

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

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

District III

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

District IV

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

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

Form C-101

August 1, 2011

Permit 277425

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

1. Operator Name and Address Spur Energy Partners LLC 920 Memorial City Way Houston, TX 77024		2. OGRID Number 328947
		3. API Number 30-015-46628
4. Property Code 325897	5. Property Name SHELBY 23	6. Well No. 006H

7. Surface Location

UL - Lot A	Section 26	Township 19S	Range 25E	Lot Idn	Feet From 836	N/S Line N	Feet From 685	E/W Line E	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot A	Section 23	Township 19S	Range 25E	Lot Idn A	Feet From 50	N/S Line N	Feet From 375	E/W Line E	County Eddy
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9. Pool Information

N. SEVEN RIVERS; GLORIETA-YESO	97565
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type Private	15. Ground Level Elevation 3415
16. Multiple N	17. Proposed Depth 8444	18. Formation Paddock	19. Contractor	20. Spud Date 3/25/2020
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12.25	9.625	36	1200	550	0
Prod	8.75	7	32	2973	1440	0
Prod	8.75	5.5	20	8444	1440	0

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Blind	5	70	Control Technology Inc.

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.	OIL CONSERVATION DIVISION	
Signature:		
Printed Name: Electronically filed by Sarah Chapman	Approved By: Raymond Podany	
Title: Regulatory Director	Title: Geologist	
Email Address: schapman@spurepllc.com	Approved Date: 1/23/2020	Expiration Date: 1/23/2022
Date: 1/23/2020	Phone: 832-930-8613	Conditions of Approval Attached

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code 97565		3 Pool Name N. Green Kinners; Aloneta-Yero					
4 Property Code		5 Property Name SHELBY 23						6 Well Number 6H	
7 OGRID NO. 328947		8 Operator Name SPUR ENERGY PARTNERS LLC						9 Elevation 3415'	
10 Surface Location									
UL or lot no. A	Section 26	Township 19S	Range 25E	Lot Idn	Feet from the 836	North/South line NORTH	Feet From the 685	East/West line EAST	County EDDY
11 Bottom Hole Location If Different From Surface									
UL or lot no. A	Section 23	Township 19S	Range 25E	Lot Idn	Feet from the 50	North/South line NORTH	Feet from the 375	East/West line EAST	County EDDY
12 Dedicated Acres 3.20		13 Joint or Infill I		14 Consolidation Code		15 Order No.			

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.

	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Sarah Chapman 1/9/2020 Signature Date Sarah Chapman Printed Name schapman@spurenergyllc.com E-mail Address
	18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. 12-11-2019 Date of Survey Signature and Seal of Professional Surveyor: 19680 Certificate Number

RRC-Job No: LS19121148

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Santa Fe, NM 87505

GAS CAPTURE PLAN

Date: 1/23/2020

☒ Original

Operator & OGRID No.: [328947] Spur Energy Partners LLC

☐ Amended - Reason for
Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
SHELBY 23 #006H	30-015-46628	A-26-19S-25E	0836N 0685E	600	Vented	Will flare until tie-in constructed.

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to DCP OPERATING COMPANY, LP and will be connected to DCP OPERATING COMPANY, LP Low Pressure gathering system located in Eddy County, New Mexico. It will require 1100' of pipeline to connect the facility to Low Pressure gathering system. Spur Energy Partners LLC provides (periodically) to DCP OPERATING COMPANY, LP a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Spur Energy Partners LLC and DCP OPERATING COMPANY, LP have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DCP OPERATING COMPANY, LP Processing Plant located in Sec. 36, Twn. 19S, Rng. 24E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on DCP OPERATING COMPANY, LP system at that time. Based on current information, it is Spur Energy Partners LLC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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Form APD Comments

Permit 277425

PERMIT COMMENTS

Operator Name and Address: Spur Energy Partners LLC [328947] 920 Memorial City Way Houston, TX 77024		API Number: 30-015-46628
		Well: SHELBY 23 #006H
Created By	Comment	Comment Date
rpodany	Fee Cancellation - fix bhl and resubmit with fee	1/23/2020
schapman01	Updated BHL. Thank you.	1/23/2020

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Form APD Conditions

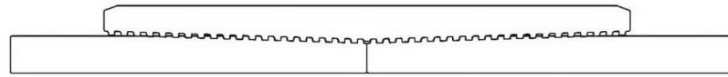
Permit 277425

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: Spur Energy Partners LLC [328947] 920 Memorial City Way Houston, TX 77024		API Number: 30-015-46628
		Well: SHELBY 23 #006H
OCD Reviewer	Condition	
rpodany	Will require a directional survey with the C-104	
rpodany	Cement is required to circulate on both surface and intermediate1 strings of casing	



Keeping You Connected.



