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 346974

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

1. Operator Name and Address	2. OGRID Number
Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	328947
	3. API Number 30-015-54061

4. Property Code	5. Property Name	6. Well No.
334602	AID NORTH 14 13 STATE COM	020H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
B	14	17S	28E		1188	N	2382	E	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
A	13	17S	28E	A	350	N	50	E	Eddy

9. Pool Information

EMPIRE; GLORIETA-YESO	96210

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3600
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	11180	Paddock		10/10/2023
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	1275	378	0
Prod	8.75	7	32	4300	1857	0
Prod	8.75	5.5	20	11180	1857	0

Casing/Cement Program: Additional Comments

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:		**OIL CONSERVATION DIVISION**	
Printed Name:	Electronically filed by Sarah Chapman	Approved By:	Ward Rikala
Title:	Regulatory Director	Title:	
Email Address:	schapman@spurenergy.com	Approved Date: 8/17/2023	Expiration Date: 8/17/2025
Date: 8/8/2023	Phone: 832-930-8613	Conditions of Approval Attached	

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Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-015-54061	96210	EMPIRE; GLORIETA-YESO

4 Property Code	5 Property Name	6 Well Number
334602	AID NORTH 14-13 STATE COM	20H

7 OGRID NO.	8 Operator Name	9 Elevation
328947	SPUR ENERGY PARTNERS LLC.	3600'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
B	14	17S	28E		1188	NORTH	2382	EAST	EDDY

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	13	17S	28E		350	NORTH	50	EAST	EDDY

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
480			

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.

16

GEODETIC DATA
NAD 83 GRID – NM EAST

SURFACE LOCATION (SL)
N: 669110.0 – E: 598767.6
LAT: 32.8392693° N
LONG: 104.1463448° W

FIRST TAKE POINT (FTP)
344' FNL & 1406' FEL – SEC 14
N: 670046.3 – E: 599718.7
LAT: 32.8418382° N
LONG: 104.1432426° W

LAST TAKE POINT (LTP)
352' FNL & 100' FEL – SEC 13
N: 670189.4 – E: 606338.2
LAT: 32.8421969° N
LONG: 104.1216885° W

BOTTOM HOLE (BH)
N: 670191.2 – E: 606388.1
LAT: 32.8422014° N
LONG: 104.1215259° W

CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1941"
N: 664715.7 – E: 596062.5

B: FOUND BRASS CAP "1941"
N: 667371.0 – E: 595986.7

C: FOUND BRASS CAP "1941"
N: 670028.0 – E: 595911.3

D: FOUND BRASS CAP "1941"
N: 670275.9 – E: 598509.8

E: FOUND BRASS CAP "1941"
N: 670523.4 – E: 601110.0

F: FOUND 1/2" REBAR
N: 670530.5 – E: 603773.2

G: FOUND BRASS CAP "1941"
N: 670541.3 – E: 606438.4

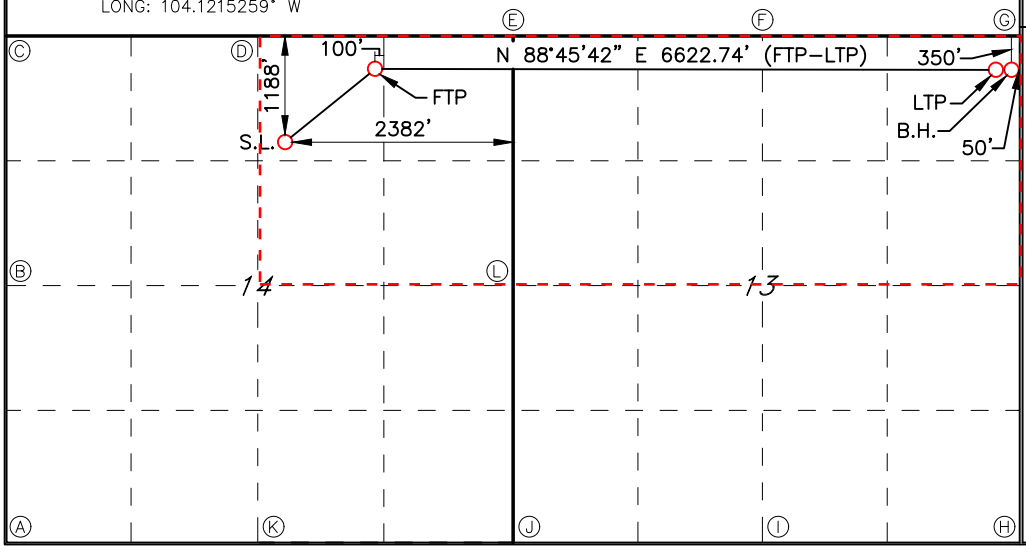
H: FOUND BRASS CAP "1941"
N: 665238.8 – E: 606433.6

I: FOUND BRASS CAP "1941"
N: 665220.7 – E: 603835.2

J: FOUND BRASS CAP "1941"
N: 665202.5 – E: 601236.8

K: FOUND BRASS CAP "1941"
N: 664959.0 – E: 598649.4

L: FOUND BRASS CAP "1941"
N: 667862.4 – E: 601172.4



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 08/07/2023
Signature Date

SARAH CHAPMAN
Printed Name

SCHAPMAN@SPURENERGY.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.

06/14/2023
Date of Survey

Signature and Seal of Professional Surveyor:

DALE E. BELL
NEW MEXICO
14400
PROFESSIONAL SURVEYOR
07/03/2023

14400
Certificate Number

Job No: LS23060535

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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 346974

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
Spur Energy Partners LLC [328947] 9655 Katy Freeway Houston, TX 77024	30-015-54061
	Well: AID NORTH 14 13 STATE COM #020H

OCD Reviewer	Condition
ward.rikala	Notify OCD 24 hours prior to casing & cement
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104
ward.rikala	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
ward.rikala	Cement is required to circulate on both surface and production strings of casing
ward.rikala	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
ward.rikala	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud

SPUR ENERGY PARTNERS, LLC

EDDY COUNTY, NM (NAD 83 - NME)
AID NORTH 14-13 STATE COM
20H

Wellbore #1
PERMIT

Anticollision Report

01 August, 2023

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Reference PERMIT

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 50.00usft	**Error Model:**	ISCWSA
Depth Range:	0.00 to 11,180.09usft	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum separation factor of 55.00	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 08/01/23

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	11,180.09	PERMIT (Wellbore #1)	MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + Sag + FDIR Correction

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
AID NORTH 14-13 STATE COM						
10H - Wellbore #1 - PERMIT	300.00	300.00	40.00	38.28	23.247	CC
10H - Wellbore #1 - PERMIT	350.00	350.48	40.14	38.05	19.251	ES
10H - Wellbore #1 - PERMIT	11,180.09	10,909.80	901.17	730.55	5.282	SF
21H - Wellbore #1 - PERMIT	300.00	300.00	79.90	78.18	46.437	CC, ES
21H - Wellbore #1 - PERMIT	11,180.09	11,124.98	1,804.77	1,633.93	10.564	SF
60H - Wellbore #1 - PERMIT	541.29	542.97	19.99	16.48	5.698	CC
60H - Wellbore #1 - PERMIT	750.00	752.89	20.26	15.21	4.014	ES
60H - Wellbore #1 - PERMIT	800.00	802.88	21.32	15.91	3.940	SF
61H - Wellbore #1 - PERMIT	300.00	300.00	59.90	58.18	34.813	CC, ES
61H - Wellbore #1 - PERMIT	11,180.09	11,345.67	1,408.87	1,241.62	8.424	SF
OFFSET: AID STATE #10 - Wellbore #1 - Wellbore #1	8,892.51	4,053.85	1,255.22	1,114.73	8.935	CC
OFFSET: AID STATE #10 - Wellbore #1 - Wellbore #1	8,900.00	4,053.96	1,255.25	1,114.67	8.929	ES
OFFSET: AID STATE #10 - Wellbore #1 - Wellbore #1	9,000.00	4,055.46	1,259.82	1,118.11	8.891	SF
OFFSET: AID STATE #6 - Wellbore #1 - Wellbore #1	10,857.68	4,065.27	1,952.88	1,795.78	12.431	CC
OFFSET: AID STATE #6 - Wellbore #1 - Wellbore #1	10,900.00	4,065.90	1,953.34	1,795.76	12.396	ES
OFFSET: AID STATE #6 - Wellbore #1 - Wellbore #1	11,130.16	4,069.35	1,971.79	1,811.59	12.308	SF
OFFSET: AID STATE #8 - Wellbore #1 - Wellbore #1	10,888.08	4,078.81	632.91	467.16	3.818	CC
OFFSET: AID STATE #8 - Wellbore #1 - Wellbore #1	10,900.00	4,078.99	633.02	467.13	3.816	ES, SF
OFFSET: AID STATE #9 - Wellbore #1 - Wellbore #1	8,922.89	4,042.27	64.70	-66.92	0.492	Level 1, CC, ES, SF
OFFSET: PUMA #1 - Wellbore #1 - Wellbore #1	3,822.36	3,574.94	351.07	266.63	4.157	CC
OFFSET: PUMA #1 - Wellbore #1 - Wellbore #1	3,850.00	3,592.69	351.54	266.62	4.140	ES, SF

Offset Design AID NORTH 14-13 STATE COM - 10H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
200.00	200.00	200.00	200.00	0.50	0.50	179.570	-40.00	0.30	40.00	39.00	1.00	39.853	
250.00	250.00	250.00	250.00	0.68	0.68	179.570	-40.00	0.30	40.00	38.64	1.36	29.365	
300.00	300.00	300.00	300.00	0.86	0.86	179.570	-40.00	0.30	40.00	38.28	1.72	23.247	CC
350.00	350.00	350.48	350.48	1.04	1.04	178.416	-39.69	0.62	40.14	38.05	2.08	19.251	ES
400.00	399.98	400.74	400.72	1.22	1.22	177.169	-38.84	1.53	40.62	38.16	2.45	16.566	
450.00	449.93	450.72	450.68	1.40	1.40	175.888	-37.88	2.54	41.89	39.07	2.82	14.843	
500.00	499.84	500.66	500.61	1.58	1.58	174.786	-36.93	3.55	44.05	40.86	3.19	13.801	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

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Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 10H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
550.00	549.68	550.56	550.49	1.77	1.75	173.900	-35.98	4.55	47.09	43.53	3.56	13.218	
600.00	599.45	600.41	600.31	1.95	1.93	173.235	-35.03	5.56	51.01	47.08	3.93	12.974	
650.00	649.13	650.18	650.06	2.13	2.11	172.776	-34.08	6.56	55.79	51.49	4.30	12.975	
700.00	698.70	699.85	699.72	2.31	2.29	172.493	-33.13	7.56	61.44	56.78	4.66	13.171	
750.00	748.15	749.43	749.28	2.49	2.46	172.352	-32.18	8.56	67.95	62.92	5.03	13.512	
800.00	797.47	798.88	798.71	2.67	2.64	172.320	-31.24	9.56	75.31	69.93	5.39	13.978	
850.00	846.63	848.20	848.01	2.85	2.82	172.369	-30.30	10.55	83.53	77.79	5.75	14.538	
900.00	895.62	897.37	897.16	3.03	2.99	172.476	-29.36	11.55	92.60	86.50	6.10	15.185	
950.00	944.44	946.38	946.15	3.21	3.17	172.621	-28.43	12.53	102.52	96.08	6.45	15.902	
1,000.00	993.06	995.20	994.95	3.39	3.34	172.791	-27.50	13.52	113.29	106.50	6.79	16.678	
1,050.00	1,041.46	1,043.83	1,043.56	3.57	3.52	172.976	-26.57	14.50	124.90	117.77	7.13	17.511	
1,100.00	1,089.64	1,092.25	1,091.97	3.76	3.69	173.168	-25.64	15.48	137.36	129.89	7.47	18.388	
1,150.00	1,137.58	1,140.45	1,140.14	3.95	3.86	173.361	-24.72	16.45	150.65	142.85	7.80	19.312	
1,200.00	1,185.27	1,188.40	1,188.08	4.14	4.04	173.551	-23.81	17.42	164.79	156.66	8.13	20.273	
1,250.00	1,232.68	1,236.11	1,235.77	4.33	4.21	173.737	-22.90	18.38	179.75	171.30	8.45	21.274	
1,259.51	1,241.67	1,245.15	1,244.81	4.37	4.24	173.772	-22.73	18.56	182.69	174.18	8.51	21.468	
1,300.00	1,279.91	1,283.63	1,283.28	4.52	4.38	173.937	-21.99	19.34	195.27	186.49	8.78	22.253	
1,350.00	1,327.13	1,331.15	1,330.78	4.72	4.55	174.113	-21.09	20.29	210.81	201.70	9.10	23.156	
1,400.00	1,374.35	1,378.68	1,378.28	4.91	4.72	174.265	-20.18	21.25	226.34	216.91	9.43	23.990	
1,450.00	1,421.58	1,426.20	1,425.78	5.11	4.89	174.397	-19.27	22.21	241.88	232.12	9.77	24.767	
1,500.00	1,468.80	1,473.72	1,473.29	5.31	5.06	174.513	-18.37	23.17	257.42	247.32	10.10	25.488	
1,550.00	1,516.02	1,521.24	1,520.79	5.50	5.23	174.617	-17.46	24.13	272.97	262.53	10.43	26.162	
1,600.00	1,563.24	1,568.76	1,568.29	5.70	5.40	174.709	-16.55	25.09	288.51	277.74	10.77	26.791	
1,650.00	1,610.46	1,616.28	1,615.79	5.90	5.57	174.791	-15.65	26.05	304.05	292.95	11.10	27.381	
1,700.00	1,657.68	1,663.80	1,663.30	6.10	5.74	174.866	-14.74	27.00	319.60	308.15	11.44	27.934	
1,750.00	1,704.91	1,711.32	1,710.80	6.30	5.91	174.934	-13.83	27.96	335.14	323.36	11.78	28.453	
1,800.00	1,752.13	1,758.84	1,758.30	6.50	6.08	174.995	-12.93	28.92	350.68	338.57	12.12	28.942	
1,850.00	1,799.35	1,806.36	1,805.80	6.70	6.25	175.052	-12.02	29.88	366.23	353.77	12.46	29.404	
1,900.00	1,846.57	1,853.89	1,853.31	6.90	6.42	175.104	-11.11	30.84	381.77	368.98	12.79	29.839	
1,950.00	1,893.79	1,901.41	1,900.81	7.10	6.59	175.151	-10.21	31.80	397.32	384.19	13.13	30.251	
2,000.00	1,941.01	1,948.93	1,948.31	7.30	6.76	175.195	-9.30	32.75	412.87	399.39	13.47	30.641	
2,050.00	1,988.24	1,996.45	1,995.82	7.50	6.93	175.236	-8.39	33.71	428.41	414.60	13.81	31.011	
2,100.00	2,035.46	2,043.97	2,043.32	7.70	7.10	175.275	-7.49	34.67	443.96	429.80	14.16	31.362	
2,150.00	2,082.68	2,091.49	2,090.82	7.90	7.27	175.310	-6.58	35.63	459.50	445.01	14.50	31.696	
2,200.00	2,129.90	2,139.01	2,138.32	8.10	7.44	175.343	-5.67	36.59	475.05	460.21	14.84	32.014	
2,250.00	2,177.12	2,186.53	2,185.83	8.31	7.61	175.374	-4.77	37.55	490.60	475.42	15.18	32.317	
2,300.00	2,224.34	2,234.05	2,233.33	8.51	7.78	175.404	-3.86	38.51	506.14	490.62	15.52	32.606	
2,350.00	2,271.56	2,281.57	2,280.83	8.71	7.95	175.431	-2.95	39.46	521.69	505.82	15.87	32.881	
2,400.00	2,318.79	2,329.10	2,328.33	8.91	8.12	175.457	-2.05	40.42	537.24	521.03	16.21	33.145	
2,450.00	2,366.01	2,376.62	2,375.84	9.11	8.29	175.481	-1.14	41.38	552.78	536.23	16.55	33.397	
2,500.00	2,413.23	2,424.14	2,423.34	9.32	8.47	175.504	-0.23	42.34	568.33	551.43	16.90	33.639	
2,550.00	2,460.45	2,471.66	2,470.84	9.52	8.64	175.526	0.67	43.30	583.88	566.64	17.24	33.870	
2,600.00	2,507.67	2,519.18	2,518.35	9.72	8.81	175.547	1.58	44.26	599.42	581.84	17.58	34.092	
2,650.00	2,554.89	2,566.70	2,565.85	9.92	8.98	175.567	2.49	45.21	614.97	597.04	17.93	34.305	
2,700.00	2,602.12	2,614.22	2,613.35	10.13	9.15	175.585	3.39	46.17	630.52	612.25	18.27	34.509	
2,750.00	2,649.34	2,661.74	2,660.85	10.33	9.32	175.603	4.30	47.13	646.07	627.45	18.62	34.706	
2,800.00	2,696.56	2,709.26	2,708.36	10.53	9.49	175.620	5.21	48.09	661.61	642.65	18.96	34.896	
2,850.00	2,743.78	2,756.79	2,755.86	10.74	9.66	175.636	6.11	49.05	677.16	657.86	19.30	35.078	
2,900.00	2,791.00	2,803.88	2,802.94	10.94	9.83	175.645	7.01	50.07	692.71	673.06	19.65	35.256	
2,950.00	2,838.22	2,850.00	2,848.97	11.14	9.99	175.516	7.91	52.69	708.35	688.36	19.99	35.438	
2,997.10	2,882.71	2,892.51	2,891.24	11.34	10.14	175.238	8.75	57.07	723.19	702.89	20.31	35.615	
3,000.00	2,885.45	2,895.14	2,893.84	11.35	10.15	174.666	8.81	57.40	724.11	703.78	20.33	35.620	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 10H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,050.00	2,932.72	2,940.37	2,938.54	11.55	10.31	164.688	9.72	64.24	739.68	718.96	20.72	35.701	
3,100.00	2,979.98	2,985.54	2,982.81	11.75	10.48	154.795	10.66	73.18	754.77	733.66	21.11	35.746	
3,150.00	3,027.12	3,030.67	3,026.56	11.95	10.64	145.384	11.60	84.19	769.34	747.82	21.51	35.761	
3,200.00	3,073.99	3,075.77	3,069.72	12.15	10.80	136.752	12.56	97.25	783.33	761.41	21.91	35.750	
3,250.00	3,120.48	3,120.86	3,112.19	12.34	10.96	129.052	13.52	112.32	796.71	774.40	22.31	35.717	
3,300.00	3,166.44	3,165.94	3,153.90	12.53	11.12	122.308	14.49	129.38	809.44	786.74	22.70	35.666	
3,350.00	3,211.77	3,211.02	3,194.76	12.71	11.29	116.462	15.47	148.39	821.48	798.40	23.08	35.597	
3,400.00	3,256.32	3,256.10	3,234.68	12.89	11.45	111.416	16.45	169.31	832.81	809.36	23.45	35.514	
3,450.00	3,299.98	3,300.00	3,272.56	13.06	11.61	107.067	17.41	191.47	843.39	819.58	23.81	35.421	
3,500.00	3,342.64	3,346.29	3,311.35	13.23	11.79	103.303	18.41	216.69	853.20	829.03	24.17	35.300	
3,550.00	3,384.17	3,391.39	3,347.93	13.40	11.96	100.047	19.39	243.05	862.21	837.69	24.52	35.168	
3,600.00	3,424.46	3,436.49	3,383.23	13.56	12.13	97.219	20.36	271.11	870.39	845.53	24.86	35.016	
3,650.00	3,463.39	3,481.59	3,417.16	13.71	12.31	94.757	21.32	300.80	877.72	852.53	25.19	34.844	
3,700.00	3,500.87	3,526.68	3,449.64	13.87	12.50	92.611	22.27	332.05	884.20	858.68	25.52	34.647	
3,750.00	3,536.79	3,571.76	3,480.60	14.02	12.69	90.739	23.21	364.79	889.79	863.94	25.85	34.423	
3,800.00	3,571.05	3,616.80	3,509.96	14.18	12.89	89.108	24.13	398.93	894.49	868.31	26.18	34.169	
3,850.00	3,603.56	3,661.81	3,537.66	14.33	13.10	87.689	25.04	434.39	898.28	871.77	26.51	33.883	
3,900.00	3,634.23	3,706.78	3,563.63	14.49	13.31	86.461	25.93	471.08	901.16	874.31	26.85	33.562	
3,950.00	3,662.97	3,751.68	3,587.82	14.66	13.53	85.404	26.80	508.90	903.12	875.92	27.20	33.205	
4,000.00	3,689.70	3,799.29	3,611.82	14.84	13.77	84.520	27.69	550.01	904.11	876.53	27.57	32.791	
4,016.96	3,698.30	3,816.25	3,620.30	14.91	13.86	84.282	28.01	564.69	904.18	876.46	27.71	32.627	
4,050.00	3,714.82	3,849.29	3,636.82	15.04	14.05	84.282	28.64	593.30	904.18	876.11	28.07	32.215	
4,100.00	3,739.82	3,899.29	3,661.82	15.24	14.32	84.282	29.58	636.59	904.18	875.57	28.60	31.612	
4,150.00	3,764.82	3,949.29	3,686.82	15.47	14.61	84.282	30.52	679.88	904.18	875.00	29.18	30.991	
4,169.53	3,774.59	3,968.82	3,696.58	15.57	14.73	84.282	30.89	696.79	904.17	874.78	29.40	30.755	
4,200.00	3,789.82	3,995.63	3,709.58	15.71	14.89	84.253	31.40	720.23	904.23	874.50	29.73	30.416	
4,216.96	3,798.30	4,010.24	3,716.20	15.80	14.98	84.204	31.68	733.25	904.32	874.41	29.91	30.232	
4,250.00	3,813.99	4,038.63	3,728.11	15.97	15.15	84.072	32.24	759.02	904.53	874.28	30.25	29.906	
4,300.00	3,834.48	4,081.47	3,743.62	16.25	15.42	83.906	33.11	798.93	904.80	874.04	30.76	29.412	
4,350.00	3,850.91	4,124.19	3,756.08	16.54	15.69	83.780	33.99	839.77	905.01	873.71	31.29	28.920	
4,400.00	3,863.17	4,166.82	3,765.44	16.84	15.97	83.696	34.90	881.34	905.15	873.32	31.83	28.434	
4,450.00	3,871.16	4,209.40	3,771.68	17.14	16.24	83.653	35.81	923.44	905.22	872.84	32.38	27.954	
4,500.00	3,874.81	4,251.96	3,774.78	17.44	16.51	83.652	36.74	965.86	905.22	872.29	32.93	27.486	
4,508.37	3,875.00	4,259.50	3,775.00	17.49	16.55	83.656	36.90	973.40	905.22	872.19	33.03	27.407	
4,550.00	3,875.62	4,300.64	3,775.93	17.75	16.82	83.675	37.79	1,014.52	905.18	871.62	33.56	26.972	
4,600.00	3,876.37	4,350.64	3,777.06	18.07	17.16	83.699	38.88	1,064.49	905.14	870.92	34.22	26.449	
4,650.00	3,877.12	4,400.64	3,778.18	18.41	17.50	83.723	39.97	1,114.47	905.10	870.19	34.91	25.928	
4,700.00	3,877.87	4,450.63	3,779.31	18.75	17.86	83.747	41.05	1,164.44	905.05	869.44	35.62	25.412	
4,750.00	3,878.62	4,500.63	3,780.44	19.10	18.22	83.770	42.14	1,214.42	905.01	868.67	36.34	24.902	
4,800.00	3,879.37	4,550.63	3,781.57	19.46	18.60	83.794	43.23	1,264.39	904.97	867.88	37.09	24.399	
4,850.00	3,880.12	4,600.63	3,782.70	19.84	18.98	83.818	44.31	1,314.36	904.93	867.07	37.86	23.903	
4,900.00	3,880.87	4,650.63	3,783.82	20.22	19.38	83.842	45.40	1,364.34	904.89	866.25	38.64	23.418	
4,950.00	3,881.62	4,700.63	3,784.95	20.61	19.78	83.866	46.49	1,414.31	904.85	865.41	39.44	22.942	
5,000.00	3,882.37	4,750.63	3,786.08	21.01	20.19	83.890	47.57	1,464.29	904.81	864.55	40.26	22.476	
5,050.00	3,883.12	4,800.62	3,787.21	21.41	20.61	83.913	48.66	1,514.26	904.76	863.68	41.09	22.021	
5,100.00	3,883.87	4,850.62	3,788.33	21.82	21.03	83.937	49.75	1,564.23	904.72	862.79	41.93	21.577	
5,150.00	3,884.62	4,900.62	3,789.46	22.24	21.46	83.961	50.83	1,614.21	904.68	861.90	42.79	21.144	
5,200.00	3,885.37	4,950.62	3,790.59	22.67	21.90	83.985	51.92	1,664.18	904.64	860.99	43.66	20.723	
5,250.00	3,886.12	5,000.62	3,791.72	23.10	22.34	84.009	53.01	1,714.16	904.60	860.07	44.54	20.312	
5,300.00	3,886.87	5,050.62	3,792.85	23.53	22.79	84.033	54.09	1,764.13	904.56	859.14	45.43	19.913	
5,350.00	3,887.61	5,100.62	3,793.97	23.98	23.24	84.056	55.18	1,814.10	904.52	858.20	46.33	19.525	
5,400.00	3,888.36	5,150.61	3,795.10	24.42	23.70	84.080	56.26	1,864.08	904.48	857.25	47.24	19.148	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 10H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,450.00	3,889.11	5,200.61	3,796.23	24.88	24.16	84.104	57.35	1,914.05	904.44	856.29	48.16	18.782	
5,500.00	3,889.86	5,250.61	3,797.36	25.33	24.63	84.128	58.44	1,964.03	904.40	855.32	49.08	18.426	
5,550.00	3,890.61	5,300.61	3,798.49	25.79	25.10	84.152	59.52	2,014.00	904.36	854.34	50.02	18.080	
5,600.00	3,891.36	5,350.61	3,799.61	26.25	25.57	84.176	60.61	2,063.97	904.32	853.36	50.96	17.745	
5,650.00	3,892.11	5,400.61	3,800.74	26.72	26.05	84.200	61.70	2,113.95	904.29	852.37	51.91	17.419	
5,700.00	3,892.86	5,450.61	3,801.87	27.19	26.53	84.223	62.78	2,163.92	904.25	851.38	52.87	17.103	
5,750.00	3,893.61	5,500.60	3,803.00	27.67	27.01	84.247	63.87	2,213.90	904.21	850.37	53.83	16.796	
5,800.00	3,894.36	5,550.60	3,804.12	28.15	27.50	84.271	64.96	2,263.87	904.17	849.36	54.80	16.498	
5,850.00	3,895.11	5,600.60	3,805.25	28.63	27.99	84.295	66.04	2,313.84	904.13	848.35	55.78	16.209	
5,900.00	3,895.86	5,650.60	3,806.38	29.11	28.48	84.319	67.13	2,363.82	904.09	847.33	56.76	15.928	
5,950.00	3,896.61	5,700.60	3,807.51	29.60	28.97	84.343	68.22	2,413.79	904.05	846.31	57.75	15.655	
6,000.00	3,897.36	5,750.60	3,808.64	30.09	29.47	84.367	69.30	2,463.77	904.02	845.28	58.74	15.390	
6,050.00	3,898.11	5,800.60	3,809.76	30.58	29.97	84.390	70.39	2,513.74	903.98	844.24	59.74	15.133	
6,100.00	3,898.86	5,850.59	3,810.89	31.08	30.47	84.414	71.48	2,563.72	903.94	843.20	60.74	14.883	
6,150.00	3,899.61	5,900.59	3,812.02	31.57	30.98	84.438	72.56	2,613.69	903.90	842.16	61.74	14.640	
6,200.00	3,900.36	5,950.59	3,813.15	32.07	31.48	84.462	73.65	2,663.66	903.87	841.12	62.75	14.404	
6,250.00	3,901.10	6,000.59	3,814.28	32.57	31.99	84.486	74.74	2,713.64	903.83	840.06	63.76	14.175	
6,300.00	3,901.85	6,050.59	3,815.40	33.08	32.50	84.510	75.82	2,763.61	903.79	839.01	64.78	13.952	
6,350.00	3,902.60	6,100.59	3,816.53	33.58	33.01	84.534	76.91	2,813.59	903.75	837.95	65.80	13.735	
6,400.00	3,903.35	6,150.59	3,817.66	34.09	33.53	84.558	77.99	2,863.56	903.72	836.89	66.82	13.524	
6,450.00	3,904.10	6,200.58	3,818.79	34.60	34.04	84.581	79.08	2,913.53	903.68	835.83	67.85	13.319	
6,500.00	3,904.85	6,250.58	3,819.91	35.11	34.56	84.605	80.17	2,963.51	903.64	834.76	68.88	13.119	
6,550.00	3,905.60	6,300.58	3,821.04	35.62	35.07	84.629	81.25	3,013.48	903.61	833.70	69.91	12.925	
6,600.00	3,906.35	6,350.58	3,822.17	36.13	35.59	84.653	82.34	3,063.46	903.57	832.62	70.95	12.736	
6,650.00	3,907.10	6,400.58	3,823.30	36.65	36.11	84.677	83.43	3,113.43	903.54	831.55	71.99	12.551	
6,700.00	3,907.85	6,450.58	3,824.43	37.16	36.64	84.701	84.51	3,163.40	903.50	830.47	73.03	12.372	
6,750.00	3,908.60	6,500.58	3,825.55	37.68	37.16	84.725	85.60	3,213.38	903.46	829.39	74.07	12.197	
6,800.00	3,909.35	6,550.57	3,826.68	38.20	37.68	84.749	86.69	3,263.35	903.43	828.31	75.12	12.027	
6,850.00	3,910.10	6,600.57	3,827.81	38.72	38.21	84.773	87.77	3,313.33	903.39	827.23	76.17	11.861	
6,900.00	3,910.85	6,650.57	3,828.94	39.24	38.73	84.797	88.86	3,363.30	903.36	826.14	77.22	11.699	
6,950.00	3,911.60	6,700.57	3,830.07	39.76	39.26	84.820	89.95	3,413.27	903.32	825.06	78.27	11.541	
7,000.00	3,912.35	6,750.57	3,831.19	40.29	39.79	84.844	91.03	3,463.25	903.29	823.97	79.32	11.388	
7,050.00	3,913.10	6,800.57	3,832.32	40.81	40.32	84.868	92.12	3,513.22	903.25	822.87	80.38	11.237	
7,100.00	3,913.85	6,850.57	3,833.45	41.34	40.85	84.892	93.21	3,563.20	903.22	821.78	81.44	11.091	
7,150.00	3,914.59	6,900.56	3,834.58	41.86	41.38	84.916	94.29	3,613.17	903.19	820.69	82.50	10.948	
7,200.00	3,915.34	6,950.56	3,835.70	42.39	41.91	84.940	95.38	3,663.14	903.15	819.59	83.56	10.808	
7,250.00	3,916.09	7,000.56	3,836.83	42.92	42.44	84.964	96.47	3,713.12	903.12	818.49	84.62	10.672	
7,300.00	3,916.84	7,050.56	3,837.96	43.45	42.98	84.988	97.55	3,763.09	903.08	817.39	85.69	10.539	
7,350.00	3,917.59	7,100.56	3,839.09	43.98	43.51	85.012	98.64	3,813.07	903.05	816.29	86.76	10.409	
7,400.00	3,918.34	7,150.56	3,840.22	44.51	44.05	85.036	99.72	3,863.04	903.02	815.19	87.82	10.282	
7,450.00	3,919.09	7,200.56	3,841.34	45.04	44.58	85.060	100.81	3,913.01	902.98	814.09	88.89	10.158	
7,500.00	3,919.84	7,250.55	3,842.47	45.57	45.12	85.083	101.90	3,962.99	902.95	812.98	89.96	10.037	
7,550.00	3,920.59	7,300.55	3,843.60	46.11	45.65	85.107	102.98	4,012.96	902.92	811.88	91.04	9.918	
7,600.00	3,921.34	7,350.55	3,844.73	46.64	46.19	85.131	104.07	4,062.94	902.88	810.77	92.11	9.802	
7,650.00	3,922.09	7,400.55	3,845.86	47.17	46.73	85.155	105.16	4,112.91	902.85	809.66	93.19	9.689	
7,700.00	3,922.84	7,450.55	3,846.98	47.71	47.27	85.179	106.24	4,162.88	902.82	808.56	94.26	9.578	
7,750.00	3,923.59	7,500.55	3,848.11	48.24	47.81	85.203	107.33	4,212.86	902.78	807.45	95.34	9.469	
7,800.00	3,924.34	7,550.55	3,849.24	48.78	48.35	85.227	108.42	4,262.83	902.75	806.33	96.42	9.363	
7,850.00	3,925.09	7,600.54	3,850.37	49.32	48.89	85.251	109.50	4,312.81	902.72	805.22	97.50	9.259	
7,900.00	3,925.84	7,650.54	3,851.49	49.86	49.43	85.275	110.59	4,362.78	902.69	804.11	98.58	9.157	
7,950.00	3,926.59	7,700.54	3,852.62	50.39	49.97	85.299	111.68	4,412.75	902.66	803.00	99.66	9.057	
8,000.00	3,927.33	7,750.54	3,853.75	50.93	50.51	85.323	112.76	4,462.73	902.62	801.88	100.74	8.960	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 10H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,050.00	3,928.08	7,800.54	3,854.88	51.47	51.05	85.347	113.85	4,512.70	902.59	800.77	101.83	8.864	
8,100.00	3,928.83	7,850.54	3,856.01	52.01	51.59	85.371	114.94	4,562.68	902.56	799.65	102.91	8.770	
8,150.00	3,929.58	7,900.54	3,857.13	52.55	52.14	85.395	116.02	4,612.65	902.53	798.53	104.00	8.678	
8,200.00	3,930.33	7,950.53	3,858.26	53.09	52.68	85.419	117.11	4,662.62	902.50	797.41	105.08	8.588	
8,250.00	3,931.08	8,000.53	3,859.39	53.63	53.22	85.443	118.20	4,712.60	902.47	796.30	106.17	8.500	
8,300.00	3,931.83	8,050.53	3,860.52	54.17	53.77	85.467	119.28	4,762.57	902.44	795.18	107.26	8.413	
8,350.00	3,932.58	8,100.53	3,861.65	54.72	54.31	85.490	120.37	4,812.55	902.41	794.06	108.35	8.329	
8,400.00	3,933.33	8,150.53	3,862.77	55.26	54.86	85.514	121.46	4,862.52	902.38	792.94	109.44	8.245	
8,450.00	3,934.08	8,200.53	3,863.90	55.80	55.40	85.538	122.54	4,912.49	902.35	791.82	110.53	8.164	
8,500.00	3,934.83	8,250.53	3,865.03	56.34	55.95	85.562	123.63	4,962.47	902.32	790.69	111.62	8.084	
8,550.00	3,935.58	8,300.52	3,866.16	56.89	56.49	85.586	124.71	5,012.44	902.29	789.57	112.71	8.005	
8,600.00	3,936.33	8,350.52	3,867.28	57.43	57.04	85.610	125.80	5,062.42	902.26	788.45	113.81	7.928	
8,650.00	3,937.08	8,400.52	3,868.41	57.98	57.59	85.634	126.89	5,112.39	902.23	787.33	114.90	7.852	
8,700.00	3,937.83	8,450.52	3,869.54	58.52	58.13	85.658	127.97	5,162.37	902.20	786.20	116.00	7.778	
8,750.00	3,938.58	8,500.52	3,870.67	59.07	58.68	85.682	129.06	5,212.34	902.17	785.08	117.09	7.705	
8,800.00	3,939.33	8,550.52	3,871.80	59.61	59.23	85.706	130.15	5,262.31	902.14	783.95	118.19	7.633	
8,850.00	3,940.08	8,600.52	3,872.92	60.16	59.78	85.730	131.23	5,312.29	902.11	782.83	119.28	7.563	
8,900.00	3,940.82	8,650.51	3,874.05	60.70	60.33	85.754	132.32	5,362.26	902.08	781.70	120.38	7.494	
8,950.00	3,941.57	8,700.51	3,875.18	61.25	60.87	85.778	133.41	5,412.24	902.05	780.57	121.48	7.426	
9,000.00	3,942.32	8,750.51	3,876.31	61.80	61.42	85.802	134.49	5,462.21	902.02	779.45	122.58	7.359	
9,050.00	3,943.07	8,800.51	3,877.44	62.34	61.97	85.826	135.58	5,512.18	902.00	778.32	123.67	7.293	
9,100.00	3,943.82	8,850.51	3,878.56	62.89	62.52	85.850	136.67	5,562.16	901.97	777.19	124.77	7.229	
9,150.00	3,944.57	8,900.51	3,879.69	63.44	63.07	85.874	137.75	5,612.13	901.94	776.07	125.87	7.165	
9,200.00	3,945.32	8,950.51	3,880.82	63.98	63.62	85.898	138.84	5,662.11	901.91	774.94	126.97	7.103	
9,250.00	3,946.07	9,000.50	3,881.95	64.53	64.17	85.922	139.93	5,712.08	901.88	773.81	128.07	7.042	
9,300.00	3,946.82	9,050.50	3,883.07	65.08	64.72	85.946	141.01	5,762.05	901.86	772.68	129.18	6.982	
9,350.00	3,947.57	9,100.50	3,884.20	65.63	65.27	85.970	142.10	5,812.03	901.83	771.55	130.28	6.922	
9,400.00	3,948.32	9,150.50	3,885.33	66.18	65.82	85.994	143.19	5,862.00	901.80	770.42	131.38	6.864	
9,450.00	3,949.07	9,200.50	3,886.46	66.73	66.37	86.018	144.27	5,911.98	901.77	769.29	132.48	6.807	
9,500.00	3,949.82	9,250.50	3,887.59	67.28	66.92	86.042	145.36	5,961.95	901.75	768.16	133.58	6.750	
9,550.00	3,950.57	9,300.50	3,888.71	67.83	67.47	86.066	146.44	6,011.92	901.72	767.03	134.69	6.695	
9,600.00	3,951.32	9,350.49	3,889.84	68.38	68.02	86.090	147.53	6,061.90	901.69	765.90	135.79	6.640	
9,650.00	3,952.07	9,400.49	3,890.97	68.93	68.58	86.114	148.62	6,111.87	901.67	764.77	136.90	6.586	
9,700.00	3,952.82	9,450.49	3,892.10	69.48	69.13	86.138	149.70	6,161.85	901.64	763.64	138.00	6.534	
9,750.00	3,953.56	9,500.49	3,893.23	70.03	69.68	86.162	150.79	6,211.82	901.61	762.51	139.11	6.481	
9,800.00	3,954.31	9,550.49	3,894.35	70.58	70.23	86.186	151.88	6,261.79	901.59	761.38	140.21	6.430	
9,850.00	3,955.06	9,600.49	3,895.48	71.13	70.78	86.210	152.96	6,311.77	901.56	760.24	141.32	6.380	
9,900.00	3,955.81	9,650.49	3,896.61	71.68	71.34	86.234	154.05	6,361.74	901.54	759.11	142.42	6.330	
9,950.00	3,956.56	9,700.48	3,897.74	72.23	71.89	86.258	155.14	6,411.72	901.51	757.98	143.53	6.281	
10,000.00	3,957.31	9,750.48	3,898.87	72.78	72.44	86.282	156.22	6,461.69	901.49	756.85	144.64	6.233	
10,050.00	3,958.06	9,800.48	3,899.99	73.33	72.99	86.306	157.31	6,511.66	901.46	755.71	145.75	6.185	
10,100.00	3,958.81	9,850.48	3,901.12	73.88	73.55	86.330	158.40	6,561.64	901.44	754.58	146.85	6.138	
10,150.00	3,959.56	9,900.48	3,902.25	74.43	74.10	86.354	159.48	6,611.61	901.41	753.45	147.96	6.092	
10,200.00	3,960.31	9,950.48	3,903.38	74.99	74.65	86.378	160.57	6,661.59	901.39	752.32	149.07	6.047	
10,250.00	3,961.06	10,000.48	3,904.50	75.54	75.21	86.402	161.66	6,711.56	901.36	751.18	150.18	6.002	
10,300.00	3,961.81	10,050.47	3,905.63	76.09	75.76	86.426	162.74	6,761.53	901.34	750.05	151.29	5.958	
10,350.00	3,962.56	10,100.47	3,906.76	76.64	76.31	86.450	163.83	6,811.51	901.31	748.91	152.40	5.914	
10,400.00	3,963.31	10,150.47	3,907.89	77.20	76.87	86.474	164.92	6,861.48	901.29	747.78	153.51	5.871	
10,450.00	3,964.06	10,200.47	3,909.02	77.75	77.42	86.498	166.00	6,911.46	901.26	746.65	154.62	5.829	
10,500.00	3,964.81	10,250.47	3,910.14	78.30	77.98	86.522	167.09	6,961.43	901.24	745.51	155.73	5.787	
10,550.00	3,965.56	10,300.47	3,911.27	78.85	78.53	86.546	168.17	7,011.40	901.22	744.38	156.84	5.746	
10,600.00	3,966.31	10,350.47	3,912.40	79.41	79.09	86.570	169.26	7,061.38	901.19	743.24	157.95	5.706	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 10H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,650.00	3,967.05	10,400.46	3,913.53	79.96	79.64	86.594	170.35	7,111.35	901.17	742.11	159.06	5.666	
10,700.00	3,967.80	10,450.46	3,914.66	80.51	80.19	86.618	171.43	7,161.33	901.15	740.97	160.17	5.626	
10,750.00	3,968.55	10,500.46	3,915.78	81.07	80.75	86.642	172.52	7,211.30	901.12	739.84	161.28	5.587	
10,800.00	3,969.30	10,550.46	3,916.91	81.62	81.30	86.666	173.61	7,261.27	901.10	738.71	162.40	5.549	
10,850.00	3,970.05	10,600.46	3,918.04	82.17	81.86	86.690	174.69	7,311.25	901.08	737.57	163.51	5.511	
10,900.00	3,970.80	10,650.46	3,919.17	82.73	82.41	86.714	175.78	7,361.22	901.06	736.44	164.62	5.474	
10,950.00	3,971.55	10,700.46	3,920.29	83.28	82.97	86.738	176.87	7,411.20	901.03	735.30	165.73	5.437	
11,000.00	3,972.30	10,750.45	3,921.42	83.84	83.52	86.762	177.95	7,461.17	901.01	734.16	166.85	5.400	
11,050.00	3,973.05	10,800.45	3,922.55	84.39	84.08	86.786	179.04	7,511.14	900.99	733.03	167.96	5.364	
11,100.00	3,973.80	10,850.45	3,923.68	84.95	84.63	86.810	180.13	7,561.12	900.97	731.89	169.07	5.329	
11,130.16	3,974.25	10,880.61	3,924.36	85.28	84.97	86.825	180.78	7,591.26	900.95	731.21	169.74	5.308	
11,150.00	3,974.55	10,900.45	3,924.81	85.50	85.19	86.834	181.21	7,611.09	900.95	730.76	170.19	5.294	
11,158.35	3,974.67	10,908.80	3,924.99	85.59	85.28	86.838	181.39	7,619.44	900.94	730.57	170.37	5.288	
11,180.09	3,975.00	10,909.80	3,925.02	85.83	85.29	86.839	181.42	7,620.43	901.17	730.55	170.62	5.282	SF

