1.4	1.4	
N/A	8.75	0	4400	7	32	L-80	GBCD	1.125	1.2	1.4	1.4	
Yeso	8.75	4400	12407	5.5	20	L-80	GBCD	1.125	1.2	1.4	1.4	
	_	_				_		SF	Values will me	et or Exceed		

	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?	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

Casing String	Top (ft)	Bottom (ft)	% Excess
Surface Tail	0	350	100%
Intermediate (Lead)	0	350	50%
Intermediate (Tail)	350	1525	100%
Production (Lead)	0	3400	0%
Production (Tail)	3400	12407	50%

Casing String	# Sks	Wt.	Yld	H20	500# Comp. Strength	Slurry Description
	210	(lb/gal)	(ft3/sack)	(gal/sk)	(hours)	a an i n a
Surface Tail	218	13.2	2.32	9.92	6:59	Clas C Premium Plus Cement
Intermediate (Lead)	69	12.2	1.84	13.48	8:12	Clas C Premium Plus Cement
Intermediate (Tail)	326	13.2	2.32	9.92	6:59	Clas C Premium Plus Cement
Production (Lead)	472	11.8	2.54	15.29	N/A	Clas C Premium Plus Cement
Production (Tail)	1806	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\*

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		✓	Tested to:	
		5M	Annular		✓	70% of working pressure	
10.05" []-1-	13-5/8"		Blind Rai	m	✓		
12.25" Hole	13-3/8	5M	Pipe Ram		✓	250 psi / 3000 psi	
			Double Ram			230 psi / 3000 psi	
			Other*				
		5M	Annular		✓	70% of working pressure	
0.75" 11-1-	12 5/9"		Blind Ram		✓		
8.75" Hole	13-5/8"	5M	Pipe Ram		✓	250 mgi / 2000 mgi	
			Double Ram			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	1944 psi			
Abnormal Temperature	No			
BH Temperature at deepest TVD	114°F			

<sup>\*</sup>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 Ex	On Exploratory wells or on that portion of any well approved for a 5M BOPE system or							
greate	greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in							
accord	lance 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	E will meet all API 6A requirements. The BOP will be tested per Onshore Order #2							
after i	nstallation on the surface casing which will cover testing requirements for a maximum							
of 30	days.							
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.

I	Depth	Depth			Viannaitu	Water Loss	
ĺ	From (ft) To (ft)		Туре	Weight (ppg)	Viscosity	water Loss	
	0	350	Water-Based Mud	8.6-8.9	32-36	N/C	
	450	1525	Brine	9.0-10.0	32-36	N/C	
	1525	12407	Brine	9.0-10.0	32-36	N/C	

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

# 7. Logging and Testing Procedures

Logg	Logging, Coring and Testing.				
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 informa	tion.		
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			

# 8. Drilling Conditions

PEX

No

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.

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

Total estimated cuttings volume: 1097.7 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/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.	

#### Attachments

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

# 10. Company Personnel

<u>Name</u>	<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



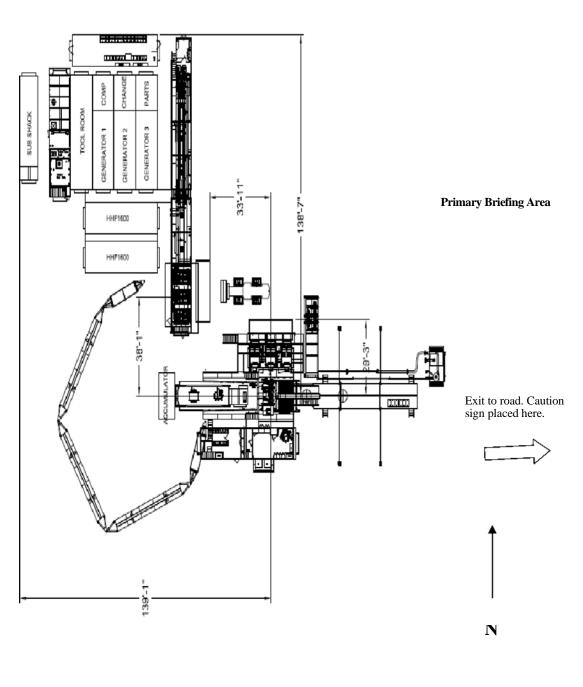
# Permian Drilling Hydrogen Sulfide Drilling Operations Plan Peaky 8 9 State Com Development

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





# Spur Energy Partners New Mexico Operations Hydrogen Sulfide Operation Plan

#### A. Introduction:

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

The objective of this contingency plan is to provide an organized plan of action for alerting, responding to and protecting employees, other workers and the public from H2S exposure in the event of a release of a potentially hazardous volume of H2S to the atmosphere. This plan should be activated immediately if any such release occurs. The Superintendent is responsible for initiating and carrying out the plan.

