

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 311715

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

1. Operator Name and Address Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024		2. OGRID Number 328947
		3. API Number 30-015-49356
4. Property Code 326714	5. Property Name HALBERD 27 STATE COM	6. Well No. 002H

7. Surface Location

UL - Lot D	Section 26	Township 17S	Range 28E	Lot Idn	Feet From 665	N/S Line N	Feet From 112	E/W Line W	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot D	Section 27	Township 17S	Range 28E	Lot Idn D	Feet From 400	N/S Line N	Feet From 50	E/W Line W	County Eddy
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9. Pool Information

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

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3590
16. Multiple N	17. Proposed Depth 8130	18. Formation Yeso	19. Contractor	20. Spud Date 5/31/2022
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

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

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12.25	9.625	36	1200	353	0
Prod	8.75	7	32	3800	1283	0
Prod	8.75	5.5	20	8130	1283	0

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5	5000	Shaffer

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.

Signature:

Printed Name: Electronically filed by Sarah Chapman

Title: Regulatory Director

Email Address: schapman@spurenergy.com

Date: 3/14/2022

Phone: 832-930-8613

OIL CONSERVATION DIVISION

Approved By: Katherine Pickford

Title: Geoscientist

Approved Date: 3/14/2022

Expiration Date: 3/14/2024

Conditions of Approval Attached

☐ AMENDED REPORT

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GEODETIC DATA

NAD 83 GRID – NM EAST

SURFACE LOCATION (SL)

N: 658818.9 – E: 596124.8

LAT: 32.8109954° N

LONG: 104.1550059° W

FIRST TAKE POINT (FTP)

400' FNL & 100' FEL – SEC 27

N: 659074.9 – E: 595914.8

LAT: 32.8116999° N

LONG: 104.1556881° W

LAST TAKE POINT (LTP)

400' FNL & 100' FWL – SEC 27

N: 659058.2 – E: 590890.9

LAT: 32.8116762° N

LONG: 104.1720404° W

BOTTOM HOLE (BH)

N: 659058.0 – E: 590840.9

LAT: 32.8116759° N

LONG: 104.1722031° W

CORNER DATA

NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1941"

N: 654235.0 – E: 590741.9

B: FOUND BRASS CAP "1941"

N: 656846.0 – E: 590769.0

C: FOUND BRASS CAP "1941"

N: 659457.7 – E: 590794.9

D: FOUND BRASS CAP "1941"

N: 659466.8 – E: 593406.4

E: FOUND BRASS CAP "1941"

N: 659475.1 – E: 596017.9

F: FOUND BRASS CAP "1941"

N: 659675.9 – E: 598617.6

G: FOUND BRASS CAP "1941"

N: 659870.2 – E: 601205.0

H: FOUND BRASS CAP "1941"

N: 657214.4 – E: 601209.0

I: FOUND BRASS CAP "1941"

N: 654552.6 – E: 601197.1

J: FOUND BRASS CAP "1941"

N: 654424.1 – E: 598586.6

K: FOUND BRASS CAP "1941"

N: 654298.0 – E: 595977.3

L: FOUND BRASS CAP "1941"

N: 654266.7 – E: 593360.1

M: FOUND BRASS CAP "1941"

N: 656886.5 – E: 595997.7

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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 03/01/2022

Signature Date

SARAH CHAPMAN

Printed Name

SCHAPMAN@SPUREENERGY.COM

E-mail Address

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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.

02/04/2022

Date of Survey

Signature and Seal of Professional Surveyor

19680

Certificate Number

1521121313

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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 Comments

Permit 311715

PERMIT COMMENTS

Operator Name and Address: Spur Energy Partners LLC [328947] 9655 Katy Freeway Houston, TX 77024		API Number: 30-015-49356
		Well: HALBERD 27 STATE COM #002H
Created By	Comment	Comment Date
ahvermersch	Fee Cancellation - System timeout; APD needs submitted.	3/14/2022

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Energy, Minerals and Natural Resources
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1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Conditions

Permit 311715

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: Spur Energy Partners LLC [328947] 9655 Katy Freeway Houston, TX 77024		API Number: 30-015-49356
		Well: HALBERD 27 STATE COM #002H
OCD Reviewer	Condition	



Spur Energy Partners, LLC

Eddy County, NM (NAD 83 - NME)

HALBERD 27 STATE COM

2H

Wellbore #1

Plan: PLAN #2

Standard Planning Report

06 March, 2022





Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 2H
Company:	Spur Energy Partners, LLC	TVD Reference:	RKB = 20' @ 3610.00usft (AKITA 57)
Project:	Eddy County, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3610.00usft (AKITA 57)
Site:	HALBERD 27 STATE COM	North Reference:	Grid
Well:	2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN #2		

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

Well	2H					
Well Position	+N/-S	0.00 usft	Northing:	658,818.90 usft	Latitude:	32.8109953
	+E/-W	0.00 usft	Easting:	596,124.80 usft	Longitude:	-104.1550059
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,590.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	02/11/22	6.786	60.325	47,709.88863939

Design	PLAN #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	269.81

Plan Survey Tool Program	Date	03/06/22		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	8,129.88	PLAN #2 (Wellbore #1)	MWD+IFR1+SAG+FDIR OWSG MWD + IFR1 + Sag

