

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 346977

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

1. Operator Name and Address Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024		2. OGRID Number 328947
		3. API Number 30-015-54076
4. Property Code 334602	5. Property Name AID NORTH 14 13 STATE COM	6. Well No. 060H

7. Surface Location

UL - Lot B	Section 14	Township 17S	Range 28E	Lot Idn	Feet From 1208	N/S Line N	Feet From 2382	E/W Line E	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot A	Section 13	Township 17S	Range 28E	Lot Idn A	Feet From 810	N/S Line N	Feet From 50	E/W Line E	County Eddy
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9. Pool Information

EMPIRE; GLORIETA-YESO	96210
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3600
16. Multiple N	17. Proposed Depth 11380	18. Formation Blinbry	19. Contractor	20. Spud Date 10/30/2023
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	4500	1882	0
Prod	8.75	5.5	20	11380	1882	0

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5	5000	SHAFFER

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.	OIL CONSERVATION DIVISION	
Signature:		
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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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 30-015-54076	² Pool Code 96210	³ Pool Name EMPIRE; GLORIETA-YESO
⁴ Property Code 334602	⁵ Property Name AID NORTH 14-13 STATE COM	⁶ Well Number 60H
⁷ OGRID NO. 328947	⁸ Operator Name SPUR ENERGY PARTNERS LLC.	⁹ Elevation 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		1208	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		810	NORTH	50	EAST	EDDY

¹² Dedicated Acres 480	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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 <u>GEODETIC DATA</u> NAD 83 GRID - NM EAST <u>SURFACE LOCATION (SL)</u> N: 669090.0 - E: 598767.7 LAT: 32.8392144° N LONG: 104.1463445° W <u>FIRST TAKE POINT (FTP)</u> 804' FNL & 1405' FEL - SEC 14 N: 669586.6 - E: 599730.1 LAT: 32.8405745° N LONG: 104.1432081° W <u>LAST TAKE POINT (LTP)</u> 812' FNL & 100' FEL - SEC 13 N: 669729.5 - E: 606337.7 LAT: 32.8409328° N LONG: 104.1216929° W <u>BOTTOM HOLE (BH)</u> N: 669731.3 - E: 606387.7 LAT: 32.8409373° N LONG: 104.1215302° W <u>CORNER DATA</u> NAD 83 GRID - NM EAST <table border="0"> <tr> <td>A: FOUND BRASS CAP "1941" N: 664715.7 - E: 596062.5</td> <td>G: FOUND BRASS CAP "1941" N: 670541.3 - E: 606438.4</td> </tr> <tr> <td>B: FOUND BRASS CAP "1941" N: 667371.0 - E: 595986.7</td> <td>H: FOUND BRASS CAP "1941" N: 665238.8 - E: 606433.6</td> </tr> <tr> <td>C: FOUND BRASS CAP "1941" N: 670028.0 - E: 595911.3</td> <td>I: FOUND BRASS CAP "1941" N: 665220.7 - E: 603835.2</td> </tr> <tr> <td>D: FOUND BRASS CAP "1941" N: 670275.9 - E: 598509.8</td> <td>J: FOUND BRASS CAP "1941" N: 665202.5 - E: 601236.8</td> </tr> <tr> <td>E: FOUND BRASS CAP "1941" N: 670523.4 - E: 601110.0</td> <td>K: FOUND BRASS CAP "1941" N: 664959.0 - E: 598649.4</td> </tr> <tr> <td>F: FOUND 1/2" REBAR N: 670530.5 - E: 603773.2</td> <td>L: FOUND BRASS CAP "1941" N: 667862.4 - E: 601172.4</td> </tr> </table>	A: FOUND BRASS CAP "1941" N: 664715.7 - E: 596062.5	G: FOUND BRASS CAP "1941" N: 670541.3 - E: 606438.4	B: FOUND BRASS CAP "1941" N: 667371.0 - E: 595986.7	H: FOUND BRASS CAP "1941" N: 665238.8 - E: 606433.6	C: FOUND BRASS CAP "1941" N: 670028.0 - E: 595911.3	I: FOUND BRASS CAP "1941" N: 665220.7 - E: 603835.2	D: FOUND BRASS CAP "1941" N: 670275.9 - E: 598509.8	J: FOUND BRASS CAP "1941" N: 665202.5 - E: 601236.8	E: FOUND BRASS CAP "1941" N: 670523.4 - E: 601110.0	K: FOUND BRASS CAP "1941" N: 664959.0 - E: 598649.4	F: FOUND 1/2" REBAR N: 670530.5 - E: 603773.2	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. <i>Sarah Chapman</i> 08/07/2023 Signature Date SARAH CHAPMAN Printed Name SCHAPMAN@SPUREENERGY.COM E-mail Address
A: FOUND BRASS CAP "1941" N: 664715.7 - E: 596062.5	G: FOUND BRASS CAP "1941" N: 670541.3 - E: 606438.4												
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	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 07/03/2023 14400 Certificate Number												

Job No: LS23060537

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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 346977

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: Spur Energy Partners LLC [328947] 9655 Katy Freeway Houston, TX 77024	API Number: 30-015-54076
	Well: AID NORTH 14 13 STATE COM #060H

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
60H**

**Wellbore #1
PERMIT**

Anticollision Report

01 August, 2023



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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
Depth Range:	0.00 to 11,380.28usft
Results Limited by:	Maximum separation factor of 55.00
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic
Casing Method:	Not applied

Survey Tool Program		Date	08/01/23		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	11,380.28	PERMIT (Wellbore #1)	MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + Sag + FDIR Correction	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
AID NORTH 14-13 STATE COM						
10H - Wellbore #1 - PERMIT	300.00	300.00	20.00	18.28	11.624	CC
10H - Wellbore #1 - PERMIT	350.00	350.24	20.14	18.06	9.663	ES
10H - Wellbore #1 - PERMIT	11,380.28	10,909.80	594.55	461.82	4.480	SF
20H - Wellbore #1 - PERMIT	542.98	541.29	19.99	16.48	5.698	CC
20H - Wellbore #1 - PERMIT	750.00	746.88	20.23	15.21	4.033	ES
20H - Wellbore #1 - PERMIT	800.00	796.51	21.22	15.86	3.956	SF
21H - Wellbore #1 - PERMIT	300.00	300.00	59.90	58.18	34.814	CC, ES
21H - Wellbore #1 - PERMIT	11,380.28	11,124.98	1,383.42	1,216.80	8.303	SF
61H - Wellbore #1 - PERMIT	300.00	300.00	39.90	38.18	23.190	CC, ES
61H - Wellbore #1 - PERMIT	11,380.28	11,345.67	904.80	733.74	5.289	SF
OFFSET: AID STATE #10 - Wellbore #1 - Wellbore #1	9,102.94	4,395.46	795.42	648.18	5.402	CC, ES
OFFSET: AID STATE #10 - Wellbore #1 - Wellbore #1	9,150.00	4,396.35	796.81	649.03	5.392	SF
OFFSET: AID STATE #6 - Wellbore #1 - Wellbore #1	11,068.23	4,414.25	1,493.09	1,329.43	9.123	CC
OFFSET: AID STATE #6 - Wellbore #1 - Wellbore #1	11,100.00	4,414.84	1,493.43	1,329.41	9.105	ES
OFFSET: AID STATE #6 - Wellbore #1 - Wellbore #1	11,200.00	4,416.72	1,498.89	1,333.73	9.075	SF
OFFSET: AID STATE #8 - Wellbore #1 - Wellbore #1	11,098.64	4,427.92	173.12	-0.62	0.996	Level 1, CC
OFFSET: AID STATE #8 - Wellbore #1 - Wellbore #1	11,100.00	4,427.95	173.13	-0.63	0.996	Level 1, ES, SF
OFFSET: AID STATE #9 - Wellbore #1 - Wellbore #1	9,133.33	4,383.94	524.50	386.35	3.797	CC, ES
OFFSET: AID STATE #9 - Wellbore #1 - Wellbore #1	9,150.00	4,384.25	524.76	386.43	3.793	SF
OFFSET: PUMA #1 - Wellbore #1 - Wellbore #1	4,081.30	3,928.14	105.16	12.63	1.137	Level 2, CC, ES, SF