# B. Scope:

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

Provide immediate and adequate medical attention should an injury occur.

To provide Company employees working at actual or potential Hydrogen Sulfide (H2S) facilities with a safe procedure to comply with applicable Federal, State and Company requirements.

This document is intended to provide general policy, procedures and expectations surrounding elevated levels of H2S. The intent is to promote sound and safe operations, while seeking effective communication surrounding operational considerations working around H2S.

This procedure applies to all Company employees and contractors working at facilities that have the potential to release 100 ppm or higher concentrations of H2S.

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

# C. Hydrogen Sulfide Gas (H2S) Characteristics:

- H2S is a toxic, poisonous gas that could cause death or injury. And it is also flammable.
- H2S is an irritant and extremely toxic gas that is several times deadlier than carbon monoxide (CO).
- 3. H2S is heavier than air with a specific gravity of 1.1895 @ 600 F. so it will tend to lie in lower areas. Wind movement or air currents can readily disperse H2S since wind currents can easily overcome the heavier weight. On calm days, with no wind, the H2S will tend to accumulate in dangerous concentrations; however, if the H2S is warmer than the surrounding air it may rise.
- H2S is colorless.
- 5. In small concentrations, H2S has the characteristic odor of rotten eggs. It may be detected by smell at a concentration in air of about 2 ppm but may NOT be detected

at high concentrations. DO NOT DEPEND ON THE SENSE OF SMELL TO DETECT H2S! H2S will paralyze the olfactory nerve causing a loss of the sense of smell within 2 – 15 minutes of an exposure in concentrations as low as 100-150 ppm.

6. H2S burns with a blue flame and has an auto ignition temperature of 5000 F. H2S forms an explosive mixture in the range of 4.3% to 45% by volume with air. H2S, when ignited, produces Sulfur Dioxide (SO2). SO2 is another toxic gas but less toxic than H2S.

# Physiological Effects

- 1,000-2,000+ ppm: Loss of consciousness and possible death.
- 100-1,000 ppm: Serious respiratory, central nervous, and cardiovascular system effects.
- 150-200 ppm: Olfactory fatigue (sense of smell is significantly impaired).
- 100 ppm: Immediately Dangerous to Life and Health (IDLH concentration).
- 5-30 ppm: Moderate irritation of the eyes.
- 5-10 ppm: Relatively minor metabolic changes in exercising individuals during short-term exposures.
- Less than 5 ppm: Metabolic changes observed in exercising individuals, but not clinically significant.
- 5 ppm: Increase in anxiety symptoms (single exposure).
- 5 ppm: Start of the dose-response curve (short-term exposure).
- 0.032-0.02 ppm: Olfactory threshold (begin to smell).

# D. H₂STraining

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

- 1. The hazards and characteristics of hydrogen sulfide (H2S)
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- 4. The proper techniques for first aid and rescue procedures.
- 5. The procedures for operating process equipment.

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

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

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

Note: All H2S safety equipment and systems will be installed, tested, and operational when operation commences.

# E. Protective equipment controls:

Any facility that has the potential to emit H2S at 100 ppm or higher will be required to install and utilize the below controls:

- 1. Where applicable, area air monitors will be installed and function tested and calibrated no less than monthly and set on a quarterly basis PM schedule.
- 2. Facility operators will use self contained breathing apparatuses (SCBA's) to perform routine operations in areas where H2S may be present.
- 3. Trigger of 100 PPM or more must be communicated and work proceeding the trigger must use the buddy system.
- 4. Visible windsocks must be installed at key locations surrounding the facility.
- 5. H2S warning signs must be placed at the entrance to the facility as well as other key locations.
- 6. Personal H2S Monitor are required to be worn by all personnel on locations.
- 7. Stairs and ladders leading to the top of a tank or vessel containing 300 ppm or greater shall be chained or marked to restrict entry.