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.000	
812.14	10.24	56.23	809.42	25.38	37.95	2.00	2.00	0.00	56.227	
2,678.68	10.24	56.23	2,646.21	209.89	313.85	0.00	0.00	0.00	0.000	
3,537.06	60.00	269.81	3,372.21	256.84	-37.50	8.00	5.80	-17.06	-149.052	
3,737.06	60.00	269.81	3,472.21	256.26	-210.70	0.00	0.00	0.00	0.000	
4,039.88	90.28	269.81	3,548.97	255.30	-500.00	10.00	10.00	0.00	0.000	4. PLAN LP 2H: 400' FN
8,129.88	90.28	269.81	3,528.81	241.68	-4,589.93	0.00	0.00	0.00	0.000	5. BHL 2H: 400' FN



Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 2H
Company:	Spur Energy Partners, LLC	TVD Reference:	RKB = 20' @ 3610.00usft (AKITA 57)
Project:	Eddy County, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3610.00usft (AKITA 57)
Site:	HALBERD 27 STATE COM	North Reference:	Grid
Well:	2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1. SHL 2H: 665' FNL, 112' FWL									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	56.23	399.98	0.97	1.45	-1.45	2.00	2.00	0.00
500.00	4.00	56.23	499.84	3.88	5.80	-5.81	2.00	2.00	0.00
600.00	6.00	56.23	599.45	8.72	13.05	-13.07	2.00	2.00	0.00
700.00	8.00	56.23	698.70	15.50	23.18	-23.23	2.00	2.00	0.00
800.00	10.00	56.23	797.47	24.19	36.18	-36.26	2.00	2.00	0.00
812.14	10.24	56.23	809.42	25.38	37.95	-38.04	2.00	2.00	0.00
900.00	10.24	56.23	895.88	34.07	50.94	-51.05	0.00	0.00	0.00
1,000.00	10.24	56.23	994.28	43.95	65.72	-65.86	0.00	0.00	0.00
1,100.00	10.24	56.23	1,092.69	53.84	80.50	-80.68	0.00	0.00	0.00
1,200.00	10.24	56.23	1,191.10	63.72	95.28	-95.49	0.00	0.00	0.00
1,300.00	10.24	56.23	1,289.50	73.61	110.06	-110.31	0.00	0.00	0.00
1,400.00	10.24	56.23	1,387.91	83.49	124.84	-125.12	0.00	0.00	0.00
1,500.00	10.24	56.23	1,486.31	93.38	139.63	-139.93	0.00	0.00	0.00
1,600.00	10.24	56.23	1,584.72	103.26	154.41	-154.75	0.00	0.00	0.00
1,700.00	10.24	56.23	1,683.13	113.15	169.19	-169.56	0.00	0.00	0.00
1,800.00	10.24	56.23	1,781.53	123.03	183.97	-184.38	0.00	0.00	0.00
1,900.00	10.24	56.23	1,879.94	132.92	198.75	-199.19	0.00	0.00	0.00
2,000.00	10.24	56.23	1,978.35	142.80	213.53	-214.00	0.00	0.00	0.00
2,100.00	10.24	56.23	2,076.75	152.69	228.31	-228.82	0.00	0.00	0.00
2,200.00	10.24	56.23	2,175.16	162.57	243.09	-243.63	0.00	0.00	0.00
2,300.00	10.24	56.23	2,273.56	172.46	257.88	-258.45	0.00	0.00	0.00
2,400.00	10.24	56.23	2,371.97	182.35	272.66	-273.26	0.00	0.00	0.00
2,500.00	10.24	56.23	2,470.38	192.23	287.44	-288.07	0.00	0.00	0.00
2,600.00	10.24	56.23	2,568.78	202.12	302.22	-302.89	0.00	0.00	0.00
2,678.68	10.24	56.23	2,646.21	209.89	313.85	-314.54	0.00	0.00	0.00
2. KOP 2H @ 2678.68' MD									
2,700.00	8.82	50.50	2,667.23	211.99	316.69	-317.39	8.00	-6.66	-26.86
2,750.00	6.09	27.44	2,716.82	216.78	320.87	-321.59	8.00	-5.46	-46.13
2,800.00	5.32	347.06	2,766.59	221.40	321.57	-322.31	8.00	-1.54	-80.75
2,850.00	7.17	313.64	2,816.31	225.82	318.80	-319.54	8.00	3.70	-66.85
2,900.00	10.32	297.06	2,865.73	230.01	312.55	-313.31	8.00	6.29	-33.15
2,950.00	13.91	288.54	2,914.61	233.96	302.86	-303.63	8.00	7.18	-17.05
3,000.00	17.67	283.52	2,962.72	237.65	289.78	-290.57	8.00	7.53	-10.03
3,050.00	21.52	280.24	3,009.81	241.05	273.37	-274.17	8.00	7.69	-6.57
3,100.00	25.41	277.92	3,055.67	244.16	253.72	-254.53	8.00	7.78	-4.65
3,150.00	29.33	276.18	3,100.07	246.96	230.91	-231.73	8.00	7.84	-3.48
3,200.00	33.27	274.82	3,142.78	249.43	205.06	-205.89	8.00	7.87	-2.72
3,250.00	37.21	273.72	3,183.61	251.56	176.30	-177.13	8.00	7.90	-2.20
3,300.00	41.17	272.80	3,222.36	253.34	144.76	-145.60	8.00	7.92	-1.84
3,350.00	45.14	272.01	3,258.83	254.77	110.59	-111.44	8.00	7.93	-1.57
3,400.00	49.11	271.33	3,292.84	255.83	73.98	-74.83	8.00	7.94	-1.36
3,450.00	53.08	270.73	3,324.24	256.52	35.08	-35.94	8.00	7.94	-1.21
3,500.00	57.05	270.18	3,352.87	256.85	-5.90	5.04	8.00	7.95	-1.09
3,537.06	60.00	269.81	3,372.21	256.84	-37.50	36.64	8.00	7.95	-1.01
3,600.00	60.00	269.81	3,403.68	256.66	-92.01	91.16	0.00	0.00	0.00
3,700.00	60.00	269.81	3,453.68	256.37	-178.61	177.76	0.00	0.00	0.00
3,737.06	60.00	269.81	3,472.21	256.26	-210.70	209.85	0.00	0.00	0.00
3,750.00	61.29	269.81	3,478.56	256.23	-221.98	221.13	10.00	10.00	0.00