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		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
150.00	150.00	150.00	150.00	0.32	0.32	179.427	-20.00	0.20	20.00	19.36	0.65	30.997	
200.00	200.00	200.00	200.00	0.50	0.50	179.427	-20.00	0.20	20.00	19.00	1.00	19.927	
250.00	250.00	250.00	250.00	0.68	0.68	179.427	-20.00	0.20	20.00	18.64	1.36	14.683	
300.00	300.00	300.00	300.00	0.86	0.86	179.427	-20.00	0.20	20.00	18.28	1.72	11.624	CC
350.00	350.00	350.24	350.23	1.04	1.04	173.647	-19.70	0.52	20.14	18.06	2.08	9.663	ES
400.00	399.98	400.37	400.35	1.22	1.22	171.486	-18.84	1.42	20.62	18.17	2.45	8.418	
450.00	449.93	450.34	450.31	1.40	1.40	169.540	-17.89	2.43	21.90	19.08	2.82	7.768	
500.00	499.84	500.29	500.24	1.58	1.57	168.244	-16.94	3.44	24.06	20.87	3.19	7.544	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3620.00usft (AKITA 57)
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Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	60H	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	Offset	Semi Major Axis		Distance								Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
550.00	549.68	550.20	550.12	1.77	1.75	167.567	-15.99	4.44	27.08	23.52	3.56	7.606	
600.00	599.45	600.05	599.95	1.95	1.93	167.382	-15.03	5.45	30.94	27.02	3.93	7.877	
650.00	649.13	649.83	649.71	2.13	2.11	167.542	-14.08	6.45	35.66	31.36	4.30	8.300	
700.00	698.70	699.51	699.38	2.31	2.28	167.916	-13.14	7.46	41.23	36.56	4.66	8.844	
719.90	718.40	719.27	719.13	2.39	2.36	168.102	-12.76	7.85	43.68	38.87	4.81	9.087	
750.00	748.18	749.12	748.97	2.49	2.46	168.386	-12.19	8.46	47.49	42.47	5.02	9.469	
800.00	797.64	798.72	798.54	2.67	2.64	168.770	-11.24	9.46	53.82	48.46	5.36	10.039	
850.00	847.10	848.31	848.12	2.85	2.82	169.072	-10.30	10.46	60.15	54.44	5.71	10.530	
900.00	896.57	897.91	897.70	3.02	2.99	169.317	-9.35	11.46	66.49	60.43	6.06	10.975	
950.00	946.03	947.50	947.28	3.20	3.17	169.519	-8.41	12.46	72.82	66.42	6.41	11.366	
1,000.00	995.49	997.10	996.85	3.38	3.35	169.689	-7.46	13.46	79.16	72.40	6.76	11.712	
1,050.00	1,044.96	1,046.70	1,046.43	3.56	3.53	169.834	-6.51	14.46	85.50	78.39	7.11	12.025	
1,100.00	1,094.42	1,096.29	1,096.01	3.74	3.71	169.958	-5.57	15.46	91.83	84.37	7.46	12.307	
1,150.00	1,143.89	1,145.89	1,145.58	3.93	3.88	170.067	-4.62	16.46	98.17	90.36	7.81	12.563	
1,200.00	1,193.35	1,195.49	1,195.16	4.11	4.06	170.162	-3.67	17.46	104.51	96.34	8.17	12.797	
1,250.00	1,242.81	1,245.08	1,244.74	4.29	4.24	170.247	-2.73	18.46	110.85	102.33	8.52	13.010	
1,300.00	1,292.28	1,294.68	1,294.32	4.47	4.42	170.322	-1.78	19.46	117.19	108.31	8.87	13.206	
1,350.00	1,341.74	1,344.28	1,343.89	4.66	4.59	170.390	-0.84	20.46	123.52	114.30	9.23	13.387	
1,400.00	1,391.21	1,393.87	1,393.47	4.84	4.77	170.451	0.11	21.46	129.86	120.28	9.58	13.554	
1,450.00	1,440.67	1,443.47	1,443.05	5.02	4.95	170.506	1.06	22.46	136.20	126.27	9.94	13.709	
1,500.00	1,490.13	1,493.06	1,492.63	5.20	5.13	170.557	2.00	23.46	142.54	132.25	10.29	13.852	
1,550.00	1,539.60	1,542.66	1,542.20	5.39	5.30	170.603	2.95	24.46	148.88	138.24	10.64	13.986	
1,600.00	1,589.06	1,592.26	1,591.78	5.57	5.48	170.645	3.90	25.46	155.22	144.22	11.00	14.111	
1,650.00	1,638.52	1,641.85	1,641.36	5.75	5.66	170.684	4.84	26.46	161.56	150.20	11.35	14.229	
1,700.00	1,687.99	1,691.45	1,690.93	5.94	5.84	170.720	5.79	27.46	167.90	156.19	11.71	14.338	
1,750.00	1,737.45	1,741.05	1,740.51	6.12	6.02	170.754	6.73	28.46	174.24	162.17	12.06	14.442	
1,800.00	1,786.92	1,790.64	1,790.09	6.30	6.19	170.785	7.68	29.46	180.58	168.16	12.42	14.539	
1,850.00	1,836.38	1,840.24	1,839.67	6.49	6.37	170.814	8.63	30.46	186.92	174.14	12.78	14.631	
1,900.00	1,885.84	1,889.84	1,889.24	6.67	6.55	170.841	9.57	31.46	193.26	180.13	13.13	14.717	
1,950.00	1,935.31	1,939.43	1,938.82	6.85	6.73	170.867	10.52	32.46	199.60	186.11	13.49	14.799	
2,000.00	1,984.77	1,989.03	1,988.40	7.04	6.90	170.890	11.46	33.46	205.94	192.09	13.84	14.877	
2,050.00	2,034.24	2,038.63	2,037.98	7.22	7.08	170.913	12.41	34.46	212.28	198.08	14.20	14.951	
2,100.00	2,083.70	2,088.22	2,087.55	7.40	7.26	170.934	13.36	35.46	218.62	204.06	14.55	15.021	
2,150.00	2,133.16	2,137.82	2,137.13	7.59	7.44	170.954	14.30	36.46	224.96	210.05	14.91	15.087	
2,200.00	2,182.63	2,187.41	2,186.71	7.77	7.62	170.973	15.25	37.46	231.30	216.03	15.27	15.151	
2,250.00	2,232.09	2,237.01	2,236.28	7.95	7.79	170.990	16.20	38.46	237.64	222.01	15.62	15.211	
2,300.00	2,281.56	2,286.61	2,285.86	8.14	7.97	171.007	17.14	39.47	243.98	228.00	15.98	15.269	
2,350.00	2,331.02	2,336.20	2,335.44	8.32	8.15	171.023	18.09	40.47	250.32	233.98	16.33	15.324	
2,400.00	2,380.48	2,385.80	2,385.02	8.50	8.33	171.039	19.03	41.47	256.66	239.96	16.69	15.377	
2,450.00	2,429.95	2,435.40	2,434.59	8.69	8.51	171.053	19.98	42.47	263.00	245.95	17.05	15.427	
2,500.00	2,479.41	2,484.99	2,484.17	8.87	8.68	171.067	20.93	43.47	269.34	251.93	17.40	15.476	
2,550.00	2,528.87	2,534.59	2,533.75	9.05	8.86	171.080	21.87	44.47	275.68	257.92	17.76	15.522	
2,600.00	2,578.34	2,584.19	2,583.33	9.24	9.04	171.093	22.82	45.47	282.02	263.90	18.12	15.567	
2,650.00	2,627.80	2,633.78	2,632.90	9.42	9.22	171.105	23.77	46.47	288.36	269.88	18.47	15.610	
2,700.00	2,677.27	2,683.38	2,682.48	9.60	9.39	171.116	24.71	47.47	294.70	275.87	18.83	15.651	
2,750.00	2,726.73	2,732.97	2,732.06	9.79	9.57	171.127	25.66	48.47	301.04	281.85	19.19	15.691	
2,800.00	2,776.19	2,782.57	2,781.63	9.97	9.75	171.138	26.60	49.47	307.38	287.83	19.54	15.729	
2,850.00	2,825.66	2,831.43	2,830.44	10.15	9.93	170.998	27.54	51.27	313.76	293.87	19.90	15.770	
2,900.00	2,875.12	2,879.88	2,878.70	10.34	10.10	170.429	28.50	55.47	320.31	300.06	20.25	15.819	
2,950.00	2,924.59	2,927.86	2,926.21	10.52	10.27	169.462	29.47	62.04	327.09	306.49	20.60	15.879	
3,000.00	2,974.05	2,975.13	2,972.64	10.70	10.44	168.144	30.44	70.83	334.23	313.28	20.95	15.955	
3,050.00	3,023.51	3,021.48	3,017.69	10.89	10.61	166.526	31.41	81.68	341.87	320.57	21.29	16.054	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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	Offset	Semi Major Axis		Distance								Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
3,100.00	3,072.98	3,066.72	3,061.10	11.07	10.77	164.664	32.36	94.36	350.19	328.55	21.64	16.185	
3,150.00	3,122.44	3,110.71	3,102.69	11.25	10.92	162.614	33.30	108.65	359.38	337.40	21.98	16.354	
3,200.00	3,171.90	3,153.31	3,142.29	11.44	11.08	160.431	34.22	124.30	369.63	347.32	22.31	16.568	
3,239.93	3,211.41	3,186.27	3,172.44	11.58	11.20	158.626	34.93	137.61	378.69	356.12	22.57	16.777	
3,250.00	3,221.37	3,194.44	3,179.84	11.62	11.23	153.955	35.11	141.08	381.09	358.45	22.64	16.830	
3,300.00	3,270.79	3,234.72	3,215.87	11.81	11.37	132.342	35.99	159.05	393.27	370.28	23.00	17.101	
3,350.00	3,320.03	3,274.48	3,250.66	11.99	11.52	115.140	36.85	178.27	405.78	382.44	23.34	17.385	
3,400.00	3,368.97	3,313.76	3,284.22	12.17	11.66	102.343	37.70	198.67	418.47	394.80	23.67	17.681	
3,450.00	3,417.47	3,350.00	3,314.41	12.35	11.80	92.897	38.49	218.70	431.25	407.29	23.96	17.998	
3,500.00	3,465.40	3,391.03	3,347.65	12.53	11.96	85.460	39.38	242.73	443.99	419.74	24.24	18.314	
3,550.00	3,512.62	3,429.09	3,377.52	12.70	12.11	79.637	40.20	266.29	456.61	432.13	24.48	18.651	
3,600.00	3,559.01	3,466.79	3,406.18	12.87	12.26	74.881	41.00	290.78	469.03	444.35	24.68	19.004	
3,650.00	3,604.43	3,500.00	3,430.60	13.04	12.39	71.021	41.71	313.27	481.20	456.38	24.83	19.383	
3,700.00	3,648.77	3,541.25	3,459.81	13.20	12.56	67.521	42.58	342.37	492.99	468.03	24.95	19.755	
3,750.00	3,691.90	3,578.05	3,484.80	13.37	12.72	64.599	43.34	369.37	504.40	479.37	25.03	20.153	
3,800.00	3,733.71	3,614.59	3,508.56	13.54	12.88	62.049	44.09	397.12	515.36	490.30	25.06	20.566	
3,850.00	3,774.07	3,650.00	3,530.55	13.71	13.04	59.823	44.81	424.86	525.82	500.77	25.05	20.995	
3,900.00	3,812.89	3,686.97	3,552.41	13.88	13.21	57.818	45.54	454.67	535.74	510.74	25.00	21.431	
3,950.00	3,850.04	3,722.84	3,572.49	14.06	13.39	56.050	46.24	484.38	545.09	520.18	24.91	21.879	
4,000.00	3,885.44	3,758.53	3,591.35	14.25	13.56	54.471	46.93	514.67	553.83	529.04	24.80	22.336	
4,050.00	3,918.98	3,802.25	3,613.30	14.45	13.79	52.973	47.75	552.47	561.72	537.05	24.67	22.766	
4,100.00	3,950.58	3,851.58	3,637.96	14.65	14.06	51.725	48.68	595.18	567.84	543.26	24.57	23.107	
4,150.00	3,980.13	3,901.27	3,662.81	14.87	14.33	50.799	49.61	638.20	572.03	547.53	24.49	23.353	
4,200.00	4,007.58	3,951.18	3,687.76	15.09	14.62	50.180	50.55	681.41	574.25	549.79	24.46	23.476	
4,230.69	4,023.34	3,978.16	3,701.23	15.23	14.78	49.943	51.06	704.79	574.65	550.21	24.45	23.506	
4,250.00	4,032.99	3,989.89	3,706.89	15.33	14.85	49.925	51.29	715.06	574.90	550.32	24.58	23.385	
4,300.00	4,057.99	4,020.17	3,720.51	15.57	15.04	49.794	51.87	742.10	576.74	551.82	24.92	23.142	
4,350.00	4,082.99	4,050.00	3,732.51	15.84	15.22	49.548	52.47	769.39	580.29	555.05	25.25	22.985	
4,400.00	4,107.99	4,079.78	3,743.07	16.10	15.41	49.189	53.07	797.24	585.57	560.03	25.55	22.923	
4,430.69	4,123.34	4,100.00	3,749.40	16.27	15.54	48.883	53.49	816.43	589.68	563.96	25.72	22.925	
4,450.00	4,132.71	4,100.00	3,749.40	16.38	15.54	48.669	53.49	816.43	592.49	566.97	25.52	23.215	
4,500.00	4,154.28	4,137.74	3,759.39	16.66	15.78	47.689	54.28	852.81	598.62	573.54	25.07	23.876	
4,550.00	4,171.84	4,166.56	3,765.39	16.96	15.96	47.013	54.89	880.99	603.68	579.03	24.65	24.490	
4,600.00	4,185.26	4,200.00	3,770.57	17.26	16.18	46.478	55.61	914.01	607.55	583.24	24.32	24.987	
4,650.00	4,194.43	4,224.07	3,773.11	17.55	16.33	46.175	56.13	937.94	610.11	586.05	24.06	25.355	
4,700.00	4,199.28	4,252.79	3,774.81	17.85	16.51	46.007	56.75	966.59	611.42	587.46	23.96	25.518	
4,719.94	4,200.00	4,267.75	3,775.19	17.97	16.61	45.988	57.08	981.54	611.57	587.58	23.98	25.502	
4,750.00	4,200.56	4,297.81	3,775.86	18.15	16.80	45.996	57.73	1,011.59	611.49	587.20	24.28	25.180	
4,800.00	4,201.50	4,347.81	3,776.99	18.46	17.14	46.008	58.82	1,061.57	611.35	586.55	24.80	24.649	
4,850.00	4,202.44	4,397.81	3,778.12	18.78	17.48	46.021	59.91	1,111.54	611.22	585.88	25.34	24.120	
4,900.00	4,203.38	4,447.81	3,779.25	19.11	17.84	46.034	60.99	1,161.52	611.09	585.20	25.89	23.599	
4,950.00	4,204.32	4,497.81	3,780.38	19.46	18.20	46.047	62.08	1,211.49	610.96	584.49	26.47	23.083	
5,000.00	4,205.26	4,547.81	3,781.50	19.80	18.58	46.060	63.17	1,261.47	610.83	583.77	27.05	22.578	
5,050.00	4,206.19	4,597.81	3,782.63	20.17	18.96	46.072	64.25	1,311.44	610.69	583.04	27.66	22.081	
5,100.00	4,207.13	4,647.81	3,783.76	20.54	19.36	46.085	65.34	1,361.42	610.56	582.29	28.27	21.595	
5,150.00	4,208.07	4,697.81	3,784.89	20.92	19.76	46.098	66.42	1,411.39	610.43	581.53	28.90	21.120	
5,200.00	4,209.01	4,747.81	3,786.02	21.30	20.17	46.111	67.51	1,461.37	610.30	580.76	29.54	20.657	
5,250.00	4,209.95	4,797.81	3,787.14	21.70	20.58	46.124	68.60	1,511.34	610.17	579.97	30.20	20.205	
5,300.00	4,210.89	4,847.81	3,788.27	22.10	21.01	46.136	69.68	1,561.32	610.04	579.17	30.86	19.767	
5,350.00	4,211.83	4,897.81	3,789.40	22.51	21.44	46.149	70.77	1,611.29	609.90	578.37	31.54	19.340	
5,400.00	4,212.76	4,947.80	3,790.53	22.92	21.88	46.162	71.86	1,661.27	609.77	577.55	32.22	18.925	
5,450.00	4,213.70	4,997.80	3,791.65	23.35	22.32	46.175	72.94	1,711.24	609.64	576.73	32.91	18.523	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,500.00	4,214.64	5,047.80	3,792.78	23.77	22.76	46.188	74.03	1,761.22	609.51	575.90	33.61	18.133	
5,550.00	4,215.58	5,097.80	3,793.91	24.21	23.21	46.200	75.12	1,811.19	609.38	575.06	34.32	17.754	
5,600.00	4,216.52	5,147.80	3,795.04	24.64	23.67	46.213	76.20	1,861.17	609.25	574.21	35.04	17.388	
5,650.00	4,217.46	5,197.80	3,796.17	25.09	24.13	46.226	77.29	1,911.14	609.12	573.35	35.76	17.032	
5,700.00	4,218.39	5,247.80	3,797.29	25.53	24.60	46.239	78.38	1,961.12	608.98	572.49	36.49	16.688	
5,750.00	4,219.33	5,297.80	3,798.42	25.99	25.07	46.252	79.46	2,011.09	608.85	571.62	37.23	16.354	
5,800.00	4,220.27	5,347.80	3,799.55	26.44	25.54	46.265	80.55	2,061.07	608.72	570.75	37.97	16.031	
5,850.00	4,221.21	5,397.80	3,800.68	26.91	26.02	46.278	81.64	2,111.04	608.59	569.87	38.72	15.718	
5,900.00	4,222.15	5,447.80	3,801.81	27.37	26.50	46.290	82.72	2,161.02	608.46	568.99	39.47	15.415	
5,950.00	4,223.09	5,497.80	3,802.93	27.84	26.98	46.303	83.81	2,211.00	608.33	568.10	40.23	15.121	
6,000.00	4,224.02	5,547.80	3,804.06	28.31	27.47	46.316	84.90	2,260.97	608.20	567.20	40.99	14.837	
6,050.00	4,224.96	5,597.80	3,805.19	28.78	27.96	46.329	85.98	2,310.95	608.07	566.31	41.76	14.561	
6,100.00	4,225.90	5,647.80	3,806.32	29.26	28.45	46.342	87.07	2,360.92	607.93	565.40	42.53	14.293	
6,150.00	4,226.84	5,697.80	3,807.45	29.74	28.95	46.355	88.16	2,410.90	607.80	564.50	43.31	14.034	
6,200.00	4,227.78	5,747.80	3,808.57	30.23	29.45	46.368	89.24	2,460.87	607.67	563.59	44.09	13.783	
6,250.00	4,228.72	5,797.80	3,809.70	30.71	29.94	46.381	90.33	2,510.85	607.54	562.67	44.87	13.540	
6,300.00	4,229.65	5,847.80	3,810.83	31.20	30.45	46.394	91.41	2,560.82	607.41	561.75	45.66	13.303	
6,350.00	4,230.59	5,897.80	3,811.96	31.69	30.95	46.407	92.50	2,610.80	607.28	560.83	46.45	13.074	
6,400.00	4,231.53	5,947.80	3,813.08	32.19	31.46	46.420	93.59	2,660.77	607.15	559.91	47.24	12.852	
6,450.00	4,232.47	5,997.80	3,814.21	32.68	31.96	46.432	94.67	2,710.75	607.02	558.98	48.04	12.636	
6,500.00	4,233.41	6,047.80	3,815.34	33.18	32.47	46.445	95.76	2,760.72	606.89	558.05	48.84	12.427	
6,550.00	4,234.35	6,097.80	3,816.47	33.68	32.98	46.458	96.85	2,810.70	606.76	557.12	49.64	12.223	
6,600.00	4,235.28	6,147.80	3,817.60	34.18	33.50	46.471	97.93	2,860.67	606.63	556.18	50.44	12.026	
6,650.00	4,236.22	6,197.80	3,818.72	34.69	34.01	46.484	99.02	2,910.65	606.49	555.24	51.25	11.834	
6,700.00	4,237.16	6,247.80	3,819.85	35.19	34.53	46.497	100.11	2,960.62	606.36	554.30	52.06	11.647	
6,750.00	4,238.10	6,297.80	3,820.98	35.70	35.05	46.510	101.19	3,010.60	606.23	553.36	52.87	11.466	
6,800.00	4,239.04	6,347.79	3,822.11	36.21	35.57	46.523	102.28	3,060.57	606.10	552.41	53.69	11.289	
6,850.00	4,239.98	6,397.79	3,823.24	36.72	36.09	46.536	103.37	3,110.55	605.97	551.47	54.51	11.118	
6,900.00	4,240.92	6,447.79	3,824.36	37.23	36.61	46.549	104.45	3,160.52	605.84	550.52	55.32	10.951	
6,950.00	4,241.85	6,497.79	3,825.49	37.75	37.13	46.562	105.54	3,210.50	605.71	549.57	56.14	10.788	
7,000.00	4,242.79	6,547.79	3,826.62	38.26	37.65	46.575	106.63	3,260.47	605.58	548.61	56.97	10.630	
7,050.00	4,243.73	6,597.79	3,827.75	38.78	38.18	46.588	107.71	3,310.45	605.45	547.66	57.79	10.476	
7,100.00	4,244.67	6,647.79	3,828.87	39.29	38.70	46.601	108.80	3,360.42	605.32	546.70	58.62	10.326	
7,150.00	4,245.61	6,697.79	3,830.00	39.81	39.23	46.614	109.89	3,410.40	605.19	545.74	59.45	10.180	
7,200.00	4,246.55	6,747.79	3,831.13	40.33	39.76	46.627	110.97	3,460.37	605.06	544.78	60.28	10.038	
7,250.00	4,247.48	6,797.79	3,832.26	40.85	40.29	46.640	112.06	3,510.35	604.93	543.82	61.11	9.899	
7,300.00	4,248.42	6,847.79	3,833.39	41.38	40.82	46.653	113.15	3,560.32	604.80	542.86	61.94	9.764	
7,350.00	4,249.36	6,897.79	3,834.51	41.90	41.35	46.666	114.23	3,610.30	604.67	541.89	62.78	9.632	
7,400.00	4,250.30	6,947.79	3,835.64	42.42	41.88	46.679	115.32	3,660.27	604.54	540.93	63.61	9.504	
7,450.00	4,251.24	6,997.79	3,836.77	42.95	42.41	46.692	116.41	3,710.25	604.41	539.96	64.45	9.378	
7,500.00	4,252.18	7,047.79	3,837.90	43.48	42.95	46.705	117.49	3,760.22	604.28	538.99	65.29	9.256	
7,550.00	4,253.11	7,097.79	3,839.03	44.00	43.48	46.719	118.58	3,810.20	604.15	538.02	66.13	9.136	
7,600.00	4,254.05	7,147.79	3,840.15	44.53	44.02	46.732	119.66	3,860.17	604.02	537.05	66.97	9.019	
7,650.00	4,254.99	7,197.79	3,841.28	45.06	44.55	46.745	120.75	3,910.15	603.89	536.07	67.81	8.905	
7,700.00	4,255.93	7,247.79	3,842.41	45.59	45.09	46.758	121.84	3,960.12	603.76	535.10	68.66	8.794	
7,750.00	4,256.87	7,297.79	3,843.54	46.12	45.62	46.771	122.92	4,010.10	603.63	534.12	69.50	8.685	
7,800.00	4,257.81	7,347.79	3,844.67	46.65	46.16	46.784	124.01	4,060.07	603.50	533.15	70.35	8.579	
7,850.00	4,258.74	7,397.79	3,845.79	47.18	46.70	46.797	125.10	4,110.05	603.37	532.17	71.20	8.475	
7,900.00	4,259.68	7,447.79	3,846.92	47.72	47.24	46.810	126.18	4,160.02	603.24	531.19	72.04	8.373	
7,950.00	4,260.62	7,497.79	3,848.05	48.25	47.78	46.823	127.27	4,210.00	603.11	530.21	72.89	8.274	
8,000.00	4,261.56	7,547.79	3,849.18	48.78	48.32	46.836	128.36	4,259.97	602.98	529.23	73.74	8.177	
8,050.00	4,262.50	7,597.79	3,850.30	49.32	48.86	46.849	129.44	4,309.95	602.85	528.25	74.60	8.081	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,100.00	4,263.44	7,647.79	3,851.43	49.85	49.40	46.863	130.53	4,359.92	602.72	527.27	75.45	7.988	
8,150.00	4,264.37	7,697.79	3,852.56	50.39	49.94	46.876	131.62	4,409.90	602.59	526.28	76.30	7.897	
8,200.00	4,265.31	7,747.78	3,853.69	50.92	50.48	46.889	132.70	4,459.88	602.46	525.30	77.16	7.808	
8,250.00	4,266.25	7,797.78	3,854.82	51.46	51.02	46.902	133.79	4,509.85	602.33	524.31	78.01	7.721	
8,300.00	4,267.19	7,847.78	3,855.94	52.00	51.56	46.915	134.88	4,559.83	602.20	523.33	78.87	7.635	
8,350.00	4,268.13	7,897.78	3,857.07	52.54	52.11	46.928	135.96	4,609.80	602.07	522.34	79.73	7.552	
8,400.00	4,269.07	7,947.78	3,858.20	53.08	52.65	46.941	137.05	4,659.78	601.94	521.35	80.59	7.470	
8,450.00	4,270.01	7,997.78	3,859.33	53.62	53.19	46.955	138.14	4,709.75	601.81	520.36	81.44	7.389	
8,500.00	4,270.94	8,047.78	3,860.46	54.16	53.74	46.968	139.22	4,759.73	601.68	519.37	82.30	7.310	
8,550.00	4,271.88	8,097.78	3,861.58	54.70	54.28	46.981	140.31	4,809.70	601.55	518.38	83.16	7.233	
8,600.00	4,272.82	8,147.78	3,862.71	55.24	54.83	46.994	141.40	4,859.68	601.42	517.39	84.03	7.157	
8,650.00	4,273.76	8,197.78	3,863.84	55.78	55.37	47.007	142.48	4,909.65	601.29	516.40	84.89	7.083	
8,700.00	4,274.70	8,247.78	3,864.97	56.32	55.92	47.021	143.57	4,959.63	601.16	515.41	85.75	7.010	
8,750.00	4,275.64	8,297.78	3,866.10	56.86	56.46	47.034	144.65	5,009.60	601.03	514.41	86.62	6.939	
8,800.00	4,276.57	8,347.78	3,867.22	57.40	57.01	47.047	145.74	5,059.58	600.90	513.42	87.48	6.869	
8,850.00	4,277.51	8,397.78	3,868.35	57.95	57.56	47.060	146.83	5,109.55	600.77	512.43	88.35	6.800	
8,900.00	4,278.45	8,447.78	3,869.48	58.49	58.10	47.073	147.91	5,159.53	600.64	511.43	89.21	6.733	
8,950.00	4,279.39	8,497.78	3,870.61	59.03	58.65	47.087	149.00	5,209.50	600.51	510.43	90.08	6.667	
9,000.00	4,280.33	8,547.78	3,871.73	59.58	59.20	47.100	150.09	5,259.48	600.38	509.44	90.95	6.602	
9,050.00	4,281.27	8,597.78	3,872.86	60.12	59.75	47.113	151.17	5,309.45	600.25	508.44	91.81	6.538	
9,100.00	4,282.20	8,647.78	3,873.99	60.66	60.30	47.126	152.26	5,359.43	600.13	507.44	92.68	6.475	
9,150.00	4,283.14	8,697.78	3,875.12	61.21	60.84	47.139	153.35	5,409.40	600.00	506.44	93.55	6.413	
9,200.00	4,284.08	8,747.78	3,876.25	61.75	61.39	47.153	154.43	5,459.38	599.87	505.44	94.42	6.353	
9,250.00	4,285.02	8,797.78	3,877.37	62.30	61.94	47.166	155.52	5,509.35	599.74	504.44	95.29	6.294	
9,300.00	4,285.96	8,847.78	3,878.50	62.84	62.49	47.179	156.61	5,559.33	599.61	503.44	96.16	6.235	
9,350.00	4,286.90	8,897.78	3,879.63	63.39	63.04	47.193	157.69	5,609.30	599.48	502.44	97.04	6.178	
9,400.00	4,287.83	8,947.78	3,880.76	63.94	63.59	47.206	158.78	5,659.28	599.35	501.44	97.91	6.121	
9,450.00	4,288.77	8,997.78	3,881.89	64.48	64.14	47.219	159.87	5,709.25	599.22	500.44	98.78	6.066	
9,500.00	4,289.71	9,047.78	3,883.01	65.03	64.69	47.232	160.95	5,759.23	599.09	499.44	99.66	6.012	
9,550.00	4,290.65	9,097.78	3,884.14	65.58	65.24	47.246	162.04	5,809.20	598.96	498.43	100.53	5.958	
9,600.00	4,291.59	9,147.77	3,885.27	66.13	65.79	47.259	163.13	5,859.18	598.83	497.43	101.41	5.905	
9,650.00	4,292.53	9,197.77	3,886.40	66.67	66.34	47.272	164.21	5,909.15	598.71	496.42	102.28	5.853	
9,700.00	4,293.46	9,247.77	3,887.52	67.22	66.89	47.286	165.30	5,959.13	598.58	495.42	103.16	5.803	
9,750.00	4,294.40	9,297.77	3,888.65	67.77	67.44	47.299	166.39	6,009.10	598.45	494.41	104.03	5.752	
9,800.00	4,295.34	9,347.77	3,889.78	68.32	67.99	47.312	167.47	6,059.08	598.32	493.41	104.91	5.703	
9,850.00	4,296.28	9,397.77	3,890.91	68.87	68.55	47.325	168.56	6,109.05	598.19	492.40	105.79	5.655	
9,900.00	4,297.22	9,447.77	3,892.04	69.42	69.10	47.339	169.65	6,159.03	598.06	491.39	106.67	5.607	
9,950.00	4,298.16	9,497.77	3,893.16	69.96	69.65	47.352	170.73	6,209.00	597.93	490.39	107.55	5.560	
10,000.00	4,299.10	9,547.77	3,894.29	70.51	70.20	47.365	171.82	6,258.98	597.80	489.38	108.43	5.513	
10,050.00	4,300.03	9,597.77	3,895.42	71.06	70.75	47.379	172.90	6,308.95	597.68	488.37	109.31	5.468	
10,100.00	4,300.97	9,647.77	3,896.55	71.61	71.31	47.392	173.99	6,358.93	597.55	487.36	110.19	5.423	
10,150.00	4,301.91	9,697.77	3,897.68	72.16	71.86	47.406	175.08	6,408.90	597.42	486.35	111.07	5.379	
10,200.00	4,302.85	9,747.77	3,898.80	72.71	72.41	47.419	176.16	6,458.88	597.29	485.34	111.95	5.335	
10,250.00	4,303.79	9,797.77	3,899.93	73.26	72.96	47.432	177.25	6,508.85	597.16	484.33	112.83	5.293	
10,300.00	4,304.73	9,847.77	3,901.06	73.81	73.52	47.446	178.34	6,558.83	597.03	483.32	113.71	5.250	
10,350.00	4,305.66	9,897.77	3,902.19	74.36	74.07	47.459	179.42	6,608.80	596.90	482.31	114.60	5.209	
10,400.00	4,306.60	9,947.77	3,903.32	74.92	74.62	47.472	180.51	6,658.78	596.78	481.30	115.48	5.168	
10,450.00	4,307.54	9,997.77	3,904.44	75.47	75.18	47.486	181.60	6,708.75	596.65	480.28	116.36	5.127	
10,500.00	4,308.48	10,047.77	3,905.57	76.02	75.73	47.499	182.68	6,758.73	596.52	479.27	117.25	5.088	
10,550.00	4,309.42	10,097.77	3,906.70	76.57	76.28	47.513	183.77	6,808.71	596.39	478.26	118.13	5.048	
10,600.00	4,310.36	10,147.77	3,907.83	77.12	76.84	47.526	184.86	6,858.68	596.26	477.24	119.02	5.010	
10,650.00	4,311.29	10,197.77	3,908.95	77.67	77.39	47.539	185.94	6,908.66	596.13	476.23	119.90	4.972	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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		Offset		Semi Major Axis			Distance										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning				
10,700.00	4,312.23	10,247.77	3,910.08	78.22	77.95	47.553	187.03	6,958.63	596.01	475.22	120.79	4.934					
10,750.00	4,313.17	10,297.77	3,911.21	78.78	78.50	47.566	188.12	7,008.61	595.88	474.20	121.68	4.897					
10,800.00	4,314.11	10,347.77	3,912.34	79.33	79.06	47.580	189.20	7,058.58	595.75	473.19	122.57	4.861					
10,850.00	4,315.05	10,397.77	3,913.47	79.88	79.61	47.593	190.29	7,108.56	595.62	472.17	123.45	4.825					
10,900.00	4,315.99	10,447.77	3,914.59	80.43	80.16	47.607	191.38	7,158.53	595.49	471.15	124.34	4.789					
10,950.00	4,316.92	10,497.77	3,915.72	80.99	80.72	47.620	192.46	7,208.51	595.37	470.14	125.23	4.754					
11,000.00	4,317.86	10,547.76	3,916.85	81.54	81.27	47.633	193.55	7,258.48	595.24	469.12	126.12	4.720					
11,050.00	4,318.80	10,597.76	3,917.98	82.09	81.83	47.647	194.64	7,308.46	595.11	468.10	127.01	4.686					
11,100.00	4,319.74	10,647.76	3,919.11	82.65	82.38	47.660	195.72	7,358.43	594.98	467.08	127.90	4.652					
11,150.00	4,320.68	10,697.76	3,920.23	83.20	82.94	47.674	196.81	7,408.41	594.85	466.07	128.79	4.619					
11,200.00	4,321.62	10,747.76	3,921.36	83.75	83.49	47.687	197.89	7,458.38	594.73	465.05	129.68	4.586					
11,250.00	4,322.56	10,797.76	3,922.49	84.31	84.05	47.701	198.98	7,508.36	594.60	464.03	130.57	4.554					
11,300.00	4,323.49	10,847.76	3,923.62	84.86	84.61	47.714	200.07	7,558.33	594.47	463.01	131.46	4.522					
11,330.25	4,324.06	10,878.01	3,924.30	85.19	84.94	47.722	200.73	7,588.56	594.39	462.39	132.00	4.503					
11,350.00	4,324.43	10,897.76	3,924.75	85.41	85.16	47.728	201.15	7,608.31	594.34	461.99	132.35	4.491					
11,363.54	4,324.69	10,909.80	3,925.02	85.56	85.29	47.731	201.42	7,620.33	594.31	461.73	132.58	4.483					
11,380.28	4,325.00	10,909.80	3,925.02	85.75	85.29	47.731	201.42	7,620.33	594.55	461.82	132.72	4.480 SF					