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 21H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
300.00	300.00	300.00	300.00	0.86	0.86	179.498	-79.90	0.70	79.90	78.18	1.72	46.437	CC, ES
350.00	350.00	348.63	348.63	1.04	1.03	178.782	-80.31	0.73	80.76	78.69	2.07	38.963	
400.00	399.98	397.18	397.16	1.22	1.19	178.741	-81.54	0.83	83.34	80.91	2.43	34.280	
450.00	449.93	445.55	445.49	1.40	1.36	178.679	-83.59	0.98	87.63	84.84	2.79	31.371	
500.00	499.84	493.67	493.53	1.58	1.52	178.601	-86.42	1.20	93.62	90.47	3.16	29.672	
550.00	549.68	541.46	541.17	1.77	1.69	178.515	-90.04	1.48	101.31	97.79	3.52	28.787	
600.00	599.45	588.82	588.33	1.95	1.86	178.425	-94.40	1.82	110.67	106.79	3.88	28.520	
650.00	649.13	635.70	634.93	2.13	2.02	178.336	-99.49	2.21	121.69	117.45	4.24	28.706	
700.00	698.70	682.00	680.87	2.31	2.19	178.251	-105.26	2.66	134.34	129.75	4.59	29.250	
750.00	748.15	727.67	726.09	2.49	2.35	178.171	-111.67	3.15	148.61	143.67	4.94	30.070	
800.00	797.47	772.64	770.50	2.67	2.51	178.097	-118.68	3.70	164.46	159.18	5.28	31.122	
850.00	846.63	816.84	814.04	2.85	2.67	178.028	-126.26	4.28	181.87	176.25	5.62	32.351	
900.00	895.62	860.23	856.66	3.03	2.83	177.966	-134.34	4.91	200.80	194.85	5.95	33.752	
950.00	944.44	900.00	895.62	3.21	2.98	177.910	-142.32	5.52	221.24	214.97	6.26	35.325	
1,000.00	993.06	944.34	938.92	3.39	3.15	177.854	-151.84	6.26	243.09	236.51	6.58	36.928	
1,050.00	1,041.46	984.97	978.46	3.57	3.30	177.805	-161.16	6.98	266.39	259.50	6.89	38.658	
1,100.00	1,089.64	1,024.61	1,016.91	3.76	3.45	177.758	-170.78	7.72	291.06	283.87	7.19	40.490	
1,150.00	1,137.58	1,063.22	1,054.22	3.95	3.60	177.714	-180.67	8.49	317.07	309.59	7.48	42.412	
1,200.00	1,185.27	1,100.00	1,089.64	4.14	3.75	177.672	-190.55	9.25	344.38	336.63	7.75	44.422	
1,250.00	1,232.68	1,138.57	1,126.65	4.33	3.90	177.630	-201.37	10.09	372.92	364.89	8.04	46.411	
1,259.51	1,241.67	1,146.30	1,134.07	4.37	3.93	177.623	-203.57	10.25	378.46	370.38	8.09	46.799	
1,300.00	1,279.91	1,179.18	1,165.59	4.52	4.06	177.616	-212.90	10.98	402.09	393.77	8.31	48.369	
1,350.00	1,327.13	1,219.79	1,204.51	4.72	4.22	177.608	-224.43	11.87	431.26	422.67	8.59	50.191	
1,400.00	1,374.35	1,260.40	1,243.44	4.91	4.39	177.601	-235.96	12.76	460.43	451.56	8.87	51.883	
1,450.00	1,421.58	1,301.00	1,282.36	5.11	4.55	177.596	-247.48	13.65	489.61	480.45	9.16	53.475	
1,500.00	1,468.80	1,341.61	1,321.29	5.31	4.72	177.591	-259.01	14.54	518.78	509.34	9.44	54.947	
4,450.00	3,871.16	4,432.52	3,895.06	17.14	17.07	90.765	-869.06	928.99	1,804.61	1,771.48	33.13	54.476	
4,500.00	3,874.81	4,484.74	3,899.58	17.44	17.36	90.787	-867.92	980.99	1,804.62	1,770.85	33.76	53.449	
4,508.37	3,875.00	4,493.49	3,899.87	17.49	17.41	90.790	-867.73	989.74	1,804.62	1,770.75	33.87	53.282	
4,550.00	3,875.62	4,535.39	3,900.54	17.75	17.66	90.791	-866.82	1,031.62	1,804.62	1,770.21	34.41	52.447	
4,600.00	3,876.37	4,585.39	3,901.29	18.07	17.96	90.791	-865.73	1,081.60	1,804.62	1,769.56	35.06	51.479	
4,650.00	3,877.12	4,635.39	3,902.05	18.41	18.27	90.791	-864.65	1,131.58	1,804.61	1,768.87	35.74	50.491	
4,700.00	3,877.87	4,685.39	3,902.80	18.75	18.60	90.792	-863.56	1,181.57	1,804.61	1,768.18	36.43	49.530	
4,750.00	3,878.62	4,735.39	3,903.56	19.10	18.94	90.792	-862.47	1,231.55	1,804.61	1,767.45	37.16	48.559	
4,800.00	3,879.37	4,785.39	3,904.31	19.46	19.29	90.792	-861.38	1,281.53	1,804.61	1,766.71	37.90	47.618	
4,850.00	3,880.12	4,835.39	3,905.07	19.84	19.66	90.792	-860.29	1,331.51	1,804.60	1,765.94	38.66	46.674	
4,900.00	3,880.87	4,885.39	3,905.82	20.22	20.03	90.792	-859.20	1,381.49	1,804.60	1,765.17	39.44	45.761	
4,950.00	3,881.62	4,935.39	3,906.58	20.61	20.41	90.792	-858.12	1,431.48	1,804.60	1,764.37	40.23	44.852	
5,000.00	3,882.37	4,985.39	3,907.33	21.01	20.80	90.793	-857.03	1,481.46	1,804.60	1,763.56	41.04	43.973	
5,050.00	3,883.12	5,035.39	3,908.09	21.41	21.20	90.793	-855.94	1,531.44	1,804.60	1,762.73	41.87	43.103	
5,100.00	3,883.87	5,085.39	3,908.84	21.82	21.61	90.793	-854.85	1,581.42	1,804.59	1,761.89	42.70	42.262	
5,150.00	3,884.62	5,135.39	3,909.60	22.24	22.02	90.793	-853.76	1,631.41	1,804.59	1,761.04	43.56	41.432	
5,200.00	3,885.37	5,185.39	3,910.35	22.67	22.44	90.793	-852.68	1,681.39	1,804.59	1,760.17	44.41	40.630	
5,250.00	3,886.12	5,235.39	3,911.10	23.10	22.87	90.793	-851.59	1,731.37	1,804.59	1,759.29	45.29	39.842	
5,300.00	3,886.87	5,285.39	3,911.86	23.53	23.30	90.794	-850.50	1,781.35	1,804.58	1,758.41	46.18	39.081	
5,350.00	3,887.61	5,335.39	3,912.61	23.98	23.74	90.794	-849.41	1,831.34	1,804.58	1,757.51	47.07	38.335	
5,400.00	3,888.36	5,385.39	3,913.37	24.42	24.18	90.794	-848.32	1,881.32	1,804.58	1,756.60	47.98	37.614	
5,450.00	3,889.11	5,435.39	3,914.12	24.88	24.63	90.794	-847.23	1,931.30	1,804.58	1,755.68	48.89	36.908	
5,500.00	3,889.86	5,485.39	3,914.88	25.33	25.09	90.794	-846.15	1,981.28	1,804.58	1,754.76	49.81	36.226	
5,550.00	3,890.61	5,535.39	3,915.63	25.79	25.55	90.794	-845.06	2,031.27	1,804.57	1,753.82	50.75	35.559	
5,600.00	3,891.36	5,585.39	3,916.39	26.25	26.01	90.795	-843.97	2,081.25	1,804.57	1,752.89	51.69	34.914	
5,650.00	3,892.11	5,635.39	3,917.14	26.72	26.47	90.795	-842.88	2,131.23	1,804.57	1,751.93	52.63	34.285	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 21H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,700.00	3,892.86	5,685.39	3,917.90	27.19	26.94	90.795	-841.79	2,181.21	1,804.57	1,750.98	53.59	33.676	
5,750.00	3,893.61	5,735.39	3,918.65	27.67	27.42	90.795	-840.70	2,231.20	1,804.56	1,750.02	54.55	33.082	
5,800.00	3,894.36	5,785.39	3,919.41	28.15	27.90	90.795	-839.62	2,281.18	1,804.56	1,749.05	55.51	32.507	
5,850.00	3,895.11	5,835.39	3,920.16	28.63	28.38	90.795	-838.53	2,331.16	1,804.56	1,748.07	56.49	31.947	
5,900.00	3,895.86	5,885.39	3,920.92	29.11	28.86	90.796	-837.44	2,381.14	1,804.56	1,747.09	57.46	31.404	
5,950.00	3,896.61	5,935.39	3,921.67	29.60	29.35	90.796	-836.35	2,431.13	1,804.55	1,746.11	58.45	30.875	
6,000.00	3,897.36	5,985.39	3,922.43	30.09	29.84	90.796	-835.26	2,481.11	1,804.55	1,745.12	59.43	30.362	
6,050.00	3,898.11	6,035.39	3,923.18	30.58	30.33	90.796	-834.17	2,531.09	1,804.55	1,744.12	60.43	29.863	
6,100.00	3,898.86	6,085.39	3,923.93	31.08	30.82	90.796	-833.09	2,581.07	1,804.55	1,743.12	61.42	29.378	
6,150.00	3,899.61	6,135.39	3,924.69	31.57	31.32	90.796	-832.00	2,631.06	1,804.55	1,742.12	62.43	28.906	
6,200.00	3,900.36	6,185.39	3,925.44	32.07	31.82	90.797	-830.91	2,681.04	1,804.54	1,741.11	63.43	28.448	
6,250.00	3,901.10	6,235.39	3,926.20	32.57	32.32	90.797	-829.82	2,731.02	1,804.54	1,740.10	64.44	28.001	
6,300.00	3,901.85	6,285.39	3,926.95	33.08	32.82	90.797	-828.73	2,781.00	1,804.54	1,739.08	65.46	27.568	
6,350.00	3,902.60	6,335.39	3,927.71	33.58	33.33	90.797	-827.65	2,830.99	1,804.54	1,738.06	66.48	27.146	
6,400.00	3,903.35	6,385.39	3,928.46	34.09	33.83	90.797	-826.56	2,880.97	1,804.53	1,737.04	67.50	26.736	
6,450.00	3,904.10	6,435.39	3,929.22	34.60	34.34	90.797	-825.47	2,930.95	1,804.53	1,736.01	68.52	26.335	
6,500.00	3,904.85	6,485.39	3,929.97	35.11	34.85	90.798	-824.38	2,980.93	1,804.53	1,734.98	69.55	25.947	
6,550.00	3,905.60	6,535.39	3,930.73	35.62	35.36	90.798	-823.29	3,030.92	1,804.53	1,733.95	70.58	25.568	
6,600.00	3,906.35	6,585.39	3,931.48	36.13	35.88	90.798	-822.20	3,080.90	1,804.53	1,732.91	71.61	25.199	
6,650.00	3,907.10	6,635.39	3,932.24	36.65	36.39	90.798	-821.12	3,130.88	1,804.52	1,731.88	72.65	24.839	
6,700.00	3,907.85	6,685.39	3,932.99	37.16	36.91	90.798	-820.03	3,180.86	1,804.52	1,730.84	73.69	24.489	
6,750.00	3,908.60	6,735.39	3,933.75	37.68	37.43	90.798	-818.94	3,230.85	1,804.52	1,729.79	74.73	24.148	
6,800.00	3,909.35	6,785.39	3,934.50	38.20	37.95	90.799	-817.85	3,280.83	1,804.52	1,728.75	75.77	23.815	
6,850.00	3,910.10	6,835.39	3,935.25	38.72	38.47	90.799	-816.76	3,330.81	1,804.51	1,727.70	76.82	23.491	
6,900.00	3,910.85	6,885.39	3,936.01	39.24	38.99	90.799	-815.67	3,380.79	1,804.51	1,726.65	77.87	23.175	
6,950.00	3,911.60	6,935.39	3,936.76	39.76	39.51	90.799	-814.59	3,430.78	1,804.51	1,725.59	78.92	22.866	
7,000.00	3,912.35	6,985.39	3,937.52	40.29	40.03	90.799	-813.50	3,480.76	1,804.51	1,724.54	79.97	22.565	
7,050.00	3,913.10	7,035.39	3,938.27	40.81	40.56	90.800	-812.41	3,530.74	1,804.51	1,723.48	81.02	22.272	
7,100.00	3,913.85	7,085.39	3,939.03	41.34	41.08	90.800	-811.32	3,580.72	1,804.50	1,722.42	82.08	21.985	
7,150.00	3,914.59	7,135.39	3,939.78	41.86	41.61	90.800	-810.23	3,630.71	1,804.50	1,721.36	83.14	21.705	
7,200.00	3,915.34	7,185.39	3,940.54	42.39	42.14	90.800	-809.15	3,680.69	1,804.50	1,720.30	84.20	21.432	
7,250.00	3,916.09	7,235.39	3,941.29	42.92	42.67	90.800	-808.06	3,730.67	1,804.50	1,719.24	85.26	21.165	
7,300.00	3,916.84	7,285.39	3,942.05	43.45	43.20	90.800	-806.97	3,780.65	1,804.49	1,718.17	86.32	20.904	
7,350.00	3,917.59	7,335.39	3,942.80	43.98	43.73	90.801	-805.88	3,830.64	1,804.49	1,717.11	87.39	20.650	
7,400.00	3,918.34	7,385.39	3,943.56	44.51	44.26	90.801	-804.79	3,880.62	1,804.49	1,716.04	88.45	20.401	
7,450.00	3,919.09	7,435.39	3,944.31	45.04	44.79	90.801	-803.70	3,930.60	1,804.49	1,714.97	89.52	20.157	
7,500.00	3,919.84	7,485.39	3,945.07	45.57	45.32	90.801	-802.62	3,980.58	1,804.49	1,713.90	90.59	19.919	
7,550.00	3,920.59	7,535.39	3,945.82	46.11	45.86	90.801	-801.53	4,030.57	1,804.48	1,712.82	91.66	19.687	
7,600.00	3,921.34	7,585.39	3,946.57	46.64	46.39	90.801	-800.44	4,080.55	1,804.48	1,711.75	92.73	19.459	
7,650.00	3,922.09	7,635.39	3,947.33	47.17	46.93	90.802	-799.35	4,130.53	1,804.48	1,710.67	93.81	19.236	
7,700.00	3,922.84	7,685.39	3,948.08	47.71	47.46	90.802	-798.26	4,180.51	1,804.48	1,709.60	94.88	19.019	
7,750.00	3,923.59	7,735.39	3,948.84	48.24	48.00	90.802	-797.17	4,230.50	1,804.47	1,708.52	95.96	18.805	
7,800.00	3,924.34	7,785.39	3,949.59	48.78	48.54	90.802	-796.09	4,280.48	1,804.47	1,707.44	97.03	18.597	
7,850.00	3,925.09	7,835.39	3,950.35	49.32	49.07	90.802	-795.00	4,330.46	1,804.47	1,706.36	98.11	18.392	
7,900.00	3,925.84	7,885.39	3,951.10	49.86	49.61	90.802	-793.91	4,380.44	1,804.47	1,705.28	99.19	18.192	
7,950.00	3,926.59	7,935.39	3,951.86	50.39	50.15	90.803	-792.82	4,430.42	1,804.46	1,704.20	100.27	17.996	
8,000.00	3,927.33	7,985.39	3,952.61	50.93	50.69	90.803	-791.73	4,480.41	1,804.46	1,703.11	101.35	17.805	
8,050.00	3,928.08	8,035.39	3,953.37	51.47	51.23	90.803	-790.64	4,530.39	1,804.46	1,702.03	102.43	17.616	
8,100.00	3,928.83	8,085.39	3,954.12	52.01	51.77	90.803	-789.56	4,580.37	1,804.46	1,700.94	103.51	17.432	
8,150.00	3,929.58	8,135.39	3,954.88	52.55	52.31	90.803	-788.47	4,630.35	1,804.46	1,699.86	104.60	17.251	
8,200.00	3,930.33	8,185.39	3,955.63	53.09	52.85	90.803	-787.38	4,680.34	1,804.45	1,698.77	105.68	17.074	
8,250.00	3,931.08	8,235.39	3,956.39	53.63	53.39	90.804	-786.29	4,730.32	1,804.45	1,697.68	106.77	16.901	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 21H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,300.00	3,931.83	8,285.39	3,957.14	54.17	53.93	90.804	-785.20	4,780.30	1,804.45	1,696.60	107.85	16.731	
8,350.00	3,932.58	8,335.39	3,957.90	54.72	54.48	90.804	-784.12	4,830.28	1,804.45	1,695.51	108.94	16.564	
8,400.00	3,933.33	8,385.39	3,958.65	55.26	55.02	90.804	-783.03	4,880.27	1,804.44	1,694.42	110.03	16.400	
8,450.00	3,934.08	8,435.39	3,959.40	55.80	55.56	90.804	-781.94	4,930.25	1,804.44	1,693.33	111.12	16.239	
8,500.00	3,934.83	8,485.39	3,960.16	56.34	56.10	90.804	-780.85	4,980.23	1,804.44	1,692.23	112.21	16.081	
8,550.00	3,935.58	8,535.39	3,960.91	56.89	56.65	90.805	-779.76	5,030.21	1,804.44	1,691.14	113.30	15.927	
8,600.00	3,936.33	8,585.39	3,961.67	57.43	57.19	90.805	-778.67	5,080.20	1,804.44	1,690.05	114.39	15.775	
8,650.00	3,937.08	8,635.39	3,962.42	57.98	57.74	90.805	-777.59	5,130.18	1,804.43	1,688.95	115.48	15.626	
8,700.00	3,937.83	8,685.39	3,963.18	58.52	58.28	90.805	-776.50	5,180.16	1,804.43	1,687.86	116.57	15.479	
8,750.00	3,938.58	8,735.39	3,963.93	59.07	58.83	90.805	-775.41	5,230.14	1,804.43	1,686.77	117.66	15.336	
8,800.00	3,939.33	8,785.39	3,964.69	59.61	59.37	90.805	-774.32	5,280.13	1,804.43	1,685.67	118.76	15.194	
8,850.00	3,940.08	8,835.39	3,965.44	60.16	59.92	90.806	-773.23	5,330.11	1,804.42	1,684.57	119.85	15.056	
8,900.00	3,940.82	8,885.39	3,966.20	60.70	60.47	90.806	-772.14	5,380.09	1,804.42	1,683.48	120.95	14.919	
8,950.00	3,941.57	8,935.39	3,966.95	61.25	61.01	90.806	-771.06	5,430.07	1,804.42	1,682.38	122.04	14.785	
9,000.00	3,942.32	8,985.39	3,967.71	61.80	61.56	90.806	-769.97	5,480.06	1,804.42	1,681.28	123.14	14.654	
9,050.00	3,943.07	9,035.39	3,968.46	62.34	62.11	90.806	-768.88	5,530.04	1,804.42	1,680.18	124.23	14.525	
9,100.00	3,943.82	9,085.39	3,969.22	62.89	62.65	90.806	-767.79	5,580.02	1,804.41	1,679.08	125.33	14.397	
9,150.00	3,944.57	9,135.39	3,969.97	63.44	63.20	90.807	-766.70	5,630.00	1,804.41	1,677.98	126.43	14.272	
9,200.00	3,945.32	9,185.39	3,970.72	63.98	63.75	90.807	-765.62	5,679.99	1,804.41	1,676.88	127.52	14.150	
9,250.00	3,946.07	9,235.39	3,971.48	64.53	64.30	90.807	-764.53	5,729.97	1,804.41	1,675.78	128.62	14.029	
9,300.00	3,946.82	9,285.39	3,972.23	65.08	64.85	90.807	-763.44	5,779.95	1,804.40	1,674.68	129.72	13.910	
9,350.00	3,947.57	9,335.39	3,972.99	65.63	65.40	90.807	-762.35	5,829.93	1,804.40	1,673.58	130.82	13.793	
9,400.00	3,948.32	9,385.39	3,973.74	66.18	65.94	90.807	-761.26	5,879.92	1,804.40	1,672.48	131.92	13.678	
9,450.00	3,949.07	9,435.39	3,974.50	66.73	66.49	90.808	-760.17	5,929.90	1,804.40	1,671.38	133.02	13.565	
9,500.00	3,949.82	9,485.39	3,975.25	67.28	67.04	90.808	-759.09	5,979.88	1,804.40	1,670.27	134.12	13.454	
9,550.00	3,950.57	9,535.39	3,976.01	67.83	67.59	90.808	-758.00	6,029.86	1,804.39	1,669.17	135.22	13.344	
9,600.00	3,951.32	9,585.39	3,976.76	68.38	68.14	90.808	-756.91	6,079.85	1,804.39	1,668.07	136.32	13.236	
9,650.00	3,952.07	9,635.39	3,977.52	68.93	68.69	90.808	-755.82	6,129.83	1,804.39	1,666.96	137.42	13.130	
9,700.00	3,952.82	9,685.39	3,978.27	69.48	69.24	90.808	-754.73	6,179.81	1,804.39	1,665.86	138.53	13.026	
9,750.00	3,953.56	9,735.39	3,979.03	70.03	69.79	90.809	-753.64	6,229.79	1,804.38	1,664.75	139.63	12.923	
9,800.00	3,954.31	9,785.39	3,979.78	70.58	70.34	90.809	-752.56	6,279.78	1,804.38	1,663.65	140.73	12.821	
9,850.00	3,955.06	9,835.39	3,980.54	71.13	70.90	90.809	-751.47	6,329.76	1,804.38	1,662.54	141.83	12.722	
9,900.00	3,955.81	9,885.39	3,981.29	71.68	71.45	90.809	-750.38	6,379.74	1,804.38	1,661.44	142.94	12.623	
9,950.00	3,956.56	9,935.39	3,982.04	72.23	72.00	90.809	-749.29	6,429.72	1,804.37	1,660.33	144.04	12.527	
10,000.00	3,957.31	9,985.39	3,982.80	72.78	72.55	90.809	-748.20	6,479.71	1,804.37	1,659.23	145.15	12.431	
10,050.00	3,958.06	10,035.39	3,983.55	73.33	73.10	90.810	-747.12	6,529.69	1,804.37	1,658.12	146.25	12.337	
10,100.00	3,958.81	10,085.39	3,984.31	73.88	73.65	90.810	-746.03	6,579.67	1,804.37	1,657.01	147.36	12.245	
10,150.00	3,959.56	10,135.39	3,985.06	74.43	74.21	90.810	-744.94	6,629.65	1,804.37	1,655.90	148.46	12.154	
10,200.00	3,960.31	10,185.39	3,985.82	74.99	74.76	90.810	-743.85	6,679.64	1,804.36	1,654.80	149.57	12.064	
10,250.00	3,961.06	10,235.39	3,986.57	75.54	75.31	90.810	-742.76	6,729.62	1,804.36	1,653.69	150.67	11.975	
10,300.00	3,961.81	10,285.39	3,987.33	76.09	75.86	90.810	-741.67	6,779.60	1,804.36	1,652.58	151.78	11.888	
10,350.00	3,962.56	10,335.39	3,988.08	76.64	76.41	90.811	-740.59	6,829.58	1,804.36	1,651.47	152.89	11.802	
10,400.00	3,963.31	10,385.39	3,988.84	77.20	76.97	90.811	-739.50	6,879.57	1,804.35	1,650.36	153.99	11.717	
10,450.00	3,964.06	10,435.39	3,989.59	77.75	77.52	90.811	-738.41	6,929.55	1,804.35	1,649.25	155.10	11.634	
10,500.00	3,964.81	10,485.39	3,990.35	78.30	78.07	90.811	-737.32	6,979.53	1,804.35	1,648.14	156.21	11.551	
10,550.00	3,965.56	10,535.39	3,991.10	78.85	78.63	90.811	-736.23	7,029.51	1,804.35	1,647.03	157.31	11.470	
10,600.00	3,966.31	10,585.39	3,991.86	79.41	79.18	90.811	-735.14	7,079.50	1,804.35	1,645.92	158.42	11.390	
10,650.00	3,967.05	10,635.39	3,992.61	79.96	79.73	90.812	-734.06	7,129.48	1,804.34	1,644.81	159.53	11.310	
10,700.00	3,967.80	10,685.39	3,993.37	80.51	80.29	90.812	-732.97	7,179.46	1,804.34	1,643.70	160.64	11.232	
10,750.00	3,968.55	10,735.39	3,994.12	81.07	80.84	90.812	-731.88	7,229.44	1,804.34	1,642.59	161.75	11.155	
10,800.00	3,969.30	10,785.39	3,994.87	81.62	81.40	90.812	-730.79	7,279.43	1,804.34	1,641.48	162.86	11.079	
10,850.00	3,970.05	10,835.39	3,995.63	82.17	81.95	90.812	-729.70	7,329.41	1,804.33	1,640.37	163.96	11.004	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 21H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,900.00	3,970.80	10,885.39	3,996.38	82.73	82.50	90.812	-728.61	7,379.39	1,804.33	1,639.26	165.07	10.930	
10,950.00	3,971.55	10,935.39	3,997.14	83.28	83.06	90.813	-727.53	7,429.37	1,804.33	1,638.15	166.18	10.857	
11,000.00	3,972.30	10,985.39	3,997.89	83.84	83.61	90.813	-726.44	7,479.36	1,804.33	1,637.03	167.29	10.785	
11,050.00	3,973.05	11,035.39	3,998.65	84.39	84.17	90.813	-725.35	7,529.34	1,804.33	1,635.92	168.40	10.714	
11,100.00	3,973.80	11,085.39	3,999.40	84.95	84.72	90.813	-724.26	7,579.32	1,804.32	1,634.81	169.51	10.644	
11,130.16	3,974.25	11,115.55	3,999.86	85.28	85.05	90.813	-723.61	7,609.47	1,804.32	1,634.14	170.18	10.602	
11,139.68	3,974.39	11,124.98	4,000.00	85.38	85.16	90.813	-723.40	7,618.90	1,804.32	1,633.93	170.39	10.589	
11,150.00	3,974.55	11,124.98	4,000.00	85.50	85.16	90.813	-723.40	7,618.90	1,804.35	1,633.85	170.51	10.582	
11,180.09	3,975.00	11,124.98	4,000.00	85.83	85.16	90.813	-723.40	7,618.90	1,804.77	1,633.93	170.84	10.564	SF