Planning Report



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Well:	2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,770.81	63.38	269.81	3,488.22	256.17	-240.41	239.56	10.00	10.00	0.00
3. FTP 2H: 400' FNL, 100' FEL									
3,800.00	66.29	269.81	3,500.63	256.08	-266.83	265.98	10.00	10.00	0.00
3,850.00	71.29	269.81	3,518.71	255.92	-313.43	312.58	10.00	10.00	0.00
3,900.00	76.29	269.81	3,532.66	255.76	-361.43	360.58	10.00	10.00	0.00
3,950.00	81.29	269.81	3,542.37	255.60	-410.46	409.61	10.00	10.00	0.00
4,000.00	86.29	269.81	3,547.77	255.43	-460.15	459.30	10.00	10.00	0.00
4,039.88	90.28	269.81	3,548.97	255.30	-500.00	499.15	10.00	10.00	0.00
4. PLAN LP 2H: 400' FNL, 390' FEL									
4,100.00	90.28	269.81	3,548.67	255.10	-560.12	559.27	0.00	0.00	0.00
4,200.00	90.28	269.81	3,548.18	254.77	-660.12	659.27	0.00	0.00	0.00
4,300.00	90.28	269.81	3,547.68	254.43	-760.12	759.27	0.00	0.00	0.00
4,400.00	90.28	269.81	3,547.19	254.10	-860.12	859.27	0.00	0.00	0.00
4,500.00	90.28	269.81	3,546.70	253.77	-960.11	959.27	0.00	0.00	0.00
4,600.00	90.28	269.81	3,546.21	253.43	-1,060.11	1,059.27	0.00	0.00	0.00
4,700.00	90.28	269.81	3,545.71	253.10	-1,160.11	1,159.26	0.00	0.00	0.00
4,800.00	90.28	269.81	3,545.22	252.77	-1,260.11	1,259.26	0.00	0.00	0.00
4,900.00	90.28	269.81	3,544.73	252.44	-1,360.11	1,359.26	0.00	0.00	0.00
5,000.00	90.28	269.81	3,544.23	252.10	-1,460.10	1,459.26	0.00	0.00	0.00
5,100.00	90.28	269.81	3,543.74	251.77	-1,560.10	1,559.26	0.00	0.00	0.00
5,200.00	90.28	269.81	3,543.25	251.44	-1,660.10	1,659.26	0.00	0.00	0.00
5,300.00	90.28	269.81	3,542.76	251.10	-1,760.10	1,759.26	0.00	0.00	0.00
5,400.00	90.28	269.81	3,542.26	250.77	-1,860.10	1,859.26	0.00	0.00	0.00
5,500.00	90.28	269.81	3,541.77	250.44	-1,960.10	1,959.25	0.00	0.00	0.00
5,600.00	90.28	269.81	3,541.28	250.10	-2,060.09	2,059.25	0.00	0.00	0.00
5,700.00	90.28	269.81	3,540.79	249.77	-2,160.09	2,159.25	0.00	0.00	0.00
5,800.00	90.28	269.81	3,540.29	249.44	-2,260.09	2,259.25	0.00	0.00	0.00
5,900.00	90.28	269.81	3,539.80	249.11	-2,360.09	2,359.25	0.00	0.00	0.00
6,000.00	90.28	269.81	3,539.31	248.77	-2,460.09	2,459.25	0.00	0.00	0.00
6,100.00	90.28	269.81	3,538.81	248.44	-2,560.09	2,559.25	0.00	0.00	0.00
6,200.00	90.28	269.81	3,538.32	248.11	-2,660.08	2,659.25	0.00	0.00	0.00
6,300.00	90.28	269.81	3,537.83	247.77	-2,760.08	2,759.24	0.00	0.00	0.00
6,400.00	90.28	269.81	3,537.34	247.44	-2,860.08	2,859.24	0.00	0.00	0.00
6,500.00	90.28	269.81	3,536.84	247.11	-2,960.08	2,959.24	0.00	0.00	0.00
6,600.00	90.28	269.81	3,536.35	246.77	-3,060.08	3,059.24	0.00	0.00	0.00
6,700.00	90.28	269.81	3,535.86	246.44	-3,160.07	3,159.24	0.00	0.00	0.00
6,800.00	90.28	269.81	3,535.37	246.11	-3,260.07	3,259.24	0.00	0.00	0.00
6,900.00	90.28	269.81	3,534.87	245.77	-3,360.07	3,359.24	0.00	0.00	0.00
7,000.00	90.28	269.81	3,534.38	245.44	-3,460.07	3,459.24	0.00	0.00	0.00
7,100.00	90.28	269.81	3,533.89	245.11	-3,560.07	3,559.24	0.00	0.00	0.00
7,200.00	90.28	269.81	3,533.40	244.78	-3,660.07	3,659.23	0.00	0.00	0.00
7,300.00	90.28	269.81	3,532.90	244.44	-3,760.06	3,759.23	0.00	0.00	0.00
7,400.00	90.28	269.81	3,532.41	244.11	-3,860.06	3,859.23	0.00	0.00	0.00
7,500.00	90.28	269.81	3,531.92	243.78	-3,960.06	3,959.23	0.00	0.00	0.00
7,600.00	90.28	269.81	3,531.42	243.44	-4,060.06	4,059.23	0.00	0.00	0.00
7,700.00	90.28	269.81	3,530.93	243.11	-4,160.06	4,159.23	0.00	0.00	0.00
7,800.00	90.28	269.81	3,530.44	242.78	-4,260.06	4,259.23	0.00	0.00	0.00
7,900.00	90.28	269.81	3,529.95	242.44	-4,360.05	4,359.23	0.00	0.00	0.00
8,000.00	90.28	269.81	3,529.45	242.11	-4,460.05	4,459.22	0.00	0.00	0.00
8,100.00	90.28	269.81	3,528.96	241.78	-4,560.05	4,559.22	0.00	0.00	0.00
8,129.88	90.28	269.81	3,528.81	241.68	-4,589.93	4,589.10	0.00	0.00	0.00
6. BHL 2H: 400' FNL, 50' FWL - 5. BHL 2H: 400' FNL, 744' FWL - 5. LTP 2H: 400' FNL, 100' FWL									



Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 2H
Company:	Spur Energy Partners, LLC	TVD Reference:	RKB = 20' @ 3610.00usft (AKITA 57)
Project:	Eddy County, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3610.00usft (AKITA 57)
Site:	HALBERD 27 STATE COM	North Reference:	Grid
Well:	2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN #2		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
1. SHL 2H: 665' FNL, - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	658,818.90	596,124.80	32.8109953	-104.1550059
2. KOP 2H @ 2678.6ft - plan hits target center - Point	0.00	0.00	2,646.21	209.89	313.85	659,028.79	596,438.65	32.8115708	-104.1539832
5. BHL 2H: 400' FNL, - plan hits target center - Point	0.00	0.00	3,528.81	241.68	-4,589.93	659,060.58	591,534.88	32.8116800	-104.1699444
4. PLAN LP 2H: 400' FNL, - plan hits target center - Point	0.00	0.00	3,548.97	255.30	-500.00	659,074.21	595,624.80	32.8116994	-104.1566320
3. FTP 2H: 400' FNL, - plan misses target center by 68.86usft at 3770.81usft MD (3488.22 TVD, 256.17 N, -240.41 E) - Point	0.00	0.00	3,550.00	256.00	-210.00	659,074.90	595,914.80	32.8117000	-104.1556881



Company: Spur Energy Partners, LLC
Project: Eddy County, NM (NAD 83 - NME)
Site: HALBERD 27 STATE COM
Well: 2H
Wellbore: Wellbore #1
Rig: AKITA 57
Design: PLAN #2 / 15:35, March 06 2022



WELL DETAILS: 2H

RKB = 20' @ 3610.00usft (AKITA 57)					
3590.00					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	658818.90	596124.80	32.8109953	-104.1550059

SECTION DETAILS

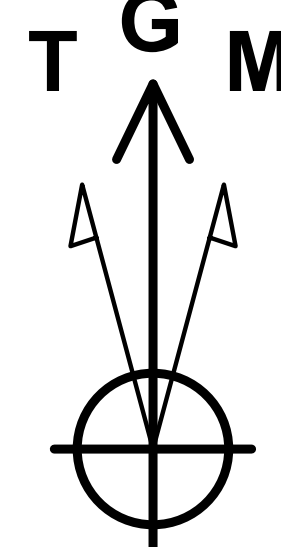
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00
3	812.14	10.24	56.23	809.42	25.38	37.95	2.00	-38.04
4	2678.68	10.24	56.23	2646.21	209.89	313.85	0.00	-314.54
5	3537.06	60.00	269.81	3372.21	256.84	-37.50	8.00	36.64
6	3737.06	60.00	269.81	3472.21	256.26	-210.70	0.00	209.85
7	4039.88	90.28	269.81	3548.97	255.30	-500.00	10.00	499.15
8	8129.88	90.28	269.81	3528.81	241.68	-4589.93	0.00	4589.10

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
1. SHL 2H: 665' FNL, 112' FWL	0.00	0.00	0.00	658818.90	596124.80	32.8109953	-104.1550059
2. KOP 2H @ 2678.68' MD	2646.21	209.89	313.85	659028.79	596438.65	32.8115708	-104.1539832
5. BHL 2H: 400' FNL, 744' FWL	3528.81	241.68	-4589.93	659060.58	591534.87	32.8116800	-104.1699444
4. PLAN LP 2H: 400' FNL, 390' FEL	3548.97	255.30	-500.00	659074.20	595624.80	32.8116994	-104.1566320
3. FTP 2H: 400' FNL, 100' FEL	3550.00	256.00	-210.00	659074.90	595914.80	32.8116999	-104.1556881

CORRECTION REFERENCE DATA:

To convert a Magnetic Direction to a Grid Direction, Add 6.689°
To convert a True Direction to a Grid Direction, Subtract 0.097°
To convert a Magnetic Direction to a True Direction, Add 6.786° East
Magnetic Declination: 6.786°
Grid Convergence: 0.097° West
Magnetic Dip Angle: 60.325°
Magnetic Field Strength: 47709.88863940nT