# F. Emergency Procedures

# Spill or Release of H₂S gas

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

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

# e. Facility Standard Operating Procedure

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

# G. Contacting Authorities

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

# H. Call List

Spur Energy Partne	ers Eme	rgency	Contact List			
Person	Loc	ation	Office Phon	ie	Cell Phone	
Drilling and Co	mpletic	ns Dep	artment	•		
Orilling Manager - Chris Hollis Houston		on	832-930-8629	) 7	13-380-7754	
Completions Manager - Theresa Voss	Houst	on	832-930-8614	. 8	32-849-8635	
VP of Operations - Seth Ireland	Houst	on	832-930-8527	' 9	40-704-6375	
Senior VP of Operations - John Nabors	Houst	on	832-930-8526	5 2	81-904-8811	
Executive VP of Operations - Todd Mucha	Houst	on	832-930-8515	5 2	81-795-2286	
HES/Environmental	and Re	gulatory	/ Department			
EHS Manager - Braidy Moulder	Artesi	a	575-616-5400	) 7	13-264-2517	
Superintendent - Jerry Mathews	Artesi	a	575-616-5400	) 5	75-748-5234	
Asst. Superintendent - Kenny Kidd	Artesi	a	575-616-5400	) 5	75-703-5851	
Regulatory Director - Sarah Chapman	Houst	on	832-930-8613	3 281-642-5503		
Regula	atory Ag	encies				
Bureau of Land Management		Carlsbad 5		575	575-886-6544	
Bureau of Land Management		Hobbs		575	575-393-3612	
Bureau of Land Management		Roswel	Roswell 5		75-622-5335	
Bureau of Land Management		Santa Fe 5		505	05-954-2000	
DOT Judicial Pipelines - Incident Reportir Public Regulation Commission	ng NM	Santa F	e		5-827-3549 5-490-2375	
EPA Hotline		Dallas 2		214	214-665-6444	
Federal OSHA, Area Office		Lubbock 8		806	306-472-7681	
National Response Center		Washington, D.C. 8		800	300-424-8803	
National Infrastructure Coordinator Cente	r	Washington, D.C. 2		202	202-282-2901	
New Mexico Air Quality Bureau		Santa F	e	505	-827-1494	
New Mexico Oil Conservation Division		Artesia			5-748-1283 -370-7545Aftei	
New Mexico Oil Conservation Division		Hobbs		575	-393-6161	
New Mexico Oil Conservation Division		Santa F	e	505	-476-3770	
New Mexico OCD Environmental Bureau		Santa F	-e		5-827-7152 5-476-3470	
New Mexico Environmental Department		Hobbs		575	-827-9329	
NM State Emergency Response Center		Santa F	e	505	-476-9600	

Medical	Facilities	
Artesia General Hospital	Artesia	575-748-3333
Covenant Medical Center	Lubbock	806-725-1011
Covenant Medical Center Lakeside	Lubbock	806-725-6000
Guadalupe County Hospital	Carlsbad	575-887-6633
Lea Regional Hospital	Hobbs	575-492-5000
Medical Center Hospital	Odessa	432-640-4000
Midland Memorial Hospital	Midland	432-685-1111
Nor-Lea General Hospital	Lovington	575-396-6611
Odessa Regional Hospital	Odessa	432-334-8200
Union County General Hospital	Clayton	575-374-2585
University Medical Center	Lubbock	806-725-8200
Law Enforce	ement - Sheriff	
Ector County Sheriff's Department	Odessa	432-335-3050
Ector County Sheriff's Department	Artesia	575-746-2704
Ector County Sheriff's Department	Carlsbad	575-887-7551
Lea County Sherrif's Department	Eunice	575-384-2020
Lea County Sherrif's Department	Hobbs	575-393-2515
Lea County Sherrif's Department	Lovington	575-396-3611
Lubbock County Sheriff's Department	Abernathy	806-296-2724
Midland County Sheriff's Department	Midland	432-688-1277
Union County Sheriff's Department	Clayton	575-374-2583
Law Enforce	ement - Police	
Abernathy Police Department	Abernathy	806-298-2545
Artesia City Police	Artesia	575-746-2704
Carlsbad City Police	Carlsbad	575-885-2111
Clayton City Police	Clayton	575-374-2504
Eunice City Police	Eunice	575-394-2112
Hobbs City Police	Hobbs	575-397-9265
		575-393-2677
Jal City Police	Jal	575-395-2501
Lovington City Police	Lovington	575-396-2811