SEMI
PREMIUMCONNECTIONS
FIELD TESTED. FIELD PROVEN.

Precision Connections BK-HT

5.5 in. 20 lb/ft L-80 with 6.3 in. Coupling OD

Pipe Body

Nominal OD	5.500	inches
Nominal Weight	20.00	lb/ft
Wall Thickness	0.361	inches
Plain End Weight	19.81	lb/ft
Drift	4.653	inches
Nominal ID	4.778	inches
Grade	L-80	
Min Yield	80,000	lbf/in ²
Min Tensile	95,000	lbf/in ²
Critical Section Area	5.828	in ²
Pipe Body Yield Strength	466	kips
Min Internal Yield Pressure	9,190	psi
Collapse Pressure	8,830	psi

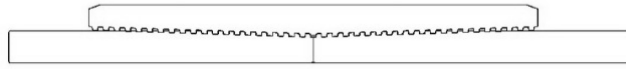
Connection

Coupling OD	6.300	inches
Coupling Length	8.250	inches
Make Up Loss	4.125	inches
Critical Section Area	8.456	in ²
Internal Pressure Rating	100%	
External Pressure Rating	100%	
Tension Efficiency	100%	
Connection Strength	466	kips
Compression Efficiency	100%	
Uniaxial Bend Rating	58.2	° / 100 ft
Min Make Up Torque	6,050	ft-lbs
Yield Torque	23,250	ft-lbs

v1.2

7/26/2018

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SEMI
PREMIUMCONNECTIONS
FIELD TESTED. FIELD PROVEN.

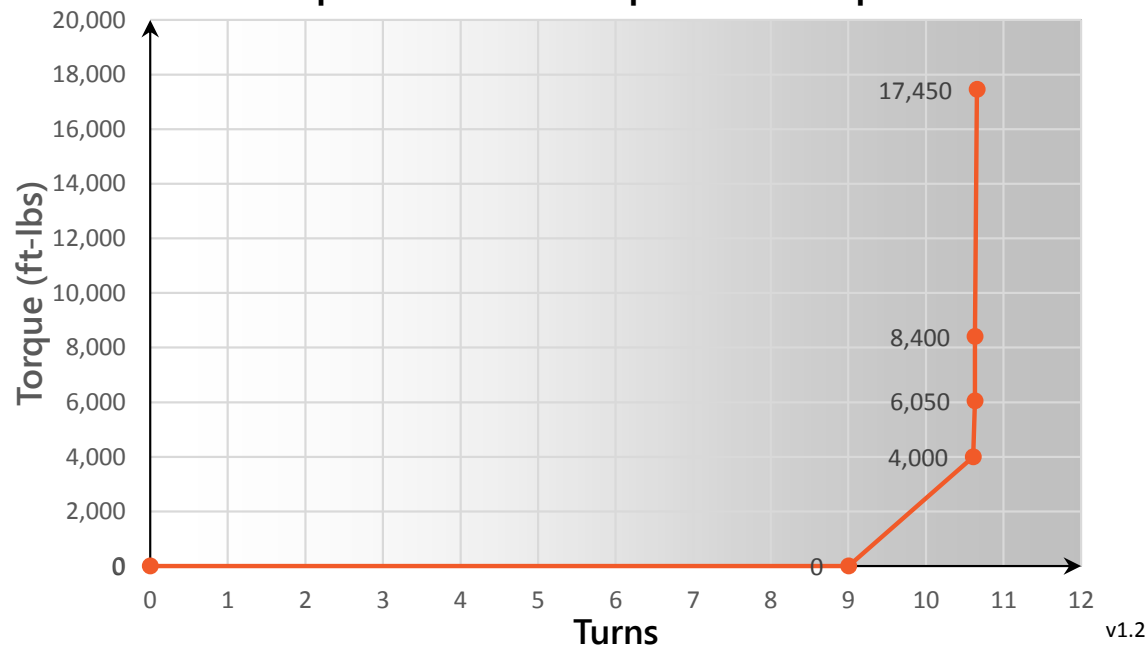
Torque Data Sheet - Precision Connections BK-HT