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

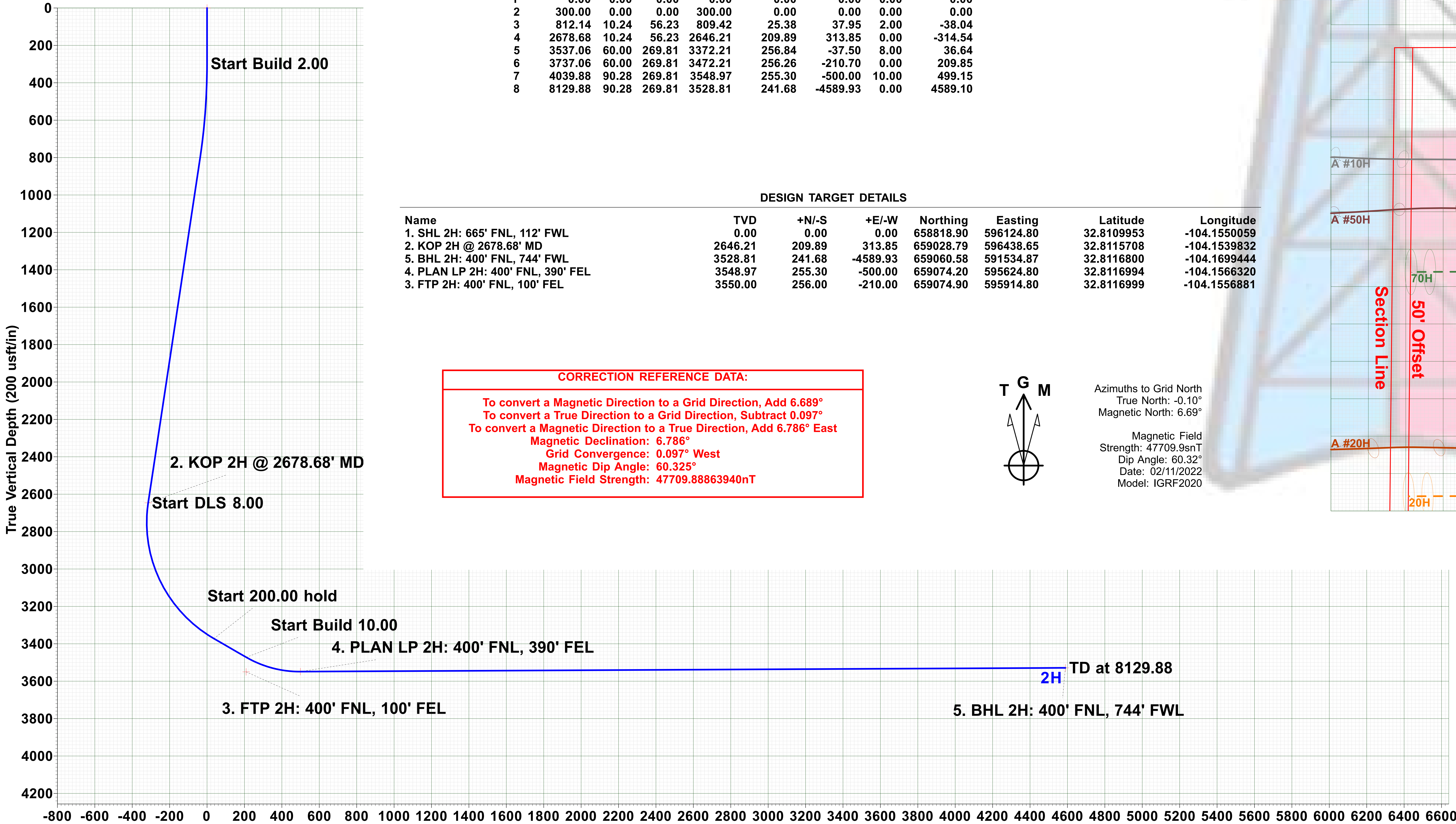
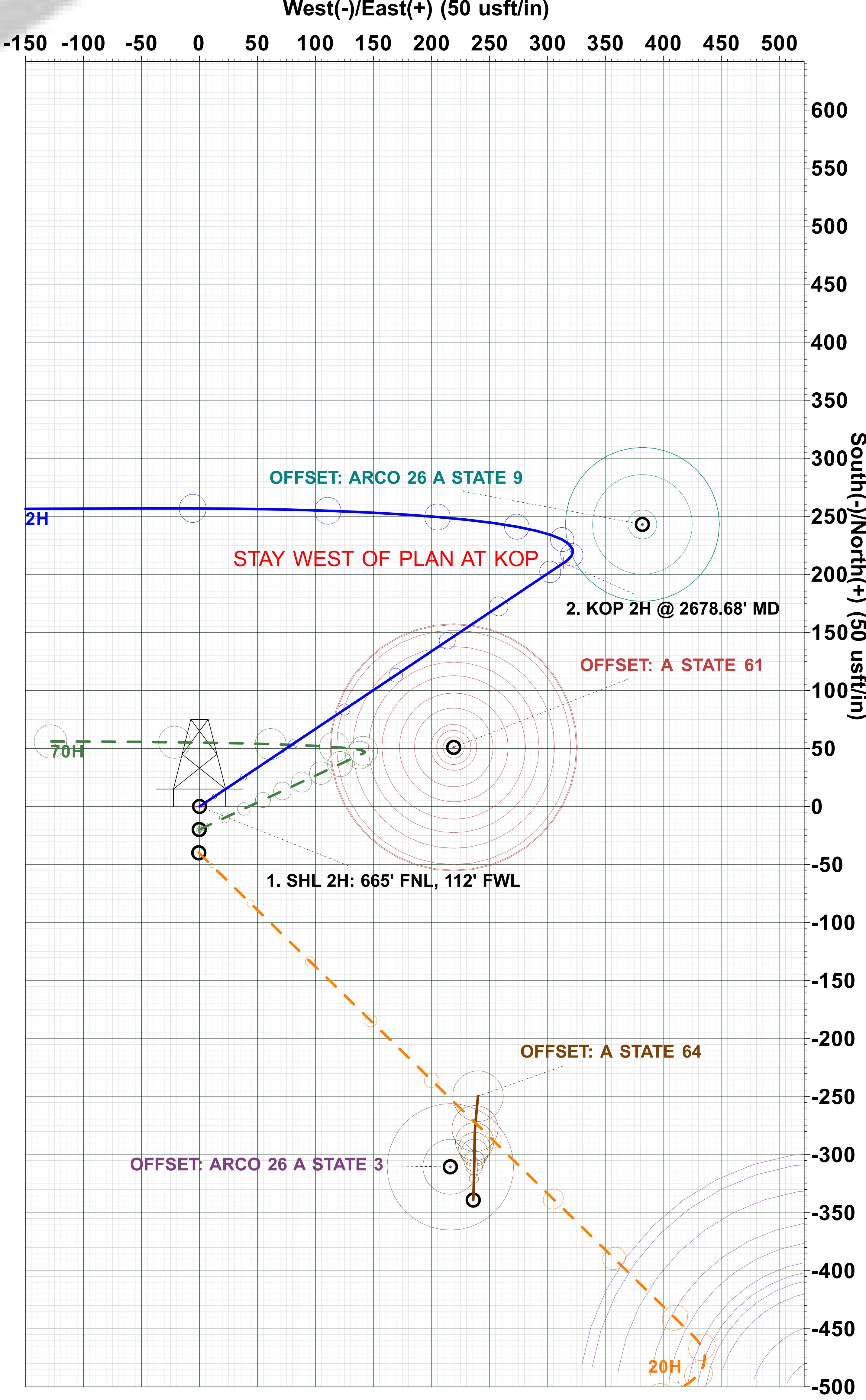