Midland City Police	Midland	432-685-7113
Odessa City Police	Odessa	432-335-3378
Law Enforcem	ent - FBI	
FBI	Albuquerque	505-224-2000
FBI	Midland	432-570-0255
Law Enforcement	- DPS (911)	
NM State Police	Artesia	575-746-2704
NM State Police	Carlsbad	575-885-3137
NM State Police	Eunice	575-392-5588
NM State Police	Hobbs	575-392-5588
NM State Police	Clayton	575-374-2473
Firefighting and R	Rescue (911)	
Abernathy	Abernathy	806-298-2022
Amistad/Rosebud	Amistad/Rosebud	575-633-9113
Artesia	Artesia	575-746-5751
Carlsbad	Carlsbad	575-885-3125
Clayton	Clayton	575-374-2435
Eunice	Eunice	575-394-2111
Hobbs	Hobbs	575-397-9308
Jal	Jal	575-395-2221
Lovington	Lovington	575-396-2359
Maljamar	Maljamar	575-676-4100
Midland	Midland	432-685-7346
Nara Visa	Nara Visa	575-461-3300
Odessa	Odessa	432-335-4659
Tucumcari	Tucumcari	911
West Odessa	Odessa	432-381-3033

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

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

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

ALASKA 29 FEE TANK BATTERY
ARABIAN 6 FEE TANK BATTERY
ARCO 26 A STATE OIL BATTERY
ARCO B FEDERAL COM NO. 001
ARKANSAS STATE 23 TANK BATTERY

**AVALON FEDERAL #001** 

B&B/ROSS RANCH OIL TANK BATTERY BC FEDERAL 10 (9-13) TNK BTY BC FEDERAL 1-8 &14 TNK BTY BC FEDERAL 42 TNK BTY

BEE FED OIL BATTERY

BEECH 25 FEDERAL #9H BATTERY

BEECH FEDERAL 1

BEECH FEDERAL 2 BATTERY
BERRY A FEDERAL #005 SWB
BERRY A FEDERAL PADD BATTERY

**BIG BOY STATE TB** 

BLUETAIL 8 FEDERAL 2 TANK BATTERY BONE YARD 11 FEE TANK BATTERY

**BOOT HILL 25 1H SWB** 

**BOSE IKARD 4 ST COM 18H BATTERY** 

BRANTLEY FEDERAL #001 BR-549 STATE BATTERY BRADLEY 8 FEE #3H-BATTERY BRADLEY 8 FEE BATTERY BRAGG 10 FEE 1 BATTERY

**BRIGHAM H 2** 

BRIGHAM H FED (NORTH) BATTERY

BURCH KEELY 13C TK BTY
BURCH KEELY 18A TK BATT
BURCH KEELY 19A OIL BATT
BURCH KEELY 23A TK BATT

BURCH KEELY EAST 18B TANK BAT BURCH KEELY SEC 13A NORTH BTTY BURCH KEELY SEC 13B SOUTH BTTY

BURCH KEELY UNIT CTB BTTY
BURCH KEELY UNIT E BATTERY

**BURKETT 16 STATE** 

CADDO FEDERAL BATTERY CADILLAC ST 4 BATTERY CALIFORNIA 29 FEE 1

CARMEN 3 FEDERAL BATTERY
CARRINGTON 12 ST 3,4,7 BATTERY

CHASER 8 STATE 2 TANK BATTERY
CHEYENNE FEDERAL TNK BTY
CLYDESDALE 1 FEE #1H BAT
CLYDESDALE 1 FEE 6H - BATTERY
COAL TRAIN FEDERAL COM #1