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 60H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
150.00	150.00	150.00	150.00	0.32	0.32	179.714	-20.00	0.10	20.00	19.36	0.65	30.996	
200.00	200.00	200.00	200.00	0.50	0.50	179.714	-20.00	0.10	20.00	19.00	1.00	19.926	
250.00	250.00	250.00	250.00	0.68	0.68	179.714	-20.00	0.10	20.00	18.64	1.36	14.682	
300.00	300.00	300.00	300.00	0.86	0.86	179.714	-20.00	0.10	20.00	18.28	1.72	11.624	
350.00	350.00	350.35	350.35	1.04	1.04	178.916	-19.56	0.14	20.00	17.91	2.09	9.587	
400.00	399.98	400.70	400.68	1.22	1.22	178.632	-18.24	0.25	20.00	17.54	2.45	8.146	
450.00	449.93	451.05	450.98	1.40	1.41	178.159	-16.03	0.45	19.99	17.16	2.83	7.069	
500.00	499.84	501.40	501.23	1.58	1.59	177.496	-12.95	0.71	19.99	16.79	3.20	6.247	
541.29	541.00	542.97	542.68	1.73	1.74	176.806	-9.74	0.99	19.99	16.48	3.51	5.698	CC
550.00	549.68	551.75	551.42	1.77	1.77	176.644	-8.99	1.06	19.99	16.41	3.57	5.595	
600.00	599.45	602.09	601.53	1.95	1.95	175.603	-4.15	1.48	19.99	16.05	3.94	5.070	
650.00	649.13	652.44	651.55	2.13	2.14	174.375	1.57	1.98	20.00	15.69	4.31	4.638	
700.00	698.70	702.78	701.45	2.31	2.32	172.961	8.16	2.55	20.03	15.35	4.68	4.279	
750.00	748.15	752.89	751.04	2.49	2.50	171.494	15.40	3.19	20.26	15.21	5.05	4.014	ES
800.00	797.47	802.88	800.49	2.67	2.68	170.432	22.68	3.82	21.32	15.91	5.41	3.940	SF
850.00	846.63	852.84	849.92	2.85	2.86	169.861	29.94	4.45	23.24	17.46	5.78	4.022	
900.00	895.62	902.76	899.30	3.03	3.03	169.727	37.21	5.09	26.02	19.88	6.13	4.242	
950.00	944.44	952.63	948.63	3.21	3.21	169.918	44.46	5.72	29.65	23.16	6.49	4.570	
1,000.00	993.06	1,002.43	997.90	3.39	3.39	170.315	51.71	6.35	34.15	27.30	6.85	4.987	
1,050.00	1,041.46	1,052.14	1,047.07	3.57	3.57	170.821	58.94	6.98	39.50	32.30	7.20	5.487	
1,100.00	1,089.64	1,101.75	1,096.15	3.76	3.75	171.369	66.16	7.61	45.71	38.16	7.55	6.055	
1,150.00	1,137.58	1,151.24	1,145.12	3.95	3.93	171.916	73.36	8.24	52.78	44.89	7.89	6.686	
1,200.00	1,185.27	1,200.61	1,193.95	4.14	4.11	172.439	80.54	8.86	60.71	52.47	8.24	7.372	
1,250.00	1,232.68	1,249.83	1,242.64	4.33	4.29	172.926	87.71	9.49	69.50	60.92	8.57	8.107	
1,259.51	1,241.67	1,259.17	1,251.89	4.37	4.32	173.014	89.06	9.61	71.27	62.63	8.64	8.252	
1,300.00	1,279.91	1,298.94	1,291.23	4.52	4.47	173.367	94.85	10.11	78.86	69.95	8.91	8.848	
1,350.00	1,327.13	1,348.05	1,339.81	4.72	4.65	173.719	102.00	10.73	88.25	78.99	9.25	9.535	
1,400.00	1,374.35	1,397.16	1,388.39	4.91	4.83	174.003	109.14	11.36	97.63	88.03	9.60	10.171	
1,450.00	1,421.58	1,446.26	1,436.97	5.11	5.01	174.238	116.29	11.98	107.02	97.08	9.94	10.762	
1,500.00	1,468.80	1,495.37	1,485.56	5.31	5.19	174.435	123.43	12.60	116.41	106.12	10.29	11.312	
1,550.00	1,516.02	1,544.48	1,534.14	5.50	5.37	174.602	130.58	13.23	125.80	115.16	10.64	11.826	
1,600.00	1,563.24	1,593.59	1,582.72	5.70	5.55	174.746	137.72	13.85	135.19	124.21	10.99	12.306	
1,650.00	1,610.46	1,642.70	1,631.30	5.90	5.73	174.872	144.87	14.47	144.59	133.25	11.33	12.756	
1,700.00	1,657.68	1,691.81	1,679.89	6.10	5.91	174.982	152.01	15.09	153.98	142.29	11.68	13.178	
1,750.00	1,704.91	1,740.92	1,728.47	6.30	6.09	175.079	159.16	15.72	163.37	151.34	12.03	13.575	
1,800.00	1,752.13	1,790.03	1,777.05	6.50	6.27	175.166	166.30	16.34	172.77	160.38	12.39	13.949	
1,850.00	1,799.35	1,839.14	1,825.63	6.70	6.45	175.244	173.45	16.96	182.16	169.42	12.74	14.302	
1,900.00	1,846.57	1,888.24	1,874.21	6.90	6.63	175.314	180.59	17.59	191.56	178.47	13.09	14.635	
1,950.00	1,893.79	1,937.35	1,922.80	7.10	6.81	175.378	187.74	18.21	200.95	187.51	13.44	14.950	
2,000.00	1,941.01	1,986.46	1,971.38	7.30	6.99	175.436	194.88	18.83	210.35	196.55	13.79	15.249	
2,050.00	1,988.24	2,035.57	2,019.96	7.50	7.17	175.489	202.03	19.45	219.74	205.59	14.15	15.532	
2,100.00	2,035.46	2,084.68	2,068.54	7.70	7.35	175.537	209.18	20.08	229.14	214.64	14.50	15.801	
2,150.00	2,082.68	2,133.79	2,117.13	7.90	7.53	175.582	216.32	20.70	238.53	223.68	14.86	16.057	
2,200.00	2,129.90	2,182.90	2,165.71	8.10	7.71	175.624	223.47	21.32	247.93	232.72	15.21	16.301	
2,250.00	2,177.12	2,232.01	2,214.29	8.31	7.89	175.662	230.61	21.95	257.32	241.76	15.56	16.533	
2,300.00	2,224.34	2,281.12	2,262.87	8.51	8.07	175.698	237.76	22.57	266.72	250.80	15.92	16.755	
2,350.00	2,271.56	2,330.23	2,311.46	8.71	8.25	175.731	244.90	23.19	276.12	259.84	16.27	16.967	
2,400.00	2,318.79	2,379.33	2,360.04	8.91	8.43	175.762	252.05	23.81	285.51	268.88	16.63	17.169	
2,450.00	2,366.01	2,428.44	2,408.62	9.11	8.61	175.791	259.19	24.44	294.91	277.92	16.98	17.363	
2,500.00	2,413.23	2,477.55	2,457.20	9.32	8.79	175.819	266.34	25.06	304.30	286.96	17.34	17.549	
2,550.00	2,460.45	2,526.66	2,505.79	9.52	8.97	175.844	273.48	25.68	313.70	296.00	17.70	17.727	
2,600.00	2,507.67	2,575.77	2,554.37	9.72	9.15	175.869	280.63	26.30	323.10	305.05	18.05	17.898	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 60H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,650.00	2,554.89	2,624.88	2,602.95	9.92	9.33	175.891	287.77	26.93	332.49	314.09	18.41	18.062	
2,700.00	2,602.12	2,673.99	2,651.53	10.13	9.51	175.913	294.92	27.55	341.89	323.13	18.77	18.219	
2,750.00	2,649.34	2,723.10	2,700.12	10.33	9.69	175.933	302.06	28.17	351.29	332.17	19.12	18.371	
2,800.00	2,696.56	2,772.21	2,748.70	10.53	9.87	175.953	309.21	28.80	360.68	341.21	19.48	18.517	
2,850.00	2,743.78	2,821.31	2,797.28	10.74	10.05	175.971	316.35	29.42	370.08	350.24	19.84	18.657	
2,900.00	2,791.00	2,870.42	2,845.86	10.94	10.23	175.989	323.50	30.04	379.48	359.28	20.19	18.793	
2,950.00	2,838.22	2,919.53	2,894.44	11.14	10.41	176.005	330.64	30.66	388.87	368.32	20.55	18.923	
2,997.10	2,882.71	2,965.80	2,940.21	11.34	10.58	176.020	337.38	31.25	397.73	376.84	20.89	19.042	
3,000.00	2,885.45	2,968.64	2,943.03	11.35	10.59	175.495	337.79	31.29	398.27	377.36	20.91	19.047	
3,050.00	2,932.72	3,017.78	2,991.64	11.55	10.77	166.502	344.94	31.91	407.34	386.04	21.30	19.123	
3,100.00	2,979.98	3,066.89	3,040.22	11.75	10.95	157.898	352.08	32.53	415.85	394.16	21.69	19.174	
3,150.00	3,027.12	3,115.82	3,088.62	11.95	11.13	150.055	359.20	33.15	423.83	401.76	22.07	19.204	
3,200.00	3,073.99	3,164.44	3,136.73	12.15	11.31	143.241	366.28	33.77	431.38	408.93	22.44	19.221	
3,250.00	3,120.48	3,212.62	3,184.39	12.34	11.48	137.580	373.29	34.38	438.62	415.81	22.81	19.232	
3,300.00	3,166.44	3,260.11	3,231.37	12.53	11.66	133.032	380.18	35.20	445.71	422.55	23.16	19.244	
3,350.00	3,211.77	3,307.74	3,278.42	12.71	11.83	129.333	386.97	37.99	452.80	429.29	23.51	19.260	
3,400.00	3,256.32	3,356.09	3,326.01	12.89	12.01	126.358	393.67	43.24	459.87	436.01	23.86	19.276	
3,450.00	3,299.98	3,405.20	3,374.04	13.06	12.19	124.001	400.27	51.05	466.88	442.68	24.20	19.293	
3,500.00	3,342.64	3,455.10	3,422.39	13.23	12.37	122.164	406.76	61.52	473.82	449.28	24.54	19.309	
3,550.00	3,384.17	3,505.84	3,470.96	13.40	12.55	120.760	413.10	74.77	480.64	455.76	24.88	19.322	
3,600.00	3,424.46	3,557.45	3,519.59	13.56	12.72	119.715	419.26	90.88	487.31	462.10	25.21	19.331	
3,650.00	3,463.39	3,609.95	3,568.13	13.71	12.90	118.970	425.23	109.95	493.80	468.26	25.54	19.336	
3,700.00	3,500.87	3,663.38	3,616.41	13.87	13.08	118.474	430.96	132.09	500.06	474.20	25.86	19.334	
3,750.00	3,536.79	3,717.77	3,664.24	14.02	13.26	118.188	436.42	157.38	506.06	479.87	26.19	19.325	
3,800.00	3,571.05	3,773.13	3,711.41	14.18	13.45	118.079	441.59	185.88	511.75	485.24	26.51	19.307	
3,850.00	3,603.56	3,829.48	3,757.69	14.33	13.63	118.121	446.41	217.66	517.10	490.27	26.82	19.278	
3,900.00	3,634.23	3,886.84	3,802.83	14.49	13.83	118.290	450.85	252.76	522.06	494.92	27.14	19.236	
3,950.00	3,662.97	3,945.21	3,846.56	14.66	14.04	118.571	454.87	291.19	526.58	499.13	27.45	19.181	
4,000.00	3,689.70	4,004.59	3,888.60	14.84	14.27	118.946	458.42	332.96	530.64	502.87	27.77	19.109	
4,016.96	3,698.30	4,024.95	3,902.42	14.91	14.35	119.093	459.52	347.88	531.89	504.02	27.88	19.080	
4,050.00	3,714.82	4,065.08	3,928.72	15.04	14.51	119.879	461.48	378.12	534.09	506.00	28.10	19.009	
4,100.00	3,739.82	4,126.91	3,966.74	15.24	14.77	120.750	464.01	426.79	536.59	508.12	28.47	18.850	
4,150.00	3,764.82	4,189.61	4,002.05	15.47	15.05	121.223	465.93	478.56	537.97	509.06	28.90	18.612	
4,200.00	3,789.82	4,248.12	4,032.05	15.71	15.32	121.310	467.17	528.77	538.23	508.85	29.38	18.319	
4,216.96	3,798.30	4,265.08	4,040.53	15.80	15.40	121.310	467.49	543.45	538.23	508.69	29.54	18.221	
4,216.97	3,798.31	4,265.08	4,040.54	15.80	15.40	121.310	467.49	543.45	538.23	508.69	29.54	18.221	
4,250.00	3,813.99	4,298.10	4,057.04	15.97	15.56	121.354	468.11	572.04	538.72	508.95	29.77	18.096	
4,300.00	3,834.48	4,347.83	4,081.91	16.25	15.82	121.583	469.05	615.10	541.37	511.25	30.13	17.970	
4,350.00	3,850.91	4,396.93	4,106.46	16.54	16.08	121.984	469.97	657.61	546.37	515.91	30.47	17.932	
4,400.00	3,863.17	4,461.73	4,138.12	16.84	16.44	122.903	471.20	714.12	553.63	522.81	30.82	17.966	
4,450.00	3,871.16	4,569.80	4,177.66	17.14	17.08	124.388	473.38	814.51	559.65	528.38	31.27	17.897	
4,500.00	3,874.81	4,683.31	4,198.14	17.44	17.75	125.167	475.81	925.93	562.77	530.86	31.92	17.632	
4,508.37	3,875.00	4,702.60	4,199.41	17.49	17.87	125.219	476.22	945.18	562.98	530.94	32.05	17.568	
4,550.00	3,875.62	4,754.06	4,200.64	17.75	18.18	125.257	477.34	996.61	563.14	530.60	32.53	17.309	
4,600.00	3,876.37	4,804.06	4,201.58	18.07	18.48	125.273	478.43	1,046.59	563.25	530.18	33.07	17.032	
4,650.00	3,877.12	4,854.06	4,202.52	18.41	18.81	125.289	479.51	1,096.57	563.36	529.72	33.64	16.747	
4,700.00	3,877.87	4,904.06	4,203.46	18.75	19.14	125.305	480.60	1,146.55	563.46	529.25	34.21	16.470	
4,750.00	3,878.62	4,954.06	4,204.39	19.10	19.48	125.320	481.69	1,196.52	563.57	528.76	34.81	16.188	
4,800.00	3,879.37	5,004.06	4,205.33	19.46	19.83	125.336	482.77	1,246.50	563.68	528.26	35.42	15.915	
4,850.00	3,880.12	5,054.06	4,206.27	19.84	20.20	125.352	483.86	1,296.48	563.79	527.74	36.05	15.639	
4,900.00	3,880.87	5,104.06	4,207.21	20.22	20.57	125.367	484.95	1,346.46	563.90	527.22	36.69	15.371	
4,950.00	3,881.62	5,154.06	4,208.15	20.61	20.95	125.383	486.03	1,396.44	564.01	526.66	37.34	15.103	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 60H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	3,882.37	5,204.06	4,209.09	21.01	21.33	125.399	487.12	1,446.42	564.12	526.11	38.01	14.843	
5,050.00	3,883.12	5,254.05	4,210.02	21.41	21.73	125.414	488.20	1,496.40	564.23	525.54	38.69	14.584	
5,100.00	3,883.87	5,304.05	4,210.96	21.82	22.13	125.430	489.29	1,546.38	564.34	524.96	39.37	14.333	
5,150.00	3,884.62	5,354.05	4,211.90	22.24	22.54	125.446	490.38	1,596.36	564.45	524.37	40.08	14.083	
5,200.00	3,885.37	5,404.05	4,212.84	22.67	22.96	125.461	491.46	1,646.34	564.56	523.77	40.79	13.842	
5,250.00	3,886.12	5,454.05	4,213.78	23.10	23.38	125.477	492.55	1,696.31	564.66	523.15	41.51	13.603	
5,300.00	3,886.87	5,504.05	4,214.72	23.53	23.81	125.493	493.64	1,746.29	564.77	522.54	42.24	13.372	
5,350.00	3,887.61	5,554.05	4,215.65	23.98	24.24	125.508	494.72	1,796.27	564.88	521.90	42.98	13.143	
5,400.00	3,888.36	5,604.05	4,216.59	24.42	24.68	125.524	495.81	1,846.25	564.99	521.27	43.72	12.922	
5,450.00	3,889.11	5,654.05	4,217.53	24.88	25.12	125.539	496.89	1,896.23	565.10	520.62	44.48	12.705	
5,500.00	3,889.86	5,704.05	4,218.47	25.33	25.57	125.555	497.98	1,946.21	565.21	519.97	45.24	12.494	
5,550.00	3,890.61	5,754.05	4,219.41	25.79	26.03	125.571	499.07	1,996.19	565.32	519.31	46.01	12.287	
5,600.00	3,891.36	5,804.05	4,220.35	26.25	26.48	125.586	500.15	2,046.17	565.43	518.65	46.78	12.087	
5,650.00	3,892.11	5,854.05	4,221.28	26.72	26.94	125.602	501.24	2,096.15	565.54	517.97	47.57	11.890	
5,700.00	3,892.86	5,904.05	4,222.22	27.19	27.41	125.618	502.33	2,146.13	565.65	517.30	48.35	11.699	
5,750.00	3,893.61	5,954.05	4,223.16	27.67	27.88	125.633	503.41	2,196.10	565.76	516.61	49.15	11.512	
5,800.00	3,894.36	6,004.05	4,224.10	28.15	28.35	125.649	504.50	2,246.08	565.87	515.93	49.94	11.330	
5,850.00	3,895.11	6,054.05	4,225.04	28.63	28.82	125.664	505.58	2,296.06	565.98	515.23	50.75	11.153	
5,900.00	3,895.86	6,104.05	4,225.98	29.11	29.30	125.680	506.67	2,346.04	566.09	514.54	51.55	10.980	
5,950.00	3,896.61	6,154.05	4,226.92	29.60	29.78	125.695	507.76	2,396.02	566.20	513.83	52.37	10.812	
6,000.00	3,897.36	6,204.05	4,227.85	30.09	30.26	125.711	508.84	2,446.00	566.31	513.12	53.19	10.648	
6,050.00	3,898.11	6,254.05	4,228.79	30.58	30.75	125.726	509.93	2,495.98	566.42	512.41	54.01	10.488	
6,100.00	3,898.86	6,304.05	4,229.73	31.08	31.24	125.742	511.02	2,545.96	566.53	511.70	54.83	10.332	
6,150.00	3,899.61	6,354.05	4,230.67	31.57	31.73	125.758	512.10	2,595.94	566.64	510.98	55.66	10.180	
6,200.00	3,900.36	6,404.05	4,231.61	32.07	32.23	125.773	513.19	2,645.92	566.75	510.26	56.49	10.032	
6,250.00	3,901.10	6,454.05	4,232.55	32.57	32.72	125.789	514.27	2,695.90	566.86	509.53	57.33	9.887	
6,300.00	3,901.85	6,504.05	4,233.48	33.08	33.22	125.804	515.36	2,745.87	566.97	508.80	58.17	9.747	
6,350.00	3,902.60	6,554.05	4,234.42	33.58	33.72	125.820	516.45	2,795.85	567.08	508.07	59.01	9.609	
6,400.00	3,903.35	6,604.05	4,235.36	34.09	34.22	125.835	517.53	2,845.83	567.19	507.33	59.86	9.476	
6,450.00	3,904.10	6,654.04	4,236.30	34.60	34.73	125.851	518.62	2,895.81	567.30	506.59	60.71	9.345	
6,500.00	3,904.85	6,704.04	4,237.24	35.11	35.23	125.866	519.71	2,945.79	567.41	505.85	61.56	9.218	
6,550.00	3,905.60	6,754.04	4,238.18	35.62	35.74	125.882	520.79	2,995.77	567.52	505.11	62.41	9.093	
6,600.00	3,906.35	6,804.04	4,239.11	36.13	36.25	125.897	521.88	3,045.75	567.63	504.36	63.27	8.972	
6,650.00	3,907.10	6,854.04	4,240.05	36.65	36.76	125.913	522.96	3,095.73	567.74	503.62	64.13	8.853	
6,700.00	3,907.85	6,904.04	4,240.99	37.16	37.27	125.928	524.05	3,145.71	567.85	502.87	64.99	8.738	
6,750.00	3,908.60	6,954.04	4,241.93	37.68	37.79	125.943	525.14	3,195.69	567.96	502.11	65.85	8.625	
6,800.00	3,909.35	7,004.04	4,242.87	38.20	38.30	125.959	526.22	3,245.66	568.07	501.36	66.71	8.515	
6,850.00	3,910.10	7,054.04	4,243.81	38.72	38.82	125.974	527.31	3,295.64	568.19	500.60	67.58	8.407	
6,900.00	3,910.85	7,104.04	4,244.74	39.24	39.34	125.990	528.40	3,345.62	568.30	499.85	68.45	8.302	
6,950.00	3,911.60	7,154.04	4,245.68	39.76	39.85	126.005	529.48	3,395.60	568.41	499.09	69.32	8.200	
7,000.00	3,912.35	7,204.04	4,246.62	40.29	40.37	126.021	530.57	3,445.58	568.52	498.33	70.19	8.099	
7,050.00	3,913.10	7,254.04	4,247.56	40.81	40.90	126.036	531.65	3,495.56	568.63	497.56	71.07	8.001	
7,100.00	3,913.85	7,304.04	4,248.50	41.34	41.42	126.052	532.74	3,545.54	568.74	496.80	71.94	7.906	
7,150.00	3,914.59	7,354.04	4,249.44	41.86	41.94	126.067	533.83	3,595.52	568.85	496.03	72.82	7.812	
7,200.00	3,915.34	7,404.04	4,250.37	42.39	42.47	126.082	534.91	3,645.50	568.96	495.26	73.70	7.720	
7,250.00	3,916.09	7,454.04	4,251.31	42.92	42.99	126.098	536.00	3,695.48	569.07	494.50	74.58	7.631	
7,300.00	3,916.84	7,504.04	4,252.25	43.45	43.52	126.113	537.09	3,745.45	569.18	493.73	75.46	7.543	
7,350.00	3,917.59	7,554.04	4,253.19	43.98	44.05	126.129	538.17	3,795.43	569.29	492.95	76.34	7.457	
7,400.00	3,918.34	7,604.04	4,254.13	44.51	44.57	126.144	539.26	3,845.41	569.40	492.18	77.22	7.374	
7,450.00	3,919.09	7,654.04	4,255.07	45.04	45.10	126.159	540.35	3,895.39	569.52	491.41	78.11	7.291	
7,500.00	3,919.84	7,704.04	4,256.01	45.57	45.63	126.175	541.43	3,945.37	569.63	490.63	78.99	7.211	
7,550.00	3,920.59	7,754.04	4,256.94	46.11	46.16	126.190	542.52	3,995.35	569.74	489.86	79.88	7.132	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 60H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,600.00	3,921.34	7,804.04	4,257.88	46.64	46.69	126.205	543.60	4,045.33	569.85	489.08	80.77	7.055	
7,650.00	3,922.09	7,854.04	4,258.82	47.17	47.23	126.221	544.69	4,095.31	569.96	488.30	81.66	6.980	
7,700.00	3,922.84	7,904.04	4,259.76	47.71	47.76	126.236	545.78	4,145.29	570.07	487.53	82.55	6.906	
7,750.00	3,923.59	7,954.04	4,260.70	48.24	48.29	126.251	546.86	4,195.27	570.18	486.75	83.44	6.834	
7,800.00	3,924.34	8,004.04	4,261.64	48.78	48.83	126.267	547.95	4,245.25	570.30	485.97	84.33	6.763	
7,850.00	3,925.09	8,054.03	4,262.57	49.32	49.36	126.282	549.04	4,295.22	570.41	485.19	85.22	6.693	
7,900.00	3,925.84	8,104.03	4,263.51	49.86	49.90	126.297	550.12	4,345.20	570.52	484.41	86.11	6.625	
7,950.00	3,926.59	8,154.03	4,264.45	50.39	50.43	126.313	551.21	4,395.18	570.63	483.62	87.01	6.559	
8,000.00	3,927.33	8,204.03	4,265.39	50.93	50.97	126.328	552.29	4,445.16	570.74	482.84	87.90	6.493	
8,050.00	3,928.08	8,254.03	4,266.33	51.47	51.51	126.343	553.38	4,495.14	570.85	482.06	88.80	6.429	
8,100.00	3,928.83	8,304.03	4,267.27	52.01	52.04	126.359	554.47	4,545.12	570.96	481.27	89.69	6.366	
8,150.00	3,929.58	8,354.03	4,268.20	52.55	52.58	126.374	555.55	4,595.10	571.08	480.49	90.59	6.304	
8,200.00	3,930.33	8,404.03	4,269.14	53.09	53.12	126.389	556.64	4,645.08	571.19	479.70	91.48	6.244	
8,250.00	3,931.08	8,454.03	4,270.08	53.63	53.66	126.405	557.73	4,695.06	571.30	478.92	92.38	6.184	
8,300.00	3,931.83	8,504.03	4,271.02	54.17	54.20	126.420	558.81	4,745.04	571.41	478.13	93.28	6.126	
8,350.00	3,932.58	8,554.03	4,271.96	54.72	54.74	126.435	559.90	4,795.01	571.52	477.35	94.18	6.069	
8,400.00	3,933.33	8,604.03	4,272.90	55.26	55.28	126.450	560.98	4,844.99	571.64	476.56	95.08	6.012	
8,450.00	3,934.08	8,654.03	4,273.83	55.80	55.82	126.466	562.07	4,894.97	571.75	475.77	95.98	5.957	
8,500.00	3,934.83	8,704.03	4,274.77	56.34	56.36	126.481	563.16	4,944.95	571.86	474.98	96.88	5.903	
8,550.00	3,935.58	8,754.03	4,275.71	56.89	56.90	126.496	564.24	4,994.93	571.97	474.19	97.78	5.850	
8,600.00	3,936.33	8,804.03	4,276.65	57.43	57.45	126.511	565.33	5,044.91	572.08	473.41	98.68	5.797	
8,650.00	3,937.08	8,854.03	4,277.59	57.98	57.99	126.527	566.42	5,094.89	572.20	472.62	99.58	5.746	
8,700.00	3,937.83	8,904.03	4,278.53	58.52	58.53	126.542	567.50	5,144.87	572.31	471.83	100.48	5.696	
8,750.00	3,938.58	8,954.03	4,279.46	59.07	59.08	126.557	568.59	5,194.85	572.42	471.04	101.38	5.646	
8,800.00	3,939.33	9,004.03	4,280.40	59.61	59.62	126.572	569.67	5,244.83	572.53	470.25	102.29	5.597	
8,850.00	3,940.08	9,054.03	4,281.34	60.16	60.16	126.587	570.76	5,294.81	572.64	469.46	103.19	5.550	
8,900.00	3,940.82	9,104.03	4,282.28	60.70	60.71	126.603	571.85	5,344.78	572.76	468.67	104.09	5.502	
8,950.00	3,941.57	9,154.03	4,283.22	61.25	61.25	126.618	572.93	5,394.76	572.87	467.88	104.99	5.456	
9,000.00	3,942.32	9,204.03	4,284.16	61.80	61.80	126.633	574.02	5,444.74	572.98	467.08	105.90	5.411	
9,050.00	3,943.07	9,254.03	4,285.09	62.34	62.34	126.648	575.11	5,494.72	573.09	466.29	106.80	5.366	
9,100.00	3,943.82	9,304.03	4,286.03	62.89	62.89	126.663	576.19	5,544.70	573.21	465.50	107.71	5.322	
9,150.00	3,944.57	9,354.03	4,286.97	63.44	63.43	126.679	577.28	5,594.68	573.32	464.71	108.61	5.279	
9,200.00	3,945.32	9,404.03	4,287.91	63.98	63.98	126.694	578.36	5,644.66	573.43	463.92	109.51	5.236	
9,250.00	3,946.07	9,454.02	4,288.85	64.53	64.53	126.709	579.45	5,694.64	573.54	463.13	110.42	5.194	
9,300.00	3,946.82	9,504.02	4,289.79	65.08	65.07	126.724	580.54	5,744.62	573.66	462.33	111.32	5.153	
9,350.00	3,947.57	9,554.02	4,290.73	65.63	65.62	126.739	581.62	5,794.60	573.77	461.54	112.23	5.112	
9,400.00	3,948.32	9,604.02	4,291.66	66.18	66.17	126.754	582.71	5,844.57	573.88	460.75	113.13	5.073	
9,450.00	3,949.07	9,654.02	4,292.60	66.73	66.72	126.770	583.80	5,894.55	574.00	459.96	114.04	5.033	
9,500.00	3,949.82	9,704.02	4,293.54	67.28	67.27	126.785	584.88	5,944.53	574.11	459.16	114.95	4.995	
9,550.00	3,950.57	9,754.02	4,294.48	67.83	67.81	126.800	585.97	5,994.51	574.22	458.37	115.85	4.957	
9,600.00	3,951.32	9,804.02	4,295.42	68.38	68.36	126.815	587.05	6,044.49	574.33	457.58	116.76	4.919	
9,650.00	3,952.07	9,854.02	4,296.36	68.93	68.91	126.830	588.14	6,094.47	574.45	456.78	117.66	4.882	
9,700.00	3,952.82	9,904.02	4,297.29	69.48	69.46	126.845	589.23	6,144.45	574.56	455.99	118.57	4.846	
9,750.00	3,953.56	9,954.02	4,298.23	70.03	70.01	126.860	590.31	6,194.43	574.67	455.20	119.48	4.810	
9,800.00	3,954.31	10,004.02	4,299.17	70.58	70.56	126.875	591.40	6,244.41	574.79	454.40	120.38	4.775	
9,850.00	3,955.06	10,054.02	4,300.11	71.13	71.11	126.890	592.49	6,294.39	574.90	453.61	121.29	4.740	
9,900.00	3,955.81	10,104.02	4,301.05	71.68	71.66	126.906	593.57	6,344.36	575.01	452.82	122.19	4.706	
9,950.00	3,956.56	10,154.02	4,301.99	72.23	72.21	126.921	594.66	6,394.34	575.13	452.02	123.10	4.672	
10,000.00	3,957.31	10,204.02	4,302.92	72.78	72.76	126.936	595.75	6,444.32	575.24	451.23	124.01	4.639	
10,050.00	3,958.06	10,254.02	4,303.86	73.33	73.31	126.951	596.83	6,494.30	575.35	450.44	124.91	4.606	
10,100.00	3,958.81	10,304.02	4,304.80	73.88	73.86	126.966	597.92	6,544.28	575.46	449.64	125.82	4.574	
10,150.00	3,959.56	10,354.02	4,305.74	74.43	74.41	126.981	599.00	6,594.26	575.58	448.85	126.73	4.542	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 60H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.00	3,960.31	10,404.02	4,306.68	74.99	74.96	126.996	600.09	6,644.24	575.69	448.06	127.64	4.510	
10,250.00	3,961.06	10,454.02	4,307.62	75.54	75.51	127.011	601.18	6,694.22	575.81	447.26	128.54	4.480	
10,300.00	3,961.81	10,504.02	4,308.55	76.09	76.06	127.026	602.26	6,744.20	575.92	446.47	129.45	4.449	
10,350.00	3,962.56	10,554.02	4,309.49	76.64	76.61	127.041	603.35	6,794.18	576.03	445.68	130.36	4.419	
10,400.00	3,963.31	10,604.02	4,310.43	77.20	77.17	127.056	604.44	6,844.16	576.15	444.88	131.26	4.389	
10,450.00	3,964.06	10,654.02	4,311.37	77.75	77.72	127.071	605.52	6,894.13	576.26	444.09	132.17	4.360	
10,500.00	3,964.81	10,704.02	4,312.31	78.30	78.27	127.086	606.61	6,944.11	576.37	443.30	133.08	4.331	
10,550.00	3,965.56	10,754.02	4,313.25	78.85	78.82	127.101	607.69	6,994.09	576.49	442.50	133.98	4.303	
10,600.00	3,966.31	10,804.02	4,314.18	79.41	79.37	127.116	608.78	7,044.07	576.60	441.71	134.89	4.275	
10,650.00	3,967.05	10,854.01	4,315.12	79.96	79.93	127.131	609.87	7,094.05	576.71	440.92	135.80	4.247	
10,700.00	3,967.80	10,904.01	4,316.06	80.51	80.48	127.146	610.95	7,144.03	576.83	440.12	136.70	4.220	
10,750.00	3,968.55	10,954.01	4,317.00	81.07	81.03	127.161	612.04	7,194.01	576.94	439.33	137.61	4.193	
10,800.00	3,969.30	11,004.01	4,317.94	81.62	81.58	127.176	613.13	7,243.99	577.06	438.54	138.52	4.166	
10,850.00	3,970.05	11,054.01	4,318.88	82.17	82.14	127.191	614.21	7,293.97	577.17	437.74	139.42	4.140	
10,900.00	3,970.80	11,104.01	4,319.82	82.73	82.69	127.206	615.30	7,343.95	577.28	436.95	140.33	4.114	
10,950.00	3,971.55	11,154.01	4,320.75	83.28	83.24	127.221	616.38	7,393.92	577.40	436.16	141.24	4.088	
11,000.00	3,972.30	11,204.01	4,321.69	83.84	83.80	127.236	617.47	7,443.90	577.51	435.37	142.14	4.063	
11,050.00	3,973.05	11,254.01	4,322.63	84.39	84.35	127.251	618.56	7,493.88	577.62	434.57	143.05	4.038	
11,100.00	3,973.80	11,304.01	4,323.57	84.95	84.90	127.266	619.64	7,543.86	577.74	433.78	143.96	4.013	
11,130.16	3,974.25	11,334.17	4,324.13	85.28	85.24	127.275	620.30	7,574.01	577.81	433.30	144.50	3.999	
11,150.00	3,974.55	11,354.01	4,324.51	85.50	85.46	127.281	620.73	7,593.84	577.85	432.99	144.86	3.989	
11,180.09	3,975.00	11,380.28	4,325.00	85.83	85.75	127.289	621.30	7,620.10	577.93	432.56	145.37	3.976	