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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 - 20H - Wellbore #1 - PERMIT												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
150.00	150.00	150.00	150.00	0.32	0.32	-0.286	20.00	-0.10	20.00	19.36	0.65	30.996	
200.00	200.00	200.00	200.00	0.50	0.50	-0.286	20.00	-0.10	20.00	19.00	1.00	19.926	
250.00	250.00	250.00	250.00	0.68	0.68	-0.286	20.00	-0.10	20.00	18.64	1.36	14.682	
300.00	300.00	300.00	300.00	0.86	0.86	-0.286	20.00	-0.10	20.00	18.28	1.72	11.624	
350.00	350.00	349.65	349.65	1.04	1.04	-5.361	20.43	-0.09	20.00	17.92	2.08	9.599	
400.00	399.98	399.31	399.29	1.22	1.22	-5.639	21.72	-0.08	20.00	17.55	2.45	8.163	
450.00	449.93	448.96	448.89	1.40	1.40	-6.103	23.87	-0.05	19.99	17.17	2.82	7.088	
500.00	499.84	498.61	498.45	1.58	1.58	-6.752	26.88	-0.02	19.99	16.80	3.19	6.267	
542.98	542.68	541.29	541.01	1.74	1.73	-7.458	30.15	0.02	19.99	16.48	3.51	5.698 CC	
550.00	549.68	548.27	547.96	1.77	1.76	-7.587	30.75	0.03	19.99	16.43	3.56	5.615	
600.00	599.45	597.92	597.38	1.95	1.94	-8.606	35.48	0.09	19.99	16.06	3.93	5.090	
650.00	649.13	647.57	646.72	2.13	2.12	-9.809	41.06	0.16	20.00	15.71	4.29	4.657	
700.00	698.70	697.23	695.95	2.31	2.30	-11.194	47.49	0.24	20.03	15.37	4.66	4.298	
719.90	718.40	716.99	715.52	2.39	2.37	-11.795	50.29	0.27	20.04	15.24	4.80	4.171	
750.00	748.18	746.88	745.07	2.49	2.48	-12.658	54.78	0.33	20.23	15.21	5.02	4.033 ES	
800.00	797.64	796.51	794.03	2.67	2.66	-13.740	62.92	0.43	21.22	15.86	5.36	3.956 SF	
850.00	847.10	846.10	842.80	2.85	2.84	-14.335	71.89	0.54	23.08	17.36	5.72	4.034	
900.00	896.57	895.61	891.33	3.02	3.02	-14.490	81.69	0.66	25.79	19.72	6.07	4.249	
950.00	946.03	945.02	939.58	3.20	3.19	-14.314	92.30	0.79	29.34	22.92	6.42	4.569	
1,000.00	995.49	994.29	987.51	3.38	3.37	-13.926	103.71	0.93	33.75	26.97	6.78	4.979	
1,050.00	1,044.96	1,043.40	1,035.08	3.56	3.55	-13.423	115.91	1.08	38.99	31.86	7.13	5.467	
1,100.00	1,094.42	1,092.31	1,082.25	3.74	3.73	-12.875	128.86	1.23	45.08	37.59	7.49	6.021	
1,150.00	1,143.89	1,141.01	1,128.99	3.93	3.92	-12.326	142.55	1.40	52.01	44.17	7.84	6.633	
1,200.00	1,193.35	1,189.47	1,175.25	4.11	4.10	-11.799	156.97	1.58	59.77	51.58	8.19	7.294	
1,250.00	1,242.81	1,237.65	1,221.00	4.29	4.28	-11.307	172.07	1.76	68.36	59.82	8.55	7.998	
1,300.00	1,292.28	1,286.25	1,266.92	4.47	4.47	-10.859	187.96	1.96	77.66	68.76	8.90	8.724	
1,350.00	1,341.74	1,335.35	1,313.30	4.66	4.66	-10.496	204.11	2.16	87.04	77.79	9.25	9.405	
1,400.00	1,391.21	1,384.46	1,359.68	4.84	4.85	-10.204	220.25	2.36	96.43	86.82	9.61	10.037	
1,450.00	1,440.67	1,433.57	1,406.06	5.02	5.04	-9.964	236.39	2.55	105.82	95.86	9.96	10.623	
1,500.00	1,490.13	1,482.68	1,452.44	5.20	5.24	-9.763	252.53	2.75	115.21	104.89	10.32	11.169	
1,550.00	1,539.60	1,531.79	1,498.82	5.39	5.43	-9.592	268.67	2.95	124.60	113.93	10.67	11.678	
1,600.00	1,589.06	1,580.90	1,545.20	5.57	5.62	-9.446	284.81	3.15	133.99	122.97	11.02	12.154	
1,650.00	1,638.52	1,630.01	1,591.58	5.75	5.82	-9.318	300.95	3.34	143.38	132.00	11.38	12.600	
1,700.00	1,687.99	1,679.12	1,637.96	5.94	6.01	-9.206	317.09	3.54	152.78	141.04	11.74	13.019	
1,750.00	1,737.45	1,728.23	1,684.34	6.12	6.21	-9.107	333.24	3.74	162.17	150.08	12.09	13.413	
1,800.00	1,786.92	1,777.34	1,730.72	6.30	6.41	-9.019	349.38	3.94	171.56	159.12	12.45	13.784	
1,850.00	1,836.38	1,826.44	1,777.10	6.49	6.60	-8.940	365.52	4.14	180.96	168.15	12.80	14.134	
1,900.00	1,885.84	1,875.55	1,823.48	6.67	6.80	-8.869	381.66	4.33	190.35	177.19	13.16	14.465	
1,950.00	1,935.31	1,924.66	1,869.86	6.85	7.00	-8.805	397.80	4.53	199.75	186.23	13.52	14.778	
2,000.00	1,984.77	1,973.77	1,916.24	7.04	7.19	-8.746	413.94	4.73	209.14	195.27	13.87	15.075	
2,050.00	2,034.24	2,022.88	1,962.62	7.22	7.39	-8.692	430.08	4.93	218.54	204.31	14.23	15.357	
2,100.00	2,083.70	2,071.99	2,009.00	7.40	7.59	-8.643	446.22	5.13	227.93	213.35	14.59	15.625	
2,150.00	2,133.16	2,121.10	2,055.38	7.59	7.79	-8.598	462.36	5.32	237.33	222.38	14.95	15.880	
2,200.00	2,182.63	2,170.21	2,101.76	7.77	7.98	-8.556	478.51	5.52	246.72	231.42	15.30	16.123	
2,250.00	2,232.09	2,219.32	2,148.14	7.95	8.18	-8.517	494.65	5.72	256.12	240.46	15.66	16.354	
2,300.00	2,281.56	2,268.42	2,194.52	8.14	8.38	-8.481	510.79	5.92	265.52	249.50	16.02	16.575	
2,350.00	2,331.02	2,317.53	2,240.90	8.32	8.58	-8.447	526.93	6.11	274.91	258.54	16.38	16.787	
2,400.00	2,380.48	2,366.64	2,287.28	8.50	8.78	-8.416	543.07	6.31	284.31	267.57	16.73	16.989	
2,450.00	2,429.95	2,415.75	2,333.66	8.69	8.98	-8.387	559.21	6.51	293.71	276.61	17.09	17.183	
2,500.00	2,479.41	2,464.86	2,380.04	8.87	9.17	-8.359	575.35	6.71	303.10	285.65	17.45	17.368	
2,550.00	2,528.87	2,513.97	2,426.42	9.05	9.37	-8.333	591.49	6.91	312.50	294.69	17.81	17.547	
2,600.00	2,578.34	2,563.08	2,472.80	9.24	9.57	-8.309	607.64	7.10	321.89	303.73	18.17	17.718	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,650.00	2,627.80	2,612.19	2,519.18	9.42	9.77	-8.286	623.78	7.30	331.29	312.76	18.53	17.882		
2,700.00	2,677.27	2,661.30	2,565.56	9.60	9.97	-8.264	639.92	7.50	340.69	321.80	18.89	18.040		
2,750.00	2,726.73	2,710.41	2,611.94	9.79	10.17	-8.244	656.06	7.70	350.08	330.84	19.24	18.192		
2,800.00	2,776.19	2,759.51	2,658.32	9.97	10.37	-8.224	672.20	7.90	359.48	339.88	19.60	18.338		
2,850.00	2,825.66	2,808.62	2,704.70	10.15	10.57	-8.206	688.34	8.09	368.88	348.92	19.96	18.479		
2,900.00	2,875.12	2,857.73	2,751.08	10.34	10.77	-8.188	704.48	8.29	378.27	357.95	20.32	18.615		
2,950.00	2,924.59	2,906.84	2,797.46	10.52	10.97	-8.171	720.62	8.49	387.67	366.99	20.68	18.746		
3,000.00	2,974.05	2,955.95	2,843.84	10.70	11.17	-8.156	736.77	8.69	397.07	376.03	21.04	18.873		
3,050.00	3,023.51	3,005.90	2,891.02	10.89	11.37	-8.134	753.17	8.93	406.46	385.06	21.40	18.993		
3,100.00	3,072.98	3,060.22	2,942.39	11.07	11.59	-7.839	770.69	11.16	415.44	393.67	21.78	19.076		
3,150.00	3,122.44	3,114.40	2,993.58	11.25	11.81	-7.148	787.60	16.42	423.85	401.70	22.15	19.132		
3,200.00	3,171.90	3,168.07	3,044.10	11.44	12.02	-6.096	803.75	24.59	431.76	409.24	22.53	19.167		
3,239.93	3,211.41	3,210.35	3,083.66	11.58	12.19	-5.023	816.03	33.08	437.82	415.00	22.82	19.184		
3,250.00	3,221.37	3,220.93	3,093.50	11.62	12.23	-8.716	819.03	35.49	439.32	416.43	22.90	19.188		
3,300.00	3,270.79	3,273.13	3,141.82	11.81	12.43	-25.620	833.45	49.01	446.76	423.50	23.26	19.207		
3,350.00	3,320.03	3,324.86	3,189.06	11.99	12.62	-38.362	847.04	65.06	454.10	430.47	23.62	19.221		
3,400.00	3,368.97	3,376.10	3,235.13	12.17	12.80	-46.940	859.79	83.52	461.32	437.34	23.99	19.231		
3,450.00	3,417.47	3,426.89	3,279.92	12.35	12.98	-52.505	871.68	104.28	468.40	444.05	24.35	19.235		
3,500.00	3,465.40	3,477.22	3,323.34	12.53	13.15	-56.082	882.71	127.21	475.30	450.59	24.71	19.236		
3,550.00	3,512.62	3,527.11	3,365.30	12.70	13.32	-58.362	892.85	152.20	482.00	456.94	25.06	19.232		
3,600.00	3,559.01	3,576.56	3,405.73	12.87	13.48	-59.782	902.12	179.13	488.46	463.05	25.41	19.224		
3,650.00	3,604.43	3,625.60	3,444.57	13.04	13.64	-60.617	910.50	207.86	494.67	468.92	25.75	19.213		
3,700.00	3,648.77	3,674.23	3,481.74	13.20	13.79	-61.046	918.00	238.29	500.59	474.51	26.07	19.199		
3,750.00	3,691.90	3,722.45	3,517.20	13.37	13.94	-61.190	924.61	270.29	506.20	479.80	26.39	19.181		
3,800.00	3,733.71	3,770.29	3,550.90	13.54	14.08	-61.130	930.36	303.74	511.47	484.78	26.70	19.159		
3,850.00	3,774.07	3,817.74	3,582.79	13.71	14.23	-60.923	935.23	338.53	516.40	489.41	26.99	19.132		
3,900.00	3,812.89	3,864.82	3,612.84	13.88	14.38	-60.610	939.24	374.54	520.95	493.68	27.27	19.100		
3,950.00	3,850.04	3,911.54	3,641.03	14.06	14.53	-60.222	942.40	411.66	525.12	497.57	27.55	19.062		
4,000.00	3,885.44	3,957.90	3,667.33	14.25	14.69	-59.781	944.73	449.77	528.87	501.06	27.81	19.015		
4,050.00	3,918.98	4,003.92	3,691.71	14.45	14.86	-59.304	946.22	488.76	532.20	504.13	28.07	18.960		
4,100.00	3,950.58	4,052.29	3,715.97	14.65	15.05	-58.826	947.17	530.60	535.00	506.66	28.34	18.878		
4,150.00	3,980.13	4,101.98	3,740.81	14.87	15.25	-58.565	948.10	573.62	536.98	508.34	28.64	18.751		
4,200.00	4,007.58	4,151.89	3,765.77	15.09	15.48	-58.561	949.04	616.84	538.05	509.06	28.99	18.562		
4,230.69	4,023.34	4,182.57	3,781.11	15.23	15.63	-58.690	949.62	643.40	538.23	509.01	29.22	18.419		
4,250.00	4,032.99	4,201.88	3,790.77	15.33	15.72	-58.690	949.98	660.12	538.23	508.83	29.40	18.308		
4,255.19	4,035.59	4,207.08	3,793.36	15.35	15.75	-58.690	950.08	664.62	538.23	508.78	29.45	18.278		
4,300.00	4,057.99	4,240.41	3,809.61	15.57	15.92	-58.646	950.71	693.72	538.60	508.79	29.80	18.071		
4,350.00	4,082.99	4,273.84	3,824.25	15.84	16.10	-58.434	951.36	723.75	540.43	510.25	30.18	17.905		
4,400.00	4,107.99	4,300.00	3,834.48	16.10	16.25	-58.146	951.89	747.83	543.88	513.37	30.51	17.825		
4,430.69	4,123.34	4,326.88	3,843.82	16.27	16.40	-57.743	952.43	773.02	546.68	515.93	30.74	17.781		
4,450.00	4,132.71	4,339.37	3,847.76	16.38	16.48	-57.374	952.69	784.87	548.61	517.81	30.80	17.809		
4,500.00	4,154.28	4,371.62	3,856.73	16.66	16.67	-56.532	953.36	815.83	553.12	522.15	30.97	17.862		
4,550.00	4,171.84	4,400.00	3,863.17	16.96	16.84	-55.891	953.96	843.47	556.86	525.72	31.14	17.883		
4,600.00	4,185.26	4,435.77	3,869.32	17.26	17.05	-55.339	954.73	878.69	559.73	528.36	31.37	17.841		
4,650.00	4,194.43	4,467.74	3,872.95	17.55	17.24	-54.983	955.42	910.44	561.75	530.10	31.65	17.749		
4,700.00	4,199.28	4,500.00	3,874.81	17.85	17.44	-54.786	956.12	942.63	562.88	530.88	31.99	17.593		
4,719.94	4,200.00	4,514.65	3,875.09	17.97	17.53	-54.753	956.44	957.28	563.06	530.90	32.16	17.507		
4,750.00	4,200.56	4,544.72	3,875.54	18.15	17.72	-54.744	957.09	987.33	563.13	530.64	32.48	17.336		
4,800.00	4,201.50	4,594.72	3,876.29	18.46	18.04	-54.728	958.18	1,037.32	563.24	530.22	33.02	17.059		
4,850.00	4,202.44	4,644.72	3,877.04	18.78	18.37	-54.713	959.26	1,087.30	563.35	529.76	33.59	16.774		
4,900.00	4,203.38	4,694.72	3,877.79	19.11	18.71	-54.697	960.35	1,137.28	563.45	529.30	34.15	16.497		
4,950.00	4,204.32	4,744.72	3,878.54	19.46	19.07	-54.681	961.43	1,187.26	563.56	528.81	34.76	16.215		