COFFIN STATE #1

COLLIER 22 STATE COM #43H
COLLIER STATE OIL BATTERY

**CONOCO 8 STATE 4 TB** 

CONTINENTAL A STATE TNK BTY
CONTINENTAL B YESO TANK BTY
CONTINENTAL STATE 15A TNK BTY

CRYPT 30 STATE #1H

DAGGER DRAW FED/FOSTER FED TANK BATTERY

**DARNER 9 STATE 1 TANK BATTERY** 

DARNER 9 STATE 2

**DARTER 9 STATE 8 TANK BATTERY** 

**DARNER 9 STATE CTB** 

**DEXTER FEDERAL PAD TNK BTY** 

DODD 10A OIL BATTERY
DODD 10B TK BTTY
DODD FED #14C TK BATT
DODD FED 11A BATTERY

DODD FED UNIT 980H BATTERY

**DODD FEDERAL 14A-TB** 

DODD FEDERAL UNIT 15A BTTY
DODD FEDERAL UNIT NORTH BTTY
DODD FEDERAL UNIT SOUTH BTTY
DOGWOOD FEDERAL TNK BTY

DORAMI 33 FEDERAL COM 2H.4H.9H TANK BATTERY

**EBONY STATE TB** 

**EDWARD STATE TNK BTY** 

ELECTRA FEDERAL 33 (NORTH) BATTERY
ELECTRA FEDERAL 5 (SWEET) TNK BTY
ELECTRA FEDERAL SOUR TNK BTY
EMPIRE SOUTH DEEP UNIT 21
FALABELLA 31 FEE #1H TK BATT
FALABELLA 31 FEE 8H TK BTY
FAT TIRE 12 COM FEDERAL CTB
FEDERAL BA COM NO. 001

FEDERAL BB NO. 001

FLAT HEAD FED COM 6H TANK BATTERY FLAT HEAD FED COM 27H TANK BATTERY

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

FIR FEDERAL TNK BTY
FIRECRACKER STATE TB

FLEMMING STATE OIL BATTERY

FOLK FEDERAL B TNK BTY
FOLK FEDERAL TNK BATTERY
FORAN STATE OIL BATTERY
GC FEDERAL 11 TNK BTY
GC FEDERAL 27 TNK BTY
GC FEDERAL TNK BTY

GILLESPIE STATE OIL BATTERY
GISSLER FEDERAL 13H TANK BATT

GJ WEST COOP SOUTH TB
GJ WEST COOP UNIT 092 BTY
GJ WEST COOP UNIT 191 BTY
GJ WEST COOP UNIT 210 BTY
GJ WEST COOP UNIT CENTRAL
GJ WEST COOP UNIT N TNK BTY