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 61H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
250.00	250.00	250.00	250.00	0.68	0.68	179.522	-59.90	0.50	59.90	58.54	1.36	43.975	
300.00	300.00	300.00	300.00	0.86	0.86	179.522	-59.90	0.50	59.90	58.18	1.72	34.813	CC, ES
350.00	350.00	348.97	348.97	1.04	1.03	178.765	-60.31	0.57	60.76	58.69	2.07	29.296	
400.00	399.98	397.86	397.84	1.22	1.20	178.610	-61.55	0.78	63.33	60.90	2.43	26.025	
450.00	449.93	446.58	446.51	1.40	1.36	178.377	-63.60	1.13	67.62	64.82	2.80	24.176	
500.00	499.84	495.03	494.88	1.58	1.53	178.097	-66.44	1.61	73.60	70.44	3.16	23.293	
550.00	549.68	543.15	542.86	1.77	1.70	177.797	-70.07	2.22	81.28	77.76	3.53	23.059	
600.00	599.45	590.85	590.35	1.95	1.87	177.499	-74.45	2.96	90.64	86.75	3.89	23.317	
650.00	649.13	638.05	637.27	2.13	2.03	177.216	-79.54	3.82	101.65	97.40	4.25	23.905	
700.00	698.70	686.37	685.24	2.31	2.20	176.970	-85.21	4.78	113.98	109.37	4.61	24.736	
750.00	748.15	734.60	733.13	2.49	2.37	176.789	-90.88	5.74	127.15	122.19	4.96	25.648	
800.00	797.47	782.59	780.78	2.67	2.54	176.659	-96.51	6.69	141.16	135.86	5.30	26.623	
850.00	846.63	830.34	828.19	2.85	2.71	176.568	-102.12	7.64	156.00	150.36	5.64	27.651	
900.00	895.62	877.82	875.33	3.03	2.89	176.507	-107.70	8.59	171.68	165.70	5.98	28.704	
950.00	944.44	925.02	922.19	3.21	3.06	176.468	-113.24	9.52	188.18	181.86	6.31	29.809	
1,000.00	993.06	971.92	968.76	3.39	3.23	176.446	-118.75	10.45	205.49	198.85	6.64	30.945	
1,050.00	1,041.46	1,018.51	1,015.02	3.57	3.40	176.438	-124.22	11.38	223.63	216.67	6.96	32.126	
1,100.00	1,089.64	1,064.79	1,060.97	3.76	3.57	176.440	-129.65	12.30	242.57	235.29	7.28	33.325	
1,150.00	1,137.58	1,110.72	1,106.57	3.95	3.74	176.450	-135.04	13.21	262.31	254.72	7.59	34.564	
1,200.00	1,185.27	1,156.31	1,151.83	4.14	3.91	176.465	-140.40	14.12	282.86	274.96	7.90	35.825	
1,250.00	1,232.68	1,201.53	1,196.73	4.33	4.07	176.484	-145.71	15.02	304.19	296.00	8.19	37.121	
1,259.51	1,241.67	1,210.09	1,205.23	4.37	4.10	176.488	-146.71	15.19	308.34	300.09	8.25	37.370	
1,300.00	1,279.91	1,246.49	1,241.38	4.52	4.24	176.527	-150.99	15.91	326.05	317.55	8.50	38.358	
1,350.00	1,327.13	1,291.45	1,286.02	4.72	4.40	176.570	-156.27	16.80	347.93	339.12	8.81	39.498	
1,400.00	1,374.35	1,336.41	1,330.66	4.91	4.57	176.608	-161.55	17.69	369.80	360.68	9.12	40.548	
1,450.00	1,421.58	1,381.37	1,375.30	5.11	4.73	176.642	-166.83	18.59	391.68	382.25	9.43	41.525	
1,500.00	1,468.80	1,426.33	1,419.94	5.31	4.90	176.672	-172.11	19.48	413.56	403.81	9.75	42.432	
1,550.00	1,516.02	1,471.29	1,464.58	5.50	5.07	176.699	-177.38	20.37	435.43	425.37	10.06	43.278	
1,600.00	1,563.24	1,516.25	1,509.22	5.70	5.23	176.723	-182.66	21.27	457.31	446.93	10.38	44.067	
1,650.00	1,610.46	1,561.21	1,553.86	5.90	5.40	176.745	-187.94	22.16	479.19	468.49	10.69	44.806	
1,700.00	1,657.68	1,606.17	1,598.50	6.10	5.57	176.766	-193.22	23.05	501.06	490.05	11.01	45.498	
1,750.00	1,704.91	1,651.13	1,643.14	6.30	5.73	176.784	-198.50	23.95	522.94	511.61	11.33	46.147	
1,800.00	1,752.13	1,696.09	1,687.78	6.50	5.90	176.801	-203.78	24.84	544.82	533.17	11.65	46.759	
1,850.00	1,799.35	1,741.05	1,732.42	6.70	6.06	176.817	-209.06	25.73	566.70	554.72	11.97	47.334	
1,900.00	1,846.57	1,786.01	1,777.06	6.90	6.23	176.832	-214.34	26.63	588.57	576.28	12.29	47.877	
1,950.00	1,893.79	1,830.97	1,821.70	7.10	6.40	176.845	-219.62	27.52	610.45	597.83	12.62	48.389	
2,000.00	1,941.01	1,875.93	1,866.33	7.30	6.56	176.858	-224.90	28.41	632.33	619.39	12.94	48.875	
2,050.00	1,988.24	1,920.89	1,910.97	7.50	6.73	176.870	-230.18	29.30	654.20	640.94	13.26	49.334	
2,100.00	2,035.46	1,965.85	1,955.61	7.70	6.90	176.881	-235.46	30.20	676.08	662.50	13.58	49.770	
2,150.00	2,082.68	2,010.81	2,000.25	7.90	7.06	176.891	-240.74	31.09	697.96	684.05	13.91	50.184	
2,200.00	2,129.90	2,055.77	2,044.89	8.10	7.23	176.901	-246.02	31.98	719.84	705.60	14.23	50.577	
2,250.00	2,177.12	2,100.73	2,089.53	8.31	7.40	176.910	-251.30	32.88	741.71	727.16	14.56	50.952	
2,300.00	2,224.34	2,145.69	2,134.17	8.51	7.56	176.918	-256.58	33.77	763.59	748.71	14.88	51.309	
2,350.00	2,271.56	2,190.65	2,178.81	8.71	7.73	176.926	-261.86	34.66	785.47	770.26	15.21	51.649	
2,400.00	2,318.79	2,235.61	2,223.45	8.91	7.90	176.934	-267.14	35.56	807.34	791.81	15.53	51.974	
2,450.00	2,366.01	2,280.57	2,268.09	9.11	8.06	176.941	-272.42	36.45	829.22	813.36	15.86	52.285	
2,500.00	2,413.23	2,325.53	2,312.73	9.32	8.23	176.948	-277.69	37.34	851.10	834.91	16.19	52.582	
2,550.00	2,460.45	2,370.49	2,357.37	9.52	8.40	176.955	-282.97	38.24	872.98	856.46	16.51	52.867	
2,600.00	2,507.67	2,415.45	2,402.01	9.72	8.57	176.961	-288.25	39.13	894.85	878.01	16.84	53.140	
2,650.00	2,554.89	2,460.41	2,446.65	9.92	8.73	176.967	-293.53	40.02	916.73	899.56	17.17	53.401	
2,700.00	2,602.12	2,505.37	2,491.29	10.13	8.90	176.973	-298.81	40.92	938.61	921.11	17.49	53.652	
2,750.00	2,649.34	2,550.32	2,535.93	10.33	9.07	176.978	-304.09	41.81	960.48	942.66	17.82	53.893	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 61H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,800.00	2,696.56	2,595.28	2,580.57	10.53	9.23	176.983	-309.37	42.70	982.36	964.21	18.15	54.125	
2,850.00	2,743.78	2,640.24	2,625.21	10.74	9.40	176.988	-314.65	43.59	1,004.24	985.76	18.48	54.348	
2,900.00	2,791.00	2,685.20	2,669.85	10.94	9.57	176.993	-319.93	44.49	1,026.12	1,007.31	18.81	54.563	
2,950.00	2,838.22	2,730.16	2,714.49	11.14	9.73	176.997	-325.21	45.38	1,047.99	1,028.86	19.13	54.770	
2,997.10	2,882.71	2,772.52	2,756.54	11.34	9.89	177.001	-330.18	46.22	1,068.60	1,049.16	19.44	54.958	
3,000.00	2,885.45	2,775.12	2,759.13	11.35	9.90	176.425	-330.49	46.27	1,069.87	1,050.40	19.47	54.961	
3,050.00	2,932.72	2,820.19	2,803.88	11.55	10.07	166.438	-335.78	47.17	1,091.46	1,071.61	19.85	54.980	
3,100.00	2,979.98	2,865.36	2,848.72	11.75	10.24	156.651	-341.09	48.07	1,112.52	1,092.27	20.25	54.947	
3,150.00	3,027.12	2,910.50	2,893.55	11.95	10.40	147.452	-346.39	48.96	1,133.01	1,112.36	20.65	54.877	
3,200.00	3,073.99	2,955.51	2,938.23	12.15	10.57	139.129	-351.67	49.86	1,152.91	1,131.86	21.05	54.780	
3,250.00	3,120.48	3,000.24	2,982.65	12.34	10.74	131.822	-356.92	50.75	1,172.23	1,150.78	21.44	54.668	
3,300.00	3,166.44	3,044.58	3,026.67	12.53	10.90	125.543	-362.13	51.63	1,190.97	1,169.14	21.83	54.547	
3,350.00	3,211.77	3,088.42	3,070.19	12.71	11.06	120.222	-367.28	52.50	1,209.18	1,186.96	22.22	54.425	
3,400.00	3,256.32	3,131.61	3,113.08	12.89	11.23	115.750	-372.35	53.36	1,226.87	1,204.28	22.59	54.304	
3,450.00	3,299.98	3,174.06	3,155.23	13.06	11.38	112.005	-377.34	54.20	1,244.11	1,221.15	22.96	54.188	
3,500.00	3,342.64	3,215.64	3,196.51	13.23	11.54	108.875	-382.22	55.02	1,260.93	1,237.62	23.32	54.078	
3,550.00	3,384.17	3,263.60	3,244.12	13.40	11.72	106.420	-387.80	56.50	1,277.35	1,253.66	23.69	53.923	
3,600.00	3,424.46	3,318.28	3,298.27	13.56	11.92	104.510	-393.90	60.93	1,293.06	1,268.99	24.08	53.708	
3,650.00	3,463.39	3,375.71	3,354.81	13.71	12.13	102.974	-399.96	68.93	1,307.98	1,283.51	24.47	53.454	
3,700.00	3,500.87	3,436.15	3,413.72	13.87	12.35	101.766	-405.93	81.01	1,322.01	1,297.14	24.87	53.157	
3,750.00	3,536.79	3,499.87	3,474.91	14.02	12.57	100.844	-411.76	97.75	1,335.07	1,309.78	25.28	52.810	
3,800.00	3,571.05	3,567.14	3,538.20	14.18	12.80	100.176	-417.35	119.81	1,347.05	1,321.34	25.70	52.407	
3,850.00	3,603.56	3,638.21	3,603.25	14.33	13.04	99.730	-422.60	147.89	1,357.84	1,331.70	26.14	51.941	
3,900.00	3,634.23	3,713.28	3,669.57	14.49	13.29	99.479	-427.39	182.71	1,367.33	1,340.73	26.60	51.403	
3,950.00	3,662.97	3,792.51	3,736.43	14.66	13.54	99.399	-431.57	224.97	1,375.39	1,348.30	27.08	50.787	
4,000.00	3,689.70	3,875.93	3,802.85	14.84	13.80	99.463	-434.97	275.27	1,381.87	1,354.28	27.59	50.083	
4,016.96	3,698.30	3,905.16	3,825.08	14.91	13.89	99.513	-435.91	294.23	1,383.70	1,355.92	27.77	49.824	
4,050.00	3,714.82	3,963.71	3,867.82	15.04	14.08	100.194	-437.40	334.21	1,386.78	1,358.65	28.13	49.291	
4,100.00	3,739.82	4,056.04	3,930.10	15.24	14.40	100.982	-438.67	402.32	1,390.31	1,361.59	28.72	48.412	
4,150.00	3,764.82	4,151.56	3,987.38	15.47	14.76	101.431	-438.59	478.70	1,392.30	1,362.93	29.37	47.401	
4,200.00	3,789.82	4,234.38	4,030.83	15.71	15.11	101.525	-437.39	549.18	1,392.71	1,362.69	30.02	46.396	
4,216.96	3,798.30	4,251.34	4,039.31	15.80	15.19	101.525	-437.07	563.86	1,392.71	1,362.52	30.19	46.124	
4,217.05	3,798.35	4,251.44	4,039.35	15.80	15.19	101.525	-437.06	563.94	1,392.71	1,362.52	30.20	46.123	
4,250.00	3,813.99	4,284.36	4,055.82	15.97	15.34	101.545	-436.44	592.45	1,392.90	1,362.37	30.53	45.620	
4,300.00	3,834.48	4,334.09	4,080.68	16.25	15.58	101.647	-435.51	635.51	1,393.92	1,362.86	31.06	44.876	
4,350.00	3,850.91	4,383.19	4,105.23	16.54	15.83	101.827	-434.58	678.02	1,395.86	1,364.26	31.60	44.178	
4,400.00	3,863.17	4,445.00	4,135.64	16.84	16.16	102.218	-433.41	731.81	1,398.73	1,366.53	32.20	43.440	
4,450.00	3,871.16	4,552.39	4,175.93	17.14	16.77	102.932	-431.25	831.17	1,401.22	1,368.17	33.05	42.392	
4,500.00	3,874.81	4,665.52	4,197.57	17.44	17.43	103.337	-428.84	941.99	1,402.59	1,368.61	33.98	41.276	
4,508.37	3,875.00	4,684.78	4,199.06	17.49	17.54	103.369	-428.42	961.19	1,402.70	1,368.56	34.14	41.086	
4,550.00	3,875.62	4,739.92	4,200.59	17.75	17.87	103.397	-427.22	1,016.29	1,402.79	1,368.06	34.73	40.392	
4,600.00	3,876.37	4,789.92	4,201.53	18.07	18.18	103.405	-426.13	1,066.27	1,402.83	1,367.48	35.35	39.688	
4,650.00	3,877.12	4,839.92	4,202.47	18.41	18.50	103.412	-425.04	1,116.25	1,402.87	1,366.87	36.00	38.965	
4,700.00	3,877.87	4,889.92	4,203.41	18.75	18.83	103.420	-423.96	1,166.23	1,402.91	1,366.25	36.67	38.262	
4,750.00	3,878.62	4,939.92	4,204.36	19.10	19.18	103.428	-422.87	1,216.21	1,402.96	1,365.59	37.36	37.549	
4,800.00	3,879.37	4,989.92	4,205.30	19.46	19.53	103.435	-421.78	1,266.18	1,403.00	1,364.93	38.07	36.857	
4,850.00	3,880.12	5,039.92	4,206.24	19.84	19.90	103.443	-420.69	1,316.16	1,403.04	1,364.24	38.80	36.160	
4,900.00	3,880.87	5,089.92	4,207.18	20.22	20.27	103.451	-419.60	1,366.14	1,403.09	1,363.54	39.54	35.485	
4,950.00	3,881.62	5,139.92	4,208.12	20.61	20.65	103.458	-418.52	1,416.12	1,403.13	1,362.82	40.31	34.810	
5,000.00	3,882.37	5,189.92	4,209.06	21.01	21.04	103.466	-417.43	1,466.10	1,403.17	1,362.09	41.08	34.157	
5,050.00	3,883.12	5,239.92	4,210.01	21.41	21.43	103.474	-416.34	1,516.08	1,403.21	1,361.34	41.88	33.508	
5,100.00	3,883.87	5,289.92	4,210.95	21.82	21.84	103.481	-415.25	1,566.06	1,403.26	1,360.58	42.68	32.881	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 61H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,150.00	3,884.62	5,339.92	4,211.89	22.24	22.25	103.489	-414.17	1,616.04	1,403.30	1,359.80	43.50	32.260	
5,200.00	3,885.37	5,389.92	4,212.83	22.67	22.67	103.496	-413.08	1,666.02	1,403.34	1,359.02	44.33	31.659	
5,250.00	3,886.12	5,439.91	4,213.77	23.10	23.09	103.504	-411.99	1,716.00	1,403.39	1,358.21	45.17	31.067	
5,300.00	3,886.87	5,489.91	4,214.71	23.53	23.52	103.512	-410.90	1,765.97	1,403.43	1,357.41	46.02	30.495	
5,350.00	3,887.61	5,539.91	4,215.66	23.98	23.96	103.519	-409.81	1,815.95	1,403.47	1,356.58	46.89	29.932	
5,400.00	3,888.36	5,589.91	4,216.60	24.42	24.40	103.527	-408.73	1,865.93	1,403.51	1,355.76	47.76	29.388	
5,450.00	3,889.11	5,639.91	4,217.54	24.88	24.84	103.535	-407.64	1,915.91	1,403.56	1,354.91	48.64	28.853	
5,500.00	3,889.86	5,689.91	4,218.48	25.33	25.29	103.542	-406.55	1,965.89	1,403.60	1,354.07	49.53	28.337	
5,550.00	3,890.61	5,739.91	4,219.42	25.79	25.75	103.550	-405.46	2,015.87	1,403.64	1,353.21	50.43	27.831	
5,600.00	3,891.36	5,789.91	4,220.36	26.25	26.21	103.558	-404.37	2,065.85	1,403.69	1,352.35	51.34	27.341	
5,650.00	3,892.11	5,839.91	4,221.31	26.72	26.67	103.565	-403.29	2,115.83	1,403.73	1,351.47	52.26	26.862	
5,700.00	3,892.86	5,889.91	4,222.25	27.19	27.13	103.573	-402.20	2,165.81	1,403.77	1,350.60	53.18	26.399	
5,750.00	3,893.61	5,939.91	4,223.19	27.67	27.61	103.581	-401.11	2,215.78	1,403.82	1,349.71	54.11	25.945	
5,800.00	3,894.36	5,989.91	4,224.13	28.15	28.08	103.588	-400.02	2,265.76	1,403.86	1,348.82	55.04	25.507	
5,850.00	3,895.11	6,039.91	4,225.07	28.63	28.56	103.596	-398.94	2,315.74	1,403.90	1,347.92	55.98	25.078	
5,900.00	3,895.86	6,089.91	4,226.01	29.11	29.04	103.604	-397.85	2,365.72	1,403.95	1,347.02	56.93	24.663	
5,950.00	3,896.61	6,139.91	4,226.96	29.60	29.52	103.611	-396.76	2,415.70	1,403.99	1,346.11	57.88	24.257	
6,000.00	3,897.36	6,189.91	4,227.90	30.09	30.00	103.619	-395.67	2,465.68	1,404.03	1,345.20	58.83	23.864	
6,050.00	3,898.11	6,239.91	4,228.84	30.58	30.49	103.626	-394.58	2,515.66	1,404.08	1,344.28	59.80	23.480	
6,100.00	3,898.86	6,289.91	4,229.78	31.08	30.98	103.634	-393.50	2,565.64	1,404.12	1,343.36	60.76	23.108	
6,150.00	3,899.61	6,339.91	4,230.72	31.57	31.48	103.642	-392.41	2,615.62	1,404.16	1,342.43	61.74	22.745	
6,200.00	3,900.36	6,389.91	4,231.66	32.07	31.97	103.649	-391.32	2,665.59	1,404.21	1,341.50	62.71	22.392	
6,250.00	3,901.10	6,439.91	4,232.61	32.57	32.47	103.657	-390.23	2,715.57	1,404.25	1,340.56	63.69	22.048	
6,300.00	3,901.85	6,489.91	4,233.55	33.08	32.97	103.665	-389.15	2,765.55	1,404.29	1,339.62	64.67	21.714	
6,350.00	3,902.60	6,539.91	4,234.49	33.58	33.47	103.672	-388.06	2,815.53	1,404.34	1,338.68	65.66	21.388	
6,400.00	3,903.35	6,589.91	4,235.43	34.09	33.98	103.680	-386.97	2,865.51	1,404.38	1,337.73	66.65	21.071	
6,450.00	3,904.10	6,639.91	4,236.37	34.60	34.48	103.688	-385.88	2,915.49	1,404.42	1,336.78	67.64	20.762	
6,500.00	3,904.85	6,689.91	4,237.32	35.11	34.99	103.695	-384.79	2,965.47	1,404.47	1,335.83	68.64	20.462	
6,550.00	3,905.60	6,739.91	4,238.26	35.62	35.50	103.703	-383.71	3,015.45	1,404.51	1,334.87	69.64	20.168	
6,600.00	3,906.35	6,789.90	4,239.20	36.13	36.01	103.711	-382.62	3,065.43	1,404.55	1,333.91	70.64	19.883	
6,650.00	3,907.10	6,839.90	4,240.14	36.65	36.52	103.718	-381.53	3,115.41	1,404.60	1,332.95	71.65	19.604	
6,700.00	3,907.85	6,889.90	4,241.08	37.16	37.04	103.726	-380.44	3,165.38	1,404.64	1,331.99	72.66	19.333	
6,750.00	3,908.60	6,939.90	4,242.02	37.68	37.55	103.733	-379.35	3,215.36	1,404.69	1,331.02	73.67	19.068	
6,800.00	3,909.35	6,989.90	4,242.97	38.20	38.07	103.741	-378.27	3,265.34	1,404.73	1,330.05	74.68	18.810	
6,850.00	3,910.10	7,039.90	4,243.91	38.72	38.59	103.749	-377.18	3,315.32	1,404.77	1,329.08	75.70	18.558	
6,900.00	3,910.85	7,089.90	4,244.85	39.24	39.11	103.756	-376.09	3,365.30	1,404.82	1,328.10	76.71	18.313	
6,950.00	3,911.60	7,139.90	4,245.79	39.76	39.63	103.764	-375.00	3,415.28	1,404.86	1,327.13	77.73	18.073	
7,000.00	3,912.35	7,189.90	4,246.73	40.29	40.15	103.772	-373.92	3,465.26	1,404.90	1,326.15	78.76	17.839	
7,050.00	3,913.10	7,239.90	4,247.67	40.81	40.67	103.779	-372.83	3,515.24	1,404.95	1,325.17	79.78	17.610	
7,100.00	3,913.85	7,289.90	4,248.62	41.34	41.19	103.787	-371.74	3,565.22	1,404.99	1,324.19	80.81	17.387	
7,150.00	3,914.59	7,339.90	4,249.56	41.86	41.72	103.795	-370.65	3,615.19	1,405.04	1,323.20	81.83	17.169	
7,200.00	3,915.34	7,389.90	4,250.50	42.39	42.24	103.802	-369.56	3,665.17	1,405.08	1,322.22	82.86	16.956	
7,250.00	3,916.09	7,439.90	4,251.44	42.92	42.77	103.810	-368.48	3,715.15	1,405.12	1,321.23	83.90	16.748	
7,300.00	3,916.84	7,489.90	4,252.38	43.45	43.30	103.817	-367.39	3,765.13	1,405.17	1,320.24	84.93	16.545	
7,350.00	3,917.59	7,539.90	4,253.32	43.98	43.83	103.825	-366.30	3,815.11	1,405.21	1,319.25	85.96	16.347	
7,400.00	3,918.34	7,589.90	4,254.27	44.51	44.36	103.833	-365.21	3,865.09	1,405.26	1,318.26	87.00	16.152	
7,450.00	3,919.09	7,639.90	4,255.21	45.04	44.89	103.840	-364.13	3,915.07	1,405.30	1,317.26	88.04	15.962	
7,500.00	3,919.84	7,689.90	4,256.15	45.57	45.42	103.848	-363.04	3,965.05	1,405.34	1,316.27	89.08	15.777	
7,550.00	3,920.59	7,739.90	4,257.09	46.11	45.95	103.856	-361.95	4,015.03	1,405.39	1,315.27	90.12	15.595	
7,600.00	3,921.34	7,789.90	4,258.03	46.64	46.48	103.863	-360.86	4,065.00	1,405.43	1,314.27	91.16	15.417	
7,650.00	3,922.09	7,839.90	4,258.97	47.17	47.01	103.871	-359.77	4,114.98	1,405.48	1,313.27	92.20	15.243	
7,700.00	3,922.84	7,889.90	4,259.92	47.71	47.55	103.878	-358.69	4,164.96	1,405.52	1,312.28	93.25	15.073	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 61H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,750.00	3,923.59	7,939.90	4,260.86	48.24	48.08	103.886	-357.60	4,214.94	1,405.57	1,311.27	94.29	14.907	
7,800.00	3,924.34	7,989.90	4,261.80	48.78	48.62	103.894	-356.51	4,264.92	1,405.61	1,310.27	95.34	14.743	
7,850.00	3,925.09	8,039.90	4,262.74	49.32	49.15	103.901	-355.42	4,314.90	1,405.65	1,309.27	96.39	14.584	
7,900.00	3,925.84	8,089.90	4,263.68	49.86	49.69	103.909	-354.33	4,364.88	1,405.70	1,308.26	97.43	14.427	
7,950.00	3,926.59	8,139.89	4,264.62	50.39	50.23	103.917	-353.25	4,414.86	1,405.74	1,307.26	98.48	14.274	
8,000.00	3,927.33	8,189.89	4,265.57	50.93	50.76	103.924	-352.16	4,464.84	1,405.79	1,306.25	99.54	14.124	
8,050.00	3,928.08	8,239.89	4,266.51	51.47	51.30	103.932	-351.07	4,514.82	1,405.83	1,305.24	100.59	13.976	
8,100.00	3,928.83	8,289.89	4,267.45	52.01	51.84	103.940	-349.98	4,564.79	1,405.88	1,304.24	101.64	13.832	
8,150.00	3,929.58	8,339.89	4,268.39	52.55	52.38	103.947	-348.90	4,614.77	1,405.92	1,303.23	102.69	13.690	
8,200.00	3,930.33	8,389.89	4,269.33	53.09	52.92	103.955	-347.81	4,664.75	1,405.96	1,302.22	103.75	13.552	
8,250.00	3,931.08	8,439.89	4,270.27	53.63	53.46	103.962	-346.72	4,714.73	1,406.01	1,301.21	104.80	13.416	
8,300.00	3,931.83	8,489.89	4,271.22	54.17	54.00	103.970	-345.63	4,764.71	1,406.05	1,300.19	105.86	13.282	
8,350.00	3,932.58	8,539.89	4,272.16	54.72	54.54	103.978	-344.54	4,814.69	1,406.10	1,299.18	106.92	13.151	
8,400.00	3,933.33	8,589.89	4,273.10	55.26	55.08	103.985	-343.46	4,864.67	1,406.14	1,298.17	107.97	13.023	
8,450.00	3,934.08	8,639.89	4,274.04	55.80	55.62	103.993	-342.37	4,914.65	1,406.19	1,297.15	109.03	12.897	
8,500.00	3,934.83	8,689.89	4,274.98	56.34	56.17	104.000	-341.28	4,964.63	1,406.23	1,296.14	110.09	12.773	
8,550.00	3,935.58	8,739.89	4,275.92	56.89	56.71	104.008	-340.19	5,014.60	1,406.28	1,295.13	111.15	12.652	
8,600.00	3,936.33	8,789.89	4,276.87	57.43	57.25	104.016	-339.11	5,064.58	1,406.32	1,294.11	112.21	12.533	
8,650.00	3,937.08	8,839.89	4,277.81	57.98	57.79	104.023	-338.02	5,114.56	1,406.37	1,293.09	113.27	12.416	
8,700.00	3,937.83	8,889.89	4,278.75	58.52	58.34	104.031	-336.93	5,164.54	1,406.41	1,292.08	114.33	12.301	
8,750.00	3,938.58	8,939.89	4,279.69	59.07	58.88	104.039	-335.84	5,214.52	1,406.45	1,291.06	115.40	12.188	
8,800.00	3,939.33	8,989.89	4,280.63	59.61	59.43	104.046	-334.75	5,264.50	1,406.50	1,290.04	116.46	12.077	
8,850.00	3,940.08	9,039.89	4,281.57	60.16	59.97	104.054	-333.67	5,314.48	1,406.54	1,289.02	117.52	11.968	
8,900.00	3,940.82	9,089.89	4,282.52	60.70	60.52	104.061	-332.58	5,364.46	1,406.59	1,288.00	118.59	11.861	
8,950.00	3,941.57	9,139.89	4,283.46	61.25	61.06	104.069	-331.49	5,414.44	1,406.63	1,286.98	119.65	11.756	
9,000.00	3,942.32	9,189.89	4,284.40	61.80	61.61	104.077	-330.40	5,464.41	1,406.68	1,285.96	120.72	11.653	
9,050.00	3,943.07	9,239.89	4,285.34	62.34	62.15	104.084	-329.31	5,514.39	1,406.72	1,284.94	121.78	11.551	
9,100.00	3,943.82	9,289.89	4,286.28	62.89	62.70	104.092	-328.23	5,564.37	1,406.77	1,283.92	122.85	11.451	
9,150.00	3,944.57	9,339.89	4,287.22	63.44	63.25	104.100	-327.14	5,614.35	1,406.81	1,282.90	123.92	11.353	
9,200.00	3,945.32	9,389.89	4,288.17	63.98	63.79	104.107	-326.05	5,664.33	1,406.86	1,281.88	124.98	11.256	
9,250.00	3,946.07	9,439.89	4,289.11	64.53	64.34	104.115	-324.96	5,714.31	1,406.90	1,280.85	126.05	11.161	
9,300.00	3,946.82	9,489.88	4,290.05	65.08	64.89	104.122	-323.88	5,764.29	1,406.95	1,279.83	127.12	11.068	
9,350.00	3,947.57	9,539.88	4,290.99	65.63	65.44	104.130	-322.79	5,814.27	1,406.99	1,278.81	128.19	10.976	
9,400.00	3,948.32	9,589.88	4,291.93	66.18	65.98	104.138	-321.70	5,864.25	1,407.04	1,277.78	129.26	10.886	
9,450.00	3,949.07	9,639.88	4,292.87	66.73	66.53	104.145	-320.61	5,914.23	1,407.08	1,276.76	130.33	10.797	
9,500.00	3,949.82	9,689.88	4,293.82	67.28	67.08	104.153	-319.52	5,964.20	1,407.13	1,275.73	131.39	10.709	
9,550.00	3,950.57	9,739.88	4,294.76	67.83	67.63	104.160	-318.44	6,014.18	1,407.17	1,274.71	132.46	10.623	
9,600.00	3,951.32	9,789.88	4,295.70	68.38	68.18	104.168	-317.35	6,064.16	1,407.22	1,273.68	133.53	10.538	
9,650.00	3,952.07	9,839.88	4,296.64	68.93	68.73	104.176	-316.26	6,114.14	1,407.26	1,272.66	134.61	10.455	
9,700.00	3,952.82	9,889.88	4,297.58	69.48	69.28	104.183	-315.17	6,164.12	1,407.31	1,271.63	135.68	10.373	
9,750.00	3,953.56	9,939.88	4,298.52	70.03	69.83	104.191	-314.09	6,214.10	1,407.35	1,270.61	136.75	10.292	
9,800.00	3,954.31	9,989.88	4,299.47	70.58	70.38	104.198	-313.00	6,264.08	1,407.40	1,269.58	137.82	10.212	
9,850.00	3,955.06	10,039.88	4,300.41	71.13	70.93	104.206	-311.91	6,314.06	1,407.44	1,268.55	138.89	10.133	
9,900.00	3,955.81	10,089.88	4,301.35	71.68	71.48	104.214	-310.82	6,364.04	1,407.49	1,267.53	139.96	10.056	
9,950.00	3,956.56	10,139.88	4,302.29	72.23	72.03	104.221	-309.73	6,414.01	1,407.54	1,266.50	141.04	9.980	
10,000.00	3,957.31	10,189.88	4,303.23	72.78	72.58	104.229	-308.65	6,463.99	1,407.58	1,265.47	142.11	9.905	
10,050.00	3,958.06	10,239.88	4,304.17	73.33	73.13	104.237	-307.56	6,513.97	1,407.63	1,264.44	143.18	9.831	
10,100.00	3,958.81	10,289.88	4,305.12	73.88	73.68	104.244	-306.47	6,563.95	1,407.67	1,263.41	144.26	9.758	
10,150.00	3,959.56	10,339.88	4,306.06	74.43	74.23	104.252	-305.38	6,613.93	1,407.72	1,262.39	145.33	9.686	
10,200.00	3,960.31	10,389.88	4,307.00	74.99	74.78	104.259	-304.29	6,663.91	1,407.76	1,261.36	146.41	9.616	
10,250.00	3,961.06	10,439.88	4,307.94	75.54	75.34	104.267	-303.21	6,713.89	1,407.81	1,260.33	147.48	9.546	
10,300.00	3,961.81	10,489.88	4,308.88	76.09	75.89	104.275	-302.12	6,763.87	1,407.85	1,259.30	148.55	9.477	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - 61H - Wellbore #1 - PERMIT — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+SAG+FDIR — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,350.00	3,962.56	10,539.88	4,309.82	76.64	76.44	104.282	-301.03	6,813.85	1,407.90	1,258.27	149.63	9.409	
10,400.00	3,963.31	10,589.88	4,310.77	77.20	76.99	104.290	-299.94	6,863.82	1,407.94	1,257.24	150.70	9.342	
10,450.00	3,964.06	10,639.88	4,311.71	77.75	77.54	104.297	-298.86	6,913.80	1,407.99	1,256.21	151.78	9.277	
10,500.00	3,964.81	10,689.88	4,312.65	78.30	78.10	104.305	-297.77	6,963.78	1,408.04	1,255.18	152.86	9.212	
10,550.00	3,965.56	10,739.88	4,313.59	78.85	78.65	104.313	-296.68	7,013.76	1,408.08	1,254.15	153.93	9.147	
10,600.00	3,966.31	10,789.88	4,314.53	79.41	79.20	104.320	-295.59	7,063.74	1,408.13	1,253.12	155.01	9.084	
10,650.00	3,967.05	10,839.87	4,315.47	79.96	79.75	104.328	-294.50	7,113.72	1,408.17	1,252.09	156.08	9.022	
10,700.00	3,967.80	10,889.87	4,316.42	80.51	80.31	104.335	-293.42	7,163.70	1,408.22	1,251.06	157.16	8.960	
10,750.00	3,968.55	10,939.87	4,317.36	81.07	80.86	104.343	-292.33	7,213.68	1,408.26	1,250.03	158.24	8.900	
10,800.00	3,969.30	10,989.87	4,318.30	81.62	81.41	104.351	-291.24	7,263.66	1,408.31	1,249.00	159.31	8.840	
10,850.00	3,970.05	11,039.87	4,319.24	82.17	81.97	104.358	-290.15	7,313.63	1,408.36	1,247.96	160.39	8.781	
10,900.00	3,970.80	11,089.87	4,320.18	82.73	82.52	104.366	-289.07	7,363.61	1,408.40	1,246.93	161.47	8.722	
10,950.00	3,971.55	11,139.87	4,321.12	83.28	83.07	104.373	-287.98	7,413.59	1,408.45	1,245.90	162.55	8.665	
11,000.00	3,972.30	11,189.87	4,322.07	83.84	83.63	104.381	-286.89	7,463.57	1,408.49	1,244.87	163.62	8.608	
11,050.00	3,973.05	11,239.87	4,323.01	84.39	84.18	104.389	-285.80	7,513.55	1,408.54	1,243.84	164.70	8.552	
11,100.00	3,973.80	11,289.87	4,323.95	84.95	84.73	104.396	-284.71	7,563.53	1,408.58	1,242.81	165.78	8.497	
11,130.16	3,974.25	11,320.03	4,324.52	85.28	85.07	104.401	-284.06	7,593.68	1,408.61	1,242.18	166.43	8.464	
11,150.00	3,974.55	11,339.87	4,324.89	85.50	85.29	104.404	-283.63	7,613.51	1,408.63	1,241.78	166.86	8.442	
11,180.09	3,975.00	11,345.67	4,325.00	85.83	85.35	104.405	-283.50	7,619.30	1,408.87	1,241.62	167.24	8.424	SF

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: AID STATE #10 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 304-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,450.00	3,871.16	3,984.29	3,871.16	17.14	78.62	67.579	-223.41	5,360.98	4,615.82	4,528.69	87.13	52.977	
4,500.00	3,874.81	3,987.95	3,874.81	17.44	78.69	84.088	-223.41	5,360.98	4,567.87	4,473.00	94.87	48.148	
4,508.37	3,875.00	3,988.14	3,875.00	17.49	78.70	87.004	-223.41	5,360.98	4,559.82	4,464.35	95.47	47.760	
4,550.00	3,875.62	3,988.76	3,875.62	17.75	78.71	87.032	-223.41	5,360.98	4,519.82	4,424.06	95.76	47.200	
4,600.00	3,876.37	3,989.51	3,876.37	18.07	78.72	87.066	-223.41	5,360.98	4,471.81	4,375.71	96.10	46.533	
4,650.00	3,877.12	3,990.26	3,877.12	18.41	78.74	87.100	-223.41	5,360.98	4,423.85	4,327.38	96.47	45.859	
4,700.00	3,877.87	3,991.01	3,877.87	18.75	78.75	87.134	-223.41	5,360.98	4,375.93	4,279.10	96.83	45.192	
4,750.00	3,878.62	3,991.76	3,878.62	19.10	78.77	87.168	-223.41	5,360.98	4,328.06	4,230.85	97.22	44.520	
4,800.00	3,879.37	3,992.51	3,879.37	19.46	78.78	87.203	-223.41	5,360.98	4,280.24	4,182.64	97.60	43.855	
4,850.00	3,880.12	3,993.26	3,880.12	19.84	78.80	87.237	-223.41	5,360.98	4,232.47	4,134.47	98.00	43.186	
4,900.00	3,880.87	3,994.01	3,880.87	20.22	78.81	87.271	-223.41	5,360.98	4,184.75	4,086.34	98.41	42.524	
4,950.00	3,881.62	3,994.76	3,881.62	20.61	78.83	87.305	-223.41	5,360.98	4,137.09	4,038.26	98.83	41.861	
5,000.00	3,882.37	3,995.50	3,882.37	21.01	78.84	87.339	-223.41	5,360.98	4,089.48	3,990.23	99.25	41.204	
5,050.00	3,883.12	3,996.25	3,883.12	21.41	78.86	87.373	-223.41	5,360.98	4,041.93	3,942.24	99.68	40.547	
5,100.00	3,883.87	3,997.00	3,883.87	21.82	78.87	87.407	-223.41	5,360.98	3,994.43	3,894.32	100.12	39.897	
5,150.00	3,884.62	3,997.75	3,884.62	22.24	78.88	87.441	-223.41	5,360.98	3,947.00	3,846.44	100.57	39.248	
5,200.00	3,885.37	3,998.50	3,885.37	22.67	78.90	87.476	-223.41	5,360.98	3,899.64	3,798.62	101.01	38.605	
5,250.00	3,886.12	3,999.25	3,886.12	23.10	78.91	87.510	-223.41	5,360.98	3,852.34	3,750.86	101.47	37.964	
5,300.00	3,886.87	4,000.00	3,886.87	23.53	78.93	87.544	-223.41	5,360.98	3,805.11	3,703.17	101.93	37.330	
5,350.00	3,887.61	4,000.75	3,887.61	23.98	78.94	87.578	-223.41	5,360.98	3,757.95	3,655.54	102.40	36.698	
5,400.00	3,888.36	4,001.50	3,888.36	24.42	78.96	87.612	-223.41	5,360.98	3,710.86	3,607.99	102.87	36.073	
5,450.00	3,889.11	4,002.25	3,889.11	24.88	78.97	87.646	-223.41	5,360.98	3,663.85	3,560.50	103.35	35.451	
5,500.00	3,889.86	4,003.00	3,889.86	25.33	78.99	87.680	-223.41	5,360.98	3,616.92	3,513.10	103.83	34.836	
5,550.00	3,890.61	4,003.75	3,890.61	25.79	79.00	87.715	-223.41	5,360.98	3,570.08	3,465.76	104.31	34.224	
5,600.00	3,891.36	4,004.50	3,891.36	26.25	79.02	87.749	-223.41	5,360.98	3,523.32	3,418.52	104.80	33.619	
5,650.00	3,892.11	4,005.25	3,892.11	26.72	79.03	87.783	-223.41	5,360.98	3,476.65	3,371.36	105.29	33.019	
5,700.00	3,892.86	4,006.00	3,892.86	27.19	79.05	87.817	-223.41	5,360.98	3,430.08	3,324.29	105.79	32.424	
5,750.00	3,893.61	4,006.75	3,893.61	27.67	79.06	87.851	-223.41	5,360.98	3,383.60	3,277.31	106.29	31.834	
5,800.00	3,894.36	4,007.50	3,894.36	28.15	79.08	87.885	-223.41	5,360.98	3,337.22	3,230.44	106.79	31.251	
5,850.00	3,895.11	4,008.25	3,895.11	28.63	79.09	87.920	-223.41	5,360.98	3,290.96	3,183.66	107.29	30.672	
5,900.00	3,895.86	4,008.99	3,895.86	29.11	79.11	87.954	-223.41	5,360.98	3,244.80	3,137.00	107.80	30.100	
5,950.00	3,896.61	4,009.74	3,896.61	29.60	79.12	87.988	-223.41	5,360.98	3,198.75	3,090.44	108.31	29.533	
6,000.00	3,897.36	4,010.49	3,897.36	30.09	79.13	88.022	-223.41	5,360.98	3,152.83	3,044.01	108.82	28.972	
6,050.00	3,898.11	4,011.24	3,898.11	30.58	79.15	88.056	-223.41	5,360.98	3,107.03	2,997.69	109.34	28.417	
6,100.00	3,898.86	4,011.99	3,898.86	31.08	79.16	88.090	-223.41	5,360.98	3,061.37	2,951.51	109.85	27.868	
6,150.00	3,899.61	4,012.74	3,899.61	31.57	79.18	88.125	-223.41	5,360.98	3,015.84	2,905.46	110.37	27.324	
6,200.00	3,900.36	4,013.49	3,900.36	32.07	79.19	88.159	-223.41	5,360.98	2,970.45	2,859.56	110.89	26.786	
6,250.00	3,901.10	4,014.24	3,901.10	32.57	79.21	88.193	-223.41	5,360.98	2,925.22	2,813.80	111.42	26.254	
6,300.00	3,901.85	4,014.99	3,901.85	33.08	79.22	88.227	-223.41	5,360.98	2,880.14	2,768.20	111.94	25.729	
6,350.00	3,902.60	4,015.74	3,902.60	33.58	79.24	88.261	-223.41	5,360.98	2,835.23	2,722.75	112.47	25.209	
6,400.00	3,903.35	4,016.49	3,903.35	34.09	79.25	88.295	-223.41	5,360.98	2,790.48	2,677.49	113.00	24.695	
6,450.00	3,904.10	4,017.24	3,904.10	34.60	79.27	88.330	-223.41	5,360.98	2,745.93	2,632.40	113.53	24.187	
6,500.00	3,904.85	4,017.99	3,904.85	35.11	79.28	88.364	-223.41	5,360.98	2,701.56	2,587.50	114.06	23.686	
6,550.00	3,905.60	4,018.74	3,905.60	35.62	79.30	88.398	-223.41	5,360.98	2,657.39	2,542.80	114.59	23.190	
6,600.00	3,906.35	4,019.49	3,906.35	36.13	79.31	88.432	-223.41	5,360.98	2,613.43	2,498.30	115.13	22.700	
6,650.00	3,907.10	4,020.24	3,907.10	36.65	79.33	88.466	-223.41	5,360.98	2,569.69	2,454.03	115.66	22.217	
6,700.00	3,907.85	4,020.99	3,907.85	37.16	79.34	88.500	-223.41	5,360.98	2,526.19	2,409.99	116.20	21.740	
6,750.00	3,908.60	4,021.73	3,908.60	37.68	79.36	88.535	-223.41	5,360.98	2,482.92	2,366.19	116.74	21.269	
6,800.00	3,909.35	4,022.48	3,909.35	38.20	79.37	88.569	-223.41	5,360.98	2,439.92	2,322.64	117.28	20.805	
6,850.00	3,910.10	4,023.23	3,910.10	38.72	79.38	88.603	-223.41	5,360.98	2,397.19	2,279.37	117.82	20.346	
6,900.00	3,910.85	4,023.98	3,910.85	39.24	79.40	88.637	-223.41	5,360.98	2,354.74	2,236.38	118.36	19.895	
6,950.00	3,911.60	4,024.73	3,911.60	39.76	79.41	88.671	-223.41	5,360.98	2,312.59	2,193.69	118.90	19.449	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: AID STATE #10 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 304-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,000.00	3,912.35	4,025.48	3,912.35	40.29	79.43	88.706	-223.41	5,360.98	2,270.77	2,151.32	119.45	19.011	
7,050.00	3,913.10	4,026.23	3,913.10	40.81	79.44	88.740	-223.41	5,360.98	2,229.28	2,109.28	119.99	18.579	
7,100.00	3,913.85	4,026.98	3,913.85	41.34	79.46	88.774	-223.41	5,360.98	2,188.14	2,067.60	120.54	18.153	
7,150.00	3,914.59	4,027.73	3,914.59	41.86	79.47	88.808	-223.41	5,360.98	2,147.38	2,026.30	121.08	17.735	
7,200.00	3,915.34	4,028.48	3,915.34	42.39	79.49	88.842	-223.41	5,360.98	2,107.02	1,985.39	121.63	17.323	
7,250.00	3,916.09	4,029.23	3,916.09	42.92	79.50	88.877	-223.41	5,360.98	2,067.08	1,944.90	122.18	16.918	
7,300.00	3,916.84	4,029.98	3,916.84	43.45	79.52	88.911	-223.41	5,360.98	2,027.59	1,904.86	122.73	16.521	
7,350.00	3,917.59	4,030.73	3,917.59	43.98	79.53	88.945	-223.41	5,360.98	1,988.57	1,865.29	123.28	16.131	
7,400.00	3,918.34	4,031.48	3,918.34	44.51	79.55	88.979	-223.41	5,360.98	1,950.05	1,826.22	123.83	15.748	
7,450.00	3,919.09	4,032.23	3,919.09	45.04	79.56	89.013	-223.41	5,360.98	1,912.06	1,787.68	124.38	15.373	
7,500.00	3,919.84	4,032.98	3,919.84	45.57	79.58	89.047	-223.41	5,360.98	1,874.63	1,749.70	124.93	15.005	
7,550.00	3,920.59	4,033.73	3,920.59	46.11	79.59	89.082	-223.41	5,360.98	1,837.80	1,712.32	125.48	14.646	
7,600.00	3,921.34	4,034.48	3,921.34	46.64	79.61	89.116	-223.41	5,360.98	1,801.61	1,675.57	126.04	14.294	
7,650.00	3,922.09	4,035.22	3,922.09	47.17	79.62	89.150	-223.41	5,360.98	1,766.09	1,639.50	126.59	13.951	
7,700.00	3,922.84	4,035.97	3,922.84	47.71	79.64	89.184	-223.41	5,360.98	1,731.29	1,604.14	127.14	13.617	
7,750.00	3,923.59	4,036.72	3,923.59	48.24	79.65	89.218	-223.41	5,360.98	1,697.24	1,569.54	127.70	13.291	
7,800.00	3,924.34	4,037.47	3,924.34	48.78	79.66	89.253	-223.41	5,360.98	1,664.00	1,535.75	128.25	12.974	
7,850.00	3,925.09	4,038.22	3,925.09	49.32	79.68	89.287	-223.41	5,360.98	1,631.62	1,502.81	128.81	12.667	
7,900.00	3,925.84	4,038.97	3,925.84	49.86	79.69	89.321	-223.41	5,360.98	1,600.14	1,470.77	129.37	12.369	
7,950.00	3,926.59	4,039.72	3,926.59	50.39	79.71	89.355	-223.41	5,360.98	1,569.62	1,439.70	129.92	12.081	
8,000.00	3,927.33	4,040.47	3,927.33	50.93	79.72	89.389	-223.41	5,360.98	1,540.12	1,409.64	130.48	11.803	
8,050.00	3,928.08	4,041.22	3,928.08	51.47	79.74	89.424	-223.41	5,360.98	1,511.71	1,380.67	131.04	11.536	
8,100.00	3,928.83	4,041.97	3,928.83	52.01	79.75	89.458	-223.41	5,360.98	1,484.43	1,352.83	131.60	11.280	
8,150.00	3,929.58	4,042.72	3,929.58	52.55	79.77	89.492	-223.41	5,360.98	1,458.35	1,326.19	132.16	11.035	
8,200.00	3,930.33	4,043.47	3,930.33	53.09	79.78	89.526	-223.41	5,360.98	1,433.54	1,300.83	132.71	10.802	
8,250.00	3,931.08	4,044.22	3,931.08	53.63	79.80	89.560	-223.41	5,360.98	1,410.08	1,276.80	133.27	10.580	
8,300.00	3,931.83	4,044.97	3,931.83	54.17	79.81	89.595	-223.41	5,360.98	1,388.01	1,254.18	133.83	10.371	
8,350.00	3,932.58	4,045.72	3,932.58	54.72	79.83	89.629	-223.41	5,360.98	1,367.42	1,233.03	134.39	10.175	
8,400.00	3,933.33	4,046.47	3,933.33	55.26	79.84	89.663	-223.41	5,360.98	1,348.37	1,213.41	134.95	9.991	
8,450.00	3,934.08	4,047.22	3,934.08	55.80	79.86	89.697	-223.41	5,360.98	1,330.92	1,195.41	135.52	9.821	
8,500.00	3,934.83	4,047.96	3,934.83	56.34	79.87	89.731	-223.41	5,360.98	1,315.15	1,179.07	136.08	9.665	
8,550.00	3,935.58	4,048.71	3,935.58	56.89	79.89	89.766	-223.41	5,360.98	1,301.10	1,164.47	136.64	9.522	
8,600.00	3,936.33	4,049.46	3,936.33	57.43	79.90	89.800	-223.41	5,360.98	1,288.85	1,151.65	137.20	9.394	
8,650.00	3,937.08	4,050.21	3,937.08	57.98	79.91	89.834	-223.41	5,360.98	1,278.43	1,140.67	137.76	9.280	
8,700.00	3,937.83	4,050.96	3,937.83	58.52	79.93	89.868	-223.41	5,360.98	1,269.90	1,131.57	138.32	9.181	
8,750.00	3,938.58	4,051.71	3,938.58	59.07	79.94	89.903	-223.41	5,360.98	1,263.29	1,124.40	138.89	9.096	
8,800.00	3,939.33	4,052.46	3,939.33	59.61	79.96	89.937	-223.41	5,360.98	1,258.63	1,119.18	139.45	9.026	
8,850.00	3,940.08	4,053.21	3,940.08	60.16	79.97	89.971	-223.41	5,360.98	1,255.94	1,115.93	140.01	8.970	
8,892.51	3,940.71	4,053.85	3,940.71	60.62	79.99	90.000	-223.41	5,360.98	1,255.22	1,114.73	140.49	8.935	CC
8,900.00	3,940.82	4,053.96	3,940.82	60.70	79.99	90.005	-223.41	5,360.98	1,255.25	1,114.67	140.58	8.929	ES
8,950.00	3,941.57	4,054.71	3,941.57	61.25	80.00	90.039	-223.41	5,360.98	1,256.54	1,115.40	141.14	8.903	
9,000.00	3,942.32	4,055.46	3,942.32	61.80	80.02	90.074	-223.41	5,360.98	1,259.82	1,118.11	141.70	8.891	SF
9,050.00	3,943.07	4,056.21	3,943.07	62.34	80.03	90.108	-223.41	5,360.98	1,265.06	1,122.79	142.27	8.892	
9,100.00	3,943.82	4,056.96	3,943.82	62.89	80.05	90.142	-223.41	5,360.98	1,272.25	1,129.42	142.83	8.907	
9,150.00	3,944.57	4,057.71	3,944.57	63.44	80.06	90.176	-223.41	5,360.98	1,281.36	1,137.96	143.40	8.936	
9,200.00	3,945.32	4,058.46	3,945.32	63.98	80.08	90.210	-223.41	5,360.98	1,292.33	1,148.37	143.96	8.977	
9,250.00	3,946.07	4,059.21	3,946.07	64.53	80.09	90.245	-223.41	5,360.98	1,305.13	1,160.60	144.53	9.030	
9,300.00	3,946.82	4,059.96	3,946.82	65.08	80.11	90.279	-223.41	5,360.98	1,319.69	1,174.60	145.09	9.096	
9,350.00	3,947.57	4,060.71	3,947.57	65.63	80.12	90.313	-223.41	5,360.98	1,335.98	1,190.32	145.66	9.172	
9,400.00	3,948.32	4,061.45	3,948.32	66.18	80.14	90.347	-223.41	5,360.98	1,353.91	1,207.69	146.22	9.259	
9,450.00	3,949.07	4,062.20	3,949.07	66.73	80.15	90.381	-223.41	5,360.98	1,373.43	1,226.64	146.79	9.357	
9,500.00	3,949.82	4,062.95	3,949.82	67.28	80.17	90.416	-223.41	5,360.98	1,394.47	1,247.12	147.35	9.463	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: AID STATE #10 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 304-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,550.00	3,950.57	4,063.70	3,950.57	67.83	80.18	90.450	-223.41	5,360.98	1,416.96	1,269.04	147.92	9.579	
9,600.00	3,951.32	4,064.45	3,951.32	68.38	80.19	90.484	-223.41	5,360.98	1,440.84	1,292.35	148.49	9.704	
9,650.00	3,952.07	4,065.20	3,952.07	68.93	80.21	90.518	-223.41	5,360.98	1,466.03	1,316.98	149.05	9.836	
9,700.00	3,952.82	4,065.95	3,952.82	69.48	80.22	90.552	-223.41	5,360.98	1,492.47	1,342.85	149.62	9.975	
9,750.00	3,953.56	4,066.70	3,953.56	70.03	80.24	90.587	-223.41	5,360.98	1,520.10	1,369.92	150.19	10.122	
9,800.00	3,954.31	4,067.45	3,954.31	70.58	80.25	90.621	-223.41	5,360.98	1,548.85	1,398.10	150.75	10.274	
9,850.00	3,955.06	4,068.20	3,955.06	71.13	80.27	90.655	-223.41	5,360.98	1,578.66	1,427.34	151.32	10.433	
9,900.00	3,955.81	4,068.95	3,955.81	71.68	80.28	90.689	-223.41	5,360.98	1,609.47	1,457.58	151.89	10.597	
9,950.00	3,956.56	4,069.70	3,956.56	72.23	80.30	90.723	-223.41	5,360.98	1,641.22	1,488.77	152.45	10.765	
10,000.00	3,957.31	4,070.45	3,957.31	72.78	80.31	90.758	-223.41	5,360.98	1,673.87	1,520.85	153.02	10.939	
10,050.00	3,958.06	4,071.20	3,958.06	73.33	80.33	90.792	-223.41	5,360.98	1,707.36	1,553.77	153.59	11.117	
10,100.00	3,958.81	4,071.95	3,958.81	73.88	80.34	90.826	-223.41	5,360.98	1,741.63	1,587.48	154.15	11.298	
10,150.00	3,959.56	4,072.70	3,959.56	74.43	80.36	90.860	-223.41	5,360.98	1,776.66	1,621.93	154.72	11.483	
10,200.00	3,960.31	4,073.45	3,960.31	74.99	80.37	90.894	-223.41	5,360.98	1,812.38	1,657.09	155.29	11.671	
10,250.00	3,961.06	4,074.19	3,961.06	75.54	80.39	90.929	-223.41	5,360.98	1,848.77	1,692.91	155.86	11.862	
10,300.00	3,961.81	4,074.94	3,961.81	76.09	80.40	90.963	-223.41	5,360.98	1,885.78	1,729.35	156.43	12.055	
10,350.00	3,962.56	4,075.69	3,962.56	76.64	80.42	90.997	-223.41	5,360.98	1,923.38	1,766.38	156.99	12.251	
10,400.00	3,963.31	4,076.44	3,963.31	77.20	80.43	91.031	-223.41	5,360.98	1,961.53	1,803.97	157.56	12.449	
10,450.00	3,964.06	4,077.19	3,964.06	77.75	80.44	91.065	-223.41	5,360.98	2,000.20	1,842.07	158.13	12.649	
10,500.00	3,964.81	4,077.94	3,964.81	78.30	80.46	91.100	-223.41	5,360.98	2,039.37	1,880.67	158.70	12.851	
10,550.00	3,965.56	4,078.69	3,965.56	78.85	80.47	91.134	-223.41	5,360.98	2,079.00	1,919.73	159.27	13.054	
10,600.00	3,966.31	4,079.44	3,966.31	79.41	80.49	91.168	-223.41	5,360.98	2,119.07	1,959.23	159.83	13.258	
10,650.00	3,967.05	4,080.19	3,967.05	79.96	80.50	91.202	-223.41	5,360.98	2,159.55	1,999.15	160.40	13.463	
10,700.00	3,967.80	4,080.94	3,967.80	80.51	80.52	91.236	-223.41	5,360.98	2,200.42	2,039.45	160.97	13.670	
10,750.00	3,968.55	4,081.69	3,968.55	81.07	80.53	91.270	-223.41	5,360.98	2,241.67	2,080.13	161.54	13.877	
10,800.00	3,969.30	4,082.44	3,969.30	81.62	80.55	91.305	-223.41	5,360.98	2,283.26	2,121.15	162.11	14.085	
10,850.00	3,970.05	4,083.19	3,970.05	82.17	80.56	91.339	-223.41	5,360.98	2,325.18	2,162.51	162.68	14.293	
10,900.00	3,970.80	4,083.94	3,970.80	82.73	80.58	91.373	-223.41	5,360.98	2,367.42	2,204.18	163.24	14.502	
10,950.00	3,971.55	4,084.69	3,971.55	83.28	80.59	91.407	-223.41	5,360.98	2,409.96	2,246.14	163.81	14.712	
11,000.00	3,972.30	4,085.44	3,972.30	83.84	80.61	91.441	-223.41	5,360.98	2,452.77	2,288.39	164.38	14.921	
11,050.00	3,973.05	4,086.19	3,973.05	84.39	80.62	91.476	-223.41	5,360.98	2,495.86	2,330.90	164.95	15.131	
11,100.00	3,973.80	4,086.94	3,973.80	84.95	80.64	91.510	-223.41	5,360.98	2,539.19	2,373.67	165.52	15.341	
11,130.16	3,974.25	4,087.39	3,974.25	85.28	80.65	91.530	-223.41	5,360.98	2,565.45	2,399.59	165.86	15.467	
11,150.00	3,974.55	4,087.68	3,974.55	85.50	80.65	91.544	-223.41	5,360.98	2,582.77	2,416.68	166.09	15.551	
11,180.09	3,975.00	4,088.14	3,975.00	85.83	80.66	91.565	-223.41	5,360.98	2,609.11	2,442.68	166.43	15.677	