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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 - 20H - Wellbore #1 - PERMIT												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance								Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.00	4,205.26	4,794.72	3,879.29	19.80	19.42	-54.665	962.52	1,237.25	563.67	528.31	35.36	15.941	
5,050.00	4,206.19	4,844.72	3,880.04	20.17	19.80	-54.650	963.60	1,287.23	563.78	527.79	35.99	15.665	
5,100.00	4,207.13	4,894.71	3,880.79	20.54	20.18	-54.634	964.69	1,337.21	563.89	527.27	36.62	15.397	
5,150.00	4,208.07	4,944.71	3,881.54	20.92	20.57	-54.618	965.78	1,387.19	564.00	526.72	37.28	15.128	
5,200.00	4,209.01	4,994.71	3,882.29	21.30	20.96	-54.603	966.86	1,437.17	564.11	526.17	37.94	14.868	
5,250.00	4,209.95	5,044.71	3,883.04	21.70	21.37	-54.587	967.95	1,487.16	564.22	525.59	38.62	14.608	
5,300.00	4,210.89	5,094.71	3,883.79	22.10	21.78	-54.571	969.03	1,537.14	564.33	525.02	39.31	14.357	
5,350.00	4,211.83	5,144.71	3,884.54	22.51	22.20	-54.556	970.12	1,587.12	564.44	524.42	40.01	14.107	
5,400.00	4,212.76	5,194.71	3,885.29	22.92	22.62	-54.540	971.21	1,637.10	564.55	523.83	40.72	13.865	
5,450.00	4,213.70	5,244.71	3,886.04	23.35	23.05	-54.524	972.29	1,687.09	564.65	523.21	41.44	13.626	
5,500.00	4,214.64	5,294.71	3,886.79	23.77	23.49	-54.509	973.38	1,737.07	564.76	522.60	42.17	13.394	
5,550.00	4,215.58	5,344.71	3,887.54	24.21	23.93	-54.493	974.46	1,787.05	564.87	521.97	42.91	13.165	
5,600.00	4,216.52	5,394.71	3,888.29	24.64	24.38	-54.478	975.55	1,837.03	564.98	521.33	43.65	12.944	
5,650.00	4,217.46	5,444.71	3,889.03	25.09	24.83	-54.462	976.64	1,887.01	565.09	520.69	44.41	12.726	
5,700.00	4,218.39	5,494.71	3,889.78	25.53	25.28	-54.446	977.72	1,937.00	565.20	520.04	45.16	12.515	
5,750.00	4,219.33	5,544.71	3,890.53	25.99	25.74	-54.431	978.81	1,986.98	565.31	519.38	45.93	12.307	
5,800.00	4,220.27	5,594.71	3,891.28	26.44	26.21	-54.415	979.89	2,036.96	565.42	518.72	46.71	12.106	
5,850.00	4,221.21	5,644.71	3,892.03	26.91	26.67	-54.400	980.98	2,086.94	565.53	518.04	47.49	11.909	
5,900.00	4,222.15	5,694.71	3,892.78	27.37	27.14	-54.384	982.07	2,136.93	565.64	517.37	48.27	11.717	
5,950.00	4,223.09	5,744.71	3,893.53	27.84	27.62	-54.368	983.15	2,186.91	565.75	516.68	49.07	11.530	
6,000.00	4,224.02	5,794.71	3,894.28	28.31	28.10	-54.353	984.24	2,236.89	565.86	516.00	49.86	11.348	
6,050.00	4,224.96	5,844.71	3,895.03	28.78	28.58	-54.337	985.32	2,286.87	565.97	515.30	50.67	11.170	
6,100.00	4,225.90	5,894.71	3,895.78	29.26	29.06	-54.322	986.41	2,336.85	566.08	514.60	51.47	10.997	
6,150.00	4,226.84	5,944.71	3,896.53	29.74	29.55	-54.306	987.50	2,386.84	566.19	513.90	52.29	10.828	
6,200.00	4,227.78	5,994.71	3,897.28	30.23	30.04	-54.291	988.58	2,436.82	566.30	513.20	53.10	10.664	
6,250.00	4,228.72	6,044.71	3,898.03	30.71	30.53	-54.275	989.67	2,486.80	566.41	512.48	53.93	10.503	
6,300.00	4,229.65	6,094.71	3,898.78	31.20	31.02	-54.259	990.75	2,536.78	566.52	511.77	54.75	10.347	
6,350.00	4,230.59	6,144.71	3,899.53	31.69	31.52	-54.244	991.84	2,586.77	566.63	511.05	55.58	10.195	
6,400.00	4,231.53	6,194.71	3,900.28	32.19	32.02	-54.228	992.92	2,636.75	566.74	510.33	56.41	10.047	
6,450.00	4,232.47	6,244.71	3,901.03	32.68	32.52	-54.213	994.01	2,686.73	566.85	509.60	57.25	9.902	
6,500.00	4,233.41	6,294.70	3,901.77	33.18	33.02	-54.197	995.10	2,736.71	566.96	508.87	58.09	9.761	
6,550.00	4,234.35	6,344.70	3,902.52	33.68	33.53	-54.182	996.18	2,786.69	567.07	508.14	58.93	9.623	
6,600.00	4,235.28	6,394.70	3,903.27	34.18	34.03	-54.166	997.27	2,836.68	567.18	507.41	59.77	9.489	
6,650.00	4,236.22	6,444.70	3,904.02	34.69	34.54	-54.151	998.35	2,886.66	567.29	506.67	60.62	9.358	
6,700.00	4,237.16	6,494.70	3,904.77	35.19	35.05	-54.135	999.44	2,936.64	567.40	505.93	61.47	9.230	
6,750.00	4,238.10	6,544.70	3,905.52	35.70	35.56	-54.120	1,000.53	2,986.62	567.51	505.18	62.33	9.105	
6,800.00	4,239.04	6,594.70	3,906.27	36.21	36.08	-54.104	1,001.61	3,036.61	567.62	504.44	63.18	8.984	
6,850.00	4,239.98	6,644.70	3,907.02	36.72	36.59	-54.089	1,002.70	3,086.59	567.73	503.69	64.04	8.865	
6,900.00	4,240.92	6,694.70	3,907.77	37.23	37.11	-54.073	1,003.78	3,136.57	567.84	502.94	64.90	8.749	
6,950.00	4,241.85	6,744.70	3,908.52	37.75	37.63	-54.058	1,004.87	3,186.55	567.95	502.19	65.76	8.636	
7,000.00	4,242.79	6,794.70	3,909.27	38.26	38.14	-54.042	1,005.96	3,236.53	568.06	501.44	66.63	8.526	
7,050.00	4,243.73	6,844.70	3,910.02	38.78	38.66	-54.027	1,007.04	3,286.52	568.17	500.68	67.49	8.418	
7,100.00	4,244.67	6,894.70	3,910.77	39.29	39.18	-54.012	1,008.13	3,336.50	568.29	499.92	68.36	8.313	
7,150.00	4,245.61	6,944.70	3,911.52	39.81	39.71	-53.996	1,009.21	3,386.48	568.40	499.16	69.23	8.210	
7,200.00	4,246.55	6,994.70	3,912.27	40.33	40.23	-53.981	1,010.30	3,436.46	568.51	498.40	70.10	8.109	
7,250.00	4,247.48	7,044.70	3,913.02	40.85	40.76	-53.965	1,011.39	3,486.45	568.62	497.64	70.98	8.011	
7,300.00	4,248.42	7,094.70	3,913.77	41.38	41.28	-53.950	1,012.47	3,536.43	568.73	496.88	71.85	7.915	
7,350.00	4,249.36	7,144.70	3,914.52	41.90	41.81	-53.934	1,013.56	3,586.41	568.84	496.11	72.73	7.821	
7,400.00	4,250.30	7,194.70	3,915.26	42.42	42.33	-53.919	1,014.64	3,636.39	568.95	495.34	73.61	7.729	
7,450.00	4,251.24	7,244.70	3,916.01	42.95	42.86	-53.904	1,015.73	3,686.38	569.06	494.57	74.49	7.640	
7,500.00	4,252.18	7,294.70	3,916.76	43.48	43.39	-53.888	1,016.81	3,736.36	569.17	493.80	75.37	7.552	
7,550.00	4,253.11	7,344.70	3,917.51	44.00	43.92	-53.873	1,017.90	3,786.34	569.28	493.03	76.25	7.466	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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 - 20H - Wellbore #1 - PERMIT												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance								Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,600.00	4,254.05	7,394.70	3,918.26	44.53	44.45	-53.857	1,018.99	3,836.32	569.39	492.26	77.13	7.382	
7,650.00	4,254.99	7,444.70	3,919.01	45.06	44.98	-53.842	1,020.07	3,886.30	569.51	491.49	78.02	7.300	
7,700.00	4,255.93	7,494.70	3,919.76	45.59	45.52	-53.827	1,021.16	3,936.29	569.62	490.71	78.90	7.219	
7,750.00	4,256.87	7,544.70	3,920.51	46.12	46.05	-53.811	1,022.24	3,986.27	569.73	489.94	79.79	7.140	
7,800.00	4,257.81	7,594.70	3,921.26	46.65	46.58	-53.796	1,023.33	4,036.25	569.84	489.16	80.68	7.063	
7,850.00	4,258.74	7,644.70	3,922.01	47.18	47.12	-53.781	1,024.42	4,086.23	569.95	488.38	81.57	6.988	
7,900.00	4,259.68	7,694.69	3,922.76	47.72	47.65	-53.765	1,025.50	4,136.22	570.06	487.61	82.46	6.914	
7,950.00	4,260.62	7,744.69	3,923.51	48.25	48.19	-53.750	1,026.59	4,186.20	570.17	486.83	83.35	6.841	
8,000.00	4,261.56	7,794.69	3,924.26	48.78	48.72	-53.735	1,027.67	4,236.18	570.28	486.05	84.24	6.770	
8,050.00	4,262.50	7,844.69	3,925.01	49.32	49.26	-53.719	1,028.76	4,286.16	570.40	485.27	85.13	6.700	
8,100.00	4,263.44	7,894.69	3,925.76	49.85	49.80	-53.704	1,029.85	4,336.14	570.51	484.49	86.02	6.632	
8,150.00	4,264.37	7,944.69	3,926.51	50.39	50.34	-53.689	1,030.93	4,386.13	570.62	483.70	86.92	6.565	
8,200.00	4,265.31	7,994.69	3,927.26	50.92	50.87	-53.673	1,032.02	4,436.11	570.73	482.92	87.81	6.500	
8,250.00	4,266.25	8,044.69	3,928.00	51.46	51.41	-53.658	1,033.10	4,486.09	570.84	482.14	88.71	6.435	
8,300.00	4,267.19	8,094.69	3,928.75	52.00	51.95	-53.643	1,034.19	4,536.07	570.95	481.35	89.60	6.372	
8,350.00	4,268.13	8,144.69	3,929.50	52.54	52.49	-53.627	1,035.28	4,586.06	571.07	480.57	90.50	6.310	
8,400.00	4,269.07	8,194.69	3,930.25	53.08	53.03	-53.612	1,036.36	4,636.04	571.18	479.78	91.39	6.250	
8,450.00	4,270.01	8,244.69	3,931.00	53.62	53.58	-53.597	1,037.45	4,686.02	571.29	479.00	92.29	6.190	
8,500.00	4,270.94	8,294.69	3,931.75	54.16	54.12	-53.582	1,038.53	4,736.00	571.40	478.21	93.19	6.132	
8,550.00	4,271.88	8,344.69	3,932.50	54.70	54.66	-53.566	1,039.62	4,785.98	571.51	477.43	94.09	6.074	
8,600.00	4,272.82	8,394.69	3,933.25	55.24	55.20	-53.551	1,040.71	4,835.97	571.63	476.64	94.99	6.018	
8,650.00	4,273.76	8,444.69	3,934.00	55.78	55.74	-53.536	1,041.79	4,885.95	571.74	475.85	95.89	5.963	
8,700.00	4,274.70	8,494.69	3,934.75	56.32	56.29	-53.521	1,042.88	4,935.93	571.85	475.06	96.79	5.908	
8,750.00	4,275.64	8,544.69	3,935.50	56.86	56.83	-53.505	1,043.96	4,985.91	571.96	474.27	97.69	5.855	
8,800.00	4,276.57	8,594.69	3,936.25	57.40	57.37	-53.490	1,045.05	5,035.90	572.07	473.49	98.59	5.803	
8,850.00	4,277.51	8,644.69	3,937.00	57.95	57.92	-53.475	1,046.13	5,085.88	572.19	472.70	99.49	5.751	
8,900.00	4,278.45	8,694.69	3,937.75	58.49	58.46	-53.460	1,047.22	5,135.86	572.30	471.91	100.39	5.701	
8,950.00	4,279.39	8,744.69	3,938.50	59.03	59.01	-53.444	1,048.31	5,185.84	572.41	471.12	101.29	5.651	
9,000.00	4,280.33	8,794.69	3,939.25	59.58	59.55	-53.429	1,049.39	5,235.82	572.52	470.33	102.19	5.602	
9,050.00	4,281.27	8,844.69	3,940.00	60.12	60.10	-53.414	1,050.48	5,285.81	572.63	469.54	103.10	5.554	
9,100.00	4,282.20	8,894.69	3,940.74	60.66	60.64	-53.399	1,051.56	5,335.79	572.75	468.75	104.00	5.507	
9,150.00	4,283.14	8,944.69	3,941.49	61.21	61.19	-53.384	1,052.65	5,385.77	572.86	467.96	104.90	5.461	
9,200.00	4,284.08	8,994.69	3,942.24	61.75	61.74	-53.368	1,053.74	5,435.75	572.97	467.17	105.81	5.415	
9,250.00	4,285.02	9,044.69	3,942.99	62.30	62.28	-53.353	1,054.82	5,485.74	573.08	466.37	106.71	5.370	
9,300.00	4,285.96	9,094.68	3,943.74	62.84	62.83	-53.338	1,055.91	5,535.72	573.20	465.58	107.61	5.326	
9,350.00	4,286.90	9,144.68	3,944.49	63.39	63.38	-53.323	1,056.99	5,585.70	573.31	464.79	108.52	5.283	
9,400.00	4,287.83	9,194.68	3,945.24	63.94	63.93	-53.308	1,058.08	5,635.68	573.42	464.00	109.42	5.240	
9,450.00	4,288.77	9,244.68	3,945.99	64.48	64.47	-53.292	1,059.17	5,685.66	573.53	463.21	110.33	5.198	
9,500.00	4,289.71	9,294.68	3,946.74	65.03	65.02	-53.277	1,060.25	5,735.65	573.65	462.41	111.23	5.157	
9,550.00	4,290.65	9,344.68	3,947.49	65.58	65.57	-53.262	1,061.34	5,785.63	573.76	461.62	112.14	5.117	
9,600.00	4,291.59	9,394.68	3,948.24	66.13	66.12	-53.247	1,062.42	5,835.61	573.87	460.83	113.04	5.077	
9,650.00	4,292.53	9,444.68	3,948.99	66.67	66.67	-53.232	1,063.51	5,885.59	573.98	460.04	113.95	5.037	
9,700.00	4,293.46	9,494.68	3,949.74	67.22	67.22	-53.217	1,064.60	5,935.58	574.10	459.24	114.85	4.999	
9,750.00	4,294.40	9,544.68	3,950.49	67.77	67.77	-53.202	1,065.68	5,985.56	574.21	458.45	115.76	4.960	
9,800.00	4,295.34	9,594.68	3,951.24	68.32	68.32	-53.186	1,066.77	6,035.54	574.32	457.66	116.67	4.923	
9,850.00	4,296.28	9,644.68	3,951.99	68.87	68.87	-53.171	1,067.85	6,085.52	574.44	456.86	117.57	4.886	
9,900.00	4,297.22	9,694.68	3,952.74	69.42	69.42	-53.156	1,068.94	6,135.50	574.55	456.07	118.48	4.849	
9,950.00	4,298.16	9,744.68	3,953.49	69.96	69.97	-53.141	1,070.02	6,185.49	574.66	455.28	119.38	4.814	
10,000.00	4,299.10	9,794.68	3,954.23	70.51	70.52	-53.126	1,071.11	6,235.47	574.78	454.49	120.29	4.778	
10,050.00	4,300.03	9,844.68	3,954.98	71.06	71.07	-53.111	1,072.20	6,285.45	574.89	453.69	121.20	4.743	
10,100.00	4,300.97	9,894.68	3,955.73	71.61	71.62	-53.096	1,073.28	6,335.43	575.00	452.90	122.10	4.709	
10,150.00	4,301.91	9,944.68	3,956.48	72.16	72.17	-53.081	1,074.37	6,385.42	575.11	452.11	123.01	4.675	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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 - 20H - Wellbore #1 - PERMIT												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.00	4,302.85	9,994.68	3,957.23	72.71	72.72	-53.066	1,075.45	6,435.40	575.23	451.31	123.92	4.642	
10,250.00	4,303.79	10,044.68	3,957.98	73.26	73.27	-53.051	1,076.54	6,485.38	575.34	450.52	124.82	4.609	
10,300.00	4,304.73	10,094.68	3,958.73	73.81	73.82	-53.036	1,077.63	6,535.36	575.45	449.73	125.73	4.577	
10,350.00	4,305.66	10,144.68	3,959.48	74.36	74.38	-53.020	1,078.71	6,585.34	575.57	448.93	126.64	4.545	
10,400.00	4,306.60	10,194.68	3,960.23	74.92	74.93	-53.005	1,079.80	6,635.33	575.68	448.14	127.54	4.514	
10,450.00	4,307.54	10,244.68	3,960.98	75.47	75.48	-52.990	1,080.88	6,685.31	575.79	447.34	128.45	4.483	
10,500.00	4,308.48	10,294.68	3,961.73	76.02	76.03	-52.975	1,081.97	6,735.29	575.91	446.55	129.36	4.452	
10,550.00	4,309.42	10,344.68	3,962.48	76.57	76.58	-52.960	1,083.06	6,785.27	576.02	445.76	130.26	4.422	
10,600.00	4,310.36	10,394.68	3,963.23	77.12	77.14	-52.945	1,084.14	6,835.26	576.13	444.96	131.17	4.392	
10,650.00	4,311.29	10,444.68	3,963.98	77.67	77.69	-52.930	1,085.23	6,885.24	576.25	444.17	132.08	4.363	
10,700.00	4,312.23	10,494.67	3,964.73	78.22	78.24	-52.915	1,086.31	6,935.22	576.36	443.38	132.98	4.334	
10,750.00	4,313.17	10,544.67	3,965.48	78.78	78.79	-52.900	1,087.40	6,985.20	576.48	442.58	133.89	4.306	
10,800.00	4,314.11	10,594.67	3,966.23	79.33	79.35	-52.885	1,088.49	7,035.18	576.59	441.79	134.80	4.277	
10,850.00	4,315.05	10,644.67	3,966.97	79.88	79.90	-52.870	1,089.57	7,085.17	576.70	441.00	135.70	4.250	
10,900.00	4,315.99	10,694.67	3,967.72	80.43	80.45	-52.855	1,090.66	7,135.15	576.82	440.21	136.61	4.222	
10,950.00	4,316.92	10,744.67	3,968.47	80.99	81.01	-52.840	1,091.74	7,185.13	576.93	439.41	137.52	4.195	
11,000.00	4,317.86	10,794.67	3,969.22	81.54	81.56	-52.825	1,092.83	7,235.11	577.04	438.62	138.43	4.169	
11,050.00	4,318.80	10,844.67	3,969.97	82.09	82.12	-52.810	1,093.92	7,285.10	577.16	437.83	139.33	4.142	
11,100.00	4,319.74	10,894.67	3,970.72	82.65	82.67	-52.795	1,095.00	7,335.08	577.27	437.03	140.24	4.116	
11,150.00	4,320.68	10,944.67	3,971.47	83.20	83.22	-52.780	1,096.09	7,385.06	577.39	436.24	141.15	4.091	
11,200.00	4,321.62	10,994.67	3,972.22	83.75	83.78	-52.765	1,097.17	7,435.04	577.50	435.45	142.05	4.065	
11,250.00	4,322.56	11,044.67	3,972.97	84.31	84.33	-52.750	1,098.26	7,485.02	577.61	434.66	142.96	4.040	
11,300.00	4,323.49	11,094.67	3,973.72	84.86	84.89	-52.736	1,099.34	7,535.01	577.73	433.86	143.86	4.016	
11,330.25	4,324.06	11,124.92	3,974.17	85.19	85.22	-52.727	1,100.00	7,565.24	577.80	433.38	144.41	4.001	
11,350.00	4,324.43	11,144.67	3,974.47	85.41	85.44	-52.721	1,100.43	7,584.99	577.84	433.07	144.77	3.991	
11,380.28	4,325.00	11,174.95	3,974.92	85.75	85.78	-52.712	1,101.09	7,615.26	577.91	432.59	145.32	3.977	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
250.00	250.00	250.00	250.00	0.68	0.68	179.426	-59.90	0.60	59.90	58.54	1.36	43.975	
300.00	300.00	300.00	300.00	0.86	0.86	179.426	-59.90	0.60	59.90	58.18	1.72	34.814 CC, ES	
350.00	350.00	348.96	348.96	1.04	1.03	174.455	-60.32	0.63	60.76	58.69	2.07	29.300	
400.00	399.98	397.84	397.82	1.22	1.20	174.486	-61.57	0.73	63.34	60.91	2.43	26.032	
450.00	449.93	446.55	446.48	1.40	1.36	174.532	-63.64	0.89	67.64	64.84	2.80	24.188	
500.00	499.84	494.99	494.84	1.58	1.53	174.586	-66.51	1.11	73.64	70.48	3.16	23.308	
550.00	549.68	543.10	542.81	1.77	1.70	174.642	-70.18	1.39	81.33	77.81	3.52	23.077	
600.00	599.45	590.78	590.29	1.95	1.86	174.696	-74.60	1.74	90.70	86.81	3.89	23.338	
650.00	649.13	637.97	637.19	2.13	2.03	174.745	-79.75	2.13	101.73	97.48	4.25	23.959	
700.00	698.70	684.59	683.43	2.31	2.20	174.787	-85.60	2.59	114.40	109.80	4.60	24.865	
719.90	718.40	702.97	701.64	2.39	2.26	174.802	-88.11	2.78	119.89	115.15	4.74	25.290	
750.00	748.18	730.60	728.98	2.49	2.36	174.832	-92.11	3.09	128.53	123.59	4.94	26.027	
800.00	797.64	776.16	773.97	2.67	2.52	174.855	-99.26	3.64	143.49	138.22	5.27	27.251	
850.00	847.10	821.25	818.38	2.85	2.69	174.853	-107.05	4.24	159.19	153.60	5.60	28.449	
900.00	896.57	865.87	862.20	3.02	2.85	174.833	-115.44	4.89	175.64	169.72	5.92	29.682	
950.00	946.03	910.00	905.40	3.20	3.02	174.800	-124.41	5.58	192.82	186.58	6.24	30.900	
1,000.00	995.49	953.62	947.97	3.38	3.18	174.758	-133.92	6.32	210.71	204.14	6.56	32.098	
1,050.00	1,044.96	1,000.00	993.06	3.56	3.36	174.705	-144.74	7.16	229.33	222.43	6.90	33.252	
1,100.00	1,094.42	1,039.33	1,031.15	3.74	3.51	174.656	-154.49	7.91	248.58	241.38	7.21	34.499	
1,150.00	1,143.89	1,081.38	1,071.73	3.93	3.68	174.600	-165.49	8.76	268.55	261.02	7.52	35.700	
1,200.00	1,193.35	1,122.90	1,111.63	4.11	3.84	174.543	-176.93	9.64	289.17	281.33	7.84	36.871	
1,250.00	1,242.81	1,167.84	1,154.71	4.29	4.02	174.483	-189.68	10.63	310.19	302.03	8.16	37.993	
1,300.00	1,292.28	1,213.21	1,198.20	4.47	4.20	174.430	-202.56	11.62	331.21	322.73	8.49	39.033	
1,350.00	1,341.74	1,258.57	1,241.69	4.66	4.38	174.384	-215.44	12.62	352.23	343.43	8.81	39.996	
1,400.00	1,391.21	1,303.94	1,285.18	4.84	4.56	174.342	-228.32	13.61	373.26	364.13	9.13	40.891	
1,450.00	1,440.67	1,349.30	1,328.67	5.02	4.75	174.305	-241.19	14.61	394.28	384.83	9.45	41.717	
1,500.00	1,490.13	1,394.67	1,372.15	5.20	4.93	174.272	-254.07	15.60	415.30	405.53	9.77	42.489	
1,550.00	1,539.60	1,440.04	1,415.64	5.39	5.12	174.242	-266.95	16.60	436.32	426.22	10.10	43.206	
1,600.00	1,589.06	1,485.40	1,459.13	5.57	5.31	174.215	-279.83	17.59	457.34	446.92	10.42	43.877	
1,650.00	1,638.52	1,530.77	1,502.62	5.75	5.49	174.190	-292.71	18.59	478.37	467.62	10.75	44.505	
1,700.00	1,687.99	1,576.13	1,546.10	5.94	5.68	174.168	-305.58	19.58	499.39	488.32	11.07	45.094	
1,750.00	1,737.45	1,621.50	1,589.59	6.12	5.87	174.147	-318.46	20.58	520.41	509.01	11.40	45.648	
1,800.00	1,786.92	1,666.86	1,633.08	6.30	6.05	174.127	-331.34	21.57	541.43	529.71	11.73	46.169	
1,850.00	1,836.38	1,712.23	1,676.57	6.49	6.24	174.110	-344.22	22.57	562.46	550.40	12.05	46.660	
1,900.00	1,885.84	1,757.59	1,720.06	6.67	6.43	174.093	-357.10	23.56	583.48	571.10	12.38	47.124	
1,950.00	1,935.31	1,802.96	1,763.54	6.85	6.62	174.078	-369.97	24.56	604.50	591.79	12.71	47.563	
2,000.00	1,984.77	1,848.32	1,807.03	7.04	6.81	174.063	-382.85	25.55	625.53	612.49	13.04	47.978	
2,050.00	2,034.24	1,893.69	1,850.52	7.22	6.99	174.050	-395.73	26.55	646.55	633.18	13.37	48.373	
2,100.00	2,083.70	1,939.06	1,894.01	7.40	7.18	174.037	-408.61	27.54	667.57	653.88	13.69	48.747	
2,150.00	2,133.16	1,984.42	1,937.50	7.59	7.37	174.025	-421.48	28.54	688.59	674.57	14.02	49.103	
2,200.00	2,182.63	2,029.79	1,980.98	7.77	7.56	174.014	-434.36	29.53	709.62	695.26	14.35	49.442	
2,250.00	2,232.09	2,075.15	2,024.47	7.95	7.75	174.004	-447.24	30.53	730.64	715.96	14.68	49.764	
2,300.00	2,281.56	2,120.52	2,067.96	8.14	7.94	173.994	-460.12	31.52	751.66	736.65	15.01	50.073	
2,350.00	2,331.02	2,165.88	2,111.45	8.32	8.13	173.985	-473.00	32.52	772.69	757.34	15.34	50.367	
2,400.00	2,380.48	2,211.25	2,154.93	8.50	8.32	173.976	-485.87	33.51	793.71	778.04	15.67	50.648	
2,450.00	2,429.95	2,256.61	2,198.42	8.69	8.51	173.967	-498.75	34.51	814.73	798.73	16.00	50.917	
2,500.00	2,479.41	2,301.98	2,241.91	8.87	8.70	173.959	-511.63	35.50	835.75	819.42	16.33	51.175	
2,550.00	2,528.87	2,347.34	2,285.40	9.05	8.89	173.952	-524.51	36.50	856.78	840.12	16.66	51.422	
2,600.00	2,578.34	2,392.71	2,328.89	9.24	9.08	173.945	-537.39	37.49	877.80	860.81	16.99	51.659	
2,650.00	2,627.80	2,438.08	2,372.37	9.42	9.27	173.938	-550.26	38.49	898.82	881.50	17.32	51.886	
2,700.00	2,677.27	2,483.44	2,415.86	9.60	9.46	173.931	-563.14	39.48	919.85	902.19	17.65	52.105	
2,750.00	2,726.73	2,528.81	2,459.35	9.79	9.65	173.925	-576.02	40.48	940.87	922.89	17.98	52.315	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,800.00	2,776.19	2,574.17	2,502.84	9.97	9.84	173.919	-588.90	41.47	961.89	943.58	18.32	52.517	
2,850.00	2,825.66	2,619.54	2,546.33	10.15	10.03	173.913	-601.77	42.47	982.92	964.27	18.65	52.712	
2,900.00	2,875.12	2,664.90	2,589.81	10.34	10.23	173.908	-614.65	43.46	1,003.94	984.96	18.98	52.900	
2,950.00	2,924.59	2,710.27	2,633.30	10.52	10.42	173.902	-627.53	44.46	1,024.96	1,005.65	19.31	53.081	
3,000.00	2,974.05	2,755.63	2,676.79	10.70	10.61	173.897	-640.41	45.45	1,045.99	1,026.34	19.64	53.256	
3,050.00	3,023.51	2,801.00	2,720.28	10.89	10.80	173.893	-653.29	46.45	1,067.01	1,047.04	19.97	53.425	
3,100.00	3,072.98	2,846.36	2,763.76	11.07	10.99	173.888	-666.16	47.44	1,088.03	1,067.73	20.30	53.587	
3,150.00	3,122.44	2,891.73	2,807.25	11.25	11.18	173.883	-679.04	48.44	1,109.05	1,088.42	20.64	53.745	
3,200.00	3,171.90	2,937.09	2,850.74	11.44	11.37	173.879	-691.92	49.43	1,130.08	1,109.11	20.97	53.897	
3,239.93	3,211.41	2,973.32	2,885.47	11.58	11.52	173.876	-702.20	50.23	1,146.87	1,125.64	21.23	54.015	
3,250.00	3,221.37	2,982.46	2,894.23	11.62	11.56	169.522	-704.80	50.43	1,151.10	1,129.79	21.30	54.036	
3,300.00	3,270.79	3,035.16	2,944.76	11.81	11.78	149.460	-719.64	52.20	1,171.88	1,150.20	21.68	54.050	
3,350.00	3,320.03	3,093.33	3,000.51	11.99	12.03	133.687	-735.41	57.28	1,191.96	1,169.88	22.09	53.966	
3,400.00	3,368.97	3,152.30	3,056.81	12.17	12.27	122.187	-750.63	65.96	1,211.25	1,188.74	22.50	53.829	