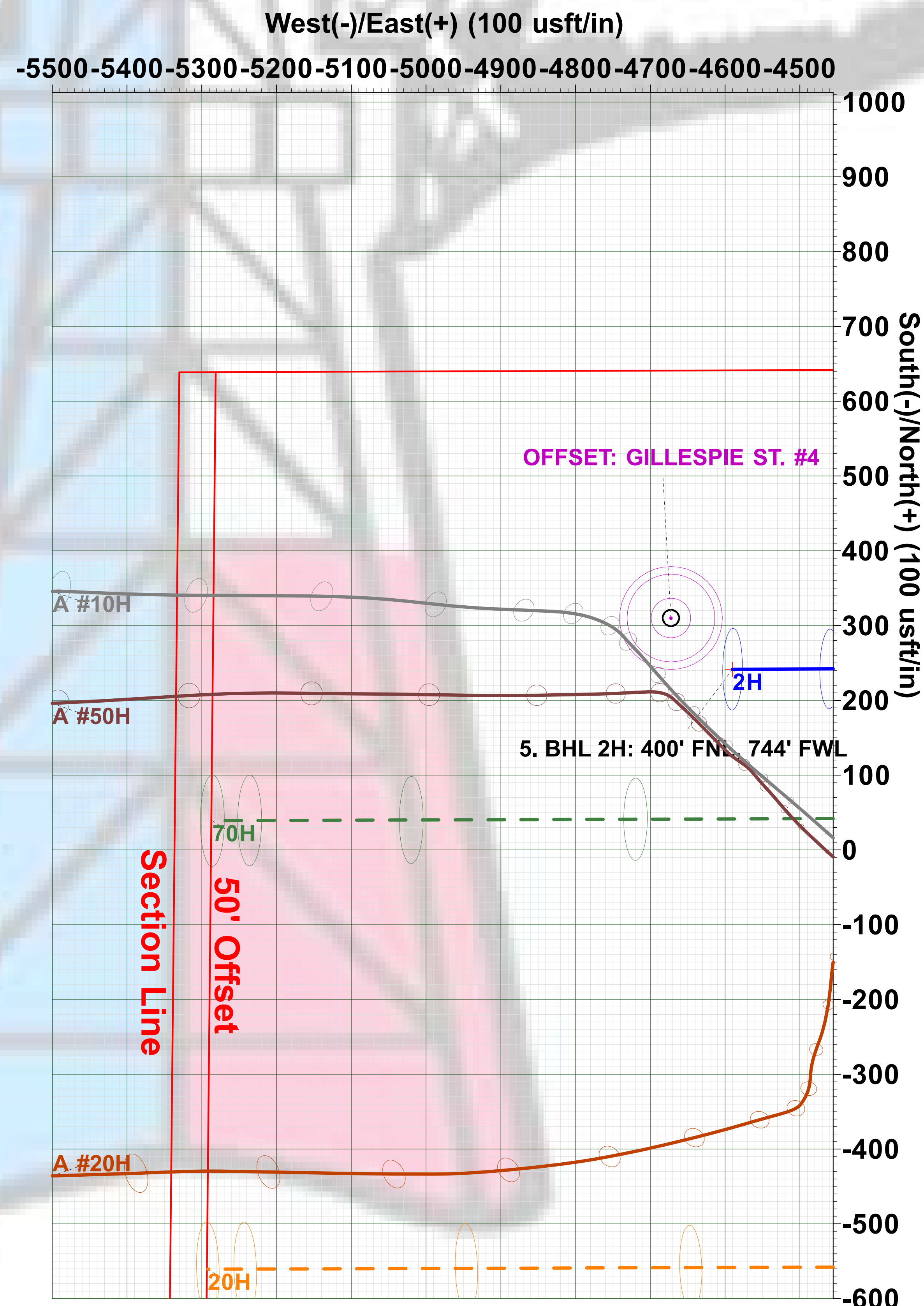
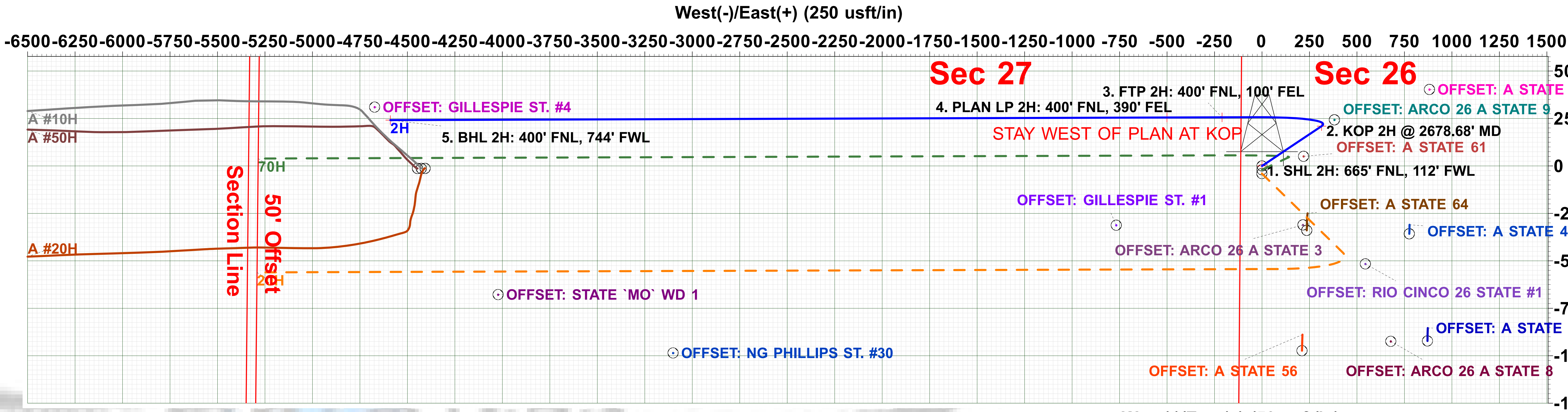
Magnetic Field
Strength: 47709.9snT
Dip Angle: 60.32°
Date: 02/11/2022
Model: IGRF2020