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: AID STATE #6 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 166-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,750.00	3,893.61	3,988.71	3,893.61	27.67	73.51	87.755	-878.22	7,340.62	5,467.75	5,367.02	100.73	54.281	
5,800.00	3,894.36	3,989.46	3,894.36	28.15	73.53	87.777	-878.22	7,340.62	5,421.08	5,319.85	101.23	53.553	
5,850.00	3,895.11	3,990.21	3,895.11	28.63	73.54	87.799	-878.22	7,340.62	5,374.48	5,272.74	101.73	52.830	
5,900.00	3,895.86	3,990.96	3,895.86	29.11	73.55	87.821	-878.22	7,340.62	5,327.93	5,225.69	102.24	52.114	
5,950.00	3,896.61	3,991.71	3,896.61	29.60	73.57	87.843	-878.22	7,340.62	5,281.45	5,178.70	102.74	51.404	
6,000.00	3,897.36	3,992.46	3,897.36	30.09	73.58	87.865	-878.22	7,340.62	5,235.03	5,131.77	103.25	50.701	
6,050.00	3,898.11	3,993.21	3,898.11	30.58	73.59	87.887	-878.22	7,340.62	5,188.68	5,084.91	103.77	50.003	
6,100.00	3,898.86	3,993.96	3,898.86	31.08	73.61	87.909	-878.22	7,340.62	5,142.39	5,038.11	104.28	49.313	
6,150.00	3,899.61	3,994.71	3,899.61	31.57	73.62	87.931	-878.22	7,340.62	5,096.18	4,991.38	104.80	48.628	
6,200.00	3,900.36	3,995.46	3,900.36	32.07	73.64	87.953	-878.22	7,340.62	5,050.04	4,944.72	105.32	47.951	
6,250.00	3,901.10	3,996.20	3,901.10	32.57	73.65	87.975	-878.22	7,340.62	5,003.97	4,898.13	105.84	47.279	
6,300.00	3,901.85	3,996.95	3,901.85	33.08	73.66	87.997	-878.22	7,340.62	4,957.98	4,851.62	106.36	46.615	
6,350.00	3,902.60	3,997.70	3,902.60	33.58	73.68	88.019	-878.22	7,340.62	4,912.06	4,805.18	106.89	45.956	
6,400.00	3,903.35	3,998.45	3,903.35	34.09	73.69	88.041	-878.22	7,340.62	4,866.23	4,758.82	107.41	45.304	
6,450.00	3,904.10	3,999.20	3,904.10	34.60	73.71	88.063	-878.22	7,340.62	4,820.48	4,712.54	107.94	44.659	
6,500.00	3,904.85	3,999.95	3,904.85	35.11	73.72	88.085	-878.22	7,340.62	4,774.82	4,666.35	108.47	44.020	
6,550.00	3,905.60	4,000.70	3,905.60	35.62	73.73	88.107	-878.22	7,340.62	4,729.24	4,620.24	109.00	43.387	
6,600.00	3,906.35	4,001.45	3,906.35	36.13	73.75	88.129	-878.22	7,340.62	4,683.75	4,574.22	109.53	42.761	
6,650.00	3,907.10	4,002.20	3,907.10	36.65	73.76	88.151	-878.22	7,340.62	4,638.36	4,528.29	110.07	42.141	
6,700.00	3,907.85	4,002.95	3,907.85	37.16	73.77	88.172	-878.22	7,340.62	4,593.06	4,482.46	110.60	41.528	
6,750.00	3,908.60	4,003.70	3,908.60	37.68	73.79	88.194	-878.22	7,340.62	4,547.86	4,436.72	111.14	40.921	
6,800.00	3,909.35	4,004.45	3,909.35	38.20	73.80	88.216	-878.22	7,340.62	4,502.76	4,391.08	111.68	40.320	
6,850.00	3,910.10	4,005.20	3,910.10	38.72	73.82	88.238	-878.22	7,340.62	4,457.76	4,345.55	112.21	39.725	
6,900.00	3,910.85	4,005.95	3,910.85	39.24	73.83	88.260	-878.22	7,340.62	4,412.88	4,300.12	112.75	39.137	
6,950.00	3,911.60	4,006.70	3,911.60	39.76	73.84	88.282	-878.22	7,340.62	4,368.10	4,254.80	113.30	38.555	
7,000.00	3,912.35	4,007.45	3,912.35	40.29	73.86	88.304	-878.22	7,340.62	4,323.44	4,209.60	113.84	37.979	
7,050.00	3,913.10	4,008.20	3,913.10	40.81	73.87	88.326	-878.22	7,340.62	4,278.89	4,164.51	114.38	37.409	
7,100.00	3,913.85	4,008.95	3,913.85	41.34	73.89	88.348	-878.22	7,340.62	4,234.47	4,119.55	114.92	36.846	
7,150.00	3,914.59	4,009.69	3,914.59	41.86	73.90	88.370	-878.22	7,340.62	4,190.17	4,074.70	115.47	36.288	
7,200.00	3,915.34	4,010.44	3,915.34	42.39	73.91	88.392	-878.22	7,340.62	4,146.01	4,029.99	116.01	35.737	
7,250.00	3,916.09	4,011.19	3,916.09	42.92	73.93	88.414	-878.22	7,340.62	4,101.97	3,985.41	116.56	35.192	
7,300.00	3,916.84	4,011.94	3,916.84	43.45	73.94	88.436	-878.22	7,340.62	4,058.08	3,940.97	117.11	34.652	
7,350.00	3,917.59	4,012.69	3,917.59	43.98	73.95	88.458	-878.22	7,340.62	4,014.33	3,896.67	117.66	34.119	
7,400.00	3,918.34	4,013.44	3,918.34	44.51	73.97	88.480	-878.22	7,340.62	3,970.72	3,852.52	118.20	33.592	
7,450.00	3,919.09	4,014.19	3,919.09	45.04	73.98	88.502	-878.22	7,340.62	3,927.27	3,808.51	118.75	33.070	
7,500.00	3,919.84	4,014.94	3,919.84	45.57	74.00	88.524	-878.22	7,340.62	3,883.97	3,764.67	119.30	32.555	
7,550.00	3,920.59	4,015.69	3,920.59	46.11	74.01	88.546	-878.22	7,340.62	3,840.84	3,720.98	119.86	32.046	
7,600.00	3,921.34	4,016.44	3,921.34	46.64	74.02	88.568	-878.22	7,340.62	3,797.87	3,677.47	120.41	31.542	
7,650.00	3,922.09	4,017.19	3,922.09	47.17	74.04	88.590	-878.22	7,340.62	3,755.08	3,634.12	120.96	31.044	
7,700.00	3,922.84	4,017.94	3,922.84	47.71	74.05	88.612	-878.22	7,340.62	3,712.47	3,590.96	121.51	30.552	
7,750.00	3,923.59	4,018.69	3,923.59	48.24	74.07	88.634	-878.22	7,340.62	3,670.05	3,547.98	122.07	30.066	
7,800.00	3,924.34	4,019.44	3,924.34	48.78	74.08	88.656	-878.22	7,340.62	3,627.82	3,505.20	122.62	29.586	
7,850.00	3,925.09	4,020.19	3,925.09	49.32	74.09	88.678	-878.22	7,340.62	3,585.79	3,462.61	123.17	29.112	
7,900.00	3,925.84	4,020.94	3,925.84	49.86	74.11	88.700	-878.22	7,340.62	3,543.96	3,420.23	123.73	28.643	
7,950.00	3,926.59	4,021.69	3,926.59	50.39	74.12	88.722	-878.22	7,340.62	3,502.35	3,378.07	124.28	28.180	
8,000.00	3,927.33	4,022.44	3,927.33	50.93	74.13	88.744	-878.22	7,340.62	3,460.96	3,336.12	124.84	27.723	
8,050.00	3,928.08	4,023.18	3,928.08	51.47	74.15	88.766	-878.22	7,340.62	3,419.80	3,294.41	125.40	27.272	
8,100.00	3,928.83	4,023.93	3,928.83	52.01	74.16	88.788	-878.22	7,340.62	3,378.88	3,252.93	125.95	26.827	
8,150.00	3,929.58	4,024.68	3,929.58	52.55	74.18	88.810	-878.22	7,340.62	3,338.21	3,211.70	126.51	26.387	
8,200.00	3,930.33	4,025.43	3,930.33	53.09	74.19	88.832	-878.22	7,340.62	3,297.79	3,170.72	127.07	25.953	
8,250.00	3,931.08	4,026.18	3,931.08	53.63	74.20	88.854	-878.22	7,340.62	3,257.64	3,130.01	127.63	25.525	
8,300.00	3,931.83	4,026.93	3,931.83	54.17	74.22	88.876	-878.22	7,340.62	3,217.76	3,089.58	128.18	25.103	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: AID STATE #6 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 166-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,350.00	3,932.58	4,027.68	3,932.58	54.72	74.23	88.897	-878.22	7,340.62	3,178.17	3,049.43	128.74	24.686	
8,400.00	3,933.33	4,028.43	3,933.33	55.26	74.25	88.919	-878.22	7,340.62	3,138.88	3,009.58	129.30	24.275	
8,450.00	3,934.08	4,029.18	3,934.08	55.80	74.26	88.941	-878.22	7,340.62	3,099.90	2,970.04	129.86	23.871	
8,500.00	3,934.83	4,029.93	3,934.83	56.34	74.27	88.963	-878.22	7,340.62	3,061.23	2,930.81	130.42	23.472	
8,550.00	3,935.58	4,030.68	3,935.58	56.89	74.29	88.985	-878.22	7,340.62	3,022.90	2,891.92	130.98	23.078	
8,600.00	3,936.33	4,031.43	3,936.33	57.43	74.30	89.007	-878.22	7,340.62	2,984.92	2,853.37	131.54	22.691	
8,650.00	3,937.08	4,032.18	3,937.08	57.98	74.31	89.029	-878.22	7,340.62	2,947.29	2,815.18	132.11	22.310	
8,700.00	3,937.83	4,032.93	3,937.83	58.52	74.33	89.051	-878.22	7,340.62	2,910.03	2,777.36	132.67	21.935	
8,750.00	3,938.58	4,033.68	3,938.58	59.07	74.34	89.073	-878.22	7,340.62	2,873.16	2,739.93	133.23	21.566	
8,800.00	3,939.33	4,034.43	3,939.33	59.61	74.36	89.095	-878.22	7,340.62	2,836.70	2,702.91	133.79	21.203	
8,850.00	3,940.08	4,035.18	3,940.08	60.16	74.37	89.117	-878.22	7,340.62	2,800.65	2,666.29	134.35	20.845	
8,900.00	3,940.82	4,035.92	3,940.82	60.70	74.38	89.139	-878.22	7,340.62	2,765.03	2,630.12	134.92	20.495	
8,950.00	3,941.57	4,036.67	3,941.57	61.25	74.40	89.161	-878.22	7,340.62	2,729.87	2,594.39	135.48	20.150	
9,000.00	3,942.32	4,037.42	3,942.32	61.80	74.41	89.183	-878.22	7,340.62	2,695.17	2,559.13	136.04	19.811	
9,050.00	3,943.07	4,038.17	3,943.07	62.34	74.43	89.205	-878.22	7,340.62	2,660.96	2,524.36	136.60	19.479	
9,100.00	3,943.82	4,038.92	3,943.82	62.89	74.44	89.227	-878.22	7,340.62	2,627.26	2,490.09	137.17	19.154	
9,150.00	3,944.57	4,039.67	3,944.57	63.44	74.45	89.249	-878.22	7,340.62	2,594.08	2,456.35	137.73	18.834	
9,200.00	3,945.32	4,040.42	3,945.32	63.98	74.47	89.271	-878.22	7,340.62	2,561.45	2,423.15	138.30	18.521	
9,250.00	3,946.07	4,041.17	3,946.07	64.53	74.48	89.293	-878.22	7,340.62	2,529.39	2,390.53	138.86	18.215	
9,300.00	3,946.82	4,041.92	3,946.82	65.08	74.49	89.315	-878.22	7,340.62	2,497.91	2,358.49	139.43	17.916	
9,350.00	3,947.57	4,042.67	3,947.57	65.63	74.51	89.337	-878.22	7,340.62	2,467.05	2,327.06	139.99	17.623	
9,400.00	3,948.32	4,043.42	3,948.32	66.18	74.52	89.359	-878.22	7,340.62	2,436.82	2,296.27	140.56	17.337	
9,450.00	3,949.07	4,044.17	3,949.07	66.73	74.54	89.381	-878.22	7,340.62	2,407.25	2,266.13	141.12	17.058	
9,500.00	3,949.82	4,044.92	3,949.82	67.28	74.55	89.403	-878.22	7,340.62	2,378.37	2,236.68	141.69	16.786	
9,550.00	3,950.57	4,045.67	3,950.57	67.83	74.56	89.425	-878.22	7,340.62	2,350.19	2,207.94	142.25	16.521	
9,600.00	3,951.32	4,046.42	3,951.32	68.38	74.58	89.447	-878.22	7,340.62	2,322.75	2,179.93	142.82	16.264	
9,650.00	3,952.07	4,047.17	3,952.07	68.93	74.59	89.469	-878.22	7,340.62	2,296.06	2,152.68	143.38	16.013	
9,700.00	3,952.82	4,047.92	3,952.82	69.48	74.61	89.491	-878.22	7,340.62	2,270.17	2,126.22	143.95	15.771	
9,750.00	3,953.56	4,048.67	3,953.56	70.03	74.62	89.513	-878.22	7,340.62	2,245.09	2,100.57	144.52	15.535	
9,800.00	3,954.31	4,049.41	3,954.31	70.58	74.63	89.535	-878.22	7,340.62	2,220.85	2,075.77	145.08	15.308	
9,850.00	3,955.06	4,050.16	3,955.06	71.13	74.65	89.557	-878.22	7,340.62	2,197.48	2,051.83	145.65	15.087	
9,900.00	3,955.81	4,050.91	3,955.81	71.68	74.66	89.579	-878.22	7,340.62	2,175.01	2,028.80	146.22	14.875	
9,950.00	3,956.56	4,051.66	3,956.56	72.23	74.67	89.601	-878.22	7,340.62	2,153.47	2,006.69	146.78	14.671	
10,000.00	3,957.31	4,052.41	3,957.31	72.78	74.69	89.623	-878.22	7,340.62	2,132.88	1,985.53	147.35	14.475	
10,050.00	3,958.06	4,053.16	3,958.06	73.33	74.70	89.645	-878.22	7,340.62	2,113.28	1,965.36	147.92	14.287	
10,100.00	3,958.81	4,053.91	3,958.81	73.88	74.72	89.667	-878.22	7,340.62	2,094.68	1,946.20	148.49	14.107	
10,150.00	3,959.56	4,054.66	3,959.56	74.43	74.73	89.689	-878.22	7,340.62	2,077.12	1,928.07	149.05	13.935	
10,200.00	3,960.31	4,055.41	3,960.31	74.99	74.74	89.711	-878.22	7,340.62	2,060.63	1,911.01	149.62	13.772	
10,250.00	3,961.06	4,056.16	3,961.06	75.54	74.76	89.733	-878.22	7,340.62	2,045.22	1,895.03	150.19	13.618	
10,300.00	3,961.81	4,056.91	3,961.81	76.09	74.77	89.755	-878.22	7,340.62	2,030.93	1,880.17	150.76	13.472	
10,350.00	3,962.56	4,057.66	3,962.56	76.64	74.79	89.777	-878.22	7,340.62	2,017.78	1,866.45	151.32	13.334	
10,400.00	3,963.31	4,058.41	3,963.31	77.20	74.80	89.799	-878.22	7,340.62	2,005.78	1,853.89	151.89	13.205	
10,450.00	3,964.06	4,059.16	3,964.06	77.75	74.81	89.821	-878.22	7,340.62	1,994.97	1,842.51	152.46	13.085	
10,500.00	3,964.81	4,059.91	3,964.81	78.30	74.83	89.843	-878.22	7,340.62	1,985.36	1,832.33	153.03	12.974	
10,550.00	3,965.56	4,060.66	3,965.56	78.85	74.84	89.865	-878.22	7,340.62	1,976.96	1,823.36	153.60	12.871	
10,600.00	3,966.31	4,061.41	3,966.31	79.41	74.85	89.887	-878.22	7,340.62	1,969.80	1,815.63	154.17	12.777	
10,650.00	3,967.05	4,062.15	3,967.05	79.96	74.87	89.909	-878.22	7,340.62	1,963.89	1,809.15	154.74	12.692	
10,700.00	3,967.80	4,062.90	3,967.80	80.51	74.88	89.931	-878.22	7,340.62	1,959.23	1,803.93	155.30	12.615	
10,750.00	3,968.55	4,063.65	3,968.55	81.07	74.90	89.953	-878.22	7,340.62	1,955.84	1,799.97	155.87	12.548	
10,800.00	3,969.30	4,064.40	3,969.30	81.62	74.91	89.975	-878.22	7,340.62	1,953.73	1,797.29	156.44	12.488	
10,850.00	3,970.05	4,065.15	3,970.05	82.17	74.92	89.997	-878.22	7,340.62	1,952.89	1,795.88	157.01	12.438	
10,857.68	3,970.17	4,065.27	3,970.17	82.26	74.93	90.000	-878.22	7,340.62	1,952.88	1,795.78	157.10	12.431	CC

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: AID STATE #6 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 166-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,900.00	3,970.80	4,065.90	3,970.80	82.73	74.94	90.019	-878.22	7,340.62	1,953.34	1,795.76	157.58	12.396	ES
10,950.00	3,971.55	4,066.65	3,971.55	83.28	74.95	90.041	-878.22	7,340.62	1,955.06	1,796.91	158.15	12.362	
11,000.00	3,972.30	4,067.40	3,972.30	83.84	74.96	90.063	-878.22	7,340.62	1,958.06	1,799.34	158.72	12.336	
11,050.00	3,973.05	4,068.15	3,973.05	84.39	74.98	90.085	-878.22	7,340.62	1,962.32	1,803.03	159.29	12.319	
11,100.00	3,973.80	4,068.90	3,973.80	84.95	74.99	90.107	-878.22	7,340.62	1,967.85	1,807.99	159.86	12.310	
11,130.16	3,974.25	4,069.35	3,974.25	85.28	75.00	90.120	-878.22	7,340.62	1,971.79	1,811.59	160.20	12.308	SF
11,150.00	3,974.55	4,069.65	3,974.55	85.50	75.01	90.129	-878.22	7,340.62	1,974.63	1,814.20	160.43	12.308	
11,180.09	3,975.00	4,070.10	3,975.00	85.83	75.01	90.142	-878.22	7,340.62	1,979.31	1,818.54	160.77	12.311	