3,450.00	3,417.47	3,212.08	3,113.42	12.35	12.51	113.812	-765.23	78.35	1,229.66	1,206.74	22.92	53.647	
3,500.00	3,465.40	3,272.63	3,170.09	12.53	12.75	107.535	-779.10	94.55	1,247.14	1,223.80	23.34	53.427	
3,550.00	3,512.62	3,333.93	3,226.52	12.70	12.98	102.664	-792.15	114.60	1,263.63	1,239.87	23.76	53.172	
3,600.00	3,559.01	3,395.92	3,282.38	12.87	13.21	98.762	-804.26	138.54	1,279.08	1,254.89	24.19	52.887	
3,650.00	3,604.43	3,458.52	3,337.35	13.04	13.43	95.550	-815.35	166.35	1,293.42	1,268.82	24.60	52.572	
3,700.00	3,648.77	3,521.65	3,391.05	13.20	13.65	92.849	-825.31	197.99	1,306.61	1,281.59	25.02	52.227	
3,750.00	3,691.90	3,585.21	3,443.14	13.37	13.86	90.535	-834.07	233.32	1,318.61	1,293.17	25.43	51.850	
3,800.00	3,733.71	3,649.08	3,493.24	13.54	14.06	88.525	-841.53	272.20	1,329.36	1,303.52	25.84	51.438	
3,850.00	3,774.07	3,713.12	3,541.01	13.71	14.26	86.761	-847.64	314.41	1,338.85	1,312.59	26.26	50.986	
3,900.00	3,812.89	3,777.21	3,586.10	13.88	14.45	85.198	-852.36	359.68	1,347.05	1,320.37	26.68	50.492	
3,950.00	3,850.04	3,841.19	3,628.24	14.06	14.65	83.805	-855.64	407.71	1,353.92	1,326.82	27.10	49.952	
4,000.00	3,885.44	3,904.92	3,667.14	14.25	14.84	82.559	-857.48	458.14	1,359.47	1,331.93	27.54	49.363	
4,050.00	3,918.98	3,968.26	3,702.60	14.45	15.03	81.442	-857.89	510.60	1,363.67	1,335.68	27.99	48.721	
4,100.00	3,950.58	4,026.29	3,732.29	14.65	15.22	80.475	-857.08	560.44	1,366.57	1,338.14	28.43	48.061	
4,150.00	3,980.13	4,075.97	3,757.14	14.87	15.39	79.753	-856.14	603.46	1,368.50	1,339.63	28.86	47.413	
4,200.00	4,007.58	4,125.88	3,782.09	15.09	15.58	79.237	-855.20	646.67	1,369.52	1,340.20	29.32	46.713	
4,230.69	4,023.34	4,156.57	3,797.43	15.23	15.70	79.020	-854.62	673.24	1,369.69	1,340.08	29.61	46.257	
4,250.00	4,032.99	4,175.88	3,807.09	15.33	15.78	79.020	-854.26	689.96	1,369.69	1,339.89	29.81	45.952	
4,279.76	4,047.88	4,205.64	3,821.97	15.47	15.91	79.020	-853.70	715.73	1,369.69	1,339.58	30.11	45.490	
4,300.00	4,057.99	4,220.38	3,829.23	15.57	15.98	79.015	-853.42	728.55	1,369.73	1,339.44	30.29	45.221	
4,350.00	4,082.99	4,250.00	3,842.82	15.84	16.12	78.958	-852.85	754.86	1,370.22	1,339.51	30.72	44.611	
4,400.00	4,107.99	4,288.57	3,858.44	16.10	16.30	78.790	-852.08	790.11	1,371.28	1,340.09	31.19	43.966	
4,430.69	4,123.34	4,309.13	3,865.79	16.27	16.41	78.657	-851.66	809.31	1,372.24	1,340.77	31.47	43.607	
4,450.00	4,132.71	4,321.98	3,870.04	16.38	16.47	78.504	-851.40	821.43	1,372.90	1,341.26	31.64	43.397	
4,500.00	4,154.28	4,350.00	3,878.33	16.66	16.62	78.179	-850.81	848.18	1,374.44	1,342.39	32.05	42.888	
4,550.00	4,171.84	4,388.19	3,887.52	16.96	16.83	77.866	-850.01	885.23	1,375.68	1,343.15	32.53	42.292	
4,600.00	4,185.26	4,421.13	3,893.45	17.26	17.01	77.651	-849.30	917.63	1,376.64	1,343.65	32.99	41.727	
4,650.00	4,194.43	4,450.00	3,897.10	17.55	17.17	77.512	-848.68	946.25	1,377.31	1,343.86	33.44	41.184	
4,700.00	4,199.28	4,486.83	3,899.66	17.85	17.37	77.431	-847.88	982.98	1,377.63	1,343.68	33.95	40.578	
4,719.94	4,200.00	4,500.05	3,900.01	17.97	17.45	77.421	-847.59	996.20	1,377.68	1,343.53	34.15	40.347	
4,750.00	4,200.56	4,530.12	3,900.46	18.15	17.63	77.417	-846.94	1,026.25	1,377.70	1,343.18	34.52	39.916	
4,800.00	4,201.50	4,580.12	3,901.21	18.46	17.93	77.409	-845.85	1,076.23	1,377.74	1,342.61	35.13	39.219	
4,850.00	4,202.44	4,630.12	3,901.97	18.78	18.24	77.402	-844.76	1,126.21	1,377.77	1,342.00	35.78	38.508	
4,900.00	4,203.38	4,680.12	3,902.72	19.11	18.57	77.395	-843.67	1,176.20	1,377.81	1,341.38	36.44	37.814	
4,950.00	4,204.32	4,730.12	3,903.48	19.46	18.91	77.387	-842.58	1,226.18	1,377.85	1,340.72	37.13	37.111	
5,000.00	4,205.26	4,780.12	3,904.23	19.80	19.26	77.380	-841.50	1,276.16	1,377.89	1,340.06	37.83	36.426	
5,050.00	4,206.19	4,830.12	3,904.99	20.17	19.62	77.372	-840.41	1,326.14	1,377.93	1,339.37	38.56	35.739	
5,100.00	4,207.13	4,880.12	3,905.74	20.54	19.99	77.365	-839.32	1,376.12	1,377.97	1,338.67	39.29	35.070	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,150.00	4,208.07	4,930.11	3,906.50	20.92	20.37	77.357	-838.23	1,426.11	1,378.00	1,337.95	40.05	34.404	
5,200.00	4,209.01	4,980.11	3,907.25	21.30	20.76	77.350	-837.14	1,476.09	1,378.04	1,337.22	40.82	33.758	
5,250.00	4,209.95	5,030.11	3,908.01	21.70	21.16	77.342	-836.05	1,526.07	1,378.08	1,336.47	41.61	33.116	
5,300.00	4,210.89	5,080.11	3,908.76	22.10	21.56	77.335	-834.97	1,576.05	1,378.12	1,335.71	42.41	32.494	
5,350.00	4,211.83	5,130.11	3,909.52	22.51	21.98	77.327	-833.88	1,626.03	1,378.16	1,334.93	43.23	31.880	
5,400.00	4,212.76	5,180.11	3,910.27	22.92	22.40	77.320	-832.79	1,676.02	1,378.20	1,334.14	44.05	31.285	
5,450.00	4,213.70	5,230.11	3,911.03	23.35	22.82	77.312	-831.70	1,726.00	1,378.23	1,333.34	44.89	30.699	
5,500.00	4,214.64	5,280.11	3,911.78	23.77	23.26	77.305	-830.61	1,775.98	1,378.27	1,332.53	45.74	30.132	
5,550.00	4,215.58	5,330.11	3,912.53	24.21	23.69	77.297	-829.53	1,825.96	1,378.31	1,331.71	46.60	29.575	
5,600.00	4,216.52	5,380.11	3,913.29	24.64	24.14	77.290	-828.44	1,875.95	1,378.35	1,330.88	47.47	29.036	
5,650.00	4,217.46	5,430.11	3,914.04	25.09	24.59	77.282	-827.35	1,925.93	1,378.39	1,330.04	48.35	28.507	
5,700.00	4,218.39	5,480.11	3,914.80	25.53	25.04	77.275	-826.26	1,975.91	1,378.43	1,329.19	49.24	27.995	
5,750.00	4,219.33	5,530.11	3,915.55	25.99	25.50	77.268	-825.17	2,025.89	1,378.47	1,328.33	50.14	27.494	
5,800.00	4,220.27	5,580.11	3,916.31	26.44	25.96	77.260	-824.08	2,075.87	1,378.50	1,327.47	51.04	27.009	
5,850.00	4,221.21	5,630.11	3,917.06	26.91	26.42	77.253	-823.00	2,125.86	1,378.54	1,326.59	51.95	26.534	
5,900.00	4,222.15	5,680.11	3,917.82	27.37	26.89	77.245	-821.91	2,175.84	1,378.58	1,325.71	52.87	26.075	
5,950.00	4,223.09	5,730.11	3,918.57	27.84	27.37	77.238	-820.82	2,225.82	1,378.62	1,324.82	53.80	25.626	
6,000.00	4,224.02	5,780.11	3,919.33	28.31	27.84	77.230	-819.73	2,275.80	1,378.66	1,323.93	54.73	25.191	
6,050.00	4,224.96	5,830.11	3,920.08	28.78	28.33	77.223	-818.64	2,325.78	1,378.70	1,323.03	55.67	24.767	
6,100.00	4,225.90	5,880.11	3,920.84	29.26	28.81	77.215	-817.55	2,375.77	1,378.74	1,322.13	56.61	24.355	
6,150.00	4,226.84	5,930.11	3,921.59	29.74	29.29	77.208	-816.47	2,425.75	1,378.78	1,321.22	57.56	23.954	
6,200.00	4,227.78	5,980.11	3,922.35	30.23	29.78	77.200	-815.38	2,475.73	1,378.82	1,320.30	58.51	23.564	
6,250.00	4,228.72	6,030.11	3,923.10	30.71	30.28	77.193	-814.29	2,525.71	1,378.85	1,319.38	59.47	23.184	
6,300.00	4,229.65	6,080.11	3,923.85	31.20	30.77	77.185	-813.20	2,575.70	1,378.89	1,318.46	60.44	22.815	
6,350.00	4,230.59	6,130.11	3,924.61	31.69	31.27	77.178	-812.11	2,625.68	1,378.93	1,317.52	61.41	22.456	
6,400.00	4,231.53	6,180.11	3,925.36	32.19	31.76	77.171	-811.03	2,675.66	1,378.97	1,316.59	62.38	22.107	
6,450.00	4,232.47	6,230.11	3,926.12	32.68	32.27	77.163	-809.94	2,725.64	1,379.01	1,315.65	63.36	21.766	
6,500.00	4,233.41	6,280.11	3,926.87	33.18	32.77	77.156	-808.85	2,775.62	1,379.05	1,314.71	64.34	21.435	
6,550.00	4,234.35	6,330.11	3,927.63	33.68	33.27	77.148	-807.76	2,825.61	1,379.09	1,313.77	65.32	21.112	
6,600.00	4,235.28	6,380.11	3,928.38	34.18	33.78	77.141	-806.67	2,875.59	1,379.13	1,312.82	66.31	20.799	
6,650.00	4,236.22	6,430.11	3,929.14	34.69	34.29	77.133	-805.58	2,925.57	1,379.17	1,311.86	67.30	20.492	
6,700.00	4,237.16	6,480.11	3,929.89	35.19	34.80	77.126	-804.50	2,975.55	1,379.20	1,310.91	68.29	20.195	
6,750.00	4,238.10	6,530.11	3,930.65	35.70	35.31	77.118	-803.41	3,025.53	1,379.24	1,309.95	69.29	19.904	
6,800.00	4,239.04	6,580.11	3,931.40	36.21	35.82	77.111	-802.32	3,075.52	1,379.28	1,308.99	70.29	19.622	
6,850.00	4,239.98	6,630.11	3,932.16	36.72	36.34	77.103	-801.23	3,125.50	1,379.32	1,308.02	71.30	19.346	
6,900.00	4,240.92	6,680.11	3,932.91	37.23	36.85	77.096	-800.14	3,175.48	1,379.36	1,307.06	72.30	19.078	
6,950.00	4,241.85	6,730.11	3,933.67	37.75	37.37	77.088	-799.05	3,225.46	1,379.40	1,306.09	73.31	18.815	
7,000.00	4,242.79	6,780.11	3,934.42	38.26	37.89	77.081	-797.97	3,275.44	1,379.44	1,305.12	74.32	18.560	
7,050.00	4,243.73	6,830.11	3,935.17	38.78	38.41	77.074	-796.88	3,325.43	1,379.48	1,304.14	75.34	18.311	
7,100.00	4,244.67	6,880.11	3,935.93	39.29	38.93	77.066	-795.79	3,375.41	1,379.52	1,303.17	76.35	18.068	
7,150.00	4,245.61	6,930.11	3,936.68	39.81	39.46	77.059	-794.70	3,425.39	1,379.56	1,302.19	77.37	17.830	
7,200.00	4,246.55	6,980.11	3,937.44	40.33	39.98	77.051	-793.61	3,475.37	1,379.60	1,301.21	78.39	17.599	
7,250.00	4,247.48	7,030.11	3,938.19	40.85	40.50	77.044	-792.52	3,525.36	1,379.64	1,300.22	79.41	17.373	
7,300.00	4,248.42	7,080.11	3,938.95	41.38	41.03	77.036	-791.44	3,575.34	1,379.68	1,299.24	80.44	17.152	
7,350.00	4,249.36	7,130.11	3,939.70	41.90	41.56	77.029	-790.35	3,625.32	1,379.71	1,298.25	81.46	16.936	
7,400.00	4,250.30	7,180.11	3,940.46	42.42	42.08	77.021	-789.26	3,675.30	1,379.75	1,297.26	82.49	16.726	
7,450.00	4,251.24	7,230.11	3,941.21	42.95	42.61	77.014	-788.17	3,725.28	1,379.79	1,296.27	83.52	16.520	
7,500.00	4,252.18	7,280.11	3,941.97	43.48	43.14	77.006	-787.08	3,775.27	1,379.83	1,295.28	84.55	16.319	
7,550.00	4,253.11	7,330.11	3,942.72	44.00	43.67	76.999	-786.00	3,825.25	1,379.87	1,294.29	85.59	16.123	
7,600.00	4,254.05	7,380.11	3,943.48	44.53	44.20	76.992	-784.91	3,875.23	1,379.91	1,293.29	86.62	15.931	
7,650.00	4,254.99	7,430.11	3,944.23	45.06	44.74	76.984	-783.82	3,925.21	1,379.95	1,292.30	87.66	15.743	
7,700.00	4,255.93	7,480.11	3,944.99	45.59	45.27	76.977	-782.73	3,975.19	1,379.99	1,291.30	88.69	15.559	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,750.00	4,256.87	7,530.10	3,945.74	46.12	45.80	76.969	-781.64	4,025.18	1,380.03	1,290.30	89.73	15.380	
7,800.00	4,257.81	7,580.10	3,946.50	46.65	46.34	76.962	-780.55	4,075.16	1,380.07	1,289.30	90.77	15.204	
7,850.00	4,258.74	7,630.10	3,947.25	47.18	46.87	76.954	-779.47	4,125.14	1,380.11	1,288.30	91.81	15.032	
7,900.00	4,259.68	7,680.10	3,948.00	47.72	47.41	76.947	-778.38	4,175.12	1,380.15	1,287.29	92.85	14.864	
7,950.00	4,260.62	7,730.10	3,948.76	48.25	47.94	76.939	-777.29	4,225.11	1,380.19	1,286.29	93.90	14.699	
8,000.00	4,261.56	7,780.10	3,949.51	48.78	48.48	76.932	-776.20	4,275.09	1,380.23	1,285.29	94.94	14.537	
8,050.00	4,262.50	7,830.10	3,950.27	49.32	49.02	76.925	-775.11	4,325.07	1,380.27	1,284.28	95.99	14.379	
8,100.00	4,263.44	7,880.09	3,951.02	49.85	49.55	76.917	-774.02	4,375.05	1,380.31	1,283.27	97.04	14.225	
8,150.00	4,264.37	7,930.09	3,951.78	50.39	50.09	76.910	-772.94	4,425.03	1,380.35	1,282.26	98.08	14.073	
8,200.00	4,265.31	7,980.09	3,952.53	50.92	50.63	76.902	-771.85	4,475.02	1,380.39	1,281.25	99.13	13.925	
8,250.00	4,266.25	8,030.09	3,953.29	51.46	51.17	76.895	-770.76	4,525.00	1,380.43	1,280.24	100.18	13.779	
8,300.00	4,267.19	8,080.09	3,954.04	52.00	51.71	76.887	-769.67	4,574.98	1,380.47	1,279.23	101.23	13.636	
8,350.00	4,268.13	8,130.09	3,954.80	52.54	52.25	76.880	-768.58	4,624.96	1,380.51	1,278.22	102.29	13.497	
8,400.00	4,269.07	8,180.09	3,955.55	53.08	52.79	76.872	-767.50	4,674.94	1,380.55	1,277.21	103.34	13.359	
8,450.00	4,270.01	8,230.09	3,956.31	53.62	53.33	76.865	-766.41	4,724.93	1,380.59	1,276.19	104.39	13.225	
8,500.00	4,270.94	8,280.09	3,957.06	54.16	53.88	76.858	-765.32	4,774.91	1,380.63	1,275.18	105.45	13.093	
8,550.00	4,271.88	8,330.09	3,957.82	54.70	54.42	76.850	-764.23	4,824.89	1,380.67	1,274.17	106.50	12.964	
8,600.00	4,272.82	8,380.09	3,958.57	55.24	54.96	76.843	-763.14	4,874.87	1,380.71	1,273.15	107.56	12.837	
8,650.00	4,273.76	8,430.09	3,959.32	55.78	55.50	76.835	-762.05	4,924.85	1,380.75	1,272.13	108.61	12.712	
8,700.00	4,274.70	8,480.09	3,960.08	56.32	56.05	76.828	-760.97	4,974.84	1,380.79	1,271.12	109.67	12.590	
8,750.00	4,275.64	8,530.09	3,960.83	56.86	56.59	76.820	-759.88	5,024.82	1,380.83	1,270.10	110.73	12.470	
8,800.00	4,276.57	8,580.09	3,961.59	57.40	57.14	76.813	-758.79	5,074.80	1,380.87	1,269.08	111.79	12.353	
8,850.00	4,277.51	8,630.09	3,962.34	57.95	57.68	76.805	-757.70	5,124.78	1,380.91	1,268.06	112.85	12.237	
8,900.00	4,278.45	8,680.09	3,963.10	58.49	58.22	76.798	-756.61	5,174.77	1,380.95	1,267.04	113.91	12.123	
8,950.00	4,279.39	8,730.09	3,963.85	59.03	58.77	76.791	-755.52	5,224.75	1,380.99	1,266.02	114.97	12.012	
9,000.00	4,280.33	8,780.09	3,964.61	59.58	59.32	76.783	-754.44	5,274.73	1,381.03	1,265.00	116.03	11.902	
9,050.00	4,281.27	8,830.09	3,965.36	60.12	59.86	76.776	-753.35	5,324.71	1,381.07	1,263.98	117.09	11.795	
9,100.00	4,282.20	8,880.09	3,966.12	60.66	60.41	76.768	-752.26	5,374.69	1,381.11	1,262.95	118.15	11.689	
9,150.00	4,283.14	8,930.09	3,966.87	61.21	60.95	76.761	-751.17	5,424.68	1,381.15	1,261.93	119.22	11.585	
9,200.00	4,284.08	8,980.09	3,967.63	61.75	61.50	76.753	-750.08	5,474.66	1,381.19	1,260.91	120.28	11.483	
9,250.00	4,285.02	9,030.09	3,968.38	62.30	62.05	76.746	-749.00	5,524.64	1,381.23	1,259.88	121.34	11.383	
9,300.00	4,285.96	9,080.09	3,969.14	62.84	62.60	76.738	-747.91	5,574.62	1,381.27	1,258.86	122.41	11.284	
9,350.00	4,286.90	9,130.09	3,969.89	63.39	63.14	76.731	-746.82	5,624.60	1,381.31	1,257.84	123.47	11.187	
9,400.00	4,287.83	9,180.09	3,970.64	63.94	63.69	76.724	-745.73	5,674.59	1,381.35	1,256.81	124.54	11.092	
9,450.00	4,288.77	9,230.09	3,971.40	64.48	64.24	76.716	-744.64	5,724.57	1,381.39	1,255.78	125.60	10.998	
9,500.00	4,289.71	9,280.09	3,972.15	65.03	64.79	76.709	-743.55	5,774.55	1,381.43	1,254.76	126.67	10.906	
9,550.00	4,290.65	9,330.09	3,972.91	65.58	65.34	76.701	-742.47	5,824.53	1,381.47	1,253.73	127.74	10.815	
9,600.00	4,291.59	9,380.08	3,973.66	66.13	65.89	76.694	-741.38	5,874.52	1,381.51	1,252.71	128.80	10.726	
9,650.00	4,292.53	9,430.08	3,974.42	66.67	66.44	76.686	-740.29	5,924.50	1,381.55	1,251.68	129.87	10.638	
9,700.00	4,293.46	9,480.08	3,975.17	67.22	66.99	76.679	-739.20	5,974.48	1,381.59	1,250.65	130.94	10.551	
9,750.00	4,294.40	9,530.08	3,975.93	67.77	67.53	76.672	-738.11	6,024.46	1,381.63	1,249.62	132.01	10.466	
9,800.00	4,295.34	9,580.08	3,976.68	68.32	68.08	76.664	-737.02	6,074.44	1,381.67	1,248.60	133.08	10.382	
9,850.00	4,296.28	9,630.08	3,977.44	68.87	68.63	76.657	-735.94	6,124.43	1,381.71	1,247.57	134.15	10.300	
9,900.00	4,297.22	9,680.08	3,978.19	69.42	69.19	76.649	-734.85	6,174.41	1,381.75	1,246.54	135.22	10.219	
9,950.00	4,298.16	9,730.08	3,978.95	69.96	69.74	76.642	-733.76	6,224.39	1,381.79	1,245.51	136.29	10.139	
10,000.00	4,299.10	9,780.08	3,979.70	70.51	70.29	76.634	-732.67	6,274.37	1,381.84	1,244.48	137.36	10.060	
10,050.00	4,300.03	9,830.08	3,980.46	71.06	70.84	76.627	-731.58	6,324.35	1,381.88	1,243.45	138.43	9.983	
10,100.00	4,300.97	9,880.08	3,981.21	71.61	71.39	76.620	-730.50	6,374.34	1,381.92	1,242.42	139.50	9.906	
10,150.00	4,301.91	9,930.08	3,981.96	72.16	71.94	76.612	-729.41	6,424.32	1,381.96	1,241.39	140.57	9.831	
10,200.00	4,302.85	9,980.08	3,982.72	72.71	72.49	76.605	-728.32	6,474.30	1,382.00	1,240.36	141.64	9.757	
10,250.00	4,303.79	10,030.08	3,983.47	73.26	73.04	76.597	-727.23	6,524.28	1,382.04	1,239.33	142.71	9.684	
10,300.00	4,304.73	10,080.08	3,984.23	73.81	73.59	76.590	-726.14	6,574.27	1,382.08	1,238.30	143.78	9.612	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,350.00	4,305.66	10,130.08	3,984.98	74.36	74.15	76.582	-725.05	6,624.25	1,382.12	1,237.26	144.86	9.541	
10,400.00	4,306.60	10,180.08	3,985.74	74.92	74.70	76.575	-723.97	6,674.23	1,382.16	1,236.23	145.93	9.472	
10,450.00	4,307.54	10,230.08	3,986.49	75.47	75.25	76.568	-722.88	6,724.21	1,382.20	1,235.20	147.00	9.403	
10,500.00	4,308.48	10,280.08	3,987.25	76.02	75.80	76.560	-721.79	6,774.19	1,382.24	1,234.17	148.07	9.335	
10,550.00	4,309.42	10,330.08	3,988.00	76.57	76.36	76.553	-720.70	6,824.18	1,382.28	1,233.14	149.15	9.268	
10,600.00	4,310.36	10,380.08	3,988.76	77.12	76.91	76.545	-719.61	6,874.16	1,382.32	1,232.10	150.22	9.202	
10,650.00	4,311.29	10,430.08	3,989.51	77.67	77.46	76.538	-718.52	6,924.14	1,382.37	1,231.07	151.29	9.137	
10,700.00	4,312.23	10,480.08	3,990.27	78.22	78.01	76.530	-717.44	6,974.12	1,382.41	1,230.04	152.37	9.073	
10,750.00	4,313.17	10,530.08	3,991.02	78.78	78.57	76.523	-716.35	7,024.10	1,382.45	1,229.01	153.44	9.010	
10,800.00	4,314.11	10,580.08	3,991.78	79.33	79.12	76.516	-715.26	7,074.09	1,382.49	1,227.97	154.52	8.947	
10,850.00	4,315.05	10,630.08	3,992.53	79.88	79.67	76.508	-714.17	7,124.07	1,382.53	1,226.94	155.59	8.886	
10,900.00	4,315.99	10,680.08	3,993.28	80.43	80.23	76.501	-713.08	7,174.05	1,382.57	1,225.90	156.67	8.825	
10,950.00	4,316.92	10,730.08	3,994.04	80.99	80.78	76.493	-712.00	7,224.03	1,382.61	1,224.87	157.74	8.765	
11,000.00	4,317.86	10,780.08	3,994.79	81.54	81.34	76.486	-710.91	7,274.01	1,382.65	1,223.84	158.82	8.706	
11,050.00	4,318.80	10,830.08	3,995.55	82.09	81.89	76.478	-709.82	7,324.00	1,382.69	1,222.80	159.89	8.648	
11,100.00	4,319.74	10,880.07	3,996.30	82.65	82.44	76.471	-708.73	7,373.98	1,382.73	1,221.77	160.97	8.590	
11,150.00	4,320.68	10,930.07	3,997.06	83.20	83.00	76.464	-707.64	7,423.96	1,382.78	1,220.73	162.04	8.533	
11,200.00	4,321.62	10,980.07	3,997.81	83.75	83.55	76.456	-706.55	7,473.94	1,382.82	1,219.70	163.12	8.477	
11,250.00	4,322.56	11,030.07	3,998.57	84.31	84.11	76.449	-705.47	7,523.93	1,382.86	1,218.66	164.19	8.422	
11,300.00	4,323.49	11,080.07	3,999.32	84.86	84.66	76.441	-704.38	7,573.91	1,382.90	1,217.63	165.27	8.368	
11,330.25	4,324.06	11,110.32	3,999.78	85.19	85.00	76.437	-703.72	7,604.14	1,382.92	1,217.00	165.92	8.335	
11,350.00	4,324.43	11,124.98	4,000.00	85.41	85.16	76.435	-703.40	7,618.80	1,382.95	1,216.66	166.29	8.316	
11,380.28	4,325.00	11,124.98	4,000.00	85.75	85.16	76.435	-703.40	7,618.80	1,383.42	1,216.80	166.62	8.303 SF	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
200.00	200.00	200.00	200.00	0.50	0.50	179.426	-39.90	0.40	39.90	38.90	1.00	39.754	
250.00	250.00	250.00	250.00	0.68	0.68	179.426	-39.90	0.40	39.90	38.54	1.36	29.292	
300.00	300.00	300.00	300.00	0.86	0.86	179.426	-39.90	0.40	39.90	38.18	1.72	23.190 CC, ES	
350.00	350.00	349.31	349.30	1.04	1.03	174.407	-40.32	0.47	40.76	38.69	2.08	19.643	
400.00	399.98	398.53	398.51	1.22	1.20	174.306	-41.57	0.68	43.34	40.90	2.44	17.793	
450.00	449.93	447.57	447.51	1.40	1.37	174.160	-43.65	1.03	47.62	44.83	2.80	17.010	
500.00	499.84	496.36	496.21	1.58	1.53	173.994	-46.53	1.52	53.62	50.45	3.16	16.946	
550.00	549.68	544.81	544.51	1.77	1.70	173.827	-50.21	2.14	61.30	57.77	3.53	17.365	
600.00	599.45	592.83	592.32	1.95	1.87	173.669	-54.64	2.89	70.66	66.76	3.89	18.149	
650.00	649.13	640.35	639.55	2.13	2.04	173.525	-59.81	3.77	81.67	77.41	4.26	19.175	
700.00	698.70	688.77	687.62	2.31	2.21	173.428	-65.50	4.73	93.95	89.34	4.61	20.361	
719.90	718.40	708.00	706.72	2.39	2.28	173.411	-67.75	5.11	99.08	94.32	4.75	20.840	
750.00	748.18	737.06	735.57	2.49	2.38	173.410	-71.17	5.69	106.93	101.97	4.95	21.593	
800.00	797.64	785.33	783.50	2.67	2.55	173.408	-76.83	6.65	119.96	114.68	5.28	22.713	
850.00	847.10	833.60	831.42	2.85	2.73	173.407	-82.50	7.61	133.00	127.39	5.62	23.683	
900.00	896.57	881.87	879.35	3.02	2.90	173.406	-88.17	8.57	146.04	140.09	5.95	24.548	
950.00	946.03	930.14	927.28	3.20	3.08	173.405	-93.84	9.52	159.08	152.79	6.28	25.315	
1,000.00	995.49	978.41	975.20	3.38	3.25	173.405	-99.51	10.48	172.12	165.49	6.62	25.991	
1,050.00	1,044.96	1,026.68	1,023.13	3.56	3.43	173.404	-105.18	11.44	185.16	178.19	6.96	26.602	
1,100.00	1,094.42	1,074.95	1,071.05	3.74	3.61	173.404	-110.84	12.40	198.19	190.89	7.30	27.150	
1,150.00	1,143.89	1,123.22	1,118.98	3.93	3.78	173.403	-116.51	13.36	211.23	203.59	7.64	27.648	
1,200.00	1,193.35	1,171.49	1,166.91	4.11	3.96	173.403	-122.18	14.32	224.27	216.29	7.98	28.100	
1,250.00	1,242.81	1,219.76	1,214.83	4.29	4.14	173.402	-127.85	15.28	237.31	228.98	8.32	28.513	
1,300.00	1,292.28	1,268.03	1,262.76	4.47	4.32	173.402	-133.52	16.24	250.35	241.68	8.67	28.891	
1,350.00	1,341.74	1,316.30	1,310.69	4.66	4.49	173.402	-139.18	17.20	263.38	254.38	9.01	29.239	
1,400.00	1,391.21	1,364.57	1,358.61	4.84	4.67	173.402	-144.85	18.15	276.42	267.07	9.35	29.559	
1,450.00	1,440.67	1,412.84	1,406.54	5.02	4.85	173.401	-150.52	19.11	289.46	279.77	9.70	29.856	
1,500.00	1,490.13	1,461.11	1,454.47	5.20	5.03	173.401	-156.19	20.07	302.50	292.46	10.04	30.131	
1,550.00	1,539.60	1,509.38	1,502.39	5.39	5.21	173.401	-161.86	21.03	315.54	305.15	10.38	30.388	
1,600.00	1,589.06	1,557.65	1,550.32	5.57	5.39	173.401	-167.53	21.99	328.57	317.85	10.73	30.626	
1,650.00	1,638.52	1,605.92	1,598.25	5.75	5.56	173.401	-173.19	22.95	341.61	330.54	11.07	30.850	
1,700.00	1,687.99	1,654.19	1,646.17	5.94	5.74	173.401	-178.86	23.91	354.65	343.23	11.42	31.058	