**GOLD STAR TNK BTY** 

**GOODMAN 22 TANK BATTERY** 

GRAVE DIGGER FEDERAL COM TANK BATTERY GRAVE DIGGER ST COM #3H TANK BATTERY

**GRAVE DIGGER STATE COM #8H SWB** 

HALBERD 27 ST 3H BATTERY HANOVER STATE #3 (YESO) HARPER STATE TNK BTY HARVARD FEDERAL TNK BTY

HATFIELD B TB

HEARSE 36 ST COM TANK BATTERY HOBGOBLIN 7 FED COM 4H TK BAT

**HOLDER CB 11 TNK BTY** 

**HOLDER CB FEDERAL 6&7 TNK BTY** 

**HOLIDAY** 

**HOUMA STATE TNK BTY** 

HT 18 FED 01.05.04 TANK BATTERY

HT 18 FEDERAL 8

HUBER 10,11,12 FEDERAL OIL TANK BATTERY

HUBER 3 FEDERAL OIL TANK BATTERY
HUBER 5 FEDERAL OIL TANK BATTERY

HYDRUS 10 FED 03.07.08.11 TANK BATTERY

**HYDRUS 10 FED 04.05 TANK BATTERY** 

HYDRUS 10 FED 06.09.10.12 TANK BATTERY

IMPERIAL STATE TNK BTY

IVAR THE BONELESS FED 11H - BATTERY

JC FEDERAL 13 TNK BTY

JC FEDERAL 2 (SOUR) TNK BTY

JC FEDERAL 27 TNK BTY
JENKINS B FEDERAL TNK BTY
JG STATE 16 1 TANK BATTERY

JG STATE 16 7 TANK BATTERY

JON BOB 1

JUNIPER STATE TNK BTY
KIOWA OIL BATTERY

KOOL AID STATE

LAKEWOOD NORTH TANK BATTERY
LAKEWOOD SOUTH TANK BATTERY
LARA MICHELLE STATE OIL BTTY

LEAKER CC STATE TB LEE 3 FEE 6H - TK BATT LIVE OAK TANK BATTERY

MALCO 23 FEDERAL COM #13H

MAPLE STATE

**MARACAS 22 STATE TANK BATTERY** 

MARY FEDERAL OIL BATTERY

MAYARO 22 STATE TANK BATTERY
MC FEDERAL 14 TANK BATTERY
MC FEDERAL 6 DEVONIAN

IVIC FEDERAL O DEVONIAN

MC FEDERAL PADDOCK TNK BTY

MC SOUTHEAST BATTERY
MC STATE OIL BATTERY
MCCOY STATE TB

MCINTYRE A EAST TANK BATTERY

MCINTYRE B 10 MCINTYRE B 4

MCINTYRE B TNK BTY
MCINTYRE DK 15 TNK BTY

MCINTYRE DK FEDERAL 28H SWB MEADOWHAWK 5 FEDERAL 3 MELROSE FEDERAL TNK BTY

MERAK 7 FEDERAL 8 TANK BATTERY
MESILLA STATE 3 & 5 TNK BTY

MESILLA STATE TNK BTY

MESQUITE STATE TANK BATTERY

MIMOSA STATE TNK BTY

MIRANDA FEDERAL B TNK BTY

MIRANDA FEDERAL TB

**MORRIS E & F TANK BATTERY** 

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

MOE FEDERAL OIL BATTERY

MOHAWK FEDERAL TNK BTY

MONCRIEF 3 OIL BATTERY

MOORE STATE OIL BATTERY

MORRIS BOYD 26 FEE COM 1H

MORRIS BOYD TANK BATTERY

ROSE SOUTH TANK BATTERY

ROSE SOUTH TANK BATTERY

SAM ADAMS 12 FED 4H UBB TK BATT

SANDY CROSSING 32 STATE COM 1

SCHLEY FEDERAL TNK BTY

SHAWNEE FEDERAL TNK BTY

MUSKEGON SOUTH STATE OIL BATTERY SHERMAN 4 FEE 4H BATTERY

NAVAHO FEDERAL TNK BTY

NELSON 13.23. TNK BATT

SHERMAN 4 FEE 6H BATTERY

SHORTY 2 STATE COM TANK BATTERY

NEWCASTLE 6 FED COM - TANK BATTERY SINCLAIR PARKE (PADDOCK) TNK BTY

**SHELBY 23 BATTERY** 

NIRVANA TANK BATTERY

NOOSE FED 10 TANK BATTERY

NOOSE FED 5 TANK BATTERY

OKLAHOMA 32 TANK BATTERY

OSAGE BOYD 15 FED 09.12.13.14 TANK BATTERY

SKELLY 965 BATTERY

SKELLY 968 BATTERY

SKELLY 973 BATTERY

SKELLY 989 BATTERY

OSAGE BOYD YESO TANK BATTERY

SKELLY UNIT 907 CTB BATTERY

PAINT 32 FEE OIL BATTERY

SKELLY UNIT 940 BATTERY

SKELLY UNIT 940 BATTERY

PAN CANADIAN A2-B3 TANK BATTERY SOUTH BOYD FED COM OIL TANK BATTERY

PASSION 1 FED PDK 5H TK BATT SOUTH EMPIRE STATE COM 1
PATTON 5 FEE 2H OIL BATTERY SPIKETAIL 5 STATE 2 TANK BATTERY

PATTON 5 FEE 8H OIL BATTERY

PAWNEE STATE TNK BTY

PEACEMAKER 25 FEDERAL TANK BATTERY

SPRUCE FEDERAL TNK BTY

STATE B GAS COM NO. 001

STATE S-19 YESO (SOUR) TNK BTY

PERE MARQUETTE 18 FEDERAL 1 TANK BATTERY STONEWALL 9 FEE #1H TBAT

PILUM 15 FEE 2H BATTERY

STONEWALL 9 FEE 8H BATTERY

SURPLANDING 40 FED COM 211 ON DAT

PINTO 36 STATE COM 1H TNK BTY

SUBMARINE 10 FED COM 2H OIL BAT
PINTO 36 STATE COM 4H TNK BTY

TAYLOR D TANK BATTEY

PINTO 36 STATE TB TENNECO STATE TNK BTY

POLARIS B 5-10 TANK BTTY

POSEIDON 3 FEDERAL 4 TANK BATTERY

TEX MACK FED

TEX MACK FED

OSEIDON 3 FEDERAL 4 TANK BATTERY TEXACO BE TNK BTY

POSEIDON 3 FEDERAL 05.07.17.18 TANK BATTERY
PUCKETT 13 FEDERAL COM 35H

TEXAS 32 FEE TANK BATTERY