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: AID STATE #8 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 335-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,300.00	3,886.87	3,995.05	3,886.87	23.53	81.38	82.462	442.10	7,342.34	5,623.19	5,519.88	103.31	54.430	
5,350.00	3,887.61	3,995.80	3,887.61	23.98	81.40	82.529	442.10	7,342.34	5,573.51	5,469.72	103.80	53.697	
5,400.00	3,888.36	3,996.55	3,888.36	24.42	81.42	82.596	442.10	7,342.34	5,523.85	5,419.57	104.28	52.971	
5,450.00	3,889.11	3,997.30	3,889.11	24.88	81.43	82.662	442.10	7,342.34	5,474.18	5,369.41	104.77	52.247	
5,500.00	3,889.86	3,998.05	3,889.86	25.33	81.45	82.729	442.10	7,342.34	5,424.53	5,319.26	105.27	51.531	
5,550.00	3,890.61	3,998.80	3,890.61	25.79	81.47	82.796	442.10	7,342.34	5,374.88	5,269.11	105.77	50.817	
5,600.00	3,891.36	3,999.55	3,891.36	26.25	81.48	82.863	442.10	7,342.34	5,325.23	5,218.96	106.27	50.110	
5,650.00	3,892.11	4,000.30	3,892.11	26.72	81.50	82.929	442.10	7,342.34	5,275.60	5,168.82	106.78	49.407	
5,700.00	3,892.86	4,001.05	3,892.86	27.19	81.52	82.996	442.10	7,342.34	5,225.97	5,118.68	107.29	48.710	
5,750.00	3,893.61	4,001.80	3,893.61	27.67	81.53	83.063	442.10	7,342.34	5,176.35	5,068.54	107.80	48.017	
5,800.00	3,894.36	4,002.55	3,894.36	28.15	81.55	83.130	442.10	7,342.34	5,126.73	5,018.41	108.32	47.331	
5,850.00	3,895.11	4,003.30	3,895.11	28.63	81.57	83.197	442.10	7,342.34	5,077.12	4,968.28	108.84	46.649	
5,900.00	3,895.86	4,004.04	3,895.86	29.11	81.58	83.264	442.10	7,342.34	5,027.52	4,918.16	109.36	45.973	
5,950.00	3,896.61	4,004.79	3,896.61	29.60	81.60	83.331	442.10	7,342.34	4,977.93	4,868.04	109.88	45.302	
6,000.00	3,897.36	4,005.54	3,897.36	30.09	81.62	83.398	442.10	7,342.34	4,928.34	4,817.93	110.41	44.637	
6,050.00	3,898.11	4,006.29	3,898.11	30.58	81.63	83.464	442.10	7,342.34	4,878.77	4,767.83	110.94	43.977	
6,100.00	3,898.86	4,007.04	3,898.86	31.08	81.65	83.531	442.10	7,342.34	4,829.20	4,717.73	111.47	43.323	
6,150.00	3,899.61	4,007.79	3,899.61	31.57	81.67	83.598	442.10	7,342.34	4,779.64	4,667.64	112.00	42.674	
6,200.00	3,900.36	4,008.54	3,900.36	32.07	81.68	83.665	442.10	7,342.34	4,730.09	4,617.55	112.54	42.031	
6,250.00	3,901.10	4,009.29	3,901.10	32.57	81.70	83.732	442.10	7,342.34	4,680.55	4,567.48	113.08	41.393	
6,300.00	3,901.85	4,010.04	3,901.85	33.08	81.71	83.799	442.10	7,342.34	4,631.02	4,517.41	113.61	40.761	
6,350.00	3,902.60	4,010.79	3,902.60	33.58	81.73	83.867	442.10	7,342.34	4,581.50	4,467.34	114.16	40.134	
6,400.00	3,903.35	4,011.54	3,903.35	34.09	81.75	83.934	442.10	7,342.34	4,531.99	4,417.29	114.70	39.512	
6,450.00	3,904.10	4,012.29	3,904.10	34.60	81.76	84.001	442.10	7,342.34	4,482.49	4,367.25	115.24	38.896	
6,500.00	3,904.85	4,013.04	3,904.85	35.11	81.78	84.068	442.10	7,342.34	4,433.00	4,317.22	115.79	38.286	
6,550.00	3,905.60	4,013.79	3,905.60	35.62	81.80	84.135	442.10	7,342.34	4,383.53	4,267.19	116.33	37.680	
6,600.00	3,906.35	4,014.54	3,906.35	36.13	81.81	84.202	442.10	7,342.34	4,334.06	4,217.18	116.88	37.081	
6,650.00	3,907.10	4,015.29	3,907.10	36.65	81.83	84.269	442.10	7,342.34	4,284.61	4,167.18	117.43	36.486	
6,700.00	3,907.85	4,016.04	3,907.85	37.16	81.85	84.336	442.10	7,342.34	4,235.17	4,117.19	117.98	35.897	
6,750.00	3,908.60	4,016.79	3,908.60	37.68	81.86	84.404	442.10	7,342.34	4,185.75	4,067.21	118.53	35.312	
6,800.00	3,909.35	4,017.53	3,909.35	38.20	81.88	84.471	442.10	7,342.34	4,136.33	4,017.25	119.09	34.734	
6,850.00	3,910.10	4,018.28	3,910.10	38.72	81.90	84.538	442.10	7,342.34	4,086.93	3,967.29	119.64	34.160	
6,900.00	3,910.85	4,019.03	3,910.85	39.24	81.91	84.605	442.10	7,342.34	4,037.55	3,917.35	120.20	33.591	
6,950.00	3,911.60	4,019.78	3,911.60	39.76	81.93	84.672	442.10	7,342.34	3,988.18	3,867.43	120.75	33.028	
7,000.00	3,912.35	4,020.53	3,912.35	40.29	81.95	84.740	442.10	7,342.34	3,938.83	3,817.52	121.31	32.469	
7,050.00	3,913.10	4,021.28	3,913.10	40.81	81.96	84.807	442.10	7,342.34	3,889.49	3,767.63	121.87	31.916	
7,100.00	3,913.85	4,022.03	3,913.85	41.34	81.98	84.874	442.10	7,342.34	3,840.17	3,717.75	122.43	31.368	
7,150.00	3,914.59	4,022.78	3,914.59	41.86	82.00	84.942	442.10	7,342.34	3,790.87	3,667.89	122.99	30.824	
7,200.00	3,915.34	4,023.53	3,915.34	42.39	82.01	85.009	442.10	7,342.34	3,741.59	3,618.04	123.54	30.285	
7,250.00	3,916.09	4,024.28	3,916.09	42.92	82.03	85.076	442.10	7,342.34	3,692.32	3,568.22	124.11	29.751	
7,300.00	3,916.84	4,025.03	3,916.84	43.45	82.05	85.144	442.10	7,342.34	3,643.08	3,518.41	124.67	29.222	
7,350.00	3,917.59	4,025.78	3,917.59	43.98	82.06	85.211	442.10	7,342.34	3,593.86	3,468.63	125.23	28.698	
7,400.00	3,918.34	4,026.53	3,918.34	44.51	82.08	85.278	442.10	7,342.34	3,544.65	3,418.86	125.79	28.178	
7,450.00	3,919.09	4,027.28	3,919.09	45.04	82.10	85.346	442.10	7,342.34	3,495.47	3,369.12	126.36	27.663	
7,500.00	3,919.84	4,028.03	3,919.84	45.57	82.11	85.413	442.10	7,342.34	3,446.32	3,319.40	126.92	27.153	
7,550.00	3,920.59	4,028.78	3,920.59	46.11	82.13	85.480	442.10	7,342.34	3,397.19	3,269.70	127.49	26.647	
7,600.00	3,921.34	4,029.53	3,921.34	46.64	82.15	85.548	442.10	7,342.34	3,348.08	3,220.03	128.05	26.146	
7,650.00	3,922.09	4,030.27	3,922.09	47.17	82.16	85.615	442.10	7,342.34	3,299.00	3,170.38	128.62	25.650	
7,700.00	3,922.84	4,031.02	3,922.84	47.71	82.18	85.683	442.10	7,342.34	3,249.95	3,120.77	129.18	25.157	
7,750.00	3,923.59	4,031.77	3,923.59	48.24	82.20	85.750	442.10	7,342.34	3,200.93	3,071.18	129.75	24.670	
7,800.00	3,924.34	4,032.52	3,924.34	48.78	82.21	85.818	442.10	7,342.34	3,151.93	3,021.62	130.32	24.186	
7,850.00	3,925.09	4,033.27	3,925.09	49.32	82.23	85.885	442.10	7,342.34	3,102.98	2,972.09	130.89	23.707	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: AID STATE #8 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 335-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,900.00	3,925.84	4,034.02	3,925.84	49.86	82.25	85.953	442.10	7,342.34	3,054.05	2,922.59	131.45	23.233	
7,950.00	3,926.59	4,034.77	3,926.59	50.39	82.26	86.020	442.10	7,342.34	3,005.16	2,873.13	132.02	22.762	
8,000.00	3,927.33	4,035.52	3,927.33	50.93	82.28	86.088	442.10	7,342.34	2,956.30	2,823.71	132.59	22.296	
8,050.00	3,928.08	4,036.27	3,928.08	51.47	82.30	86.155	442.10	7,342.34	2,907.49	2,774.32	133.16	21.834	
8,100.00	3,928.83	4,037.02	3,928.83	52.01	82.31	86.223	442.10	7,342.34	2,858.71	2,724.98	133.73	21.376	
8,150.00	3,929.58	4,037.77	3,929.58	52.55	82.33	86.290	442.10	7,342.34	2,809.98	2,675.68	134.30	20.923	
8,200.00	3,930.33	4,038.52	3,930.33	53.09	82.35	86.358	442.10	7,342.34	2,761.29	2,626.42	134.87	20.473	
8,250.00	3,931.08	4,039.27	3,931.08	53.63	82.36	86.425	442.10	7,342.34	2,712.65	2,577.21	135.44	20.028	
8,300.00	3,931.83	4,040.02	3,931.83	54.17	82.38	86.493	442.10	7,342.34	2,664.07	2,528.05	136.02	19.587	
8,350.00	3,932.58	4,040.77	3,932.58	54.72	82.40	86.561	442.10	7,342.34	2,615.53	2,478.94	136.59	19.149	
8,400.00	3,933.33	4,041.52	3,933.33	55.26	82.41	86.628	442.10	7,342.34	2,567.05	2,429.89	137.16	18.716	
8,450.00	3,934.08	4,042.27	3,934.08	55.80	82.43	86.696	442.10	7,342.34	2,518.63	2,380.90	137.73	18.287	
8,500.00	3,934.83	4,043.02	3,934.83	56.34	82.45	86.763	442.10	7,342.34	2,470.27	2,331.97	138.30	17.861	
8,550.00	3,935.58	4,043.76	3,935.58	56.89	82.46	86.831	442.10	7,342.34	2,421.98	2,283.10	138.88	17.440	
8,600.00	3,936.33	4,044.51	3,936.33	57.43	82.48	86.899	442.10	7,342.34	2,373.76	2,234.31	139.45	17.023	
8,650.00	3,937.08	4,045.26	3,937.08	57.98	82.50	86.966	442.10	7,342.34	2,325.61	2,185.59	140.02	16.609	
8,700.00	3,937.83	4,046.01	3,937.83	58.52	82.51	87.034	442.10	7,342.34	2,277.54	2,136.95	140.59	16.199	
8,750.00	3,938.58	4,046.76	3,938.58	59.07	82.53	87.102	442.10	7,342.34	2,229.56	2,088.39	141.17	15.794	
8,800.00	3,939.33	4,047.51	3,939.33	59.61	82.55	87.169	442.10	7,342.34	2,181.67	2,039.93	141.74	15.392	
8,850.00	3,940.08	4,048.26	3,940.08	60.16	82.56	87.237	442.10	7,342.34	2,133.88	1,991.56	142.31	14.994	
8,900.00	3,940.82	4,049.01	3,940.82	60.70	82.58	87.305	442.10	7,342.34	2,086.18	1,943.30	142.89	14.600	
8,950.00	3,941.57	4,049.76	3,941.57	61.25	82.59	87.372	442.10	7,342.34	2,038.60	1,895.14	143.46	14.210	
9,000.00	3,942.32	4,050.51	3,942.32	61.80	82.61	87.440	442.10	7,342.34	1,991.14	1,847.10	144.04	13.824	
9,050.00	3,943.07	4,051.26	3,943.07	62.34	82.63	87.508	442.10	7,342.34	1,943.80	1,799.19	144.61	13.442	
9,100.00	3,943.82	4,052.01	3,943.82	62.89	82.64	87.575	442.10	7,342.34	1,896.60	1,751.42	145.19	13.063	
9,150.00	3,944.57	4,052.76	3,944.57	63.44	82.66	87.643	442.10	7,342.34	1,849.55	1,703.79	145.76	12.689	
9,200.00	3,945.32	4,053.51	3,945.32	63.98	82.68	87.711	442.10	7,342.34	1,802.65	1,656.32	146.33	12.319	
9,250.00	3,946.07	4,054.26	3,946.07	64.53	82.69	87.779	442.10	7,342.34	1,755.93	1,609.02	146.91	11.952	
9,300.00	3,946.82	4,055.01	3,946.82	65.08	82.71	87.846	442.10	7,342.34	1,709.39	1,561.91	147.48	11.590	
9,350.00	3,947.57	4,055.76	3,947.57	65.63	82.73	87.914	442.10	7,342.34	1,663.05	1,514.99	148.06	11.232	
9,400.00	3,948.32	4,056.50	3,948.32	66.18	82.74	87.982	442.10	7,342.34	1,616.93	1,468.30	148.63	10.879	
9,450.00	3,949.07	4,057.25	3,949.07	66.73	82.76	88.050	442.10	7,342.34	1,571.05	1,421.84	149.21	10.529	
9,500.00	3,949.82	4,058.00	3,949.82	67.28	82.78	88.117	442.10	7,342.34	1,525.42	1,375.64	149.78	10.184	
9,550.00	3,950.57	4,058.75	3,950.57	67.83	82.79	88.185	442.10	7,342.34	1,480.08	1,329.72	150.36	9.844	
9,600.00	3,951.32	4,059.50	3,951.32	68.38	82.81	88.253	442.10	7,342.34	1,435.05	1,284.11	150.93	9.508	
9,650.00	3,952.07	4,060.25	3,952.07	68.93	82.83	88.321	442.10	7,342.34	1,390.35	1,238.84	151.51	9.177	
9,700.00	3,952.82	4,061.00	3,952.82	69.48	82.84	88.389	442.10	7,342.34	1,346.03	1,193.95	152.08	8.851	
9,750.00	3,953.56	4,061.75	3,953.56	70.03	82.86	88.456	442.10	7,342.34	1,302.12	1,149.46	152.66	8.530	
9,800.00	3,954.31	4,062.50	3,954.31	70.58	82.88	88.524	442.10	7,342.34	1,258.66	1,105.43	153.24	8.214	
9,850.00	3,955.06	4,063.25	3,955.06	71.13	82.89	88.592	442.10	7,342.34	1,215.71	1,061.90	153.81	7.904	
9,900.00	3,955.81	4,064.00	3,955.81	71.68	82.91	88.660	442.10	7,342.34	1,173.31	1,018.93	154.39	7.600	
9,950.00	3,956.56	4,064.75	3,956.56	72.23	82.93	88.727	442.10	7,342.34	1,131.54	976.58	154.96	7.302	
10,000.00	3,957.31	4,065.50	3,957.31	72.78	82.94	88.795	442.10	7,342.34	1,090.45	934.92	155.54	7.011	
10,050.00	3,958.06	4,066.25	3,958.06	73.33	82.96	88.863	442.10	7,342.34	1,050.14	894.03	156.11	6.727	
10,100.00	3,958.81	4,067.00	3,958.81	73.88	82.98	88.931	442.10	7,342.34	1,010.70	854.01	156.69	6.450	
10,150.00	3,959.56	4,067.75	3,959.56	74.43	82.99	88.999	442.10	7,342.34	972.22	814.96	157.26	6.182	
10,200.00	3,960.31	4,068.50	3,960.31	74.99	83.01	89.067	442.10	7,342.34	934.84	777.00	157.84	5.923	
10,250.00	3,961.06	4,069.25	3,961.06	75.54	83.03	89.134	442.10	7,342.34	898.68	740.27	158.41	5.673	
10,300.00	3,961.81	4,069.99	3,961.81	76.09	83.04	89.202	442.10	7,342.34	863.91	704.92	158.99	5.434	
10,350.00	3,962.56	4,070.74	3,962.56	76.64	83.06	89.270	442.10	7,342.34	830.69	671.12	159.56	5.206	
10,400.00	3,963.31	4,071.49	3,963.31	77.20	83.08	89.338	442.10	7,342.34	799.21	639.08	160.14	4.991	
10,450.00	3,964.06	4,072.24	3,964.06	77.75	83.09	89.406	442.10	7,342.34	769.71	608.99	160.71	4.789	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: AID STATE #8 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 335-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,500.00	3,964.81	4,072.99	3,964.81	78.30	83.11	89.473	442.10	7,342.34	742.39	581.10	161.29	4.603	
10,550.00	3,965.56	4,073.74	3,965.56	78.85	83.13	89.541	442.10	7,342.34	717.53	555.66	161.86	4.433	
10,600.00	3,966.31	4,074.49	3,966.31	79.41	83.14	89.609	442.10	7,342.34	695.37	532.94	162.44	4.281	
10,650.00	3,967.05	4,075.24	3,967.05	79.96	83.16	89.677	442.10	7,342.34	676.20	513.18	163.01	4.148	
10,700.00	3,967.80	4,075.99	3,967.80	80.51	83.18	89.745	442.10	7,342.34	660.26	496.67	163.59	4.036	
10,750.00	3,968.55	4,076.74	3,968.55	81.07	83.19	89.813	442.10	7,342.34	647.79	483.63	164.16	3.946	
10,800.00	3,969.30	4,077.49	3,969.30	81.62	83.21	89.880	442.10	7,342.34	639.01	474.27	164.74	3.879	
10,850.00	3,970.05	4,078.24	3,970.05	82.17	83.23	89.948	442.10	7,342.34	634.05	468.74	165.31	3.835	
10,888.08	3,970.62	4,078.81	3,970.62	82.60	83.24	90.000	442.10	7,342.34	632.91	467.16	165.75	3.818	CC
10,900.00	3,970.80	4,078.99	3,970.80	82.73	83.24	90.016	442.10	7,342.34	633.02	467.13	165.89	3.816	ES, SF
10,950.00	3,971.55	4,079.74	3,971.55	83.28	83.26	90.084	442.10	7,342.34	635.93	469.47	166.46	3.820	
11,000.00	3,972.30	4,080.49	3,972.30	83.84	83.28	90.152	442.10	7,342.34	642.72	475.69	167.04	3.848	
11,050.00	3,973.05	4,081.24	3,973.05	84.39	83.29	90.220	442.10	7,342.34	653.29	485.68	167.61	3.898	
11,100.00	3,973.80	4,081.99	3,973.80	84.95	83.31	90.288	442.10	7,342.34	667.44	499.25	168.18	3.968	
11,130.16	3,974.25	4,082.44	3,974.25	85.28	83.32	90.328	442.10	7,342.34	677.61	509.08	168.53	4.021	
11,150.00	3,974.55	4,082.74	3,974.55	85.50	83.33	90.355	442.10	7,342.34	684.95	516.19	168.76	4.059	
11,180.09	3,975.00	4,083.19	3,975.00	85.83	83.34	90.396	442.10	7,342.34	697.01	527.91	169.10	4.122	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: AID STATE #9 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 821-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,050.00	3,883.12	3,984.22	3,883.12	21.41	69.72	-48.104	1,096.86	5,362.68	3,873.00	3,802.48	70.52	54.919	
5,100.00	3,883.87	3,984.97	3,883.87	21.82	69.73	-48.474	1,096.86	5,362.68	3,823.01	3,751.79	71.22	53.678	
5,150.00	3,884.62	3,985.72	3,884.62	22.24	69.75	-48.848	1,096.86	5,362.68	3,773.02	3,701.09	71.93	52.451	
5,200.00	3,885.37	3,986.47	3,885.37	22.67	69.76	-49.226	1,096.86	5,362.68	3,723.04	3,650.38	72.65	51.245	
5,250.00	3,886.12	3,987.22	3,886.12	23.10	69.77	-49.609	1,096.86	5,362.68	3,673.05	3,599.67	73.38	50.053	
5,300.00	3,886.87	3,987.97	3,886.87	23.53	69.79	-49.996	1,096.86	5,362.68	3,623.06	3,548.95	74.12	48.883	
5,350.00	3,887.61	3,988.71	3,887.61	23.98	69.80	-50.388	1,096.86	5,362.68	3,573.08	3,498.21	74.86	47.727	
5,400.00	3,888.36	3,989.46	3,888.36	24.42	69.82	-50.784	1,096.86	5,362.68	3,523.09	3,447.48	75.62	46.592	
5,450.00	3,889.11	3,990.21	3,889.11	24.88	69.83	-51.184	1,096.86	5,362.68	3,473.11	3,396.73	76.38	45.473	
5,500.00	3,889.86	3,990.96	3,889.86	25.33	69.84	-51.589	1,096.86	5,362.68	3,423.12	3,345.98	77.14	44.373	
5,550.00	3,890.61	3,991.71	3,890.61	25.79	69.86	-51.999	1,096.86	5,362.68	3,373.13	3,295.21	77.92	43.289	
5,600.00	3,891.36	3,992.46	3,891.36	26.25	69.87	-52.414	1,096.86	5,362.68	3,323.15	3,244.45	78.70	42.224	
5,650.00	3,892.11	3,993.21	3,892.11	26.72	69.88	-52.833	1,096.86	5,362.68	3,273.16	3,193.67	79.49	41.175	
5,700.00	3,892.86	3,993.96	3,892.86	27.19	69.90	-53.256	1,096.86	5,362.68	3,223.18	3,142.89	80.29	40.145	
5,750.00	3,893.61	3,994.71	3,893.61	27.67	69.91	-53.685	1,096.86	5,362.68	3,173.20	3,092.10	81.09	39.130	
5,800.00	3,894.36	3,995.46	3,894.36	28.15	69.93	-54.118	1,096.86	5,362.68	3,123.21	3,041.31	81.90	38.134	
5,850.00	3,895.11	3,996.21	3,895.11	28.63	69.94	-54.556	1,096.86	5,362.68	3,073.23	2,990.51	82.72	37.154	
5,900.00	3,895.86	3,996.96	3,895.86	29.11	69.95	-54.999	1,096.86	5,362.68	3,023.25	2,939.71	83.54	36.190	
5,950.00	3,896.61	3,997.71	3,896.61	29.60	69.97	-55.447	1,096.86	5,362.68	2,973.26	2,888.90	84.36	35.243	
6,000.00	3,897.36	3,998.46	3,897.36	30.09	69.98	-55.899	1,096.86	5,362.68	2,923.28	2,838.08	85.20	34.312	
6,050.00	3,898.11	3,999.21	3,898.11	30.58	69.99	-56.357	1,096.86	5,362.68	2,873.30	2,787.26	86.03	33.397	
6,100.00	3,898.86	3,999.96	3,898.86	31.08	70.01	-56.819	1,096.86	5,362.68	2,823.32	2,736.44	86.88	32.498	
6,150.00	3,899.61	4,000.71	3,899.61	31.57	70.02	-57.286	1,096.86	5,362.68	2,773.34	2,685.61	87.72	31.615	
6,200.00	3,900.36	4,001.46	3,900.36	32.07	70.04	-57.759	1,096.86	5,362.68	2,723.36	2,634.78	88.57	30.747	
6,250.00	3,901.10	4,002.20	3,901.10	32.57	70.05	-58.236	1,096.86	5,362.68	2,673.38	2,583.95	89.43	29.894	
6,300.00	3,901.85	4,002.95	3,901.85	33.08	70.06	-58.718	1,096.86	5,362.68	2,623.40	2,533.11	90.29	29.056	
6,350.00	3,902.60	4,003.70	3,902.60	33.58	70.08	-59.205	1,096.86	5,362.68	2,573.42	2,482.26	91.15	28.232	
6,400.00	3,903.35	4,004.45	3,903.35	34.09	70.09	-59.697	1,096.86	5,362.68	2,523.44	2,431.42	92.02	27.423	
6,450.00	3,904.10	4,005.20	3,904.10	34.60	70.10	-60.195	1,096.86	5,362.68	2,473.46	2,380.57	92.89	26.629	
6,500.00	3,904.85	4,005.95	3,904.85	35.11	70.12	-60.697	1,096.86	5,362.68	2,423.48	2,329.73	93.76	25.848	
6,550.00	3,905.60	4,006.70	3,905.60	35.62	70.13	-61.204	1,096.86	5,362.68	2,373.51	2,278.87	94.63	25.081	
6,600.00	3,906.35	4,007.45	3,906.35	36.13	70.15	-61.716	1,096.86	5,362.68	2,323.53	2,228.02	95.51	24.328	
6,650.00	3,907.10	4,008.20	3,907.10	36.65	70.16	-62.233	1,096.86	5,362.68	2,273.56	2,177.17	96.39	23.587	
6,700.00	3,907.85	4,008.95	3,907.85	37.16	70.17	-62.755	1,096.86	5,362.68	2,223.58	2,126.32	97.27	22.860	
6,750.00	3,908.60	4,009.70	3,908.60	37.68	70.19	-63.282	1,096.86	5,362.68	2,173.61	2,075.46	98.15	22.146	
6,800.00	3,909.35	4,010.45	3,909.35	38.20	70.20	-63.814	1,096.86	5,362.68	2,123.64	2,024.61	99.03	21.444	
6,850.00	3,910.10	4,011.20	3,910.10	38.72	70.21	-64.351	1,096.86	5,362.68	2,073.67	1,973.75	99.92	20.754	
6,900.00	3,910.85	4,011.95	3,910.85	39.24	70.23	-64.893	1,096.86	5,362.68	2,023.70	1,922.90	100.80	20.077	
6,950.00	3,911.60	4,012.70	3,911.60	39.76	70.24	-65.439	1,096.86	5,362.68	1,973.73	1,872.05	101.68	19.411	
7,000.00	3,912.35	4,013.45	3,912.35	40.29	70.26	-65.991	1,096.86	5,362.68	1,923.76	1,821.20	102.56	18.757	
7,050.00	3,913.10	4,014.20	3,913.10	40.81	70.27	-66.547	1,096.86	5,362.68	1,873.80	1,770.36	103.44	18.114	
7,100.00	3,913.85	4,014.95	3,913.85	41.34	70.28	-67.108	1,096.86	5,362.68	1,823.84	1,719.51	104.32	17.483	
7,150.00	3,914.59	4,015.69	3,914.59	41.86	70.30	-67.673	1,096.86	5,362.68	1,773.87	1,668.67	105.20	16.862	
7,200.00	3,915.34	4,016.44	3,915.34	42.39	70.31	-68.243	1,096.86	5,362.68	1,723.91	1,617.84	106.07	16.252	
7,250.00	3,916.09	4,017.19	3,916.09	42.92	70.32	-68.818	1,096.86	5,362.68	1,673.96	1,567.01	106.95	15.652	
7,300.00	3,916.84	4,017.94	3,916.84	43.45	70.34	-69.397	1,096.86	5,362.68	1,624.00	1,516.18	107.82	15.063	
7,350.00	3,917.59	4,018.69	3,917.59	43.98	70.35	-69.981	1,096.86	5,362.68	1,574.05	1,465.36	108.68	14.483	
7,400.00	3,918.34	4,019.44	3,918.34	44.51	70.37	-70.569	1,096.86	5,362.68	1,524.10	1,414.55	109.54	13.913	
7,450.00	3,919.09	4,020.19	3,919.09	45.04	70.38	-71.161	1,096.86	5,362.68	1,474.15	1,363.75	110.40	13.353	
7,500.00	3,919.84	4,020.94	3,919.84	45.57	70.39	-71.758	1,096.86	5,362.68	1,424.20	1,312.95	111.25	12.802	
7,550.00	3,920.59	4,021.69	3,920.59	46.11	70.41	-72.358	1,096.86	5,362.68	1,374.26	1,262.16	112.10	12.259	
7,600.00	3,921.34	4,022.44	3,921.34	46.64	70.42	-72.963	1,096.86	5,362.68	1,324.33	1,211.38	112.94	11.726	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: AID STATE #9 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 821-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,650.00	3,922.09	4,023.19	3,922.09	47.17	70.43	-73.571	1,096.86	5,362.68	1,274.39	1,160.62	113.78	11.201	
7,700.00	3,922.84	4,023.94	3,922.84	47.71	70.45	-74.184	1,096.86	5,362.68	1,224.47	1,109.86	114.61	10.684	
7,750.00	3,923.59	4,024.69	3,923.59	48.24	70.46	-74.800	1,096.86	5,362.68	1,174.54	1,059.12	115.43	10.176	
7,800.00	3,924.34	4,025.44	3,924.34	48.78	70.48	-75.420	1,096.86	5,362.68	1,124.63	1,008.39	116.24	9.675	
7,850.00	3,925.09	4,026.19	3,925.09	49.32	70.49	-76.043	1,096.86	5,362.68	1,074.72	957.67	117.05	9.182	
7,900.00	3,925.84	4,026.94	3,925.84	49.86	70.50	-76.670	1,096.86	5,362.68	1,024.82	906.98	117.84	8.696	
7,950.00	3,926.59	4,027.69	3,926.59	50.39	70.52	-77.300	1,096.86	5,362.68	974.93	856.30	118.63	8.218	
8,000.00	3,927.33	4,028.43	3,927.33	50.93	70.53	-77.933	1,096.86	5,362.68	925.05	805.64	119.41	7.747	
8,050.00	3,928.08	4,029.18	3,928.08	51.47	70.54	-78.569	1,096.86	5,362.68	875.19	755.01	120.18	7.282	
8,100.00	3,928.83	4,029.93	3,928.83	52.01	70.56	-79.208	1,096.86	5,362.68	825.34	704.40	120.94	6.824	
8,150.00	3,929.58	4,030.68	3,929.58	52.55	70.57	-79.850	1,096.86	5,362.68	775.51	653.82	121.69	6.373	
8,200.00	3,930.33	4,031.43	3,930.33	53.09	70.59	-80.494	1,096.86	5,362.68	725.70	603.27	122.43	5.928	
8,250.00	3,931.08	4,032.18	3,931.08	53.63	70.60	-81.141	1,096.86	5,362.68	675.92	552.77	123.15	5.488	
8,300.00	3,931.83	4,032.93	3,931.83	54.17	70.61	-81.790	1,096.86	5,362.68	626.17	502.31	123.87	5.055	
8,350.00	3,932.58	4,033.68	3,932.58	54.72	70.63	-82.441	1,096.86	5,362.68	576.47	451.90	124.57	4.628	
8,400.00	3,933.33	4,034.43	3,933.33	55.26	70.64	-83.094	1,096.86	5,362.68	526.82	401.56	125.26	4.206	
8,450.00	3,934.08	4,035.18	3,934.08	55.80	70.65	-83.749	1,096.86	5,362.68	477.25	351.31	125.93	3.790	
8,500.00	3,934.83	4,035.93	3,934.83	56.34	70.67	-84.405	1,096.86	5,362.68	427.77	301.17	126.60	3.379	
8,550.00	3,935.58	4,036.68	3,935.58	56.89	70.68	-85.063	1,096.86	5,362.68	378.42	251.18	127.25	2.974	
8,600.00	3,936.33	4,037.43	3,936.33	57.43	70.70	-85.722	1,096.86	5,362.68	329.28	201.39	127.88	2.575	
8,650.00	3,937.08	4,038.18	3,937.08	57.98	70.71	-86.383	1,096.86	5,362.68	280.43	151.93	128.50	2.182	
8,700.00	3,937.83	4,038.93	3,937.83	58.52	70.72	-87.044	1,096.86	5,362.68	232.07	102.96	129.11	1.797	
8,750.00	3,938.58	4,039.68	3,938.58	59.07	70.74	-87.707	1,096.86	5,362.68	184.58	54.89	129.70	1.423	Level 3
8,800.00	3,939.33	4,040.43	3,939.33	59.61	70.75	-88.369	1,096.86	5,362.68	138.87	8.60	130.27	1.066	Level 2
8,850.00	3,940.08	4,041.18	3,940.08	60.16	70.76	-89.033	1,096.86	5,362.68	97.46	-33.38	130.83	0.745	Level 1
8,900.00	3,940.82	4,041.92	3,940.82	60.70	70.78	-89.696	1,096.86	5,362.68	68.63	-62.75	131.38	0.522	Level 1
8,922.89	3,941.17	4,042.27	3,941.17	60.95	70.78	-90.000	1,096.86	5,362.68	64.70	-66.92	131.62	0.492	Level 1, CC, ES, SF
8,950.00	3,941.57	4,042.67	3,941.57	61.25	70.79	-90.360	1,096.86	5,362.68	70.15	-61.76	131.91	0.532	Level 1
9,000.00	3,942.32	4,043.42	3,942.32	61.80	70.81	-91.023	1,096.86	5,362.68	100.65	-31.77	132.42	0.760	Level 1
9,050.00	3,943.07	4,044.17	3,943.07	62.34	70.82	-91.687	1,096.86	5,362.68	142.61	9.70	132.91	1.073	Level 2
9,100.00	3,943.82	4,044.92	3,943.82	62.89	70.83	-92.349	1,096.86	5,362.68	188.54	55.14	133.39	1.413	Level 3
9,150.00	3,944.57	4,045.67	3,944.57	63.44	70.85	-93.011	1,096.86	5,362.68	236.12	102.26	133.86	1.764	
9,200.00	3,945.32	4,046.42	3,945.32	63.98	70.86	-93.673	1,096.86	5,362.68	284.53	150.23	134.30	2.119	
9,250.00	3,946.07	4,047.17	3,946.07	64.53	70.87	-94.333	1,096.86	5,362.68	333.41	198.67	134.73	2.475	
9,300.00	3,946.82	4,047.92	3,946.82	65.08	70.89	-94.992	1,096.86	5,362.68	382.58	247.43	135.15	2.831	
9,350.00	3,947.57	4,048.67	3,947.57	65.63	70.90	-95.650	1,096.86	5,362.68	431.93	296.39	135.54	3.187	
9,400.00	3,948.32	4,049.42	3,948.32	66.18	70.91	-96.307	1,096.86	5,362.68	481.42	345.50	135.92	3.542	
9,450.00	3,949.07	4,050.17	3,949.07	66.73	70.93	-96.961	1,096.86	5,362.68	531.00	394.72	136.29	3.896	
9,500.00	3,949.82	4,050.92	3,949.82	67.28	70.94	-97.614	1,096.86	5,362.68	580.66	444.03	136.63	4.250	
9,550.00	3,950.57	4,051.67	3,950.57	67.83	70.96	-98.265	1,096.86	5,362.68	630.37	493.41	136.96	4.603	
9,600.00	3,951.32	4,052.42	3,951.32	68.38	70.97	-98.914	1,096.86	5,362.68	680.12	542.84	137.27	4.954	
9,650.00	3,952.07	4,053.17	3,952.07	68.93	70.98	-99.561	1,096.86	5,362.68	729.90	592.33	137.57	5.306	
9,700.00	3,952.82	4,053.92	3,952.82	69.48	71.00	-100.205	1,096.86	5,362.68	779.71	641.86	137.85	5.656	
9,750.00	3,953.56	4,054.66	3,953.56	70.03	71.01	-100.846	1,096.86	5,362.68	829.54	691.43	138.11	6.006	
9,800.00	3,954.31	4,055.41	3,954.31	70.58	71.02	-101.485	1,096.86	5,362.68	879.39	741.03	138.36	6.356	
9,850.00	3,955.06	4,056.16	3,955.06	71.13	71.04	-102.121	1,096.86	5,362.68	929.26	790.67	138.59	6.705	
9,900.00	3,955.81	4,056.91	3,955.81	71.68	71.05	-102.753	1,096.86	5,362.68	979.14	840.33	138.81	7.054	
9,950.00	3,956.56	4,057.66	3,956.56	72.23	71.07	-103.383	1,096.86	5,362.68	1,029.03	890.02	139.00	7.403	
10,000.00	3,957.31	4,058.41	3,957.31	72.78	71.08	-104.010	1,096.86	5,362.68	1,078.93	939.74	139.19	7.752	
10,050.00	3,958.06	4,059.16	3,958.06	73.33	71.09	-104.633	1,096.86	5,362.68	1,128.84	989.48	139.36	8.100	
10,100.00	3,958.81	4,059.91	3,958.81	73.88	71.11	-105.252	1,096.86	5,362.68	1,178.75	1,039.24	139.51	8.449	
10,150.00	3,959.56	4,060.66	3,959.56	74.43	71.12	-105.868	1,096.86	5,362.68	1,228.67	1,089.02	139.65	8.798	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: AID STATE #9 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 821-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.00	3,960.31	4,061.41	3,960.31	74.99	71.13	-106.480	1,096.86	5,362.68	1,278.60	1,138.83	139.77	9.148	
10,250.00	3,961.06	4,062.16	3,961.06	75.54	71.15	-107.088	1,096.86	5,362.68	1,328.53	1,188.65	139.88	9.497	
10,300.00	3,961.81	4,062.91	3,961.81	76.09	71.16	-107.693	1,096.86	5,362.68	1,378.47	1,238.49	139.98	9.848	
10,350.00	3,962.56	4,063.66	3,962.56	76.64	71.18	-108.293	1,096.86	5,362.68	1,428.41	1,288.35	140.06	10.198	
10,400.00	3,963.31	4,064.41	3,963.31	77.20	71.19	-108.889	1,096.86	5,362.68	1,478.36	1,338.23	140.13	10.550	
10,450.00	3,964.06	4,065.16	3,964.06	77.75	71.20	-109.481	1,096.86	5,362.68	1,528.31	1,388.12	140.19	10.902	
10,500.00	3,964.81	4,065.91	3,964.81	78.30	71.22	-110.069	1,096.86	5,362.68	1,578.26	1,438.03	140.23	11.255	
10,550.00	3,965.56	4,066.66	3,965.56	78.85	71.23	-110.652	1,096.86	5,362.68	1,628.21	1,487.95	140.26	11.608	
10,600.00	3,966.31	4,067.41	3,966.31	79.41	71.24	-111.231	1,096.86	5,362.68	1,678.17	1,537.89	140.28	11.963	
10,650.00	3,967.05	4,068.15	3,967.05	79.96	71.26	-111.805	1,096.86	5,362.68	1,728.12	1,587.84	140.29	12.318	
10,700.00	3,967.80	4,068.90	3,967.80	80.51	71.27	-112.375	1,096.86	5,362.68	1,778.09	1,637.80	140.28	12.675	
10,750.00	3,968.55	4,069.65	3,968.55	81.07	71.29	-112.940	1,096.86	5,362.68	1,828.05	1,687.78	140.27	13.033	
10,800.00	3,969.30	4,070.40	3,969.30	81.62	71.30	-113.500	1,096.86	5,362.68	1,878.01	1,737.77	140.24	13.391	
10,850.00	3,970.05	4,071.15	3,970.05	82.17	71.31	-114.056	1,096.86	5,362.68	1,927.98	1,787.77	140.20	13.751	
10,900.00	3,970.80	4,071.90	3,970.80	82.73	71.33	-114.607	1,096.86	5,362.68	1,977.94	1,837.79	140.16	14.112	
10,950.00	3,971.55	4,072.65	3,971.55	83.28	71.34	-115.153	1,096.86	5,362.68	2,027.91	1,887.81	140.10	14.475	
11,000.00	3,972.30	4,073.40	3,972.30	83.84	71.35	-115.694	1,096.86	5,362.68	2,077.88	1,937.85	140.03	14.838	
11,050.00	3,973.05	4,074.15	3,973.05	84.39	71.37	-116.231	1,096.86	5,362.68	2,127.85	1,987.89	139.96	15.204	
11,100.00	3,973.80	4,074.90	3,973.80	84.95	71.38	-116.762	1,096.86	5,362.68	2,177.82	2,037.95	139.87	15.570	
11,130.16	3,974.25	4,075.35	3,974.25	85.28	71.39	-117.081	1,096.86	5,362.68	2,207.97	2,068.15	139.82	15.792	
11,150.00	3,974.55	4,075.65	3,974.55	85.50	71.40	-117.289	1,096.86	5,362.68	2,227.80	2,088.02	139.78	15.938	
11,180.09	3,975.00	4,076.10	3,975.00	85.83	71.40	-117.604	1,096.86	5,362.68	2,257.87	2,118.15	139.72	16.160	