1,750.00	1,737.45	1,702.46	1,694.10	6.12	5.92	173.400	-184.53	24.87	367.69	355.92	11.76	31.255	
1,800.00	1,786.92	1,750.73	1,742.03	6.30	6.10	173.400	-190.20	25.82	380.73	368.62	12.11	31.439	
1,850.00	1,836.38	1,799.00	1,789.95	6.49	6.28	173.400	-195.87	26.78	393.77	381.31	12.46	31.613	
1,900.00	1,885.84	1,847.27	1,837.88	6.67	6.46	173.400	-201.53	27.74	406.80	394.00	12.80	31.776	
1,950.00	1,935.31	1,895.54	1,885.81	6.85	6.64	173.400	-207.20	28.70	419.84	406.69	13.15	31.931	
2,000.00	1,984.77	1,943.81	1,933.73	7.04	6.82	173.400	-212.87	29.66	432.88	419.38	13.49	32.078	
2,050.00	2,034.24	1,992.08	1,981.66	7.22	6.99	173.400	-218.54	30.62	445.92	432.08	13.84	32.217	
2,100.00	2,083.70	2,040.35	2,029.59	7.40	7.17	173.400	-224.21	31.58	458.96	444.77	14.19	32.348	
2,150.00	2,133.16	2,088.62	2,077.51	7.59	7.35	173.400	-229.88	32.54	471.99	457.46	14.53	32.473	
2,200.00	2,182.63	2,136.89	2,125.44	7.77	7.53	173.400	-235.54	33.50	485.03	470.15	14.88	32.593	
2,250.00	2,232.09	2,185.16	2,173.37	7.95	7.71	173.399	-241.21	34.45	498.07	482.84	15.23	32.706	
2,300.00	2,281.56	2,233.43	2,221.29	8.14	7.89	173.399	-246.88	35.41	511.11	495.53	15.58	32.814	
2,350.00	2,331.02	2,281.70	2,269.22	8.32	8.07	173.399	-252.55	36.37	524.15	508.22	15.92	32.918	
2,400.00	2,380.48	2,329.97	2,317.15	8.50	8.25	173.399	-258.22	37.33	537.18	520.91	16.27	33.016	
2,450.00	2,429.95	2,378.24	2,365.07	8.69	8.43	173.399	-263.89	38.29	550.22	533.60	16.62	33.111	
2,500.00	2,479.41	2,426.51	2,413.00	8.87	8.61	173.399	-269.55	39.25	563.26	546.30	16.97	33.201	
2,550.00	2,528.87	2,474.78	2,460.93	9.05	8.79	173.399	-275.22	40.21	576.30	558.99	17.31	33.288	
2,600.00	2,578.34	2,523.05	2,508.85	9.24	8.96	173.399	-280.89	41.17	589.34	571.68	17.66	33.371	
2,650.00	2,627.80	2,571.32	2,556.78	9.42	9.14	173.399	-286.56	42.13	602.38	584.37	18.01	33.451	
2,700.00	2,677.27	2,619.59	2,604.71	9.60	9.32	173.399	-292.23	43.08	615.41	597.06	18.36	33.527	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,750.00	2,726.73	2,667.86	2,652.63	9.79	9.50	173.399	-297.89	44.04	628.45	609.75	18.70	33.601	
2,800.00	2,776.19	2,716.13	2,700.56	9.97	9.68	173.399	-303.56	45.00	641.49	622.44	19.05	33.672	
2,850.00	2,825.66	2,764.40	2,748.49	10.15	9.86	173.399	-309.23	45.96	654.53	635.13	19.40	33.740	
2,900.00	2,875.12	2,812.67	2,796.41	10.34	10.04	173.399	-314.90	46.92	667.57	647.82	19.75	33.806	
2,950.00	2,924.59	2,860.94	2,844.34	10.52	10.22	173.399	-320.57	47.88	680.60	660.51	20.09	33.870	
3,000.00	2,974.05	2,909.21	2,892.27	10.70	10.40	173.399	-326.24	48.84	693.64	673.20	20.44	33.931	
3,050.00	3,023.51	2,957.48	2,940.19	10.89	10.58	173.399	-331.90	49.80	706.68	685.89	20.79	33.990	
3,100.00	3,072.98	3,005.75	2,988.12	11.07	10.76	173.399	-337.57	50.75	719.72	698.58	21.14	34.047	
3,150.00	3,122.44	3,054.02	3,036.05	11.25	10.94	173.399	-343.24	51.71	732.76	711.27	21.49	34.102	
3,200.00	3,171.90	3,102.29	3,083.97	11.44	11.12	173.399	-348.91	52.67	745.79	723.96	21.84	34.156	
3,239.93	3,211.41	3,140.84	3,122.25	11.58	11.26	173.399	-353.43	53.44	756.21	734.09	22.11	34.197	
3,250.00	3,221.37	3,150.57	3,131.90	11.62	11.30	169.163	-354.58	53.63	758.83	736.64	22.19	34.203	
3,300.00	3,270.79	3,198.84	3,179.83	11.81	11.48	149.731	-360.25	54.59	771.69	749.14	22.55	34.222	
3,350.00	3,320.03	3,247.98	3,228.62	11.99	11.66	134.726	-366.00	55.70	784.30	761.38	22.92	34.221	
3,400.00	3,368.97	3,299.48	3,279.68	12.17	11.85	124.023	-371.84	58.96	796.50	773.20	23.29	34.192	
3,450.00	3,417.47	3,351.45	3,330.98	12.35	12.04	116.417	-377.44	65.04	808.21	784.54	23.67	34.143	
3,500.00	3,465.40	3,403.89	3,382.37	12.53	12.23	110.880	-382.80	74.00	819.40	795.35	24.05	34.076	
3,550.00	3,512.62	3,456.81	3,433.68	12.70	12.42	106.722	-387.88	85.89	830.04	805.62	24.42	33.989	
3,600.00	3,559.01	3,510.21	3,484.73	12.87	12.61	103.507	-392.66	100.75	840.08	815.29	24.79	33.882	
3,650.00	3,604.43	3,564.08	3,535.35	13.04	12.79	100.959	-397.11	118.61	849.51	824.34	25.17	33.754	
3,700.00	3,648.77	3,618.41	3,585.34	13.20	12.98	98.897	-401.21	139.49	858.29	832.74	25.54	33.604	
3,750.00	3,691.90	3,673.19	3,634.49	13.37	13.16	97.202	-404.93	163.37	866.38	840.46	25.92	33.430	
3,800.00	3,733.71	3,728.40	3,682.59	13.54	13.34	95.790	-408.26	190.25	873.76	847.46	26.29	33.231	
3,850.00	3,774.07	3,784.01	3,729.42	13.71	13.51	94.603	-411.17	220.07	880.40	853.73	26.68	33.004	
3,900.00	3,812.89	3,839.98	3,774.76	13.88	13.69	93.599	-413.63	252.79	886.29	859.22	27.06	32.748	
3,950.00	3,850.04	3,896.30	3,818.40	14.06	13.87	92.747	-415.64	288.31	891.39	863.93	27.46	32.460	
4,000.00	3,885.44	3,952.91	3,860.12	14.25	14.05	92.022	-417.16	326.54	895.69	867.82	27.87	32.137	
4,050.00	3,918.98	4,009.77	3,899.70	14.45	14.24	91.407	-418.20	367.34	899.18	870.89	28.29	31.779	
4,100.00	3,950.58	4,066.83	3,936.94	14.65	14.44	90.888	-418.73	410.56	901.84	873.10	28.73	31.385	
4,150.00	3,980.13	4,124.05	3,971.66	14.87	14.65	90.453	-418.76	456.03	903.65	874.46	29.19	30.954	
4,200.00	4,007.58	4,181.37	4,003.67	15.09	14.88	90.094	-418.27	503.56	904.62	874.95	29.67	30.487	
4,230.69	4,023.34	4,216.58	4,021.92	15.23	15.03	89.909	-417.72	533.66	904.79	874.82	29.97	30.185	
4,250.00	4,032.99	4,236.25	4,031.76	15.33	15.12	89.909	-417.35	550.70	904.79	874.62	30.17	29.995	
4,300.00	4,057.99	4,286.25	4,056.76	15.57	15.35	89.909	-416.41	593.99	904.79	874.13	30.65	29.515	
4,350.00	4,082.99	4,336.25	4,081.76	15.84	15.59	89.909	-415.47	637.28	904.79	873.61	31.18	29.018	
4,400.00	4,107.99	4,386.25	4,106.76	16.10	15.85	89.909	-414.52	680.57	904.79	873.08	31.71	28.533	
4,430.69	4,123.34	4,416.94	4,122.11	16.27	16.01	89.909	-413.95	707.14	904.79	872.74	32.05	28.234	
4,450.00	4,132.71	4,436.21	4,131.53	16.38	16.11	89.914	-413.58	723.94	904.78	872.52	32.26	28.045	
4,500.00	4,154.28	4,486.10	4,153.25	16.66	16.39	89.928	-412.60	768.83	904.78	871.95	32.83	27.557	
4,550.00	4,171.84	4,536.01	4,171.00	16.96	16.67	89.943	-411.59	815.45	904.78	871.36	33.42	27.075	
4,600.00	4,185.26	4,585.95	4,184.63	17.26	16.96	89.958	-410.54	863.46	904.78	870.77	34.01	26.602	
4,650.00	4,194.43	4,635.90	4,194.03	17.55	17.26	89.974	-409.48	912.49	904.78	870.17	34.61	26.142	
4,700.00	4,199.28	4,685.87	4,199.12	17.85	17.55	89.990	-408.39	962.18	904.78	869.57	35.20	25.700	
4,719.94	4,200.00	4,705.81	4,199.94	17.97	17.67	89.996	-407.96	982.09	904.78	869.34	35.44	25.530	
4,750.00	4,200.56	4,735.87	4,200.51	18.15	17.85	89.997	-407.31	1,012.14	904.77	868.97	35.81	25.268	
4,800.00	4,201.50	4,785.87	4,201.46	18.46	18.16	89.997	-406.22	1,062.12	904.77	868.35	36.42	24.842	
4,850.00	4,202.44	4,835.87	4,202.40	18.78	18.48	89.997	-405.13	1,112.10	904.77	867.70	37.07	24.405	
4,900.00	4,203.38	4,885.87	4,203.34	19.11	18.81	89.997	-404.04	1,162.08	904.77	867.04	37.73	23.980	
4,950.00	4,204.32	4,935.87	4,204.28	19.46	19.15	89.998	-402.96	1,212.06	904.77	866.34	38.43	23.546	
5,000.00	4,205.26	4,985.87	4,205.22	19.80	19.50	89.998	-401.87	1,262.04	904.77	865.64	39.13	23.124	
5,050.00	4,206.19	5,035.87	4,206.16	20.17	19.87	89.998	-400.78	1,312.02	904.77	864.91	39.86	22.698	
5,100.00	4,207.13	5,085.87	4,207.11	20.54	20.24	89.998	-399.69	1,362.00	904.76	864.16	40.60	22.285	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,150.00	4,208.07	5,135.87	4,208.05	20.92	20.62	89.998	-398.60	1,411.98	904.76	863.39	41.37	21.871	
5,200.00	4,209.01	5,185.87	4,208.99	21.30	21.00	89.999	-397.52	1,461.95	904.76	862.62	42.14	21.470	
5,250.00	4,209.95	5,235.87	4,209.93	21.70	21.40	89.999	-396.43	1,511.93	904.76	861.82	42.94	21.070	
5,300.00	4,210.89	5,285.87	4,210.87	22.10	21.80	89.999	-395.34	1,561.91	904.76	861.01	43.74	20.683	
5,350.00	4,211.83	5,335.87	4,211.81	22.51	22.22	89.999	-394.25	1,611.89	904.76	860.18	44.57	20.299	
5,400.00	4,212.76	5,385.87	4,212.76	22.92	22.63	89.999	-393.17	1,661.87	904.75	859.35	45.40	19.927	
5,450.00	4,213.70	5,435.87	4,213.70	23.35	23.06	90.000	-392.08	1,711.85	904.75	858.50	46.25	19.560	
5,500.00	4,214.64	5,485.87	4,214.64	23.77	23.49	90.000	-390.99	1,761.83	904.75	857.64	47.11	19.205	
5,550.00	4,215.58	5,535.87	4,215.58	24.21	23.92	90.000	-389.90	1,811.81	904.75	856.77	47.98	18.855	
5,600.00	4,216.52	5,585.87	4,216.52	24.64	24.36	90.000	-388.81	1,861.79	904.75	855.89	48.86	18.517	
5,650.00	4,217.46	5,635.87	4,217.46	25.09	24.81	90.000	-387.73	1,911.77	904.75	854.99	49.76	18.184	
5,700.00	4,218.39	5,685.87	4,218.41	25.53	25.26	90.001	-386.64	1,961.75	904.74	854.09	50.65	17.862	
5,750.00	4,219.33	5,735.87	4,219.35	25.99	25.71	90.001	-385.55	2,011.73	904.74	853.18	51.57	17.546	
5,800.00	4,220.27	5,785.87	4,220.29	26.44	26.17	90.001	-384.46	2,061.71	904.74	852.26	52.48	17.240	
5,850.00	4,221.21	5,835.87	4,221.23	26.91	26.63	90.001	-383.37	2,111.69	904.74	851.33	53.41	16.940	
5,900.00	4,222.15	5,885.87	4,222.17	27.37	27.10	90.002	-382.29	2,161.66	904.74	850.40	54.34	16.650	
5,950.00	4,223.09	5,935.87	4,223.11	27.84	27.57	90.002	-381.20	2,211.64	904.74	849.46	55.28	16.366	
6,000.00	4,224.02	5,985.87	4,224.06	28.31	28.04	90.002	-380.11	2,261.62	904.74	848.51	56.23	16.091	
6,050.00	4,224.96	6,035.87	4,225.00	28.78	28.52	90.002	-379.02	2,311.60	904.73	847.55	57.18	15.822	
6,100.00	4,225.90	6,085.87	4,225.94	29.26	29.00	90.002	-377.94	2,361.58	904.73	846.59	58.14	15.561	
6,150.00	4,226.84	6,135.87	4,226.88	29.74	29.48	90.003	-376.85	2,411.56	904.73	845.62	59.11	15.307	
6,200.00	4,227.78	6,185.87	4,227.82	30.23	29.97	90.003	-375.76	2,461.54	904.73	844.65	60.08	15.060	
6,250.00	4,228.72	6,235.87	4,228.76	30.71	30.45	90.003	-374.67	2,511.52	904.73	843.67	61.05	14.818	
6,300.00	4,229.65	6,285.87	4,229.71	31.20	30.94	90.003	-373.58	2,561.50	904.73	842.69	62.03	14.584	
6,350.00	4,230.59	6,335.87	4,230.65	31.69	31.44	90.003	-372.50	2,611.48	904.72	841.70	63.02	14.356	
6,400.00	4,231.53	6,385.87	4,231.59	32.19	31.93	90.004	-371.41	2,661.46	904.72	840.71	64.01	14.134	
6,450.00	4,232.47	6,435.87	4,232.53	32.68	32.43	90.004	-370.32	2,711.44	904.72	839.71	65.01	13.917	
6,500.00	4,233.41	6,485.87	4,233.47	33.18	32.93	90.004	-369.23	2,761.42	904.72	838.71	66.01	13.706	
6,550.00	4,234.35	6,535.87	4,234.41	33.68	33.43	90.004	-368.15	2,811.40	904.72	837.71	67.01	13.501	
6,600.00	4,235.28	6,585.87	4,235.36	34.18	33.94	90.004	-367.06	2,861.37	904.72	836.70	68.02	13.301	
6,650.00	4,236.22	6,635.87	4,236.30	34.69	34.44	90.005	-365.97	2,911.35	904.72	835.69	69.03	13.106	
6,700.00	4,237.16	6,685.87	4,237.24	35.19	34.95	90.005	-364.88	2,961.33	904.71	834.67	70.04	12.916	
6,750.00	4,238.10	6,735.87	4,238.18	35.70	35.46	90.005	-363.79	3,011.31	904.71	833.65	71.06	12.731	
6,800.00	4,239.04	6,785.87	4,239.12	36.21	35.97	90.005	-362.71	3,061.29	904.71	832.63	72.08	12.551	
6,850.00	4,239.98	6,835.87	4,240.06	36.72	36.48	90.005	-361.62	3,111.27	904.71	831.60	73.11	12.375	
6,900.00	4,240.92	6,885.87	4,241.01	37.23	37.00	90.006	-360.53	3,161.25	904.71	830.57	74.13	12.204	
6,950.00	4,241.85	6,935.87	4,241.95	37.75	37.51	90.006	-359.44	3,211.23	904.71	829.54	75.17	12.036	
7,000.00	4,242.79	6,985.87	4,242.89	38.26	38.03	90.006	-358.35	3,261.21	904.70	828.51	76.20	11.873	
7,050.00	4,243.73	7,035.87	4,243.83	38.78	38.54	90.006	-357.27	3,311.19	904.70	827.47	77.23	11.714	
7,100.00	4,244.67	7,085.87	4,244.77	39.29	39.06	90.007	-356.18	3,361.17	904.70	826.43	78.27	11.559	
7,150.00	4,245.61	7,135.87	4,245.71	39.81	39.58	90.007	-355.09	3,411.15	904.70	825.39	79.31	11.407	
7,200.00	4,246.55	7,185.87	4,246.66	40.33	40.11	90.007	-354.00	3,461.13	904.70	824.35	80.35	11.259	
7,250.00	4,247.48	7,235.87	4,247.60	40.85	40.63	90.007	-352.92	3,511.11	904.70	823.30	81.40	11.114	
7,300.00	4,248.42	7,285.87	4,248.54	41.38	41.15	90.007	-351.83	3,561.09	904.70	822.25	82.44	10.973	
7,350.00	4,249.36	7,335.87	4,249.48	41.90	41.68	90.008	-350.74	3,611.06	904.69	821.20	83.49	10.835	
7,400.00	4,250.30	7,385.87	4,250.42	42.42	42.20	90.008	-349.65	3,661.04	904.69	820.15	84.54	10.701	
7,450.00	4,251.24	7,435.87	4,251.36	42.95	42.73	90.008	-348.56	3,711.02	904.69	819.09	85.60	10.569	
7,500.00	4,252.18	7,485.87	4,252.31	43.48	43.26	90.008	-347.48	3,761.00	904.69	818.04	86.65	10.440	
7,550.00	4,253.11	7,535.87	4,253.25	44.00	43.78	90.008	-346.39	3,810.98	904.69	816.98	87.71	10.315	
7,600.00	4,254.05	7,585.87	4,254.19	44.53	44.31	90.009	-345.30	3,860.96	904.69	815.92	88.77	10.192	
7,650.00	4,254.99	7,635.87	4,255.13	45.06	44.84	90.009	-344.21	3,910.94	904.68	814.86	89.83	10.071	
7,700.00	4,255.93	7,685.87	4,256.07	45.59	45.37	90.009	-343.12	3,960.92	904.68	813.79	90.89	9.954	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,750.00	4,256.87	7,735.87	4,257.01	46.12	45.91	90.009	-342.04	4,010.90	904.68	812.73	91.95	9.839	
7,800.00	4,257.81	7,785.87	4,257.96	46.65	46.44	90.009	-340.95	4,060.88	904.68	811.66	93.02	9.726	
7,850.00	4,258.74	7,835.87	4,258.90	47.18	46.97	90.010	-339.86	4,110.86	904.68	810.60	94.08	9.616	
7,900.00	4,259.68	7,885.87	4,259.84	47.72	47.50	90.010	-338.77	4,160.84	904.68	809.53	95.15	9.508	
7,950.00	4,260.62	7,935.87	4,260.78	48.25	48.04	90.010	-337.69	4,210.82	904.68	808.46	96.22	9.402	
8,000.00	4,261.56	7,985.87	4,261.72	48.78	48.57	90.010	-336.60	4,260.80	904.67	807.39	97.29	9.299	
8,050.00	4,262.50	8,035.87	4,262.66	49.32	49.11	90.011	-335.51	4,310.77	904.67	806.31	98.36	9.198	
8,100.00	4,263.44	8,085.87	4,263.61	49.85	49.65	90.011	-334.42	4,360.75	904.67	805.24	99.43	9.099	
8,150.00	4,264.37	8,135.87	4,264.55	50.39	50.18	90.011	-333.33	4,410.73	904.67	804.16	100.50	9.001	
8,200.00	4,265.31	8,185.87	4,265.49	50.92	50.72	90.011	-332.25	4,460.71	904.67	803.09	101.58	8.906	
8,250.00	4,266.25	8,235.87	4,266.43	51.46	51.26	90.011	-331.16	4,510.69	904.67	802.01	102.65	8.813	
8,300.00	4,267.19	8,285.87	4,267.37	52.00	51.80	90.012	-330.07	4,560.67	904.66	800.93	103.73	8.721	
8,350.00	4,268.13	8,335.87	4,268.31	52.54	52.34	90.012	-328.98	4,610.65	904.66	799.85	104.81	8.632	
8,400.00	4,269.07	8,385.87	4,269.26	53.08	52.87	90.012	-327.90	4,660.63	904.66	798.77	105.89	8.544	
8,450.00	4,270.01	8,435.87	4,270.20	53.62	53.41	90.012	-326.81	4,710.61	904.66	797.69	106.97	8.457	
8,500.00	4,270.94	8,485.87	4,271.14	54.16	53.96	90.012	-325.72	4,760.59	904.66	796.61	108.05	8.373	
8,550.00	4,271.88	8,535.87	4,272.08	54.70	54.50	90.013	-324.63	4,810.57	904.66	795.53	109.13	8.290	
8,600.00	4,272.82	8,585.87	4,273.02	55.24	55.04	90.013	-323.54	4,860.55	904.65	794.44	110.21	8.208	
8,650.00	4,273.76	8,635.87	4,273.96	55.78	55.58	90.013	-322.46	4,910.53	904.65	793.36	111.30	8.128	
8,700.00	4,274.70	8,685.87	4,274.91	56.32	56.12	90.013	-321.37	4,960.51	904.65	792.27	112.38	8.050	
8,750.00	4,275.64	8,735.87	4,275.85	56.86	56.66	90.013	-320.28	5,010.48	904.65	791.18	113.47	7.973	
8,800.00	4,276.57	8,785.87	4,276.79	57.40	57.21	90.014	-319.19	5,060.46	904.65	790.10	114.55	7.897	
8,850.00	4,277.51	8,835.87	4,277.73	57.95	57.75	90.014	-318.10	5,110.44	904.65	789.01	115.64	7.823	
8,900.00	4,278.45	8,885.87	4,278.67	58.49	58.29	90.014	-317.02	5,160.42	904.65	787.92	116.73	7.750	
8,950.00	4,279.39	8,935.87	4,279.61	59.03	58.84	90.014	-315.93	5,210.40	904.64	786.83	117.81	7.679	
9,000.00	4,280.33	8,985.87	4,280.56	59.58	59.38	90.014	-314.84	5,260.38	904.64	785.74	118.90	7.608	
9,050.00	4,281.27	9,035.87	4,281.50	60.12	59.93	90.015	-313.75	5,310.36	904.64	784.65	119.99	7.539	
9,100.00	4,282.20	9,085.87	4,282.44	60.66	60.47	90.015	-312.67	5,360.34	904.64	783.56	121.08	7.471	
9,150.00	4,283.14	9,135.87	4,283.38	61.21	61.02	90.015	-311.58	5,410.32	904.64	782.47	122.17	7.405	
9,200.00	4,284.08	9,185.87	4,284.32	61.75	61.56	90.015	-310.49	5,460.30	904.64	781.37	123.26	7.339	
9,250.00	4,285.02	9,235.87	4,285.26	62.30	62.11	90.016	-309.40	5,510.28	904.63	780.28	124.36	7.275	
9,300.00	4,285.96	9,285.87	4,286.21	62.84	62.66	90.016	-308.31	5,560.26	904.63	779.18	125.45	7.211	
9,350.00	4,286.90	9,335.87	4,287.15	63.39	63.20	90.016	-307.23	5,610.24	904.63	778.09	126.54	7.149	
9,400.00	4,287.83	9,385.87	4,288.09	63.94	63.75	90.016	-306.14	5,660.22	904.63	776.99	127.64	7.088	
9,450.00	4,288.77	9,435.87	4,289.03	64.48	64.30	90.016	-305.05	5,710.19	904.63	775.90	128.73	7.027	
9,500.00	4,289.71	9,485.87	4,289.97	65.03	64.84	90.017	-303.96	5,760.17	904.63	774.80	129.82	6.968	
9,550.00	4,290.65	9,535.87	4,290.91	65.58	65.39	90.017	-302.88	5,810.15	904.63	773.71	130.92	6.910	
9,600.00	4,291.59	9,585.87	4,291.86	66.13	65.94	90.017	-301.79	5,860.13	904.62	772.61	132.02	6.852	
9,650.00	4,292.53	9,635.87	4,292.80	66.67	66.49	90.017	-300.70	5,910.11	904.62	771.51	133.11	6.796	
9,700.00	4,293.46	9,685.87	4,293.74	67.22	67.04	90.017	-299.61	5,960.09	904.62	770.41	134.21	6.740	
9,750.00	4,294.40	9,735.87	4,294.68	67.77	67.59	90.018	-298.52	6,010.07	904.62	769.31	135.31	6.686	
9,800.00	4,295.34	9,785.87	4,295.62	68.32	68.14	90.018	-297.44	6,060.05	904.62	768.21	136.40	6.632	
9,850.00	4,296.28	9,835.87	4,296.57	68.87	68.68	90.018	-296.35	6,110.03	904.62	767.11	137.50	6.579	
9,900.00	4,297.22	9,885.87	4,297.51	69.42	69.23	90.018	-295.26	6,160.01	904.61	766.01	138.60	6.527	
9,950.00	4,298.16	9,935.87	4,298.45	69.96	69.78	90.018	-294.17	6,209.99	904.61	764.91	139.70	6.475	
10,000.00	4,299.10	9,985.87	4,299.39	70.51	70.33	90.019	-293.08	6,259.97	904.61	763.81	140.80	6.425	
10,050.00	4,300.03	10,035.87	4,300.33	71.06	70.88	90.019	-292.00	6,309.95	904.61	762.71	141.90	6.375	
10,100.00	4,300.97	10,085.87	4,301.27	71.61	71.43	90.019	-290.91	6,359.93	904.61	761.61	143.00	6.326	
10,150.00	4,301.91	10,135.87	4,302.22	72.16	71.98	90.019	-289.82	6,409.90	904.61	760.51	144.10	6.278	
10,200.00	4,302.85	10,185.87	4,303.16	72.71	72.53	90.019	-288.73	6,459.88	904.61	759.40	145.20	6.230	
10,250.00	4,303.79	10,235.87	4,304.10	73.26	73.09	90.020	-287.65	6,509.86	904.60	758.30	146.30	6.183	
10,300.00	4,304.73	10,285.87	4,305.04	73.81	73.64	90.020	-286.56	6,559.84	904.60	757.20	147.41	6.137	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,350.00	4,305.66	10,335.87	4,305.98	74.36	74.19	90.020	-285.47	6,609.82	904.60	756.09	148.51	6.091	
10,400.00	4,306.60	10,385.87	4,306.92	74.92	74.74	90.020	-284.38	6,659.80	904.60	754.99	149.61	6.046	
10,450.00	4,307.54	10,435.87	4,307.87	75.47	75.29	90.021	-283.29	6,709.78	904.60	753.88	150.71	6.002	
10,500.00	4,308.48	10,485.87	4,308.81	76.02	75.84	90.021	-282.21	6,759.76	904.60	752.78	151.82	5.958	
10,550.00	4,309.42	10,535.87	4,309.75	76.57	76.39	90.021	-281.12	6,809.74	904.59	751.67	152.92	5.915	
10,600.00	4,310.36	10,585.87	4,310.69	77.12	76.95	90.021	-280.03	6,859.72	904.59	750.57	154.02	5.873	
10,650.00	4,311.29	10,635.87	4,311.63	77.67	77.50	90.021	-278.94	6,909.70	904.59	749.46	155.13	5.831	
10,700.00	4,312.23	10,685.87	4,312.57	78.22	78.05	90.022	-277.85	6,959.68	904.59	748.36	156.23	5.790	
10,750.00	4,313.17	10,735.87	4,313.52	78.78	78.60	90.022	-276.77	7,009.66	904.59	747.25	157.34	5.749	
10,800.00	4,314.11	10,785.87	4,314.46	79.33	79.16	90.022	-275.68	7,059.64	904.59	746.14	158.44	5.709	
10,850.00	4,315.05	10,835.87	4,315.40	79.88	79.71	90.022	-274.59	7,109.62	904.58	745.04	159.55	5.670	
10,900.00	4,315.99	10,885.87	4,316.34	80.43	80.26	90.022	-273.50	7,159.59	904.58	743.93	160.66	5.631	
10,950.00	4,316.92	10,935.87	4,317.28	80.99	80.82	90.023	-272.42	7,209.57	904.58	742.82	161.76	5.592	
11,000.00	4,317.86	10,985.87	4,318.22	81.54	81.37	90.023	-271.33	7,259.55	904.58	741.71	162.87	5.554	
11,050.00	4,318.80	11,035.87	4,319.17	82.09	81.92	90.023	-270.24	7,309.53	904.58	740.60	163.97	5.517	
11,100.00	4,319.74	11,085.87	4,320.11	82.65	82.48	90.023	-269.15	7,359.51	904.58	739.50	165.08	5.480	
11,150.00	4,320.68	11,135.87	4,321.05	83.20	83.03	90.023	-268.06	7,409.49	904.58	738.39	166.19	5.443	
11,200.00	4,321.62	11,185.87	4,321.99	83.75	83.58	90.024	-266.98	7,459.47	904.57	737.28	167.30	5.407	
11,250.00	4,322.56	11,235.87	4,322.93	84.31	84.14	90.024	-265.89	7,509.45	904.57	736.17	168.40	5.371	
11,300.00	4,323.49	11,285.87	4,323.87	84.86	84.69	90.024	-264.80	7,559.43	904.57	735.06	169.51	5.336	
11,330.25	4,324.06	11,316.11	4,324.44	85.19	85.03	90.024	-264.14	7,589.66	904.57	734.39	170.18	5.315	
11,350.00	4,324.43	11,335.87	4,324.82	85.41	85.24	90.024	-263.71	7,609.41	904.57	733.95	170.62	5.302	
11,355.81	4,324.54	11,341.68	4,324.92	85.48	85.31	90.024	-263.59	7,615.21	904.57	733.82	170.75	5.298	
11,380.28	4,325.00	11,345.67	4,325.00	85.75	85.35	90.024	-263.50	7,619.20	904.80	733.74	171.06	5.289 SF	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 304-INC-ONLY												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,700.00	4,199.28	4,312.48	4,199.28	17.85	85.01	73.495	-203.41	5,360.88	4,473.44	4,375.35	98.09	45.606	