5.5 in. 20 lb/ft L-80 with 6.3 in. Coupling OD

Min Make Up Torque	6,050	ft-lbs
Max Make Up Torque	17,450	ft-lbs
Optimum Torque	8,400	ft-lbs

Max Operating Torque	19,800	ft-lbs
Yield Torque	23,250	ft-lbs

Representative Torque Turn Graph



v1.2

7/26/2018



Spur Energy Partners, LLC

Eddy County, NM (NAD 83 - NME)

Shelby 23

#6H

OH

Plan: Plan #1

Standard Plan With Toolface

15 January, 2020



Wellbenders

Standard Plan With Toolface

Company: Spur Energy Partners, LLC Project: Eddy County, NM (NAD 83 - NME) Site: Shelby 23 Well: #6H Wellbore: OH Design: Plan #1	Local Co-ordinate Reference: Well #6H TVD Reference: RKB=18.9' @ 3433.90usft (Akita 57) MD Reference: RKB=18.9' @ 3433.90usft (Akita 57) North Reference: Grid Survey Calculation Method: Minimum Curvature Database: WBDS_SQL_2
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Project	Eddy County, NM (NAD 83 - NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Shelby 23		
Site Position:		Northing:	594,944.60 usft
From: Map		Easting:	504,431.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in
		Latitude:	32.635495
		Longitude:	-104.453225
		Grid Convergence:	-0.065 °

Well	#6H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft		Wellhead Elevation:
			usft
			Latitude:
			32.636729
			Longitude:
			-104.449082
			Ground Level:
			3,415.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	1/15/2020	7.114
			Dip Angle (°)
			60.268
			Field Strength (nT)
			47,822.48876984

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°)
			1.05

Survey Tool Program	Date 1/15/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
0.00	8,444.41	Plan #1 (OH)	MWD+IGRF
			Description
			OWSG MWD + IGRF or WMM



Wellbenders

Standard Plan With Toolface

Company:	Spur Energy Partners, LLC	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County, NM (NAD 83 - NME)	TVD Reference:	RKB=18.9' @ 3433.90usft (Akita 57)
Site:	Shelby 23	MD Reference:	RKB=18.9' @ 3433.90usft (Akita 57)
Well:	#6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	WBDS_SQL_2

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
600.00	2.00	88.62	599.98	0.04	1.74	0.07	2.00	2.00	0.00	88.619
700.00	4.00	88.62	699.84	0.17	6.98	0.30	2.00	2.00	0.00	0.000
800.00	6.00	88.62	799.45	0.38	15.69	0.67	2.00	2.00	0.00	0.000
900.00	8.00	88.62	898.70	0.67	27.87	1.18	2.00	2.00	0.00	0.000
1,000.00	10.00	88.62	997.47	1.05	43.51	1.85	2.00	2.00	0.00	0.000
1,062.86	11.26	88.62	1,059.24	1.33	55.10	2.34	2.00	2.00	0.00	0.000
1,100.00	11.26	88.62	1,095.67	1.50	62.35	2.65	0.00	0.00	0.00	0.000
1,200.00	11.26	88.62	1,193.75	1.97	81.86	3.47	0.00	0.00	0.00	0.000
1,300.00	11.26	88.62	1,291.82	2.44	101.38	4.30	0.00	0.00	0.00	0.000
1,400.00	11.26	88.62	1,389.90	2.91	120.90	5.13	0.00	0.00	0.00	0.000
1,500.00	11.26	88.62	1,487.98	3.38	140.41	5.96	0.00	0.00	0.00	0.000
1,600.00	11.26	88.62	1,586.05	3.86	159.93	6.79	0.00	0.00	0.00	0.000
1,700.00	11.26	88.62	1,684.13	4.33	179.44	7.61	0.00	0.00	0.00	0.000
1,745.93	11.26	88.62	1,729.18	4.54	188.41	7.99	0.00	0.00	0.00	0.000
1,750.00	11.24	87.37	1,733.17	4.57	189.20	8.04	6.00	-0.36	-30.70	-94.074
1,800.00	11.49	72.15	1,782.20	6.32	198.81	9.96	6.00	0.49	-30.44	-92.850
1,850.00	12.46	58.43	1,831.12	10.67	208.14	14.48	6.00	1.95	-27.45	-77.926
1,900.00	14.01	47.18	1,879.80	17.61	217.18	21.59	6.00	3.10	-22.50	-64.498
1,950.00	15.97	38.38	1,928.10	27.12	225.89	31.25	6.00	3.92	-17.60	-53.543
2,000.00	18.21	31.57	1,975.89	39.17	234.26	43.46	6.00	4.48	-13.61	-45.041
2,050.00	20.64	26.27	2,023.05	53.73	242.25	58.17	6.00	4.86	-10.61	-38.535