TEXAS 32 FEE TANK BATTERY

PUCKETT 13 FEDERAL COM 35H TEXMACK 36 STATE COM #1
PUCKETT 13 FEDERAL TB TH STATE #1

RAGNAR FED COM 25H - BATTERY THO STATE OIL BATTRY

RANDALL FED 3 BATTERY

THORNTAIL 31 FEDERAL 1

RED LAKE 32 TANK BATTERY

THUNDER ROAD FEDERAL OIL BTTY

REDBUD FEDERAL TNK BTY

TUMAK FED 3 BAT

RINCON STATE TANK BATTERY VEGA 9 FED TANK BATTERY

RJ UNIT NORTH TANK BATTERY VT 36 STATE #1H
RJ UNIT SOUTH TANK BATTERY W D MCINTYRE C 10

RONCO FEDERAL #1 WAUKEE 36 STATE COME CTB
ROSE 02.03.04.05.06 TANK BATTERY WD MCINTYRE C 8-9 TNK BTY

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

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

# 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

		<u>151</u>	ilective May 25;	<u> 2021</u>				
I. Operator:	SPUR ENERGY F	PARTNERS LLC	OGRID:	328947		Date:	05 /	01/2025
II. Type: ☒ Or	iginal   Amendment	due to □ 19.15.27.	.9.D(6)(a) NMAC	C □ 19.15.27.9.D(	(6)(b) N	MAC □ (	Other.	
If Other, please	describe:							
	ovide the following inf from a single well pad				wells pro	oposed to	be dri	lled or proposed to
Well Nam	e API	ULSTR	Footages	Anticipated Oil BBL/D		cipated MCF/D	Pi	Anticipated roduced Water BBL/D
PEAKY 8 9 STATE COM 10	0H 30-015-	C-8-17S-29E	1015' FNL 1940' FWL	369 BBL/D	602 MCF/D		2216 BBL/D	
PEAKY 8 9 STATE COM 20		C-8-17S-29E	1015' FNL 1960' FWL	369 BBL/D	602 MCF/D		2216 BBL/D	
PEAKY 8 9 STATE COM 2	IH 30-015-	C-8-17S-29E	1015' FNL 1980' FWL	369 BBL/D	602	602 MCF/D		2216 BBL/D
PEAKY 8 9 STATE COM70	H 30-015-	C-8-17S-29E	1015' FNL 2000' FWL	338 BBL/D	1014	1014 MCF/D 2		2367 BBL/D
PEAKY 8 9 STATE COM 71	H 30-015-	C-8-17S-29E	1015' FNL 2020' FWL	338 BBL/D	1014 MCF/D		2367 BBL/D	
V. Anticipated	ivery Point Name: Schedule: Provide the ecompleted from a sin	following informa	tion for each new					7.9(D)(1) NMAC] used to be drilled on
Well Nam	e API	Spud Date	TD Reached Date	Completion Commencement		Initial F Back D		First Production Date
PEAKY 8 9 STATE COM 10	H 30-015-	10/24/2026	11/03/2026	12/22/2026		01/11/202	7	01/26/2027
PEAKY 8 9 STATE COM 20	0H 30-015-	11/03/2026	11/13/2026	12/22/2026		01/11/202	7	01/26/2027
PEAKY 8 9 STATE COM 2°	IH 30-015-	11/13/2026	11/23/2026	12/22/2026		01/11/202	7	01/26/2027
PEAKY 8 9 STATE COM 70	0H 30-015-	11/23/2026	12/03/2026	12/22/2026		01/11/202	7	01/26/2027
PEAKY 8 9 STATE COM 7		12/03/2026	12/13/2026	12/22/2026		01/11/202		01/26//2027
	Equipment: ⊠Attach al Practices: ⊠Attac							

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.

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	Available Maximum Daily Capacity
	-		Start Date	of System Segment Tie-in

**XI. Map.**  $\square$  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  $\square$  will  $\square$  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  $\square$  does  $\square$  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; compression on lease; (c) (d) liquids removal on lease; reinjection for underground storage; (e) **(f)** reinjection for temporary storage; **(g)** reinjection for enhanced oil recovery;

# Section 4 - Notices

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

other alternative beneficial uses approved by the division.

fuel cell production; and

(h)

- (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:	05/01/2025
Phone:	832-930-8613
	OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:	
Title:	
Approval Date:	
Conditions of Appro-	val:



# Natural Gas Management Plan – Attachment

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

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

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



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

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