4,719.94	4,200.00	4,313.20	4,200.00	17.97	85.03	84.097	-203.41	5,360.88	4,453.83	4,351.65	102.18	43.588	
4,750.00	4,200.56	4,313.77	4,200.56	18.15	85.04	84.137	-203.41	5,360.88	4,424.26	4,321.88	102.38	43.214	
4,800.00	4,201.50	4,314.71	4,201.50	18.46	85.05	84.204	-203.41	5,360.88	4,375.09	4,272.38	102.72	42.594	
4,850.00	4,202.44	4,315.64	4,202.44	18.78	85.07	84.271	-203.41	5,360.88	4,325.95	4,222.87	103.07	41.970	
4,900.00	4,203.38	4,316.58	4,203.38	19.11	85.09	84.338	-203.41	5,360.88	4,276.82	4,173.39	103.43	41.350	
4,950.00	4,204.32	4,317.52	4,204.32	19.46	85.11	84.405	-203.41	5,360.88	4,227.71	4,123.90	103.81	40.726	
5,000.00	4,205.26	4,318.46	4,205.26	19.80	85.13	84.472	-203.41	5,360.88	4,178.62	4,074.43	104.19	40.107	
5,050.00	4,206.19	4,319.40	4,206.19	20.17	85.14	84.538	-203.41	5,360.88	4,129.55	4,024.97	104.58	39.485	
5,100.00	4,207.13	4,320.34	4,207.13	20.54	85.16	84.605	-203.41	5,360.88	4,080.51	3,975.53	104.98	38.869	
5,150.00	4,208.07	4,321.27	4,208.07	20.92	85.18	84.672	-203.41	5,360.88	4,031.49	3,926.09	105.40	38.251	
5,200.00	4,209.01	4,322.21	4,209.01	21.30	85.20	84.739	-203.41	5,360.88	3,982.49	3,876.68	105.81	37.638	
5,250.00	4,209.95	4,323.15	4,209.95	21.70	85.21	84.806	-203.41	5,360.88	3,933.52	3,827.28	106.24	37.025	
5,300.00	4,210.89	4,324.09	4,210.89	22.10	85.23	84.874	-203.41	5,360.88	3,884.58	3,777.91	106.67	36.417	
5,350.00	4,211.83	4,325.03	4,211.83	22.51	85.25	84.941	-203.41	5,360.88	3,835.66	3,728.55	107.11	35.809	
5,400.00	4,212.76	4,325.97	4,212.76	22.92	85.27	85.008	-203.41	5,360.88	3,786.77	3,679.21	107.56	35.207	
5,450.00	4,213.70	4,326.90	4,213.70	23.35	85.29	85.075	-203.41	5,360.88	3,737.91	3,629.90	108.01	34.607	
5,500.00	4,214.64	4,327.84	4,214.64	23.77	85.30	85.142	-203.41	5,360.88	3,689.08	3,580.61	108.47	34.011	
5,550.00	4,215.58	4,328.78	4,215.58	24.21	85.32	85.209	-203.41	5,360.88	3,640.28	3,531.34	108.93	33.418	
5,600.00	4,216.52	4,329.72	4,216.52	24.64	85.34	85.276	-203.41	5,360.88	3,591.51	3,482.11	109.40	32.830	
5,650.00	4,217.46	4,330.66	4,217.46	25.09	85.36	85.343	-203.41	5,360.88	3,542.78	3,432.90	109.87	32.244	
5,700.00	4,218.39	4,331.60	4,218.39	25.53	85.37	85.410	-203.41	5,360.88	3,494.08	3,383.73	110.35	31.663	
5,750.00	4,219.33	4,332.53	4,219.33	25.99	85.39	85.477	-203.41	5,360.88	3,445.42	3,334.59	110.84	31.086	
5,800.00	4,220.27	4,333.47	4,220.27	26.44	85.41	85.545	-203.41	5,360.88	3,396.80	3,285.48	111.32	30.514	
5,850.00	4,221.21	4,334.41	4,221.21	26.91	85.43	85.612	-203.41	5,360.88	3,348.22	3,236.41	111.81	29.945	
5,900.00	4,222.15	4,335.35	4,222.15	27.37	85.44	85.679	-203.41	5,360.88	3,299.68	3,187.38	112.30	29.382	
5,950.00	4,223.09	4,336.29	4,223.09	27.84	85.46	85.746	-203.41	5,360.88	3,251.19	3,138.38	112.80	28.822	
6,000.00	4,224.02	4,337.23	4,224.02	28.31	85.48	85.813	-203.41	5,360.88	3,202.74	3,089.44	113.30	28.267	
6,050.00	4,224.96	4,338.16	4,224.96	28.78	85.50	85.881	-203.41	5,360.88	3,154.34	3,040.53	113.81	27.716	
6,100.00	4,225.90	4,339.10	4,225.90	29.26	85.52	85.948	-203.41	5,360.88	3,105.99	2,991.67	114.31	27.171	
6,150.00	4,226.84	4,340.04	4,226.84	29.74	85.53	86.015	-203.41	5,360.88	3,057.69	2,942.86	114.83	26.629	
6,200.00	4,227.78	4,340.98	4,227.78	30.23	85.55	86.082	-203.41	5,360.88	3,009.45	2,894.11	115.34	26.093	
6,250.00	4,228.72	4,341.92	4,228.72	30.71	85.57	86.150	-203.41	5,360.88	2,961.26	2,845.41	115.85	25.560	
6,300.00	4,229.65	4,342.86	4,229.65	31.20	85.59	86.217	-203.41	5,360.88	2,913.14	2,796.77	116.37	25.034	
6,350.00	4,230.59	4,343.80	4,230.59	31.69	85.60	86.284	-203.41	5,360.88	2,865.08	2,748.19	116.89	24.511	
6,400.00	4,231.53	4,344.73	4,231.53	32.19	85.62	86.352	-203.41	5,360.88	2,817.09	2,699.68	117.41	23.993	
6,450.00	4,232.47	4,345.67	4,232.47	32.68	85.64	86.419	-203.41	5,360.88	2,769.17	2,651.23	117.94	23.480	
6,500.00	4,233.41	4,346.61	4,233.41	33.18	85.66	86.486	-203.41	5,360.88	2,721.32	2,602.86	118.46	22.972	
6,550.00	4,234.35	4,347.55	4,234.35	33.68	85.67	86.553	-203.41	5,360.88	2,673.55	2,554.56	118.99	22.468	
6,600.00	4,235.28	4,348.49	4,235.28	34.18	85.69	86.621	-203.41	5,360.88	2,625.87	2,506.35	119.52	21.970	
6,650.00	4,236.22	4,349.43	4,236.22	34.69	85.71	86.688	-203.41	5,360.88	2,578.27	2,458.22	120.05	21.476	
6,700.00	4,237.16	4,350.36	4,237.16	35.19	85.73	86.756	-203.41	5,360.88	2,530.77	2,410.18	120.59	20.987	
6,750.00	4,238.10	4,351.30	4,238.10	35.70	85.75	86.823	-203.41	5,360.88	2,483.36	2,362.24	121.12	20.503	
6,800.00	4,239.04	4,352.24	4,239.04	36.21	85.76	86.890	-203.41	5,360.88	2,436.05	2,314.40	121.66	20.024	
6,850.00	4,239.98	4,353.18	4,239.98	36.72	85.78	86.958	-203.41	5,360.88	2,388.86	2,266.66	122.20	19.549	
6,900.00	4,240.92	4,354.12	4,240.92	37.23	85.80	87.025	-203.41	5,360.88	2,341.78	2,219.04	122.73	19.080	
6,950.00	4,241.85	4,355.06	4,241.85	37.75	85.82	87.092	-203.41	5,360.88	2,294.82	2,171.55	123.28	18.615	
7,000.00	4,242.79	4,355.99	4,242.79	38.26	85.83	87.160	-203.41	5,360.88	2,248.00	2,124.18	123.82	18.156	
7,050.00	4,243.73	4,356.93	4,243.73	38.78	85.85	87.227	-203.41	5,360.88	2,201.31	2,076.95	124.36	17.701	
7,100.00	4,244.67	4,357.87	4,244.67	39.29	85.87	87.295	-203.41	5,360.88	2,154.77	2,029.87	124.90	17.251	
7,150.00	4,245.61	4,358.81	4,245.61	39.81	85.89	87.362	-203.41	5,360.88	2,108.39	1,982.94	125.45	16.807	
7,200.00	4,246.55	4,359.75	4,246.55	40.33	85.91	87.430	-203.41	5,360.88	2,062.18	1,936.19	126.00	16.367	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 304-INC-ONLY												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,250.00	4,247.48	4,360.69	4,247.48	40.85	85.92	87.497	-203.41	5,360.88	2,016.15	1,889.61	126.54	15.932	
7,300.00	4,248.42	4,361.62	4,248.42	41.38	85.94	87.565	-203.41	5,360.88	1,970.31	1,843.22	127.09	15.503	
7,350.00	4,249.36	4,362.56	4,249.36	41.90	85.96	87.632	-203.41	5,360.88	1,924.68	1,797.04	127.64	15.079	
7,400.00	4,250.30	4,363.50	4,250.30	42.42	85.98	87.699	-203.41	5,360.88	1,879.27	1,751.08	128.19	14.660	
7,450.00	4,251.24	4,364.44	4,251.24	42.95	85.99	87.767	-203.41	5,360.88	1,834.10	1,705.36	128.74	14.246	
7,500.00	4,252.18	4,365.38	4,252.18	43.48	86.01	87.834	-203.41	5,360.88	1,789.19	1,659.90	129.29	13.838	
7,550.00	4,253.11	4,366.32	4,253.11	44.00	86.03	87.902	-203.41	5,360.88	1,744.55	1,614.71	129.85	13.436	
7,600.00	4,254.05	4,367.26	4,254.05	44.53	86.05	87.969	-203.41	5,360.88	1,700.21	1,569.81	130.40	13.039	
7,650.00	4,254.99	4,368.19	4,254.99	45.06	86.06	88.037	-203.41	5,360.88	1,656.20	1,525.24	130.95	12.647	
7,700.00	4,255.93	4,369.13	4,255.93	45.59	86.08	88.104	-203.41	5,360.88	1,612.53	1,481.02	131.51	12.262	
7,750.00	4,256.87	4,370.07	4,256.87	46.12	86.10	88.172	-203.41	5,360.88	1,569.23	1,437.17	132.06	11.882	
7,800.00	4,257.81	4,371.01	4,257.81	46.65	86.12	88.239	-203.41	5,360.88	1,526.35	1,393.73	132.62	11.509	
7,850.00	4,258.74	4,371.95	4,258.74	47.18	86.14	88.307	-203.41	5,360.88	1,483.91	1,350.74	133.17	11.143	
7,900.00	4,259.68	4,372.89	4,259.68	47.72	86.15	88.374	-203.41	5,360.88	1,441.96	1,308.23	133.73	10.782	
7,950.00	4,260.62	4,373.82	4,260.62	48.25	86.17	88.442	-203.41	5,360.88	1,400.53	1,266.24	134.29	10.429	
8,000.00	4,261.56	4,374.76	4,261.56	48.78	86.19	88.510	-203.41	5,360.88	1,359.68	1,224.84	134.85	10.083	
8,050.00	4,262.50	4,375.70	4,262.50	49.32	86.21	88.577	-203.41	5,360.88	1,319.46	1,184.06	135.41	9.745	
8,100.00	4,263.44	4,376.64	4,263.44	49.85	86.22	88.645	-203.41	5,360.88	1,279.93	1,143.97	135.96	9.414	
8,150.00	4,264.37	4,377.58	4,264.37	50.39	86.24	88.712	-203.41	5,360.88	1,241.16	1,104.63	136.52	9.091	
8,200.00	4,265.31	4,378.52	4,265.31	50.92	86.26	88.780	-203.41	5,360.88	1,203.21	1,066.12	137.08	8.777	
8,250.00	4,266.25	4,379.45	4,266.25	51.46	86.28	88.847	-203.41	5,360.88	1,166.17	1,028.52	137.64	8.472	
8,300.00	4,267.19	4,380.39	4,267.19	52.00	86.30	88.915	-203.41	5,360.88	1,130.12	991.92	138.20	8.177	
8,350.00	4,268.13	4,381.33	4,268.13	52.54	86.31	88.982	-203.41	5,360.88	1,095.18	956.41	138.77	7.892	
8,400.00	4,269.07	4,382.27	4,269.07	53.08	86.33	89.050	-203.41	5,360.88	1,061.43	922.11	139.33	7.618	
8,450.00	4,270.01	4,383.21	4,270.01	53.62	86.35	89.118	-203.41	5,360.88	1,029.02	889.13	139.89	7.356	
8,500.00	4,270.94	4,384.15	4,270.94	54.16	86.37	89.185	-203.41	5,360.88	998.05	857.60	140.45	7.106	
8,550.00	4,271.88	4,385.08	4,271.88	54.70	86.38	89.253	-203.41	5,360.88	968.67	827.66	141.01	6.869	
8,600.00	4,272.82	4,386.02	4,272.82	55.24	86.40	89.320	-203.41	5,360.88	941.04	799.46	141.57	6.647	
8,650.00	4,273.76	4,386.96	4,273.76	55.78	86.42	89.388	-203.41	5,360.88	915.30	773.16	142.14	6.440	
8,700.00	4,274.70	4,387.90	4,274.70	56.32	86.44	89.455	-203.41	5,360.88	891.63	748.93	142.70	6.248	
8,750.00	4,275.64	4,388.84	4,275.64	56.86	86.45	89.523	-203.41	5,360.88	870.18	726.92	143.26	6.074	
8,800.00	4,276.57	4,389.78	4,276.57	57.40	86.47	89.591	-203.41	5,360.88	851.14	707.31	143.83	5.918	
8,850.00	4,277.51	4,390.71	4,277.51	57.95	86.49	89.658	-203.41	5,360.88	834.66	690.26	144.39	5.781	
8,900.00	4,278.45	4,391.65	4,278.45	58.49	86.51	89.726	-203.41	5,360.88	820.89	675.94	144.95	5.663	
8,950.00	4,279.39	4,392.59	4,279.39	59.03	86.53	89.793	-203.41	5,360.88	809.99	664.47	145.52	5.566	
9,000.00	4,280.33	4,393.53	4,280.33	59.58	86.54	89.861	-203.41	5,360.88	802.05	655.97	146.08	5.490	
9,050.00	4,281.27	4,394.47	4,281.27	60.12	86.56	89.928	-203.41	5,360.88	797.18	650.53	146.65	5.436	
9,100.00	4,282.20	4,395.41	4,282.20	60.66	86.58	89.996	-203.41	5,360.88	795.43	648.21	147.21	5.403	
9,102.94	4,282.26	4,395.46	4,282.26	60.70	86.58	90.000	-203.41	5,360.88	795.42	648.18	147.25	5.402 CC, ES	
9,150.00	4,283.14	4,396.35	4,283.14	61.21	86.60	90.064	-203.41	5,360.88	796.81	649.03	147.78	5.392 SF	
9,200.00	4,284.08	4,397.28	4,284.08	61.75	86.61	90.131	-203.41	5,360.88	801.32	652.98	148.34	5.402	
9,250.00	4,285.02	4,398.22	4,285.02	62.30	86.63	90.199	-203.41	5,360.88	808.90	659.99	148.91	5.432	
9,300.00	4,285.96	4,399.16	4,285.96	62.84	86.65	90.266	-203.41	5,360.88	819.46	669.99	149.47	5.482	
9,350.00	4,286.90	4,400.10	4,286.90	63.39	86.67	90.334	-203.41	5,360.88	832.89	682.86	150.04	5.551	
9,400.00	4,287.83	4,401.04	4,287.83	63.94	86.68	90.402	-203.41	5,360.88	849.06	698.46	150.60	5.638	
9,450.00	4,288.77	4,401.98	4,288.77	64.48	86.70	90.469	-203.41	5,360.88	867.82	716.65	151.17	5.741	
9,500.00	4,289.71	4,402.91	4,289.71	65.03	86.72	90.537	-203.41	5,360.88	888.99	737.25	151.73	5.859	
9,550.00	4,290.65	4,403.85	4,290.65	65.58	86.74	90.604	-203.41	5,360.88	912.41	760.11	152.30	5.991	
9,600.00	4,291.59	4,404.79	4,291.59	66.13	86.76	90.672	-203.41	5,360.88	937.91	785.05	152.86	6.136	
9,650.00	4,292.53	4,405.73	4,292.53	66.67	86.77	90.739	-203.41	5,360.88	965.33	811.90	153.43	6.292	
9,700.00	4,293.46	4,406.67	4,293.46	67.22	86.79	90.807	-203.41	5,360.88	994.51	840.52	154.00	6.458	
9,750.00	4,294.40	4,407.61	4,294.40	67.77	86.81	90.875	-203.41	5,360.88	1,025.30	870.74	154.56	6.634	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 304-INC-ONLY												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,800.00	4,295.34	4,408.54	4,295.34	68.32	86.83	90.942	-203.41	5,360.88	1,057.55	902.43	155.13	6.817	
9,850.00	4,296.28	4,409.48	4,296.28	68.87	86.84	91.010	-203.41	5,360.88	1,091.15	935.45	155.69	7.008	
9,900.00	4,297.22	4,410.42	4,297.22	69.42	86.86	91.077	-203.41	5,360.88	1,125.96	969.70	156.26	7.206	
9,950.00	4,298.16	4,411.36	4,298.16	69.96	86.88	91.145	-203.41	5,360.88	1,161.88	1,005.05	156.82	7.409	
10,000.00	4,299.10	4,412.30	4,299.10	70.51	86.90	91.212	-203.41	5,360.88	1,198.80	1,041.41	157.39	7.617	
10,050.00	4,300.03	4,413.24	4,300.03	71.06	86.92	91.280	-203.41	5,360.88	1,236.65	1,078.69	157.96	7.829	
10,100.00	4,300.97	4,414.17	4,300.97	71.61	86.93	91.347	-203.41	5,360.88	1,275.33	1,116.81	158.52	8.045	
10,150.00	4,301.91	4,415.11	4,301.91	72.16	86.95	91.415	-203.41	5,360.88	1,314.78	1,155.69	159.09	8.265	
10,200.00	4,302.85	4,416.05	4,302.85	72.71	86.97	91.483	-203.41	5,360.88	1,354.92	1,195.27	159.65	8.487	
10,250.00	4,303.79	4,416.99	4,303.79	73.26	86.99	91.550	-203.41	5,360.88	1,395.70	1,235.48	160.22	8.711	
10,300.00	4,304.73	4,417.93	4,304.73	73.81	87.00	91.618	-203.41	5,360.88	1,437.06	1,276.28	160.78	8.938	
10,350.00	4,305.66	4,418.87	4,305.66	74.36	87.02	91.685	-203.41	5,360.88	1,478.96	1,317.61	161.35	9.166	
10,400.00	4,306.60	4,419.80	4,306.60	74.92	87.04	91.753	-203.41	5,360.88	1,521.34	1,359.42	161.91	9.396	
10,450.00	4,307.54	4,420.74	4,307.54	75.47	87.06	91.820	-203.41	5,360.88	1,564.17	1,401.69	162.48	9.627	
10,500.00	4,308.48	4,421.68	4,308.48	76.02	87.07	91.888	-203.41	5,360.88	1,607.42	1,444.37	163.05	9.859	
10,550.00	4,309.42	4,422.62	4,309.42	76.57	87.09	91.955	-203.41	5,360.88	1,651.04	1,487.43	163.61	10.091	
10,600.00	4,310.36	4,423.56	4,310.36	77.12	87.11	92.023	-203.41	5,360.88	1,695.02	1,530.85	164.18	10.324	
10,650.00	4,311.29	4,424.50	4,311.29	77.67	87.13	92.090	-203.41	5,360.88	1,739.32	1,574.58	164.74	10.558	
10,700.00	4,312.23	4,425.44	4,312.23	78.22	87.15	92.158	-203.41	5,360.88	1,783.93	1,618.62	165.31	10.792	
10,750.00	4,313.17	4,426.37	4,313.17	78.78	87.16	92.225	-203.41	5,360.88	1,828.81	1,662.94	165.87	11.025	
10,800.00	4,314.11	4,427.31	4,314.11	79.33	87.18	92.293	-203.41	5,360.88	1,873.95	1,707.52	166.44	11.259	
10,850.00	4,315.05	4,428.25	4,315.05	79.88	87.20	92.360	-203.41	5,360.88	1,919.33	1,752.33	167.00	11.493	
10,900.00	4,315.99	4,429.19	4,315.99	80.43	87.22	92.428	-203.41	5,360.88	1,964.94	1,797.37	167.57	11.726	
10,950.00	4,316.92	4,430.13	4,316.92	80.99	87.23	92.495	-203.41	5,360.88	2,010.75	1,842.62	168.13	11.960	
11,000.00	4,317.86	4,431.07	4,317.86	81.54	87.25	92.562	-203.41	5,360.88	2,056.76	1,888.07	168.69	12.192	
11,050.00	4,318.80	4,432.00	4,318.80	82.09	87.27	92.630	-203.41	5,360.88	2,102.95	1,933.69	169.26	12.424	
11,100.00	4,319.74	4,432.94	4,319.74	82.65	87.29	92.697	-203.41	5,360.88	2,149.31	1,979.49	169.82	12.656	
11,150.00	4,320.68	4,433.88	4,320.68	83.20	87.30	92.765	-203.41	5,360.88	2,195.83	2,025.45	170.39	12.887	
11,200.00	4,321.62	4,434.82	4,321.62	83.75	87.32	92.832	-203.41	5,360.88	2,242.50	2,071.55	170.95	13.118	
11,250.00	4,322.56	4,435.76	4,322.56	84.31	87.34	92.900	-203.41	5,360.88	2,289.31	2,117.80	171.51	13.348	
11,300.00	4,323.49	4,436.70	4,323.49	84.86	87.36	92.967	-203.41	5,360.88	2,336.25	2,164.17	172.08	13.577	
11,330.25	4,324.06	4,437.26	4,324.06	85.19	87.37	93.008	-203.41	5,360.88	2,364.71	2,192.29	172.42	13.715	
11,350.00	4,324.43	4,437.63	4,324.43	85.41	87.38	93.034	-203.41	5,360.88	2,383.32	2,210.68	172.64	13.805	
11,380.28	4,325.00	4,438.20	4,325.00	85.75	87.39	93.075	-203.41	5,360.88	2,411.88	2,238.90	172.98	13.943	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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	Offset	Semi Major Axis		Distance		Warning								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,600.00	4,216.52	4,311.62	4,216.52	24.64	79.47	86.069	-858.22	7,340.52	5,667.48	5,563.79	103.69	54.660		
5,650.00	4,217.46	4,312.56	4,217.46	25.09	79.49	86.105	-858.22	7,340.52	5,619.27	5,515.12	104.15	53.951		
5,700.00	4,218.39	4,313.49	4,218.39	25.53	79.51	86.140	-858.22	7,340.52	5,571.09	5,466.47	104.62	53.249		
5,750.00	4,219.33	4,314.43	4,219.33	25.99	79.53	86.176	-858.22	7,340.52	5,522.95	5,417.84	105.10	52.549		
5,800.00	4,220.27	4,315.37	4,220.27	26.44	79.54	86.212	-858.22	7,340.52	5,474.83	5,369.25	105.58	51.855		
5,850.00	4,221.21	4,316.31	4,221.21	26.91	79.56	86.248	-858.22	7,340.52	5,426.75	5,320.69	106.06	51.165		
5,900.00	4,222.15	4,317.25	4,222.15	27.37	79.58	86.284	-858.22	7,340.52	5,378.71	5,272.16	106.55	50.481		
5,950.00	4,223.09	4,318.19	4,223.09	27.84	79.60	86.320	-858.22	7,340.52	5,330.70	5,223.66	107.04	49.800		
6,000.00	4,224.02	4,319.12	4,224.02	28.31	79.61	86.355	-858.22	7,340.52	5,282.73	5,175.19	107.54	49.125		
6,050.00	4,224.96	4,320.06	4,224.96	28.78	79.63	86.391	-858.22	7,340.52	5,234.79	5,126.76	108.03	48.455		
6,100.00	4,225.90	4,321.00	4,225.90	29.26	79.65	86.427	-858.22	7,340.52	5,186.90	5,078.37	108.53	47.790		
6,150.00	4,226.84	4,321.94	4,226.84	29.74	79.67	86.463	-858.22	7,340.52	5,139.04	5,030.01	109.04	47.130		
6,200.00	4,227.78	4,322.88	4,227.78	30.23	79.68	86.499	-858.22	7,340.52	5,091.23	4,981.69	109.54	46.476		
6,250.00	4,228.72	4,323.82	4,228.72	30.71	79.70	86.535	-858.22	7,340.52	5,043.46	4,933.40	110.05	45.827		
6,300.00	4,229.65	4,324.75	4,229.65	31.20	79.72	86.571	-858.22	7,340.52	4,995.73	4,885.17	110.57	45.184		
6,350.00	4,230.59	4,325.69	4,230.59	31.69	79.73	86.607	-858.22	7,340.52	4,948.05	4,836.97	111.08	44.545		
6,400.00	4,231.53	4,326.63	4,231.53	32.19	79.75	86.642	-858.22	7,340.52	4,900.41	4,788.81	111.60	43.912		
6,450.00	4,232.47	4,327.57	4,232.47	32.68	79.77	86.678	-858.22	7,340.52	4,852.82	4,740.70	112.12	43.284		
6,500.00	4,233.41	4,328.51	4,233.41	33.18	79.79	86.714	-858.22	7,340.52	4,805.28	4,692.64	112.64	42.662		
6,550.00	4,234.35	4,329.45	4,234.35	33.68	79.80	86.750	-858.22	7,340.52	4,757.79	4,644.63	113.16	42.045		
6,600.00	4,235.28	4,330.38	4,235.28	34.18	79.82	86.786	-858.22	7,340.52	4,710.35	4,596.66	113.68	41.434		
6,650.00	4,236.22	4,331.32	4,236.22	34.69	79.84	86.822	-858.22	7,340.52	4,662.96	4,548.75	114.21	40.828		
6,700.00	4,237.16	4,332.26	4,237.16	35.19	79.86	86.858	-858.22	7,340.52	4,615.63	4,500.89	114.74	40.228		
6,750.00	4,238.10	4,333.20	4,238.10	35.70	79.87	86.894	-858.22	7,340.52	4,568.35	4,453.09	115.27	39.633		
6,800.00	4,239.04	4,334.14	4,239.04	36.21	79.89	86.930	-858.22	7,340.52	4,521.14	4,405.34	115.80	39.043		
6,850.00	4,239.98	4,335.08	4,239.98	36.72	79.91	86.965	-858.22	7,340.52	4,473.98	4,357.65	116.33	38.459		
6,900.00	4,240.92	4,336.02	4,240.92	37.23	79.93	87.001	-858.22	7,340.52	4,426.89	4,310.02	116.87	37.880		
6,950.00	4,241.85	4,336.95	4,241.85	37.75	79.94	87.037	-858.22	7,340.52	4,379.86	4,262.46	117.40	37.307		
7,000.00	4,242.79	4,337.89	4,242.79	38.26	79.96	87.073	-858.22	7,340.52	4,332.90	4,214.96	117.94	36.739		
7,050.00	4,243.73	4,338.83	4,243.73	38.78	79.98	87.109	-858.22	7,340.52	4,286.00	4,167.52	118.48	36.176		
7,100.00	4,244.67	4,339.77	4,244.67	39.29	79.99	87.145	-858.22	7,340.52	4,239.18	4,120.16	119.02	35.618		
7,150.00	4,245.61	4,340.71	4,245.61	39.81	80.01	87.181	-858.22	7,340.52	4,192.43	4,072.87	119.56	35.066		
7,200.00	4,246.55	4,341.65	4,246.55	40.33	80.03	87.217	-858.22	7,340.52	4,145.75	4,025.65	120.10	34.519		
7,250.00	4,247.48	4,342.58	4,247.48	40.85	80.05	87.253	-858.22	7,340.52	4,099.15	3,978.51	120.64	33.978		
7,300.00	4,248.42	4,343.52	4,248.42	41.38	80.06	87.289	-858.22	7,340.52	4,052.64	3,931.45	121.19	33.441		
7,350.00	4,249.36	4,344.46	4,249.36	41.90	80.08	87.325	-858.22	7,340.52	4,006.21	3,884.47	121.73	32.910		
7,400.00	4,250.30	4,345.40	4,250.30	42.42	80.10	87.360	-858.22	7,340.52	3,959.86	3,837.58	122.28	32.384		
7,450.00	4,251.24	4,346.34	4,251.24	42.95	80.12	87.396	-858.22	7,340.52	3,913.60	3,790.78	122.83	31.863		
7,500.00	4,252.18	4,347.28	4,252.18	43.48	80.13	87.432	-858.22	7,340.52	3,867.44	3,744.07	123.37	31.348		
7,550.00	4,253.11	4,348.21	4,253.11	44.00	80.15	87.468	-858.22	7,340.52	3,821.37	3,697.45	123.92	30.837		
7,600.00	4,254.05	4,349.15	4,254.05	44.53	80.17	87.504	-858.22	7,340.52	3,775.41	3,650.94	124.47	30.331		
7,650.00	4,254.99	4,350.09	4,254.99	45.06	80.19	87.540	-858.22	7,340.52	3,729.54	3,604.52	125.02	29.831		
7,700.00	4,255.93	4,351.03	4,255.93	45.59	80.20	87.576	-858.22	7,340.52	3,683.79	3,558.21	125.57	29.336		
7,750.00	4,256.87	4,351.97	4,256.87	46.12	80.22	87.612	-858.22	7,340.52	3,638.14	3,512.02	126.13	28.845		
7,800.00	4,257.81	4,352.91	4,257.81	46.65	80.24	87.648	-858.22	7,340.52	3,592.62	3,465.94	126.68	28.360		
7,850.00	4,258.74	4,353.84	4,258.74	47.18	80.25	87.684	-858.22	7,340.52	3,547.21	3,419.97	127.23	27.880		
7,900.00	4,259.68	4,354.78	4,259.68	47.72	80.27	87.720	-858.22	7,340.52	3,501.92	3,374.14	127.79	27.405		
7,950.00	4,260.62	4,355.72	4,260.62	48.25	80.29	87.756	-858.22	7,340.52	3,456.77	3,328.43	128.34	26.934		
8,000.00	4,261.56	4,356.66	4,261.56	48.78	80.31	87.792	-858.22	7,340.52	3,411.75	3,282.85	128.90	26.469		
8,050.00	4,262.50	4,357.60	4,262.50	49.32	80.32	87.828	-858.22	7,340.52	3,366.87	3,237.42	129.45	26.009		
8,100.00	4,263.44	4,358.54	4,263.44	49.85	80.34	87.864	-858.22	7,340.52	3,322.14	3,192.13	130.01	25.553		
8,150.00	4,264.37	4,359.47	4,264.37	50.39	80.36	87.900	-858.22	7,340.52	3,277.56	3,146.99	130.57	25.103		