Wellbenders

Standard Plan With Toolface

Company:	Spur Energy Partners, LLC	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County, NM (NAD 83 - NME)	TVD Reference:	RKB=18.9' @ 3433.90usft (Akita 57)
Site:	Shelby 23	MD Reference:	RKB=18.9' @ 3433.90usft (Akita 57)
Well:	#6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	WBDS_SQL_2

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
2,100.00	23.20	22.06	2,069.43	70.77	249.85	75.34	6.00	5.11	-8.42	-33.529
2,150.00	25.85	18.66	2,114.92	90.23	257.04	94.92	6.00	5.30	-6.80	-29.623
2,200.00	28.56	15.85	2,159.38	112.06	263.79	116.87	6.00	5.43	-5.60	-26.528
2,250.00	31.32	13.50	2,202.71	136.20	270.09	141.12	6.00	5.52	-4.70	-24.034
2,300.00	34.12	11.50	2,244.77	162.58	275.93	167.61	6.00	5.60	-4.01	-21.997
2,350.00	36.95	9.77	2,285.46	191.14	281.27	196.26	6.00	5.65	-3.46	-20.312
2,400.00	39.80	8.25	2,324.65	221.79	286.12	227.00	6.00	5.70	-3.04	-18.902
2,450.00	42.66	6.91	2,362.25	254.45	290.46	259.73	6.00	5.73	-2.69	-17.712
2,500.00	45.54	5.70	2,398.16	289.04	294.27	294.38	6.00	5.76	-2.41	-16.699
2,550.00	48.43	4.60	2,432.26	325.44	297.54	330.84	6.00	5.78	-2.19	-15.831
2,600.00	51.33	3.61	2,464.48	363.58	300.27	369.02	6.00	5.80	-2.00	-15.085
2,650.00	54.24	2.68	2,494.71	403.33	302.45	408.81	6.00	5.82	-1.84	-14.441
2,700.00	57.16	1.83	2,522.88	444.60	304.07	450.10	6.00	5.83	-1.71	-13.884
2,748.64	60.00	1.05	2,548.24	486.09	305.10	491.60	6.00	5.84	-1.61	-13.401
2,800.00	60.00	1.05	2,573.92	530.56	305.92	536.08	0.00	0.00	0.00	0.000
2,900.00	60.00	1.05	2,623.92	617.15	307.50	622.68	0.00	0.00	0.00	0.000
2,948.64	60.00	1.05	2,648.24	659.27	308.27	664.81	0.00	0.00	0.00	0.000
2,950.00	60.14	1.05	2,648.92	660.45	308.29	665.99	10.00	10.00	0.00	0.000
3,000.00	65.14	1.05	2,671.89	704.83	309.10	710.38	10.00	10.00	0.00	0.000
3,050.00	70.14	1.05	2,690.91	751.05	309.94	756.60	10.00	10.00	0.00	0.000
3,100.00	75.14	1.05	2,705.83	798.75	310.82	804.31	10.00	10.00	0.00	0.000
3,150.00	80.14	1.05	2,716.53	847.56	311.71	853.13	10.00	10.00	0.00	0.000
3,200.00	85.14	1.05	2,722.94	897.13	312.61	902.70	10.00	10.00	0.00	0.000
3,248.64	90.00	1.05	2,725.00	945.70	313.50	951.29	10.00	10.00	0.00	0.000
3,300.00	90.00	1.05	2,725.00	997.05	314.44	1,002.65	0.00	0.00	0.00	0.000
3,400.00	90.00	1.05	2,725.00	1,097.03	316.26	1,102.65	0.00	0.00	0.00	0.000
3,500.00	90.00	1.05	2,725.00	1,197.02	318.09	1,202.65	0.00	0.00	0.00	0.000