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

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

Disclaimer:

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



Plan: PLAN #2 (2H/Wellbore #1) AKITA 57

Created By: Derek Stephens Date: 15:35, March 06 2022

Spur Energy Partners LLC – Halberd 27 State Com 2H

1. Geologic Formations

TVD of Target	3,529'
MD at TD	8,130'

Formation	Depth	Lithology	Expected Fluids
Quaternary	0'	Dolomite, other: Caliche	Useable Water
Tansill	365'	Sandstone, Dolomite	None
Yates	465'	Dolomite, Limestone, Shale, Siltstone	None
Seven Rivers	725'	Dolomite, Limestone	Natural Gas, Oil
Queen	1270'	Sandstone, Dolomite, Anhydrite	Natural Gas, Oil
Grayburg	1680'	Sandstone, Dolomite, Anhydrite	Natural Gas, Oil
San Andres	1956'	Dolomite	Natural Gas, Oil
Glorieta	3365'	Dolomite, Siltstone	Natural Gas, Oil
Yeso	3450'	Dolomite	Natural Gas, Oil

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

2. Casing Program

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

Hole Size (in)	Casing Interval		Csg. Size (in)	Weight (lbs)	Grade	Conn.	SF	SF Burst	Body SF	Joint SF
	From (ft)	To (ft)					Collapse		Tension	Tension
12.25	0	1200	9.625	36	J-55	BTC	1.125	1.2	1.4	1.4
8.75	0	3800	7	32	L-80	BK-HT	1.125	1.2	1.4	1.4
8.75	3800	8130	5.5	20	L-80	BK-HT	1.125	1.2	1.4	1.4
SF Values will meet or Exceed										

Spur Energy Partners LLC – Halberd 27 State Com 2H

	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 rd 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 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing String	Top (ft)	Bottom (ft)	% Excess
Surface (Lead)	0	950	100%
Surface (Tail)	950	1200	100%
Production (Lead)	0	2800	100%
Production (Tail)	2800	8130	25%

Casing String	# Sks	Wt. (lb/gal)	Yld (ft3/sack)	H2O (gal/sk)	500# Comp. Strength (hours)	Slurry Description
Surface (Lead)	259	12	2.4	13.48	8:12	Clas C Premium Plus Cement
Surface (Tail)	94	13.2	1.87	9.92	6:59	Clas C Premium Plus Cement
Production (Lead)	282	11.4	2.42	15.29	N/A	Clas C Premium Plus Cement
Production (Tail)	1001	13.2	1.56	9.81	N/A	Clas C Premium Plus Cement

Spur Energy Partners LLC – Halberd 27 State Com 2H**4. Pressure Control Equipment*****Spur Energy Partners LLC variance for flex hose***

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

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

Spur Energy Partners LLC will be utilizing a 5M BOP

Condition	Specify what type and where?
BH Pressure at deepest TVD	1643 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	109°F

*Specify if additional ram is utilized.

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

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

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

Spur Energy Partners LLC – Halberd 27 State Com 2H

	A conventional wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. See attached 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 3rd Bone Spring or deeper.

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

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

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

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

6. Mud Program

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

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From (ft)	To (ft)				
0	1200	Water-Based Mud	8.6-8.9	32-36	N/C
1200	8130	Water-Based Mud	8.6-8.9	32-36	N/C

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

Spur Energy Partners LLC – Halberd 27 State Com 2H**7. Logging and Testing Procedures**

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 information.	
No	Drill stem test? If yes, explain	
No	Coring? If yes, explain	
Additional logs planned		Interval
No	Resistivity	
No	Density	
No	CBL	
Yes	Mud log	SCP - TD
No	PEX	

8. Drilling Conditions

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

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

Total estimated cuttings volume: 779.6 bbls.