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: PUMA #1 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 209-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
650.00	649.13	638.14	649.13	2.13	10.95	34.663	567.20	384.82	667.71	654.64	13.07	51.103	
700.00	698.70	687.71	698.70	2.31	12.00	35.045	567.20	384.82	662.34	648.05	14.28	46.369	
750.00	748.15	737.16	748.15	2.49	13.05	35.485	567.20	384.82	656.28	640.79	15.49	42.356	
800.00	797.47	786.47	797.47	2.67	14.10	35.986	567.20	384.82	649.55	632.86	16.69	38.907	
850.00	846.63	835.64	846.63	2.85	15.14	36.549	567.20	384.82	642.16	624.28	17.89	35.902	
900.00	895.62	884.63	895.62	3.03	16.18	37.180	567.20	384.82	634.13	615.06	19.07	33.258	
950.00	944.44	933.47	944.44	3.21	17.22	37.882	567.20	384.82	625.47	605.23	20.24	30.904	
1,000.00	993.06	982.08	993.06	3.39	18.26	38.659	567.20	384.82	616.21	594.81	21.40	28.793	
1,050.00	1,041.46	1,030.49	1,041.46	3.57	19.29	39.516	567.20	384.82	606.37	583.82	22.55	26.886	
1,100.00	1,089.64	1,078.67	1,089.64	3.76	20.31	40.458	567.20	384.82	595.98	572.28	23.70	25.150	
1,150.00	1,137.58	1,126.61	1,137.58	3.95	21.33	41.493	567.20	384.82	585.06	560.23	24.83	23.561	
1,200.00	1,185.27	1,174.30	1,185.27	4.14	22.35	42.625	567.20	384.82	573.67	547.71	25.96	22.098	
1,250.00	1,232.68	1,221.71	1,232.68	4.33	23.35	43.863	567.20	384.82	561.83	534.74	27.08	20.745	
1,259.51	1,241.67	1,230.70	1,241.67	4.37	23.55	44.111	567.20	384.82	559.53	532.23	27.30	20.498	
1,300.00	1,279.91	1,268.94	1,279.91	4.52	24.36	45.050	567.20	384.82	549.78	521.53	28.25	19.460	
1,350.00	1,327.13	1,316.16	1,327.13	4.72	25.36	46.253	567.20	384.82	537.96	508.53	29.44	18.274	
1,400.00	1,374.35	1,363.38	1,374.35	4.91	26.37	47.507	567.20	384.82	526.39	495.76	30.63	17.184	
1,450.00	1,421.58	1,410.63	1,421.58	5.11	27.37	48.813	567.20	384.82	515.08	483.25	31.83	16.182	
1,500.00	1,468.80	1,457.85	1,468.80	5.31	28.38	50.174	567.20	384.82	504.06	471.02	33.04	15.258	
1,550.00	1,516.02	1,505.07	1,516.02	5.50	29.38	51.590	567.20	384.82	493.33	459.09	34.25	14.405	
1,600.00	1,563.24	1,552.29	1,563.24	5.70	30.39	53.065	567.20	384.82	482.93	447.47	35.46	13.618	
1,650.00	1,610.46	1,599.52	1,610.46	5.90	31.39	54.599	567.20	384.82	472.87	436.18	36.68	12.890	
1,700.00	1,657.68	1,646.74	1,657.68	6.10	32.40	56.193	567.20	384.82	463.17	425.26	37.91	12.217	
1,750.00	1,704.91	1,693.96	1,704.91	6.30	33.40	57.849	567.20	384.82	453.86	414.72	39.14	11.595	
1,800.00	1,752.13	1,741.18	1,752.13	6.50	34.41	59.568	567.20	384.82	444.97	404.59	40.38	11.019	
1,850.00	1,799.35	1,788.40	1,799.35	6.70	35.41	61.349	567.20	384.82	436.51	394.89	41.62	10.487	
1,900.00	1,846.57	1,835.62	1,846.57	6.90	36.42	63.193	567.20	384.82	428.52	385.65	42.87	9.996	
1,950.00	1,893.79	1,882.87	1,893.79	7.10	37.48	65.099	567.20	384.82	421.01	376.84	44.18	9.531	
2,000.00	1,941.01	1,930.09	1,941.01	7.30	38.56	67.065	567.20	384.82	414.03	368.52	45.51	9.098	
2,050.00	1,988.24	1,977.31	1,988.24	7.50	39.65	69.091	567.20	384.82	407.58	360.74	46.84	8.701	
2,100.00	2,035.46	2,024.53	2,035.46	7.70	40.74	71.172	567.20	384.82	401.71	353.53	48.18	8.338	
2,150.00	2,082.68	2,071.76	2,082.68	7.90	41.82	73.307	567.20	384.82	396.43	346.91	49.52	8.006	
2,200.00	2,129.90	2,118.98	2,129.90	8.10	42.91	75.490	567.20	384.82	391.77	340.92	50.85	7.704	
2,250.00	2,177.12	2,166.21	2,177.12	8.31	43.98	77.717	567.20	384.82	387.75	335.58	52.17	7.433	
2,300.00	2,224.34	2,213.44	2,224.34	8.51	44.99	79.982	567.20	384.82	384.39	330.98	53.41	7.196	
2,350.00	2,271.56	2,260.66	2,271.56	8.71	45.99	82.280	567.20	384.82	381.71	327.06	54.65	6.984	
2,400.00	2,318.79	2,307.88	2,318.79	8.91	47.00	84.603	567.20	384.82	379.72	323.84	55.89	6.795	
2,450.00	2,366.01	2,355.10	2,366.01	9.11	48.00	86.943	567.20	384.82	378.44	321.33	57.11	6.626	
2,500.00	2,413.23	2,402.35	2,413.23	9.32	49.01	89.294	567.20	384.82	377.87	319.54	58.33	6.479	
2,515.00	2,427.39	2,416.51	2,427.39	9.38	49.27	90.000	567.20	384.82	377.84	319.19	58.65	6.442	
2,550.00	2,460.45	2,449.57	2,460.45	9.52	49.89	91.647	567.20	384.82	378.01	318.60	59.41	6.363	
2,600.00	2,507.67	2,496.79	2,507.67	9.72	50.78	93.995	567.20	384.82	378.87	318.38	60.48	6.264	
2,650.00	2,554.89	2,544.01	2,554.89	9.92	51.67	96.330	567.20	384.82	380.43	318.89	61.55	6.181	
2,700.00	2,602.12	2,591.24	2,602.12	10.13	52.55	98.643	567.20	384.82	382.70	320.10	62.60	6.114	
2,750.00	2,649.34	2,638.46	2,649.34	10.33	53.44	100.928	567.20	384.82	385.65	322.02	63.64	6.060	
2,800.00	2,696.56	2,685.68	2,696.56	10.53	54.32	103.179	567.20	384.82	389.28	324.61	64.67	6.020	
2,850.00	2,743.78	2,732.90	2,743.78	10.74	55.21	105.389	567.20	384.82	393.56	327.87	65.68	5.992	
2,900.00	2,791.00	2,780.12	2,791.00	10.94	56.09	107.554	567.20	384.82	398.47	331.78	66.69	5.975	
2,950.00	2,838.22	2,827.34	2,838.22	11.14	56.98	109.667	567.20	384.82	403.99	336.30	67.69	5.968	
2,997.10	2,882.71	2,871.83	2,882.71	11.34	57.81	111.609	567.20	384.82	409.73	341.10	68.62	5.971	
3,000.00	2,885.45	2,874.57	2,885.45	11.35	57.86	111.228	567.20	384.82	410.09	341.39	68.70	5.969	
3,050.00	2,932.72	2,921.84	2,932.72	11.55	58.75	104.525	567.20	384.82	415.35	345.37	69.98	5.935	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: PUMA #1 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 209-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,100.00	2,979.98	2,969.11	2,979.98	11.75	59.64	97.887	567.20	384.82	418.68	347.53	71.16	5.884	
3,150.00	3,027.12	3,016.24	3,027.12	11.95	60.52	91.747	567.20	384.82	420.15	347.92	72.22	5.817	
3,200.00	3,073.99	3,063.11	3,073.99	12.15	61.40	86.433	567.20	384.82	419.82	346.62	73.19	5.736	
3,250.00	3,120.48	3,109.60	3,120.48	12.34	62.27	82.128	567.20	384.82	417.81	343.73	74.08	5.640	
3,300.00	3,166.44	3,155.56	3,166.44	12.53	63.13	78.886	567.20	384.82	414.25	339.35	74.89	5.531	
3,350.00	3,211.77	3,200.89	3,211.77	12.71	63.98	76.676	567.20	384.82	409.30	333.64	75.66	5.409	
3,400.00	3,256.32	3,245.45	3,256.32	12.89	64.82	75.426	567.20	384.82	403.17	326.75	76.42	5.276	
3,450.00	3,299.98	3,289.11	3,299.98	13.06	65.64	75.048	567.20	384.82	396.10	318.91	77.20	5.131	
3,500.00	3,342.64	3,331.77	3,342.64	13.23	66.45	75.449	567.20	384.82	388.38	310.37	78.01	4.978	
3,550.00	3,384.17	3,373.30	3,384.17	13.40	67.23	76.539	567.20	384.82	380.35	301.45	78.90	4.821	
3,600.00	3,424.46	3,413.59	3,424.46	13.56	67.99	78.222	567.20	384.82	372.40	292.54	79.86	4.663	
3,650.00	3,463.39	3,452.52	3,463.39	13.71	68.72	80.396	567.20	384.82	365.00	284.10	80.89	4.512	
3,700.00	3,500.87	3,490.00	3,500.87	13.87	69.43	82.949	567.20	384.82	358.65	276.69	81.97	4.376	
3,750.00	3,536.79	3,525.92	3,536.79	14.02	70.11	85.756	567.20	384.82	353.91	270.89	83.03	4.263	
3,800.00	3,571.05	3,560.18	3,571.05	14.18	70.75	88.685	567.20	384.82	351.36	267.33	84.03	4.181	
3,822.36	3,585.81	3,574.94	3,585.81	14.24	71.03	90.000	567.20	384.82	351.07	266.63	84.44	4.157	CC
3,850.00	3,603.56	3,592.69	3,603.56	14.33	71.36	91.605	567.20	384.82	351.54	266.62	84.92	4.140	ES, SF
3,900.00	3,634.23	3,623.36	3,634.23	14.49	71.94	94.390	567.20	384.82	354.94	269.28	85.66	4.144	
3,950.00	3,662.97	3,652.10	3,662.97	14.66	72.48	96.929	567.20	384.82	361.94	275.70	86.25	4.197	
4,000.00	3,689.70	3,678.83	3,689.70	14.84	72.99	99.131	567.20	384.82	372.78	286.08	86.70	4.299	
4,016.96	3,698.30	3,687.43	3,698.30	14.91	73.15	99.787	567.20	384.82	377.35	290.51	86.84	4.345	
4,050.00	3,714.82	3,703.97	3,714.82	15.04	73.47	102.003	567.20	384.82	387.62	300.68	86.94	4.458	
4,100.00	3,739.82	3,728.97	3,739.82	15.24	73.98	105.286	567.20	384.82	406.53	319.57	86.96	4.675	
4,150.00	3,764.82	3,753.97	3,764.82	15.47	74.49	108.469	567.20	384.82	428.98	342.18	86.80	4.942	
4,200.00	3,789.82	3,778.97	3,789.82	15.71	75.00	111.539	567.20	384.82	454.46	367.98	86.48	5.255	
4,216.96	3,798.30	3,787.45	3,798.30	15.80	75.18	112.552	567.20	384.82	463.70	377.36	86.35	5.370	
4,250.00	3,813.99	3,803.13	3,813.99	15.97	75.50	112.281	567.20	384.82	482.80	396.13	86.67	5.571	
4,300.00	3,834.48	3,823.62	3,834.48	16.25	75.92	111.028	567.20	384.82	514.63	427.08	87.55	5.878	
4,350.00	3,850.91	3,840.05	3,850.91	16.54	76.25	108.612	567.20	384.82	549.63	460.67	88.96	6.179	
4,400.00	3,863.17	3,852.31	3,863.17	16.84	76.50	104.851	567.20	384.82	587.34	496.53	90.80	6.468	
4,450.00	3,871.16	3,860.30	3,871.16	17.14	76.67	99.573	567.20	384.82	627.25	534.56	92.69	6.767	
4,500.00	3,874.81	3,863.96	3,874.81	17.44	76.74	92.687	567.20	384.82	668.86	575.01	93.84	7.127	
4,508.37	3,875.00	3,864.14	3,875.00	17.49	76.74	91.382	567.20	384.82	675.95	582.05	93.89	7.199	
4,550.00	3,875.62	3,864.77	3,875.62	17.75	76.76	91.482	567.20	384.82	711.65	617.47	94.18	7.556	
4,600.00	3,876.37	3,865.52	3,876.37	18.07	76.77	91.602	567.20	384.82	755.32	660.81	94.52	7.991	
4,650.00	3,877.12	3,866.27	3,877.12	18.41	76.79	91.723	567.20	384.82	799.74	704.86	94.88	8.429	
4,700.00	3,877.87	3,867.02	3,877.87	18.75	76.80	91.843	567.20	384.82	844.78	749.54	95.24	8.870	
4,750.00	3,878.62	3,867.77	3,878.62	19.10	76.82	91.963	567.20	384.82	890.35	794.73	95.62	9.311	
4,800.00	3,879.37	3,868.52	3,879.37	19.46	76.83	92.083	567.20	384.82	936.37	840.37	96.00	9.754	
4,850.00	3,880.12	3,869.27	3,880.12	19.84	76.85	92.204	567.20	384.82	982.78	886.38	96.40	10.195	
4,900.00	3,880.87	3,870.01	3,880.87	20.22	76.86	92.324	567.20	384.82	1,029.52	932.73	96.80	10.636	
4,950.00	3,881.62	3,870.76	3,881.62	20.61	76.88	92.444	567.20	384.82	1,076.56	979.35	97.21	11.075	
5,000.00	3,882.37	3,871.51	3,882.37	21.01	76.90	92.564	567.20	384.82	1,123.85	1,026.23	97.62	11.512	
5,050.00	3,883.12	3,872.26	3,883.12	21.41	76.91	92.684	567.20	384.82	1,171.37	1,073.32	98.05	11.947	
5,100.00	3,883.87	3,873.01	3,883.87	21.82	76.93	92.804	567.20	384.82	1,219.08	1,120.61	98.48	12.379	
5,150.00	3,884.62	3,873.76	3,884.62	22.24	76.94	92.924	567.20	384.82	1,266.97	1,168.06	98.92	12.809	
5,200.00	3,885.37	3,874.51	3,885.37	22.67	76.96	93.044	567.20	384.82	1,315.02	1,215.67	99.35	13.236	
5,250.00	3,886.12	3,875.26	3,886.12	23.10	76.97	93.164	567.20	384.82	1,363.21	1,263.41	99.80	13.659	
5,300.00	3,886.87	3,876.01	3,886.87	23.53	76.99	93.284	567.20	384.82	1,411.52	1,311.27	100.25	14.080	
5,350.00	3,887.61	3,876.76	3,887.61	23.98	77.00	93.404	567.20	384.82	1,459.95	1,359.24	100.71	14.497	
5,400.00	3,888.36	3,877.51	3,888.36	24.42	77.02	93.524	567.20	384.82	1,508.48	1,407.31	101.17	14.911	
5,450.00	3,889.11	3,878.26	3,889.11	24.88	77.03	93.644	567.20	384.82	1,557.10	1,455.46	101.63	15.321	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: PUMA #1 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 209-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,500.00	3,889.86	3,879.01	3,889.86	25.33	77.05	93.764	567.20	384.82	1,605.80	1,503.70	102.10	15.728	
5,550.00	3,890.61	3,879.76	3,890.61	25.79	77.06	93.884	567.20	384.82	1,654.59	1,552.01	102.57	16.131	
5,600.00	3,891.36	3,880.51	3,891.36	26.25	77.08	94.004	567.20	384.82	1,703.44	1,600.39	103.05	16.531	
5,650.00	3,892.11	3,881.26	3,892.11	26.72	77.09	94.123	567.20	384.82	1,752.36	1,648.83	103.52	16.927	
5,700.00	3,892.86	3,882.01	3,892.86	27.19	77.11	94.243	567.20	384.82	1,801.33	1,697.33	104.00	17.320	
5,750.00	3,893.61	3,882.75	3,893.61	27.67	77.13	94.363	567.20	384.82	1,850.36	1,745.87	104.49	17.709	
5,800.00	3,894.36	3,883.50	3,894.36	28.15	77.14	94.482	567.20	384.82	1,899.44	1,794.47	104.97	18.095	
5,850.00	3,895.11	3,884.25	3,895.11	28.63	77.16	94.602	567.20	384.82	1,948.57	1,843.11	105.46	18.476	
5,900.00	3,895.86	3,885.00	3,895.86	29.11	77.17	94.722	567.20	384.82	1,997.74	1,891.79	105.95	18.855	
5,950.00	3,896.61	3,885.75	3,896.61	29.60	77.19	94.841	567.20	384.82	2,046.95	1,940.51	106.45	19.230	
6,000.00	3,897.36	3,886.50	3,897.36	30.09	77.20	94.961	567.20	384.82	2,096.20	1,989.26	106.94	19.602	
6,050.00	3,898.11	3,887.25	3,898.11	30.58	77.22	95.080	567.20	384.82	2,145.48	2,038.05	107.44	19.970	
6,100.00	3,898.86	3,888.00	3,898.86	31.08	77.23	95.199	567.20	384.82	2,194.80	2,086.86	107.93	20.335	
6,150.00	3,899.61	3,888.75	3,899.61	31.57	77.25	95.319	567.20	384.82	2,244.14	2,135.71	108.43	20.696	
6,200.00	3,900.36	3,889.50	3,900.36	32.07	77.26	95.438	567.20	384.82	2,293.51	2,184.58	108.93	21.054	
6,250.00	3,901.10	3,890.25	3,901.10	32.57	77.28	95.557	567.20	384.82	2,342.91	2,233.48	109.44	21.409	
6,300.00	3,901.85	3,891.00	3,901.85	33.08	77.29	95.677	567.20	384.82	2,392.34	2,282.40	109.94	21.761	
6,350.00	3,902.60	3,891.75	3,902.60	33.58	77.31	95.796	567.20	384.82	2,441.78	2,331.34	110.44	22.109	
6,400.00	3,903.35	3,892.50	3,903.35	34.09	77.32	95.915	567.20	384.82	2,491.25	2,380.30	110.95	22.454	
6,450.00	3,904.10	3,893.25	3,904.10	34.60	77.34	96.034	567.20	384.82	2,540.74	2,429.28	111.46	22.796	
6,500.00	3,904.85	3,894.00	3,904.85	35.11	77.36	96.153	567.20	384.82	2,590.25	2,478.29	111.96	23.135	
6,550.00	3,905.60	3,894.75	3,905.60	35.62	77.37	96.272	567.20	384.82	2,639.78	2,527.30	112.47	23.470	
6,600.00	3,906.35	3,895.50	3,906.35	36.13	77.39	96.391	567.20	384.82	2,689.32	2,576.34	112.98	23.803	
6,650.00	3,907.10	3,896.24	3,907.10	36.65	77.40	96.510	567.20	384.82	2,738.88	2,625.39	113.49	24.133	
6,700.00	3,907.85	3,896.99	3,907.85	37.16	77.42	96.628	567.20	384.82	2,788.46	2,674.46	114.00	24.460	
6,750.00	3,908.60	3,897.74	3,908.60	37.68	77.43	96.747	567.20	384.82	2,838.05	2,723.53	114.51	24.783	
6,800.00	3,909.35	3,898.49	3,909.35	38.20	77.45	96.866	567.20	384.82	2,887.65	2,772.63	115.03	25.105	
6,850.00	3,910.10	3,899.24	3,910.10	38.72	77.46	96.984	567.20	384.82	2,937.27	2,821.73	115.54	25.423	
6,900.00	3,910.85	3,899.99	3,910.85	39.24	77.48	97.103	567.20	384.82	2,986.90	2,870.85	116.05	25.738	
6,950.00	3,911.60	3,900.74	3,911.60	39.76	77.49	97.221	567.20	384.82	3,036.54	2,919.98	116.56	26.050	
7,000.00	3,912.35	3,901.49	3,912.35	40.29	77.51	97.340	567.20	384.82	3,086.20	2,969.12	117.08	26.360	
7,050.00	3,913.10	3,902.24	3,913.10	40.81	77.52	97.458	567.20	384.82	3,135.86	3,018.27	117.59	26.667	
7,100.00	3,913.85	3,902.99	3,913.85	41.34	77.54	97.576	567.20	384.82	3,185.54	3,067.43	118.10	26.972	
7,150.00	3,914.59	3,903.74	3,914.59	41.86	77.55	97.695	567.20	384.82	3,235.22	3,116.60	118.62	27.274	
7,200.00	3,915.34	3,904.49	3,915.34	42.39	77.57	97.813	567.20	384.82	3,284.92	3,165.78	119.13	27.573	
7,250.00	3,916.09	3,905.24	3,916.09	42.92	77.59	97.931	567.20	384.82	3,334.62	3,214.97	119.65	27.870	
7,300.00	3,916.84	3,905.99	3,916.84	43.45	77.60	98.049	567.20	384.82	3,384.33	3,264.17	120.16	28.165	
7,350.00	3,917.59	3,906.74	3,917.59	43.98	77.62	98.167	567.20	384.82	3,434.05	3,313.37	120.68	28.456	
7,400.00	3,918.34	3,907.49	3,918.34	44.51	77.63	98.285	567.20	384.82	3,483.78	3,362.59	121.19	28.746	
7,450.00	3,919.09	3,908.24	3,919.09	45.04	77.65	98.403	567.20	384.82	3,533.51	3,411.81	121.71	29.033	
7,500.00	3,919.84	3,908.98	3,919.84	45.57	77.66	98.520	567.20	384.82	3,583.26	3,461.04	122.22	29.318	
7,550.00	3,920.59	3,909.73	3,920.59	46.11	77.68	98.638	567.20	384.82	3,633.01	3,510.27	122.74	29.600	
7,600.00	3,921.34	3,910.48	3,921.34	46.64	77.69	98.756	567.20	384.82	3,682.76	3,559.51	123.25	29.880	
7,650.00	3,922.09	3,911.23	3,922.09	47.17	77.71	98.873	567.20	384.82	3,732.53	3,608.76	123.77	30.158	
7,700.00	3,922.84	3,911.98	3,922.84	47.71	77.72	98.991	567.20	384.82	3,782.29	3,658.01	124.28	30.434	
7,750.00	3,923.59	3,912.73	3,923.59	48.24	77.74	99.108	567.20	384.82	3,832.07	3,707.27	124.79	30.707	
7,800.00	3,924.34	3,913.48	3,924.34	48.78	77.75	99.225	567.20	384.82	3,881.85	3,756.54	125.31	30.978	
7,850.00	3,925.09	3,914.23	3,925.09	49.32	77.77	99.343	567.20	384.82	3,931.63	3,805.81	125.82	31.247	
7,900.00	3,925.84	3,914.98	3,925.84	49.86	77.78	99.460	567.20	384.82	3,981.42	3,855.09	126.34	31.515	
7,950.00	3,926.59	3,915.73	3,926.59	50.39	77.80	99.577	567.20	384.82	4,031.22	3,904.37	126.85	31.780	
8,000.00	3,927.33	3,916.48	3,927.33	50.93	77.81	99.694	567.20	384.82	4,081.02	3,953.66	127.36	32.043	
8,050.00	3,928.08	3,917.23	3,928.08	51.47	77.83	99.811	567.20	384.82	4,130.83	4,002.95	127.88	32.304	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: PUMA #1 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

Survey Program: 209-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,100.00	3,928.83	3,917.98	3,928.83	52.01	77.85	99.928	567.20	384.82	4,180.64	4,052.25	128.39	32.563	
8,150.00	3,929.58	3,918.73	3,929.58	52.55	77.86	100.044	567.20	384.82	4,230.45	4,101.55	128.90	32.820	
8,200.00	3,930.33	3,919.48	3,930.33	53.09	77.88	100.161	567.20	384.82	4,280.27	4,150.86	129.41	33.075	
8,250.00	3,931.08	3,920.23	3,931.08	53.63	77.89	100.278	567.20	384.82	4,330.09	4,200.17	129.92	33.328	
8,300.00	3,931.83	3,920.98	3,931.83	54.17	77.91	100.394	567.20	384.82	4,379.92	4,249.48	130.43	33.580	
8,350.00	3,932.58	3,921.73	3,932.58	54.72	77.92	100.510	567.20	384.82	4,429.75	4,298.80	130.94	33.829	
8,400.00	3,933.33	3,922.47	3,933.33	55.26	77.94	100.627	567.20	384.82	4,479.58	4,348.13	131.45	34.077	
8,450.00	3,934.08	3,923.22	3,934.08	55.80	77.95	100.743	567.20	384.82	4,529.42	4,397.45	131.96	34.323	
8,500.00	3,934.83	3,923.97	3,934.83	56.34	77.97	100.859	567.20	384.82	4,579.26	4,446.79	132.47	34.567	
8,550.00	3,935.58	3,924.72	3,935.58	56.89	77.98	100.975	567.20	384.82	4,629.10	4,496.12	132.98	34.810	
8,600.00	3,936.33	3,925.47	3,936.33	57.43	78.00	101.091	567.20	384.82	4,678.95	4,545.46	133.49	35.051	
8,650.00	3,937.08	3,926.22	3,937.08	57.98	78.01	101.207	567.20	384.82	4,728.80	4,594.80	134.00	35.290	
8,700.00	3,937.83	3,926.97	3,937.83	58.52	78.03	101.323	567.20	384.82	4,778.66	4,644.15	134.51	35.527	
8,750.00	3,938.58	3,927.72	3,938.58	59.07	78.04	101.438	567.20	384.82	4,828.51	4,693.50	135.01	35.763	
8,800.00	3,939.33	3,928.47	3,939.33	59.61	78.06	101.554	567.20	384.82	4,878.37	4,742.85	135.52	35.997	
8,850.00	3,940.08	3,929.22	3,940.08	60.16	78.08	101.670	567.20	384.82	4,928.23	4,792.21	136.03	36.230	
8,900.00	3,940.82	3,929.97	3,940.82	60.70	78.09	101.785	567.20	384.82	4,978.10	4,841.57	136.53	36.461	
8,950.00	3,941.57	3,930.72	3,941.57	61.25	78.11	101.900	567.20	384.82	5,027.96	4,890.93	137.04	36.691	
9,000.00	3,942.32	3,931.47	3,942.32	61.80	78.12	102.015	567.20	384.82	5,077.83	4,940.29	137.54	36.919	
9,050.00	3,943.07	3,932.22	3,943.07	62.34	78.14	102.130	567.20	384.82	5,127.71	4,989.66	138.04	37.145	
9,100.00	3,943.82	3,932.97	3,943.82	62.89	78.15	102.245	567.20	384.82	5,177.58	5,039.03	138.55	37.370	
9,150.00	3,944.57	3,933.72	3,944.57	63.44	78.17	102.360	567.20	384.82	5,227.46	5,088.41	139.05	37.594	
9,200.00	3,945.32	3,934.47	3,945.32	63.98	78.18	102.475	567.20	384.82	5,277.34	5,137.78	139.55	37.816	
9,250.00	3,946.07	3,935.21	3,946.07	64.53	78.20	102.590	567.20	384.82	5,327.22	5,187.16	140.05	38.037	
9,300.00	3,946.82	3,935.96	3,946.82	65.08	78.21	102.704	567.20	384.82	5,377.10	5,236.55	140.55	38.257	
9,350.00	3,947.57	3,936.71	3,947.57	65.63	78.23	102.819	567.20	384.82	5,426.99	5,285.93	141.05	38.475	
9,400.00	3,948.32	3,937.46	3,948.32	66.18	78.24	102.933	567.20	384.82	5,476.87	5,335.32	141.55	38.691	
9,450.00	3,949.07	3,938.21	3,949.07	66.73	78.26	103.048	567.20	384.82	5,526.76	5,384.71	142.05	38.907	
9,500.00	3,949.82	3,938.96	3,949.82	67.28	78.27	103.162	567.20	384.82	5,576.65	5,434.10	142.55	39.121	
9,550.00	3,950.57	3,939.71	3,950.57	67.83	78.29	103.276	567.20	384.82	5,626.55	5,483.50	143.05	39.334	
9,600.00	3,951.32	3,940.46	3,951.32	68.38	78.31	103.390	567.20	384.82	5,676.44	5,532.90	143.54	39.545	
9,650.00	3,952.07	3,941.21	3,952.07	68.93	78.32	103.504	567.20	384.82	5,726.34	5,582.30	144.04	39.755	
9,700.00	3,952.82	3,941.96	3,952.82	69.48	78.34	103.617	567.20	384.82	5,776.24	5,631.70	144.53	39.964	
9,750.00	3,953.56	3,942.71	3,953.56	70.03	78.35	103.731	567.20	384.82	5,826.14	5,681.11	145.03	40.172	
9,800.00	3,954.31	3,943.46	3,954.31	70.58	78.37	103.845	567.20	384.82	5,876.04	5,730.51	145.52	40.379	
9,850.00	3,955.06	3,944.21	3,955.06	71.13	78.38	103.958	567.20	384.82	5,925.94	5,779.92	146.02	40.584	
9,900.00	3,955.81	3,944.96	3,955.81	71.68	78.40	104.071	567.20	384.82	5,975.84	5,829.34	146.51	40.788	
9,950.00	3,956.56	3,945.71	3,956.56	72.23	78.41	104.184	567.20	384.82	6,025.75	5,878.75	147.00	40.991	
10,000.00	3,957.31	3,946.46	3,957.31	72.78	78.43	104.298	567.20	384.82	6,075.66	5,928.17	147.49	41.193	
10,050.00	3,958.06	3,947.21	3,958.06	73.33	78.44	104.411	567.20	384.82	6,125.57	5,977.58	147.98	41.394	
10,100.00	3,958.81	3,947.96	3,958.81	73.88	78.46	104.523	567.20	384.82	6,175.48	6,027.01	148.47	41.594	
10,150.00	3,959.56	3,948.70	3,959.56	74.43	78.47	104.636	567.20	384.82	6,225.39	6,076.43	148.96	41.792	
10,200.00	3,960.31	3,949.45	3,960.31	74.99	78.49	104.749	567.20	384.82	6,275.30	6,125.85	149.45	41.990	
10,250.00	3,961.06	3,950.20	3,961.06	75.54	78.50	104.861	567.20	384.82	6,325.22	6,175.28	149.94	42.186	
10,300.00	3,961.81	3,950.95	3,961.81	76.09	78.52	104.974	567.20	384.82	6,375.13	6,224.71	150.42	42.382	
10,350.00	3,962.56	3,951.70	3,962.56	76.64	78.54	105.086	567.20	384.82	6,425.05	6,274.14	150.91	42.576	
10,400.00	3,963.31	3,952.45	3,963.31	77.20	78.55	105.198	567.20	384.82	6,474.97	6,323.57	151.39	42.769	
10,450.00	3,964.06	3,953.20	3,964.06	77.75	78.57	105.310	567.20	384.82	6,524.88	6,373.01	151.88	42.962	
10,500.00	3,964.81	3,953.95	3,964.81	78.30	78.58	105.422	567.20	384.82	6,574.80	6,422.44	152.36	43.153	
10,550.00	3,965.56	3,954.70	3,965.56	78.85	78.60	105.534	567.20	384.82	6,624.73	6,471.88	152.84	43.344	
10,600.00	3,966.31	3,955.45	3,966.31	79.41	78.61	105.645	567.20	384.82	6,674.65	6,521.32	153.32	43.533	
10,650.00	3,967.05	3,956.20	3,967.05	79.96	78.63	105.757	567.20	384.82	6,724.57	6,570.77	153.80	43.721	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Offset Design AID NORTH 14-13 STATE COM - OFFSET: PUMA #1 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

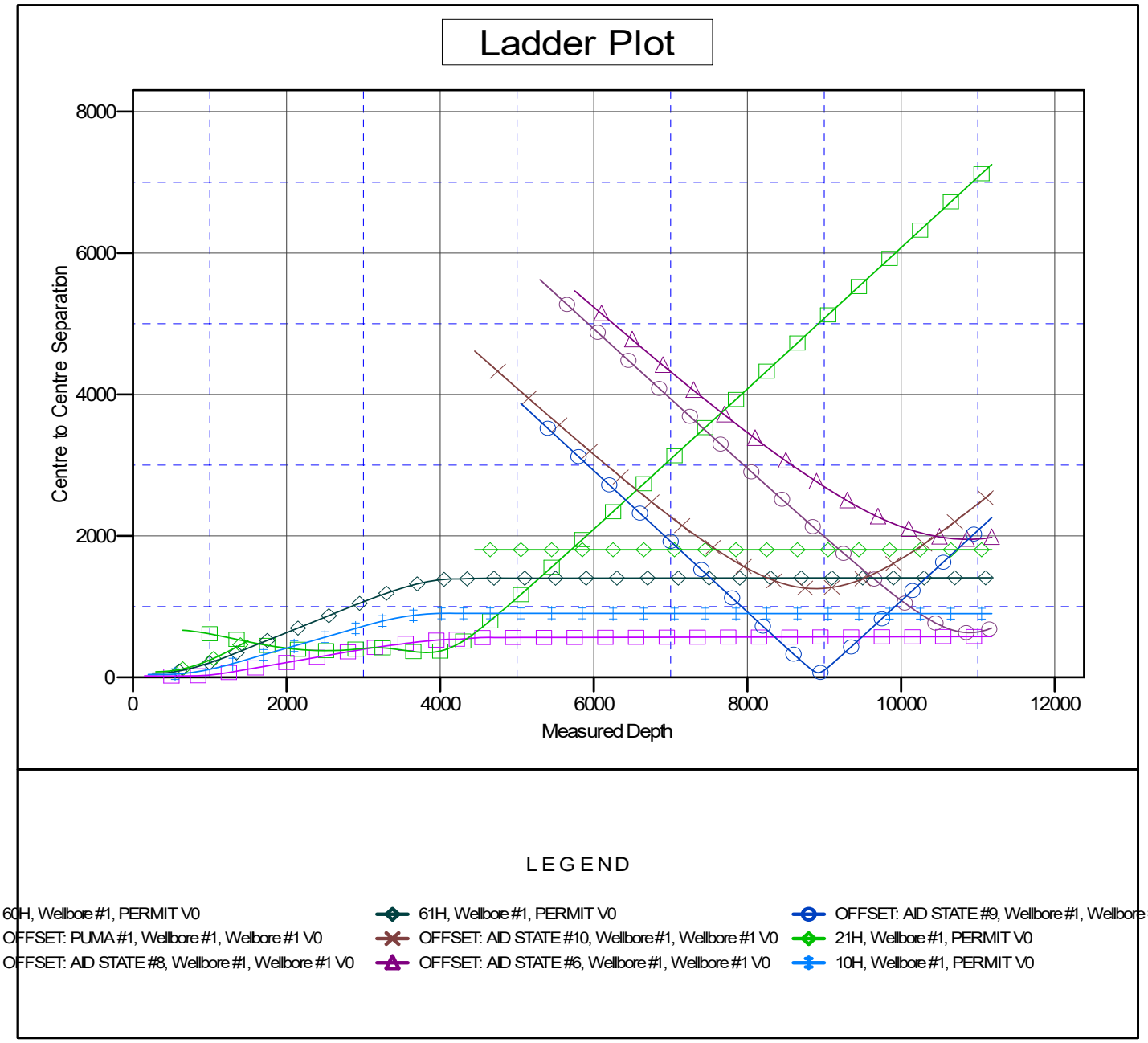
Survey Program: 209-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,700.00	3,967.80	3,956.95	3,967.80	80.51	78.64	105.868	567.20	384.82	6,774.50	6,620.21	154.28	43.909	
10,750.00	3,968.55	3,957.70	3,968.55	81.07	78.66	105.980	567.20	384.82	6,824.42	6,669.66	154.76	44.096	
10,800.00	3,969.30	3,958.45	3,969.30	81.62	78.67	106.091	567.20	384.82	6,874.35	6,719.11	155.24	44.281	
10,850.00	3,970.05	3,959.20	3,970.05	82.17	78.69	106.202	567.20	384.82	6,924.28	6,768.56	155.72	44.466	
10,900.00	3,970.80	3,959.95	3,970.80	82.73	78.70	106.313	567.20	384.82	6,974.20	6,818.01	156.20	44.650	
10,950.00	3,971.55	3,960.70	3,971.55	83.28	78.72	106.424	567.20	384.82	7,024.13	6,867.46	156.67	44.833	
11,000.00	3,972.30	3,961.45	3,972.30	83.84	78.73	106.534	567.20	384.82	7,074.06	6,916.92	157.15	45.015	
11,050.00	3,973.05	3,962.19	3,973.05	84.39	78.75	106.645	567.20	384.82	7,124.00	6,966.37	157.62	45.197	
11,100.00	3,973.80	3,962.94	3,973.80	84.95	78.77	106.755	567.20	384.82	7,173.93	7,015.83	158.10	45.377	
11,130.16	3,974.25	3,963.40	3,974.25	85.28	78.77	106.822	567.20	384.82	7,204.05	7,045.67	158.38	45.486	
11,150.00	3,974.55	3,963.69	3,974.55	85.50	78.78	106.866	567.20	384.82	7,223.86	7,065.29	158.57	45.557	
11,180.09	3,975.00	3,964.14	3,975.00	85.83	78.79	106.932	567.20	384.82	7,253.91	7,095.06	158.85	45.665	

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to RKB = 20' @ 3620.00usft (AKITA 57) Coordinates are relative to: 20H
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is -104.3333333 Grid Convergence at Surface is: 0.101°



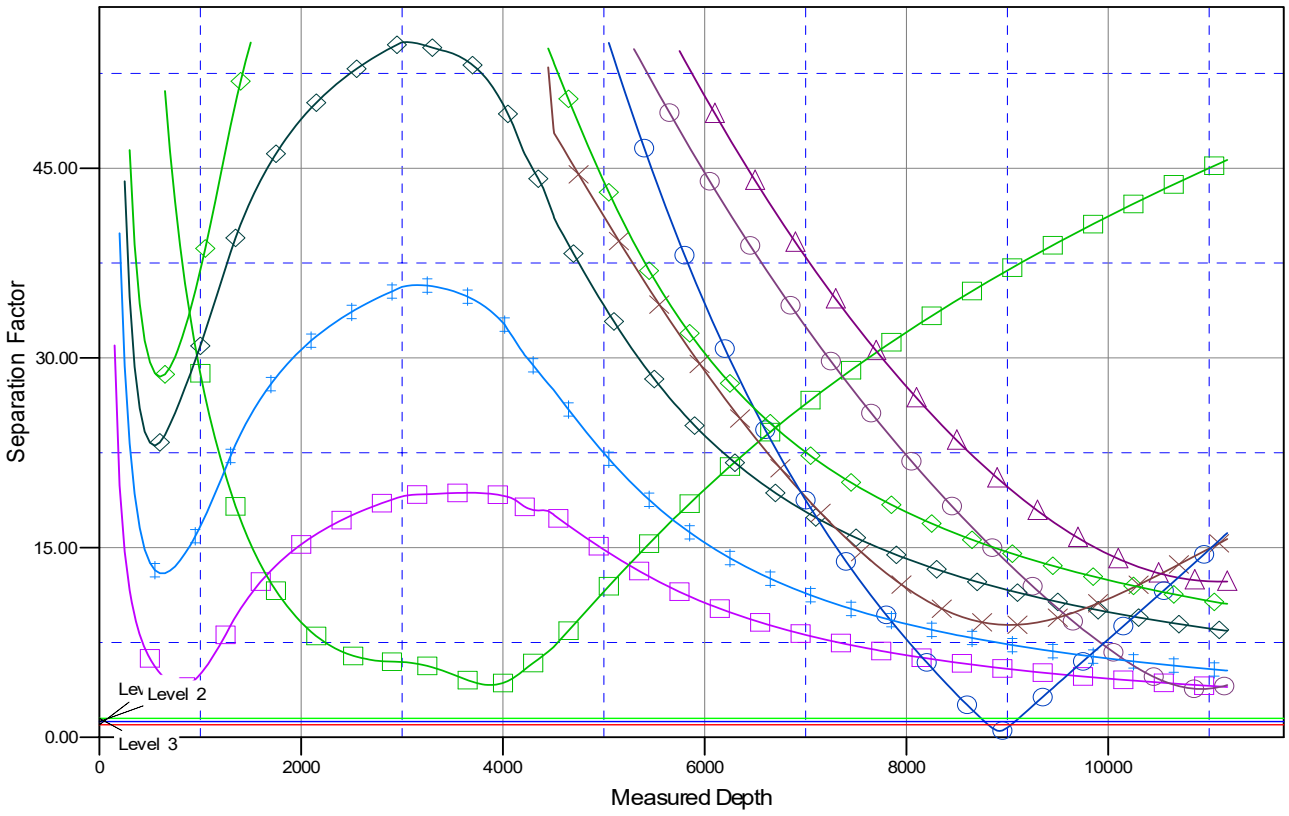
SPUR ENERGY PARTNERS

Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	**Local Co-ordinate Reference:**	Well 20H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Reference Site:	AID NORTH 14-13 STATE COM	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to RKB = 20' @ 3620.00usft (AKITA 57)
Offset Depths are relative to Offset Datum
Central Meridian is -104.3333333
Coordinates are relative to: 20H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.101°

Separation Factor Plot



LEGEND

60H, Wellbore #1, PERMIT V0
61H, Wellbore #1, PERMIT V0
OFFSET: AID STATE #9, Wellbore #1, Wellbore #
OFFSET: PUMA #1, Wellbore #1, Wellbore #1 V0
OFFSET: AID STATE #10, Wellbore #1, Wellbore #1 V0
21H, Wellbore #1, PERMIT V0
OFFSET: AID STATE #8, Wellbore #1, Wellbore #1 V0
OFFSET: AID STATE #6, Wellbore #1, Wellbore #1 V0
10H, Wellbore #1, PERMIT V0

SPUR ENERGY PARTNERS, LLC

EDDY COUNTY, NM (NAD 83 - NME)
AID NORTH 14-13 STATE COM
20H

Wellbore #1

Plan: PERMIT

Standard Planning Report

01 August, 2023

SPUR ENERGY PARTNERS

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 20H
Company:	SPUR ENERGY PARTNERS, LLC	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site:	AID NORTH 14-13 STATE COM	**North Reference:**	Grid
Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

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 AID NORTH 14-13 STATE COM

Site Position:		**Northing:**	669,070.00 usft	**Latitude:**	32.8391593
From:	Map	**Easting:**	598,767.90 usft	**Longitude:**	-104.1463439
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.101 °

Well 20H

Well Position	**+N/-S**	40.00 usft	**Northing:**	669,110.00 usft	**Latitude:**	32.8392692
	+E/-W	-0.30 usft	**Easting:**	598,767.60 usft	**Longitude:**	-104.1463446
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	3,600.00 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	08/01/23	6.613	60.303	47,575

Design PERMIT

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	88.76

Plan Sections

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	0.000	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,259.51	19.19	0.70	1,241.67	159.18	1.95	2.00	2.00	0.00	0.702	
2,997.10	19.19	0.70	2,882.71	730.29	8.95	0.00	0.00	0.00	0.000	
4,016.96	60.00	88.76	3,698.30	926.50	500.11	6.00	4.00	8.63	98.966	
4,216.96	60.00	88.76	3,798.30	930.26	673.27	0.00	0.00	0.00	0.000	
4,508.37	89.14	88.76	3,875.00	936.30	951.10	10.00	10.00	0.00	0.000	AID NORTH 20H F
11,130.16	89.14	88.76	3,974.25	1,080.12	7,570.58	0.00	0.00	0.00	0.000	AID NORTH 20H L
11,180.09	89.14	88.76	3,975.00	1,081.20	7,620.50	0.00	0.00	0.00	0.000	AID NORTH 20H B