Wellbenders

Standard Plan With Toolface

Company:	Spur Energy Partners, LLC	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County, NM (NAD 83 - NME)	TVD Reference:	RKB=18.9' @ 3433.90usft (Akita 57)
Site:	Shelby 23	MD Reference:	RKB=18.9' @ 3433.90usft (Akita 57)
Well:	#6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	WBDS_SQL_2

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
3,600.00	90.00	1.05	2,725.00	1,297.00	319.92	1,302.65	0.00	0.00	0.00	0.000
3,700.00	90.00	1.05	2,725.00	1,396.98	321.74	1,402.65	0.00	0.00	0.00	0.000
3,800.00	90.00	1.05	2,725.00	1,496.97	323.57	1,502.65	0.00	0.00	0.00	0.000
3,900.00	90.00	1.05	2,725.00	1,596.95	325.40	1,602.65	0.00	0.00	0.00	0.000
4,000.00	90.00	1.05	2,725.00	1,696.93	327.22	1,702.65	0.00	0.00	0.00	0.000
4,100.00	90.00	1.05	2,725.00	1,796.92	329.05	1,802.65	0.00	0.00	0.00	0.000
4,200.00	90.00	1.05	2,725.00	1,896.90	330.88	1,902.65	0.00	0.00	0.00	0.000
4,300.00	90.00	1.05	2,725.00	1,996.88	332.70	2,002.65	0.00	0.00	0.00	0.000
4,400.00	90.00	1.05	2,725.00	2,096.87	334.53	2,102.65	0.00	0.00	0.00	0.000
4,500.00	90.00	1.05	2,725.00	2,196.85	336.36	2,202.65	0.00	0.00	0.00	0.000
4,600.00	90.00	1.05	2,725.00	2,296.83	338.18	2,302.65	0.00	0.00	0.00	0.000
4,700.00	90.00	1.05	2,725.00	2,396.82	340.01	2,402.65	0.00	0.00	0.00	0.000
4,800.00	90.00	1.05	2,725.00	2,496.80	341.84	2,502.65	0.00	0.00	0.00	0.000
4,900.00	90.00	1.05	2,725.00	2,596.78	343.66	2,602.65	0.00	0.00	0.00	0.000
5,000.00	90.00	1.05	2,725.00	2,696.77	345.49	2,702.65	0.00	0.00	0.00	0.000
5,100.00	90.00	1.05	2,725.00	2,796.75	347.31	2,802.65	0.00	0.00	0.00	0.000
5,200.00	90.00	1.05	2,725.00	2,896.73	349.14	2,902.65	0.00	0.00	0.00	0.000
5,300.00	90.00	1.05	2,725.00	2,996.72	350.97	3,002.65	0.00	0.00	0.00	0.000
5,400.00	90.00	1.05	2,725.00	3,096.70	352.79	3,102.65	0.00	0.00	0.00	0.000
5,500.00	90.00	1.05	2,725.00	3,196.68	354.62	3,202.65	0.00	0.00	0.00	0.000
5,600.00	90.00	1.05	2,725.00	3,296.67	356.45	3,302.65	0.00	0.00	0.00	0.000
5,700.00	90.00	1.05	2,725.00	3,396.65	358.27	3,402.65	0.00	0.00	0.00	0.000
5,800.00	90.00	1.05	2,725.00	3,496.63	360.10	3,502.65	0.00	0.00	0.00	0.000
5,900.00	90.00	1.05	2,725.00	3,596.62	361.93	3,602.65	0.00	0.00	0.00	0.000
6,000.00	90.00	1.05	2,725.00	3,696.60	363.75	3,702.65	0.00	0.00	0.00	0.000
6,100.00	90.00	1.05	2,725.00	3,796.58	365.58	3,802.65	0.00	0.00	0.00	0.000
6,200.00	90.00	1.05	2,725.00	3,896.57	367.41	3,902.65	0.00	0.00	0.00	0.000