Spur Energy Partners LLC – Halberd 27 State Com 2H**9. Other facets of operation**

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

Attachments

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

10. Company Personnel

Name	Title	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



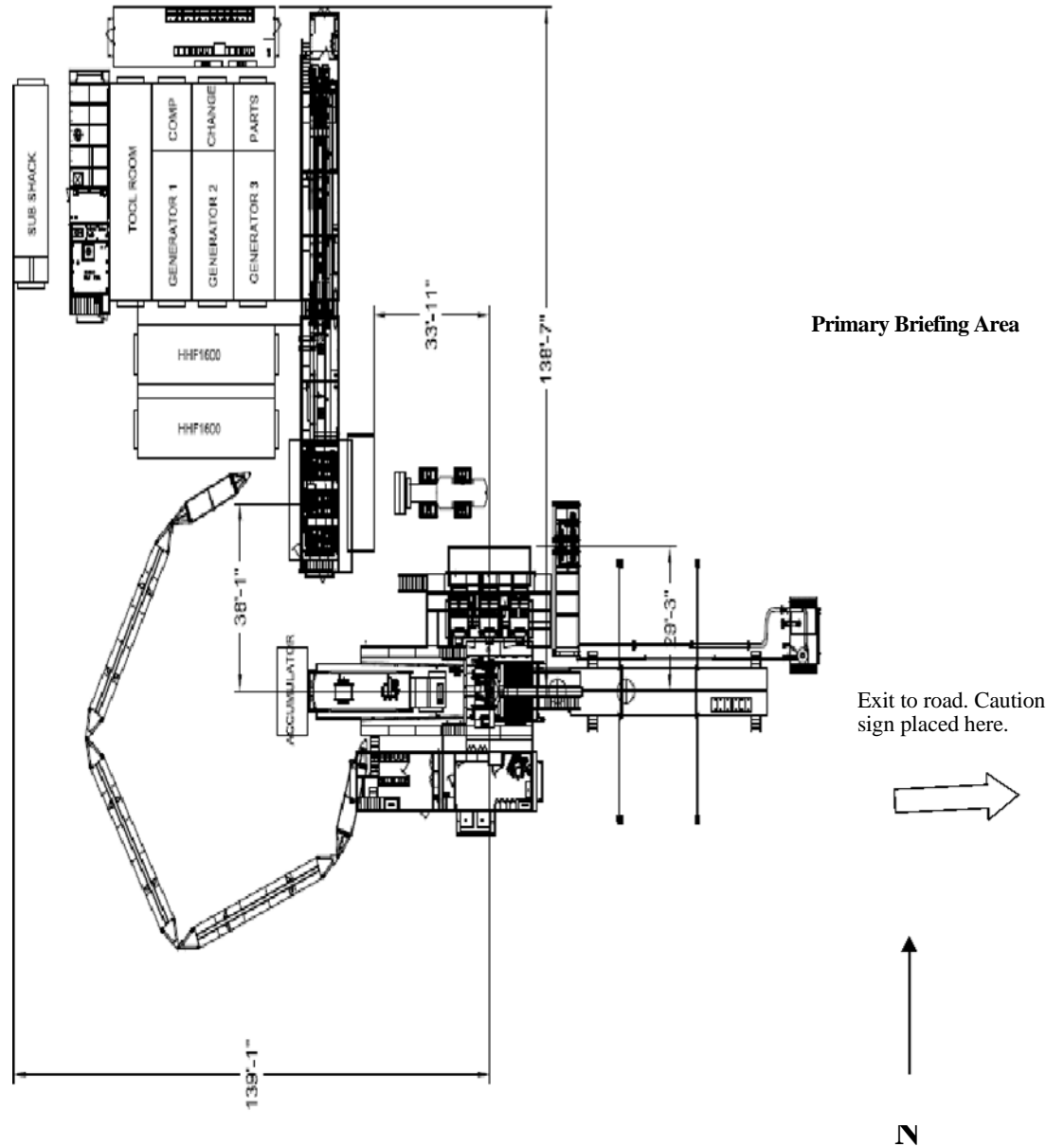
Permian Drilling Hydrogen Sulfide Drilling Operations Plan Halberd 27 State Com 2H

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



WIND: Prevailing winds are from the Southwest

Secondary Egress

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

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

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
HALBERD 27 STATE COM 2H	30-015-	D-26-17S-28E	665' FNL 112' FWL	264 BBL/D	299 MCF/D	1318 BBL/D
HALBERD 27 STATE COM 20H	30-015-	D-26-17S-28E	705' FNL 112' FWL	339 BBL/D	384 MCF/D	1693 BBL/D
HALBERD 27 STATE COM 70H	30-015-	D-26-17S-28E	685' FNL 112' FWL	283 BBL/D	468 MCF/D	1695 BBL/D

IV. Central Delivery Point Name: HALBERD NORTH STATE COM TANK BATTERY [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
HALBERD 27 STATE COM 2H	30-015-	05/31/2022	06/07/2022	08/13/2022	09/07/2022	09/07/2022
HALBERD 27 STATE COM 20H	30-015-	06/08/2022	06/16/2022	08/13/2022	09/07/2022	09/07/2022
HALBERD 27 STATE COM 70H	30-015-	05/22/2022	05/30/2022	08/13/2022	09/07/2022	09/07/2022

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

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

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

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

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

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