SPUR ENERGY PARTNERS

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 20H
Company:	SPUR ENERGY PARTNERS, LLC	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site:	AID NORTH 14-13 STATE COM	**North Reference:**	Grid
Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AID NORTH 20H SHL: 1188' FNL, 2382' FEL									
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	0.70	399.98	1.75	0.02	0.06	2.00	2.00	0.00
500.00	4.00	0.70	499.84	6.98	0.09	0.24	2.00	2.00	0.00
600.00	6.00	0.70	599.45	15.69	0.19	0.53	2.00	2.00	0.00
700.00	8.00	0.70	698.70	27.88	0.34	0.94	2.00	2.00	0.00
800.00	10.00	0.70	797.47	43.52	0.53	1.48	2.00	2.00	0.00
900.00	12.00	0.70	895.62	62.60	0.77	2.12	2.00	2.00	0.00
1,000.00	14.00	0.70	993.06	85.09	1.04	2.88	2.00	2.00	0.00
1,100.00	16.00	0.70	1,089.64	110.97	1.36	3.76	2.00	2.00	0.00
1,200.00	18.00	0.70	1,185.27	140.20	1.72	4.75	2.00	2.00	0.00
1,259.51	19.19	0.70	1,241.67	159.18	1.95	5.40	2.00	2.00	0.00
1,300.00	19.19	0.70	1,279.91	172.49	2.11	5.85	0.00	0.00	0.00
1,400.00	19.19	0.70	1,374.35	205.35	2.52	6.96	0.00	0.00	0.00
1,500.00	19.19	0.70	1,468.80	238.22	2.92	8.08	0.00	0.00	0.00
1,600.00	19.19	0.70	1,563.24	271.09	3.32	9.19	0.00	0.00	0.00
1,700.00	19.19	0.70	1,657.68	303.96	3.73	10.30	0.00	0.00	0.00
1,800.00	19.19	0.70	1,752.13	336.83	4.13	11.42	0.00	0.00	0.00
1,900.00	19.19	0.70	1,846.57	369.69	4.53	12.53	0.00	0.00	0.00
2,000.00	19.19	0.70	1,941.01	402.56	4.94	13.65	0.00	0.00	0.00
2,100.00	19.19	0.70	2,035.46	435.43	5.34	14.76	0.00	0.00	0.00
2,200.00	19.19	0.70	2,129.90	468.30	5.74	15.87	0.00	0.00	0.00
2,300.00	19.19	0.70	2,224.34	501.17	6.14	16.99	0.00	0.00	0.00
2,400.00	19.19	0.70	2,318.79	534.03	6.55	18.10	0.00	0.00	0.00
2,500.00	19.19	0.70	2,413.23	566.90	6.95	19.22	0.00	0.00	0.00
2,600.00	19.19	0.70	2,507.67	599.77	7.35	20.33	0.00	0.00	0.00
2,700.00	19.19	0.70	2,602.12	632.64	7.76	21.44	0.00	0.00	0.00
2,800.00	19.19	0.70	2,696.56	665.51	8.16	22.56	0.00	0.00	0.00
2,900.00	19.19	0.70	2,791.00	698.38	8.56	23.67	0.00	0.00	0.00
2,997.10	19.19	0.70	2,882.71	730.29	8.95	24.76	0.00	0.00	0.00
AID NORTH 20H KOP: 2997.10' MD									
3,000.00	19.16	1.23	2,885.45	731.24	8.97	24.79	6.00	-0.91	18.05
3,050.00	18.95	10.40	2,932.72	747.44	10.61	26.78	6.00	-0.43	18.35
3,100.00	19.18	19.56	2,979.98	763.16	14.83	31.34	6.00	0.48	18.33
3,150.00	19.86	28.32	3,027.12	778.39	21.61	38.45	6.00	1.35	17.51
3,200.00	20.93	36.37	3,073.99	793.06	30.94	48.09	6.00	2.14	16.10
3,250.00	22.34	43.55	3,120.48	807.14	42.78	60.24	6.00	2.82	14.37
3,300.00	24.03	49.85	3,166.44	820.60	57.12	74.86	6.00	3.38	12.60
3,350.00	25.95	55.32	3,211.77	833.39	73.90	91.92	6.00	3.83	10.94
3,400.00	28.04	60.06	3,256.32	845.48	93.09	111.36	6.00	4.19	9.48
3,450.00	30.28	64.17	3,299.98	856.84	114.62	133.14	6.00	4.47	8.22
3,500.00	32.63	67.76	3,342.64	867.44	138.45	157.19	6.00	4.69	7.17
3,550.00	35.06	70.90	3,384.17	877.24	164.50	183.45	6.00	4.87	6.29
3,600.00	37.57	73.68	3,424.46	886.23	192.71	211.84	6.00	5.02	5.56
3,650.00	40.14	76.16	3,463.39	894.36	222.99	242.30	6.00	5.13	4.96
3,700.00	42.75	78.39	3,500.87	901.64	255.27	274.72	6.00	5.23	4.45
3,750.00	45.40	80.40	3,536.79	908.02	289.45	309.04	6.00	5.31	4.03
3,800.00	48.09	82.24	3,571.05	913.50	325.45	345.14	6.00	5.37	3.68
3,850.00	50.80	83.93	3,603.56	918.07	363.15	382.94	6.00	5.42	3.38
3,900.00	53.53	85.49	3,634.23	921.70	402.47	422.32	6.00	5.47	3.12
3,950.00	56.29	86.95	3,662.97	924.39	443.29	463.19	6.00	5.51	2.91

SPUR ENERGY PARTNERS

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 20H
Company:	SPUR ENERGY PARTNERS, LLC	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site:	AID NORTH 14-13 STATE COM	**North Reference:**	Grid
Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned 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)
4,000.00	59.06	88.31	3,689.70	926.13	485.50	505.43	6.00	5.54	2.73
4,016.96	60.00	88.76	3,698.30	926.50	500.11	520.04	6.00	5.56	2.62
4,100.00	60.00	88.76	3,739.82	928.06	572.01	591.96	0.00	0.00	0.00
4,200.00	60.00	88.76	3,789.82	929.94	658.59	678.56	0.00	0.00	0.00
4,216.96	60.00	88.76	3,798.30	930.26	673.27	693.25	0.00	0.00	0.00
4,250.00	63.30	88.76	3,813.99	930.90	702.34	722.32	10.00	10.00	0.00
4,300.00	68.30	88.76	3,834.48	931.89	747.93	767.92	10.00	10.00	0.00
4,350.00	73.30	88.76	3,850.91	932.91	795.12	815.12	10.00	10.00	0.00
4,400.00	78.30	88.76	3,863.17	933.96	843.57	863.58	10.00	10.00	0.00
4,450.00	83.30	88.76	3,871.16	935.04	892.90	912.92	10.00	10.00	0.00
4,500.00	88.30	88.76	3,874.81	936.12	942.73	962.77	10.00	10.00	0.00
4,508.37	89.14	88.76	3,875.00	936.30	951.10	971.14	10.00	10.00	0.00
AID NORTH 20H FTP: 344' FNL, 1406' FEL									
4,600.00	89.14	88.76	3,876.37	938.29	1,042.70	1,062.76	0.00	0.00	0.00
4,700.00	89.14	88.76	3,877.87	940.46	1,142.66	1,162.75	0.00	0.00	0.00
4,800.00	89.14	88.76	3,879.37	942.63	1,242.63	1,262.74	0.00	0.00	0.00
4,900.00	89.14	88.76	3,880.87	944.81	1,342.59	1,362.73	0.00	0.00	0.00
5,000.00	89.14	88.76	3,882.37	946.98	1,442.56	1,462.71	0.00	0.00	0.00
5,100.00	89.14	88.76	3,883.87	949.15	1,542.52	1,562.70	0.00	0.00	0.00
5,200.00	89.14	88.76	3,885.37	951.32	1,642.49	1,662.69	0.00	0.00	0.00
5,300.00	89.14	88.76	3,886.87	953.49	1,742.45	1,762.68	0.00	0.00	0.00
5,400.00	89.14	88.76	3,888.36	955.66	1,842.42	1,862.67	0.00	0.00	0.00
5,500.00	89.14	88.76	3,889.86	957.84	1,942.38	1,962.66	0.00	0.00	0.00
5,600.00	89.14	88.76	3,891.36	960.01	2,042.35	2,062.65	0.00	0.00	0.00
5,700.00	89.14	88.76	3,892.86	962.18	2,142.32	2,162.64	0.00	0.00	0.00
5,800.00	89.14	88.76	3,894.36	964.35	2,242.28	2,262.62	0.00	0.00	0.00
5,900.00	89.14	88.76	3,895.86	966.52	2,342.25	2,362.61	0.00	0.00	0.00
6,000.00	89.14	88.76	3,897.36	968.70	2,442.21	2,462.60	0.00	0.00	0.00
6,100.00	89.14	88.76	3,898.86	970.87	2,542.18	2,562.59	0.00	0.00	0.00
6,200.00	89.14	88.76	3,900.36	973.04	2,642.14	2,662.58	0.00	0.00	0.00
6,300.00	89.14	88.76	3,901.85	975.21	2,742.11	2,762.57	0.00	0.00	0.00
6,400.00	89.14	88.76	3,903.35	977.38	2,842.07	2,862.56	0.00	0.00	0.00
6,500.00	89.14	88.76	3,904.85	979.56	2,942.04	2,962.55	0.00	0.00	0.00
6,600.00	89.14	88.76	3,906.35	981.73	3,042.00	3,062.53	0.00	0.00	0.00
6,700.00	89.14	88.76	3,907.85	983.90	3,141.97	3,162.52	0.00	0.00	0.00
6,800.00	89.14	88.76	3,909.35	986.07	3,241.93	3,262.51	0.00	0.00	0.00
6,900.00	89.14	88.76	3,910.85	988.24	3,341.90	3,362.50	0.00	0.00	0.00
7,000.00	89.14	88.76	3,912.35	990.41	3,441.86	3,462.49	0.00	0.00	0.00
7,100.00	89.14	88.76	3,913.85	992.59	3,541.83	3,562.48	0.00	0.00	0.00
7,200.00	89.14	88.76	3,915.34	994.76	3,641.79	3,662.47	0.00	0.00	0.00
7,300.00	89.14	88.76	3,916.84	996.93	3,741.76	3,762.46	0.00	0.00	0.00
7,400.00	89.14	88.76	3,918.34	999.10	3,841.72	3,862.44	0.00	0.00	0.00
7,500.00	89.14	88.76	3,919.84	1,001.27	3,941.69	3,962.43	0.00	0.00	0.00
7,600.00	89.14	88.76	3,921.34	1,003.45	4,041.65	4,062.42	0.00	0.00	0.00
7,700.00	89.14	88.76	3,922.84	1,005.62	4,141.62	4,162.41	0.00	0.00	0.00
7,800.00	89.14	88.76	3,924.34	1,007.79	4,241.58	4,262.40	0.00	0.00	0.00
7,900.00	89.14	88.76	3,925.84	1,009.96	4,341.55	4,362.39	0.00	0.00	0.00
8,000.00	89.14	88.76	3,927.33	1,012.13	4,441.51	4,462.38	0.00	0.00	0.00
8,100.00	89.14	88.76	3,928.83	1,014.30	4,541.48	4,562.37	0.00	0.00	0.00
8,200.00	89.14	88.76	3,930.33	1,016.48	4,641.44	4,662.35	0.00	0.00	0.00
8,300.00	89.14	88.76	3,931.83	1,018.65	4,741.41	4,762.34	0.00	0.00	0.00
8,400.00	89.14	88.76	3,933.33	1,020.82	4,841.37	4,862.33	0.00	0.00	0.00
8,500.00	89.14	88.76	3,934.83	1,022.99	4,941.34	4,962.32	0.00	0.00	0.00
8,600.00	89.14	88.76	3,936.33	1,025.16	5,041.31	5,062.31	0.00	0.00	0.00

SPUR ENERGY PARTNERS

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 20H
Company:	SPUR ENERGY PARTNERS, LLC	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site:	AID NORTH 14-13 STATE COM	**North Reference:**	Grid
Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned 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)
8,700.00	89.14	88.76	3,937.83	1,027.34	5,141.27	5,162.30	0.00	0.00	0.00
8,800.00	89.14	88.76	3,939.33	1,029.51	5,241.24	5,262.29	0.00	0.00	0.00
8,900.00	89.14	88.76	3,940.82	1,031.68	5,341.20	5,362.28	0.00	0.00	0.00
9,000.00	89.14	88.76	3,942.32	1,033.85	5,441.17	5,462.26	0.00	0.00	0.00
9,100.00	89.14	88.76	3,943.82	1,036.02	5,541.13	5,562.25	0.00	0.00	0.00
9,200.00	89.14	88.76	3,945.32	1,038.20	5,641.10	5,662.24	0.00	0.00	0.00
9,300.00	89.14	88.76	3,946.82	1,040.37	5,741.06	5,762.23	0.00	0.00	0.00
9,400.00	89.14	88.76	3,948.32	1,042.54	5,841.03	5,862.22	0.00	0.00	0.00
9,500.00	89.14	88.76	3,949.82	1,044.71	5,940.99	5,962.21	0.00	0.00	0.00
9,600.00	89.14	88.76	3,951.32	1,046.88	6,040.96	6,062.20	0.00	0.00	0.00
9,700.00	89.14	88.76	3,952.82	1,049.05	6,140.92	6,162.19	0.00	0.00	0.00
9,800.00	89.14	88.76	3,954.31	1,051.23	6,240.89	6,262.17	0.00	0.00	0.00
9,900.00	89.14	88.76	3,955.81	1,053.40	6,340.85	6,362.16	0.00	0.00	0.00
10,000.00	89.14	88.76	3,957.31	1,055.57	6,440.82	6,462.15	0.00	0.00	0.00
10,100.00	89.14	88.76	3,958.81	1,057.74	6,540.78	6,562.14	0.00	0.00	0.00
10,200.00	89.14	88.76	3,960.31	1,059.91	6,640.75	6,662.13	0.00	0.00	0.00
10,300.00	89.14	88.76	3,961.81	1,062.09	6,740.71	6,762.12	0.00	0.00	0.00
10,400.00	89.14	88.76	3,963.31	1,064.26	6,840.68	6,862.11	0.00	0.00	0.00
10,500.00	89.14	88.76	3,964.81	1,066.43	6,940.64	6,962.10	0.00	0.00	0.00
10,600.00	89.14	88.76	3,966.31	1,068.60	7,040.61	7,062.09	0.00	0.00	0.00
10,700.00	89.14	88.76	3,967.80	1,070.77	7,140.57	7,162.07	0.00	0.00	0.00
10,800.00	89.14	88.76	3,969.30	1,072.94	7,240.54	7,262.06	0.00	0.00	0.00
10,900.00	89.14	88.76	3,970.80	1,075.12	7,340.50	7,362.05	0.00	0.00	0.00
11,000.00	89.14	88.76	3,972.30	1,077.29	7,440.47	7,462.04	0.00	0.00	0.00
11,100.00	89.14	88.76	3,973.80	1,079.46	7,540.43	7,562.03	0.00	0.00	0.00
11,130.16	89.14	88.76	3,974.25	1,080.12	7,570.58	7,592.19	0.00	0.00	0.00
AID NORTH 20H LTP: 100' FEL									
11,180.09	89.14	88.76	3,975.00	1,081.20	7,620.50	7,642.11	0.00	0.00	0.00
AID NORTH 20H BHL: 350' FNL, 50' FEL									

Design Targets

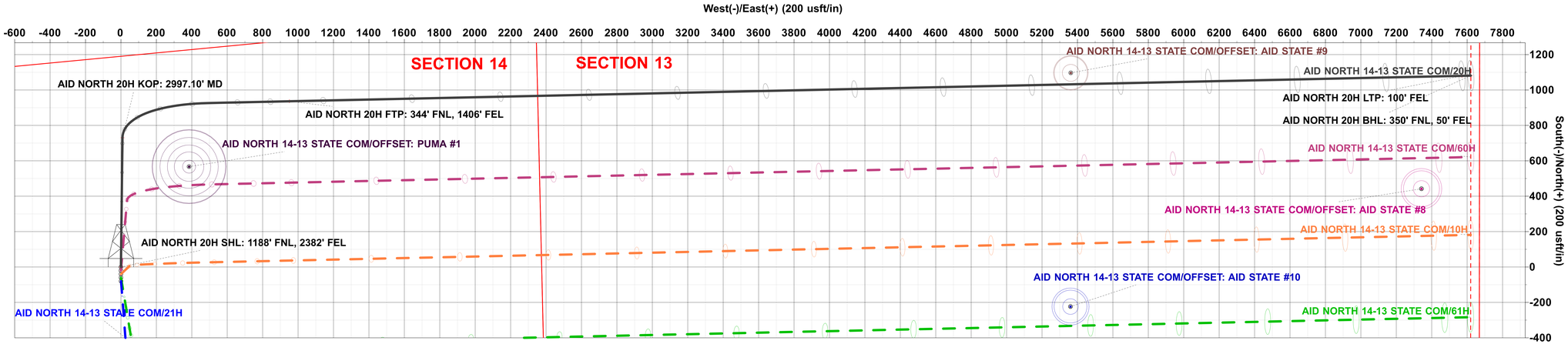
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
AID NORTH 20H SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	669,110.00	598,767.60	32.8392692	-104.1463446
AID NORTH 20H KOP - plan hits target center - Point	0.00	0.01	2,882.71	730.29	8.95	669,840.30	598,776.56	32.8412765	-104.1463113
AID NORTH 20H FTP - plan hits target center - Point	0.00	0.00	3,875.00	936.30	951.10	670,046.30	599,718.70	32.8418381	-104.1432425
AID NORTH 20H LTP - plan misses target center by 0.72usft at 11130.16usft MD (3974.25 TVD, 1080.12 N, 7570.58 E) - Point	0.00	0.00	3,974.25	1,079.40	7,570.60	670,189.40	606,338.20	32.8421968	-104.1216884
AID NORTH 20H BHL - plan hits target center - Point	0.00	0.00	3,975.00	1,081.20	7,620.50	670,191.20	606,388.10	32.8422015	-104.1215259

SPUR ENERGY PARTNERS

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 20H
Company:	SPUR ENERGY PARTNERS, LLC	**TVD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**MD Reference:**	RKB = 20' @ 3620.00usft (AKITA 57)
Site:	AID NORTH 14-13 STATE COM	**North Reference:**	Grid
Well:	20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Project: EDDY COUNTY, NM (NAD 83 - NME)
Site: AID NORTH 14-13 STATE COM
Well: 20H
Wellbore: Wellbore #1
Design: PERMIT



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

WELL DETAILS: 20H

Rig Name: AKITA 57 RKB = 20' @ 3620.00usft (AKITA 57)
Ground Level: 3600.00

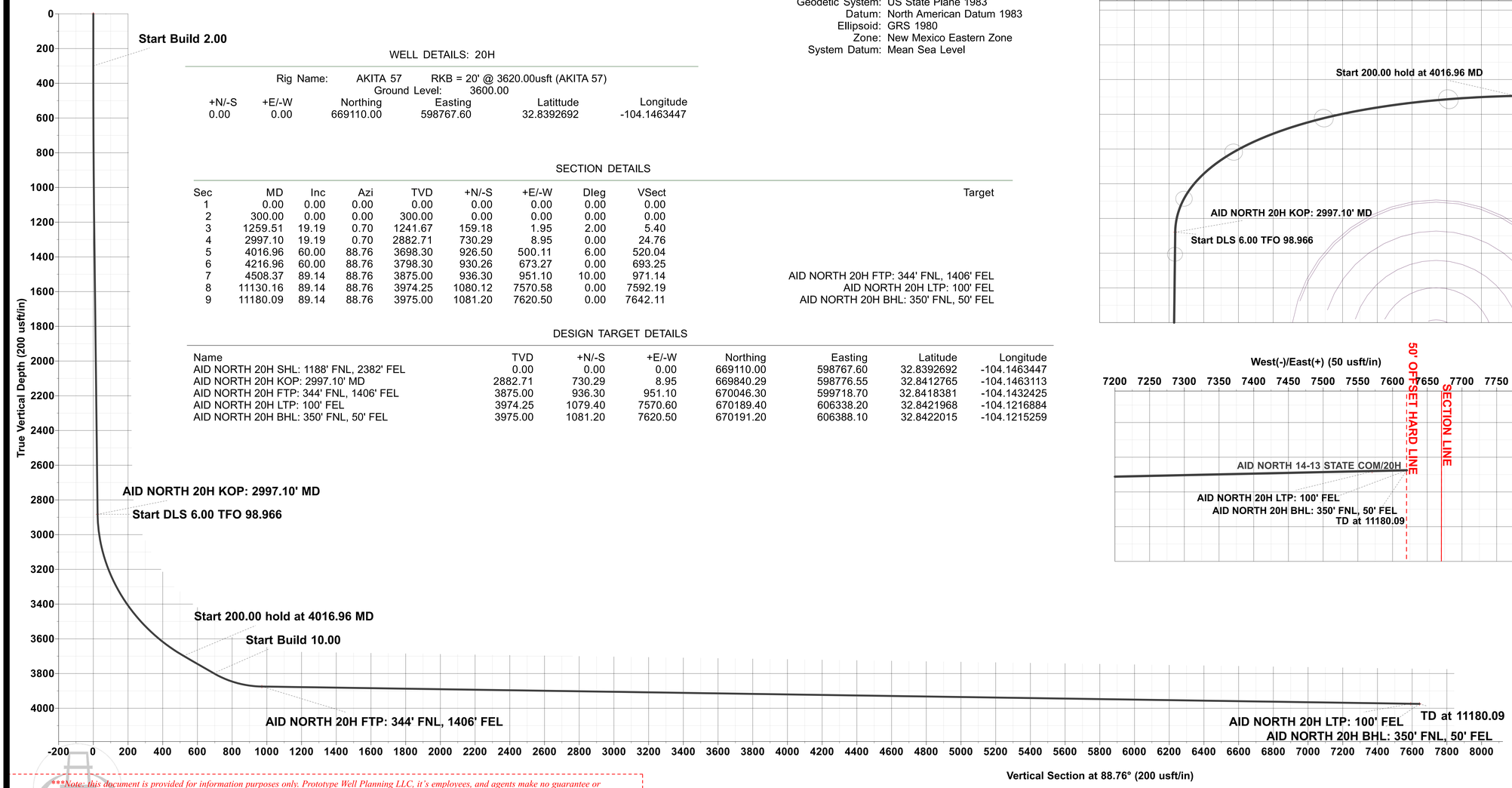
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	669110.00	598767.60	32.8392692	-104.1463447

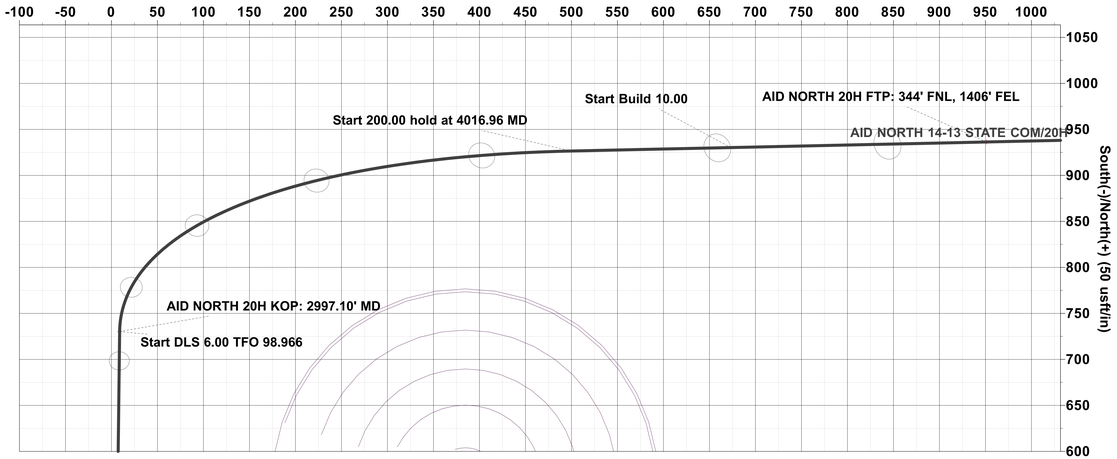
SECTION DETAILS

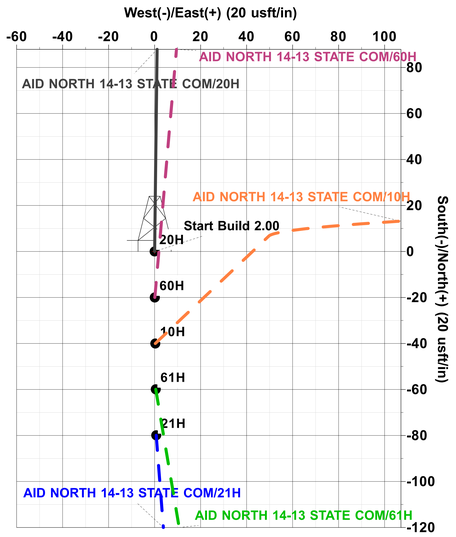
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	
3	1259.51	19.19	0.70	1241.67	159.18	1.95	2.00	5.40	
4	2997.10	19.19	0.70	2882.71	730.29	8.95	0.00	24.76	
5	4016.96	60.00	88.76	3698.30	926.50	500.11	6.00	520.04	
6	4216.96	60.00	88.76	3798.30	930.26	673.27	0.00	693.25	
7	4508.37	89.14	88.76	3875.00	936.30	951.10	10.00	971.14	AID NORTH 20H FTP: 344' FNL, 1406' FEL
8	11130.16	89.14	88.76	3974.25	1080.12	7570.58	0.00	7592.19	AID NORTH 20H LTP: 100' FEL
9	11180.09	89.14	88.76	3975.00	1081.20	7620.50	0.00	7642.11	AID NORTH 20H BHL: 350' FNL, 50' FEL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
AID NORTH 20H SHL: 1188' FNL, 2382' FEL	0.00	0.00	0.00	669110.00	598767.60	32.8392692	-104.1463447
AID NORTH 20H KOP: 2997.10' MD	2882.71	730.29	8.95	669840.29	598776.55	32.8412765	-104.1463113
AID NORTH 20H FTP: 344' FNL, 1406' FEL	3875.00	936.30	951.10	670046.30	599718.70	32.8418381	-104.1432425
AID NORTH 20H LTP: 100' FEL	3974.25	1079.40	7570.60	670189.40	606338.20	32.8421968	-104.1216884
AID NORTH 20H BHL: 350' FNL, 50' FEL	3975.00	1081.20	7620.50	670191.20	606388.10	32.8422015	-104.1215259







Plan: PERMIT (20H/Wellbore #1)

Created By: PROTOTYPE WELL PLANNING / Date: 17:07, August 01 2023

Spur Energy Partners LLC – Aid North 14-13 State Com 20H

1. Geologic Formations

TVD of Target	3,975'
MD at TD	11,180'

Formation	Depth	Lithology	Expected Fluids
Quaternary	0'	Dolomite, other: Caliche	Useable Water
Tansill	485'	Sandstone, Dolomite	None
Yates	595'	Dolomite, Limestone, Shale, Siltstone	None
Seven Rivers	850'	Dolomite, Limestone	Natural Gas, Oil
Queen	1395'	Anhydrite, Dolomite, Sandstone	Natural Gas, Oil
Grayburg	1825'	Anhydrite	Natural Gas, Oil
San Andres	2170'	Dolomite	Natural Gas, Oil
Glorieta	3520'	Dolomite, Siltstone	Natural Gas, Oil
Paddock	3620'	Dolomite, Limestone	Natural Gas, Oil
Blinebry	4015'	Dolomite, Limestone	Natural Gas, Oil
Abo	5675'	Dolomite, Limestone	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

Casing Formation Set Interval	Hole Size (in)	Casing Interval		Csg. Size (in)	Weight	Grade	Conn.	SF	SF Burst	Body SF	Joint SF
		From (ft)	To (ft)		(lbs)			Collapse		Tension	Tension
Seven Rivers	12.25	0	1275	9.625	36	J-55	BTC	1.125	1.2	1.4	1.4
N/A	8.75	0	4300	7	32	L-80	BK-HT	1.125	1.2	1.4	1.4
Yeso	8.75	4300	11180	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 – Aid North 14-13 State Com 20H

	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 3rd 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 2nd 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	1275	100%
Production (Lead)	0	3300	100%
Production (Tail)	3300	11180	25%

Casing String	# Sks	Wt. (lb/gal)	Yld (ft3/sack)	H20 (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)	119	13.2	1.87	9.92	6:59	Clas C Premium Plus Cement
Production (Lead)	340	11.4	2.42	15.29	N/A	Clas C Premium Plus Cement
Production (Tail)	1517	13.2	1.56	9.81	N/A	Clas C Premium Plus Cement

Spur Energy Partners LLC – Aid North 14-13 State Com 20H

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	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	1840 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	112°F

*Specify if additional ram is utilized.

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

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

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

	Y	Are anchors required by manufacturer?
	A 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	1275	Water-Based Mud	8.6-8.9	32-36	N/C
1275	11180	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 – Aid North 14-13 State Com 20H

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

Total estimated cuttings volume: 1017.4 bbls**.**

Spur Energy Partners LLC – Aid North 14-13 State Com 20H

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 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
_x__ Directional Plan
_x__ H2S Contingency Plan
_x__ Akita 57 Attachments
_x__ BOP Schematics
_x__ 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

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:** 08 / 08 / 2023

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
AID NORTH 14 13 STATE COM 10H	30-015-	B-14-17S-28E	1228' FNL 2382' FEL	260 BBL/D	300 MCF/D	700 BBL/D
AID NORTH 14 13 STATE COM 20H	30-015-	B-14-17S-28E	1188' FNL 2382' FEL	260 BBL/D	300 MCF/D	700 BBL/D
AID NORTH 14 13 STATE COM 21H	30-015-	B-14-17S-28E	1268' FNL 2383' FEL	260 BBL/D	300 MCF/D	700 BBL/D
AID NORTH 14 13 STATE COM 60H	30-015-	B-14-17S-28E	1208' FNL 2382' FEL	200 BBL/D	275 MCF/D	800 BBL/D
AID NORTH 14 13 STATE COM 61H	30-015-	B-14-17S-28E	1248' FNL 2383' FEL	200 BBL/D	275 MCF/D	800 BBL/D

IV. Central Delivery Point Name: AID NORTH 14 13 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
AID NORTH 14 13 STATE COM 10H	30-015-	10/26/2023	11/03/2023	12/16/2023	01/15/2024	01/20/2024
AID NORTH 14 13 STATE COM 20H	30-015-	11/04/2023	11/12/2023	12/16/2023	01/15/2024	01/20/2024
AID NORTH 14 13 STATE COM 21H	30-015-	11/13/2023	11/21/2023	12/16/2023	01/15/2024	01/20/2024
AID NORTH 14 13 STATE COM 60H	30-015-	11/22/2023	11/30/2023	12/16/2023	01/15/2024	01/20/2024
AID NORTH 14 13 STATE COM 61H	30-015-	12/01/2023	12/09/2023	12/16/2023	01/15/2024	01/24/2024

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:	Sarah Chapman
Printed Name:	SARAH CHAPMAN
Title:	REGULATORY DIRECTOR
E-mail Address:	SCHAPMAN@SPURENERGY.COM
Date:	08/08/2023
Phone:	832-930-8613

OIL CONSERVATION DIVISION

(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

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.

Hydrogen Sulfide (H2S)

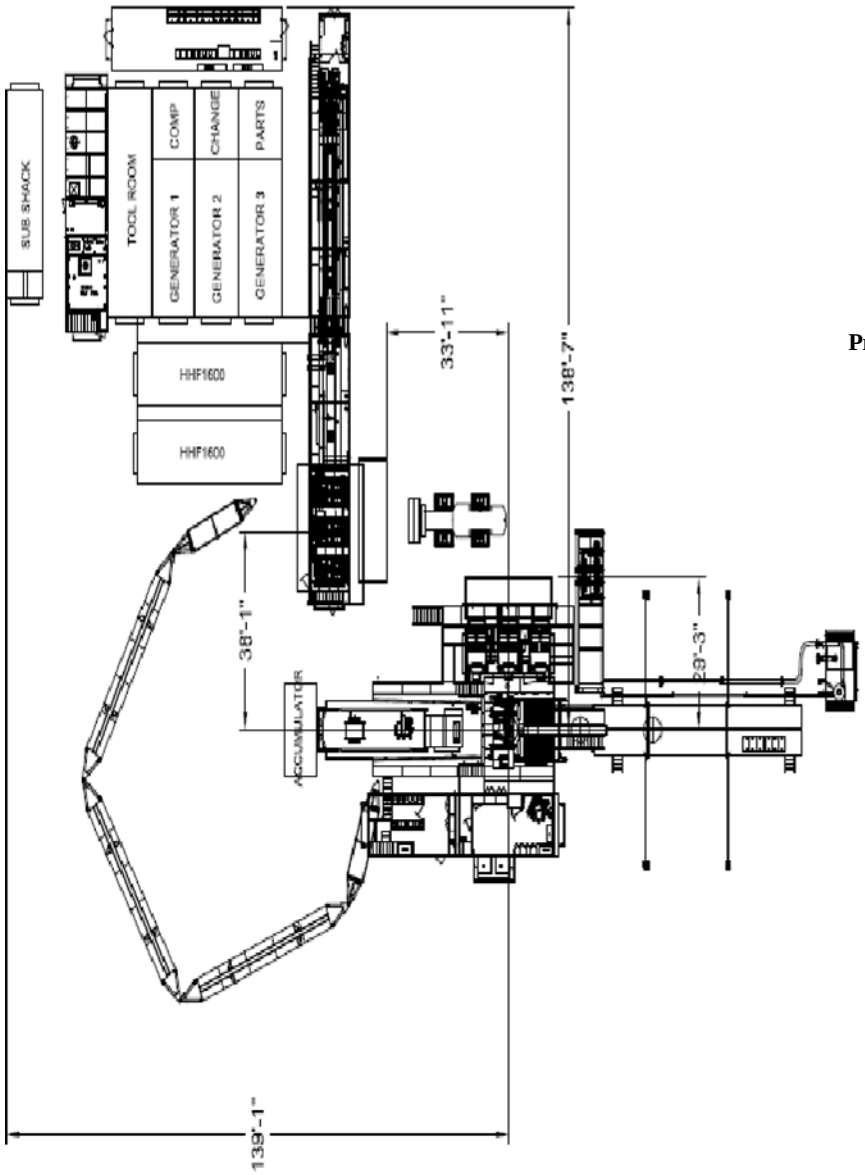
Operations Plan

For

Spur Energy Partners

New Mexico Operations

Secondary Briefing Area



Primary Briefing Area

Exit to road. Caution sign placed here.

N

Secondary Egress

WIND: Prevailing winds are from the Southwest

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_2S 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_2S).

C. Hydrogen Sulfide Gas (H2S) Characteristics:

1. H2S is a toxic, poisonous gas that could cause death or injury. And it is also flammable.
2. 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.
4. 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.
7. 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. H_2S 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 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_2S 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 H_2S 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

1. Spill or Release of H_2S gas

If a spill or leak releases H_2S 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_2S 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_2S 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 Partners Emergency Contact List			
Person	**Location**	**Office Phone**	**Cell Phone**
Drilling and Completions Department			
Drilling Manager - Chris Hollis	Houston	832-930-8629	713-380-7754
Completions Manager - Theresa Voss	Houston	832-930-8614	832-849-8635
VP of Operations - Seth Ireland	Houston	832-930-8527	940-704-6375
Senior VP of Operations - John Nabors	Houston	832-930-8526	281-904-8811
Executive VP of Operations - Todd Mucha	Houston	832-930-8515	281-795-2286
HES/Environmental and Regulatory Department			
EHS Manager - Braidy Moulder	Artesia	575-616-5400	713-264-2517
Superintendent - Jerry Mathews	Artesia	575-616-5400	575-748-5234
Asst. Superintendent - Kenny Kidd	Artesia	575-616-5400	575-703-5851
Regulatory Director - Sarah Chapman	Houston	832-930-8613	281-642-5503
Regulatory Agencies			
Bureau of Land Management	Carlsbad	575-886-6544	
Bureau of Land Management	Hobbs	575-393-3612	
Bureau of Land Management	Roswell	575-622-5335	
Bureau of Land Management	Santa Fe	505-954-2000	
DOT Judicial Pipelines - Incident Reporting NM Public Regulation Commission	Santa Fe	505-827-3549 505-490-2375	
EPA Hotline	Dallas	214-665-6444	
Federal OSHA, Area Office	Lubbock	806-472-7681	
National Response Center	Washington, D.C.	800-424-8803	
National Infrastructure Coordinator Center	Washington, D.C.	202-282-2901	
New Mexico Air Quality Bureau	Santa Fe	505-827-1494	
New Mexico Oil Conservation Division	Artesia	575-748-1283 575-370-7545After	
New Mexico Oil Conservation Division	Hobbs	575-393-6161	
New Mexico Oil Conservation Division	Santa Fe	505-476-3770	
New Mexico OCD Environmental Bureau	Santa Fe	505-827-7152 505-476-3470	
New Mexico Environmental Department	Hobbs	575-827-9329	
NM State Emergency Response Center	Santa Fe	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 Enforcement - 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 Enforcement - 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 Enforcement - 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 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

Ambulance (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 Ambulance 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 BTY
FOLK STATE TANK 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
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

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
MORRIS E & F TANK BATTERY
MUSKEGON SOUTH STATE OIL BATTERY
NAVAHO FEDERAL TNK BTY
NELSON 13.23. TNK BATT
NEWCASTLE 6 FED COM - TANK 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
OSAGE BOYD YESO TANK BATTERY
PAINT 32 FEE OIL BATTERY
PAN CANADIAN A2-B3 TANK BATTERY
PASSION 1 FED PDK 5H TK BATT
PATTON 5 FEE 2H OIL BATTERY
PATTON 5 FEE 8H OIL BATTERY
PAWNEE STATE TNK BTY
PEACEMAKER 25 FEDERAL TANK BATTERY
PERE MARQUETTE 18 FEDERAL 1 TANK BATTERY
PILUM 15 FEE 2H BATTERY
PINTO 36 STATE COM 1H TNK BTY
PINTO 36 STATE COM 4H TNK BTY
PINTO 36 STATE TB
POLARIS B 5-10 TANK BTTY
POSEIDON 3 FEDERAL 4 TANK BATTERY
POSEIDON 3 FEDERAL 05.07.17.18 TANK BATTERY
PUCKETT 13 FEDERAL COM 35H
PUCKETT 13 FEDERAL TB
RAGNAR FED COM 25H - BATTERY
RANDALL FED 3 BATTERY
RED LAKE 32 TANK BATTERY
REDBUD FEDERAL TNK BTY
RINCON STATE TANK BATTERY
RJ UNIT NORTH TANK BATTERY
RJ UNIT SOUTH TANK BATTERY
RONCO FEDERAL #1
ROSE 02.03.04.05.06 TANK BATTERY
ROSE SOUTH TANK BATTERY
ROSS RANCH 09.13.14 BATTERY
SAM ADAMS 12 FED 4H UBB TK BATT
SANDY CROSSING 32 STATE COM 1
SCHLEY FEDERAL TNK BTY
SHAWNEE FEDERAL TNK BTY
SHELBY 23 BATTERY
SHERMAN 4 FEE 4H BATTERY
SHERMAN 4 FEE 6H BATTERY
SHORTY 2 STATE COM TANK BATTERY
SINCLAIR PARKE (PADDOCK) TNK BTY
SKELLY 605 BATTERY
SKELLY 942 BATTERY
SKELLY 968 BATTERY
SKELLY 973 BATTERY
SKELLY 989 BATTERY
SKELLY UNIT 907 CTB BATTERY
SKELLY UNIT 940 BATTERY
SOUTH BOYD FED COM OIL TANK BATTERY
SOUTH EMPIRE STATE COM 1
SPIKETAIL 5 STATE 2 TANK BATTERY
SPRUCE FEDERAL TNK BTY
STATE B GAS COM NO. 001
STATE S-19 YESO (SOUR) TNK BTY
STONEWALL 9 FEE #1H TBAT
STONEWALL 9 FEE 8H BATTERY
SUBMARINE 10 FED COM 2H OIL BAT
TAYLOR D TANK BATTEY
TENNECO STATE TNK BTY
TEX MACK FED
TEXACO BE TNK BTY
TEXAS 32 FEE TANK BATTERY
TEXMACK 36 STATE COM #1
TH STATE #1
THO STATE OIL BATTRY
THORNTAIL 31 FEDERAL 1
THUNDER ROAD FEDERAL OIL BTTY
TUMAK FED 3 BAT
VEGA 9 FED TANK BATTERY
VT 36 STATE #1H
W D MCINTYRE C 10
WAUKEE 36 STATE COME CTB
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

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018