Wellbenders

Standard Plan With Toolface

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6,300.00	90.00	1.05	2,725.00	3,996.55	369.23	4,002.65	0.00	0.00	0.00	0.000
6,400.00	90.00	1.05	2,725.00	4,096.53	371.06	4,102.65	0.00	0.00	0.00	0.000
6,500.00	90.00	1.05	2,725.00	4,196.52	372.89	4,202.65	0.00	0.00	0.00	0.000
6,600.00	90.00	1.05	2,725.00	4,296.50	374.71	4,302.65	0.00	0.00	0.00	0.000
6,700.00	90.00	1.05	2,725.00	4,396.48	376.54	4,402.65	0.00	0.00	0.00	0.000
6,800.00	90.00	1.05	2,725.00	4,496.47	378.37	4,502.65	0.00	0.00	0.00	0.000
6,900.00	90.00	1.05	2,725.00	4,596.45	380.19	4,602.65	0.00	0.00	0.00	0.000
7,000.00	90.00	1.05	2,725.00	4,696.43	382.02	4,702.65	0.00	0.00	0.00	0.000
7,100.00	90.00	1.05	2,725.00	4,796.42	383.84	4,802.65	0.00	0.00	0.00	0.000
7,200.00	90.00	1.05	2,725.00	4,896.40	385.67	4,902.65	0.00	0.00	0.00	0.000
7,300.00	90.00	1.05	2,725.00	4,996.38	387.50	5,002.65	0.00	0.00	0.00	0.000
7,400.00	90.00	1.05	2,725.00	5,096.37	389.32	5,102.65	0.00	0.00	0.00	0.000
7,500.00	90.00	1.05	2,725.00	5,196.35	391.15	5,202.65	0.00	0.00	0.00	0.000
7,600.00	90.00	1.05	2,725.00	5,296.33	392.98	5,302.65	0.00	0.00	0.00	0.000
7,700.00	90.00	1.05	2,725.00	5,396.32	394.80	5,402.65	0.00	0.00	0.00	0.000
7,800.00	90.00	1.05	2,725.00	5,496.30	396.63	5,502.65	0.00	0.00	0.00	0.000
7,900.00	90.00	1.05	2,725.00	5,596.28	398.46	5,602.65	0.00	0.00	0.00	0.000
8,000.00	90.00	1.05	2,725.00	5,696.27	400.28	5,702.65	0.00	0.00	0.00	0.000
8,100.00	90.00	1.05	2,725.00	5,796.25	402.11	5,802.65	0.00	0.00	0.00	0.000
8,200.00	90.00	1.05	2,725.00	5,896.23	403.94	5,902.65	0.00	0.00	0.00	0.000
8,300.00	90.00	1.05	2,725.00	5,996.22	405.76	6,002.65	0.00	0.00	0.00	0.000
8,394.40	90.00	1.05	2,725.00	6,090.60	407.49	6,097.04	0.00	0.00	0.00	0.000
8,400.00	90.00	1.05	2,725.00	6,096.20	407.59	6,102.65	0.00	0.00	0.00	0.000
8,444.41	90.00	1.05	2,725.00	6,140.60	408.40	6,147.05	0.00	0.00	0.00	0.000

Checked By: _____ Approved By: _____ Date: _____



Hydrogen Sulfide (H₂S)
Contingency Plan
For
Spur Energy Partners
New Mexico Operations

Spur Energy Partners

New Mexico Operations

Hydrogen Sulfide Operation Plan

Introduction:

H₂S is a toxic, poisonous gas that could cause death or injury. The objective of this contingency plan is to provide an organized plan of action for alerting and protecting the public from H₂S exposure in the event a potentially hazardous volume is accidentally released 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.

Characteristics of H₂S and SO₂:

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air= 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air= 1	2 ppm	N/A	1000 ppm

Scope:

This contingency plan provides an organized plan of action for alerting and protecting the public within an area of exposure prior to an intentional release, or following the accidental release of a potentially hazardous volume of hydrogen sulfide. The plan establishes guidelines for all personnel whose work activity may involve exposure to Hydrogen Sulfide Gas (H₂S).

Objective:

Prevent any and all accidents, and prevent the uncontrolled release of H₂S into the atmosphere. Provide proper evacuation procedures to cope with emergencies.

Provide immediate and adequate medical attention should an injury occur.

H₂S Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

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 H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

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

1. The effects of H₂S metal components. If high tensile tubular are to be used, personnel will be trained in their special maintenance requirements.

2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H₂S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S Drilling Operations Plan and the Public Protection Plan.

Note: All H₂S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H₂S.

Well Control Equipment

- A. Flare Line installed
- B. Choke Manifold
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
- D. Auxiliary equipment may include if applicable: annular preventer and rotating head.

Protective equipment for essential personnel:

30-minute SCBA units located in the doghouse and at briefing areas, as indicated on well site diagram. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

H₂S detection and monitoring equipment:

Portable H₂S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H₂S levels of 20 PPM are reached. These units are usually capable of detecting SO₂, which is a byproduct of burning H₂S.

Visual warning systems:

- A. Wind direction indicators as shown on well site diagram
- B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

Mud program:

The mud program has been designed to minimize the volume of H₂S circulated to surface. Proper mud weight, safe drilling practices and the use of H₂S scavengers will minimize hazards when penetrating H₂S bearing zones.

Metallurgy:

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H₂S trim.
- B. All elastomers used for packing and seals shall be H₂S trim.

Communication:

- A. Radio communications in company vehicles including cellular telephones and 2-way radio
- B. Land line (telephone) communications at Office

Well testing:

- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H₂S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

Emergency Procedures

Assumed 100 ppm Radius Of Exposure (ROE) =3000'

100 ppm H₂S concentration shall trigger activation of this plan.

In the event of a release of gas containing H₂S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H₂S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
 - o Detection of H₂S, and
 - o Measures for protection against the gas,
 - o Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be

coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Contacting Authorities

Company personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD 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).

Spur Energy Partners Company Call List

Superintendent - Jerry Mathews	575-748-5234
Engineer – Michael Sliva	281-723-1473
Vice President Oper. - Todd Mucha	832-930-8515
HSE Manager – Mike Schoch	713-816-6350

Lea County Agency Call List - (575)**Hobbs**

State Police.....	392-5588
City Police.....	397-9265
Sheriff's Office	393-2515
Ambulance.....	911
Fire Department.....	397-9308
LEPC (Local Emergency Planning Committee)	393-2870
NMOCD	393-6161
US Bureau of Land Management.....	393-3612

Eddy County Agency Call List - (575)**Carlsbad**

State Police.....	885-3137
City Police	885-2111
Sheriff's Office	887-7551
Ambulance.....	911
Fire Department.....	885-2111
LEPC (Local Emergency Planning Committee)	887-3798
US Bureau of Land Management.....	887-6544
NM Emergency Response Commission (Santa Fe). (505) 476-9600	
24 HR.....	(505) 827-9126
National Emergency Response Center (Washington, DC)	(800) 424-8802

Emergency Services

Hungry Hock Environmental	(575)-393-3386
Flight For Life - Lubbock, TX	(806) 743-9911
Aerocare - Lubbock, TX	(806) 747-8923
Med Flight Air Amb - Albuquerque, NM	(575) 842-4433
Lifeguard Air Med Svc. Albuquerque, NM	(575) 272-3115



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Note: All H₂S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H₂S.

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Visual warning systems:

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Emergency Procedures

Assumed 100 ppm Radius Of Exposure (ROE) =3000'

100 ppm H₂S concentration shall trigger activation of this plan.

In the event of a release of gas containing H₂S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H₂S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
 - o Detection of H₂S, and
 - o Measures for protection against the gas,
 - o Equipment used for protection and emergency response.

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Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be

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Aerocare - Lubbock, TX	(806) 747-8923
Med Flight Air Amb - Albuquerque, NM	(575) 842-4433
Lifeguard Air Med Svc. Albuquerque, NM	(575) 272-3115