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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													Offset Site Error:	0.00 usft
Survey Program: 166-INC-ONLY													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis					Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
8,200.00	4,265.31	4,360.41	4,265.31	50.92	80.38	87.936	-858.22	7,340.52	3,233.14	3,102.01	131.12	24.657		
8,250.00	4,266.25	4,361.35	4,266.25	51.46	80.39	87.972	-858.22	7,340.52	3,188.88	3,057.20	131.68	24.216		
8,300.00	4,267.19	4,362.29	4,267.19	52.00	80.41	88.007	-858.22	7,340.52	3,144.79	3,012.55	132.24	23.781		
8,350.00	4,268.13	4,363.23	4,268.13	52.54	80.43	88.043	-858.22	7,340.52	3,100.89	2,968.09	132.80	23.350		
8,400.00	4,269.07	4,362.00	4,268.90	53.08	80.77	88.763	-858.22	7,340.52	3,057.22	2,923.47	133.75	22.858		
8,450.00	4,270.01	4,362.00	4,268.90	53.62	80.77	88.763	-858.22	7,340.52	3,013.69	2,879.40	134.29	22.442		
8,500.00	4,270.94	4,362.00	4,268.90	54.16	80.77	88.763	-858.22	7,340.52	2,970.36	2,835.53	134.83	22.030		
8,550.00	4,271.88	4,362.00	4,268.90	54.70	80.77	88.763	-858.22	7,340.52	2,927.25	2,791.88	135.37	21.624		
8,600.00	4,272.82	4,362.00	4,268.90	55.24	80.77	88.763	-858.22	7,340.52	2,884.36	2,748.45	135.91	21.222		
8,650.00	4,273.76	4,362.00	4,268.90	55.78	80.77	88.763	-858.22	7,340.52	2,841.70	2,705.25	136.45	20.826		
8,700.00	4,274.70	4,362.00	4,268.90	56.32	80.77	88.763	-858.22	7,340.52	2,799.29	2,662.29	136.99	20.434		
8,750.00	4,275.64	4,362.00	4,268.90	56.86	80.77	88.763	-858.22	7,340.52	2,757.13	2,619.59	137.54	20.047		
8,800.00	4,276.57	4,362.00	4,268.90	57.40	80.77	88.763	-858.22	7,340.52	2,715.23	2,577.15	138.08	19.665		
8,850.00	4,277.51	4,362.00	4,268.90	57.95	80.77	88.763	-858.22	7,340.52	2,673.62	2,534.99	138.62	19.287		
8,900.00	4,278.45	4,362.00	4,268.90	58.49	80.77	88.763	-858.22	7,340.52	2,632.29	2,493.13	139.16	18.915		
8,950.00	4,279.39	4,362.00	4,268.90	59.03	80.77	88.763	-858.22	7,340.52	2,591.27	2,451.57	139.71	18.548		
9,000.00	4,280.33	4,362.00	4,268.90	59.58	80.77	88.763	-858.22	7,340.52	2,550.58	2,410.32	140.25	18.186		
9,050.00	4,281.27	4,362.00	4,268.90	60.12	80.77	88.763	-858.22	7,340.52	2,510.21	2,369.42	140.80	17.829		
9,100.00	4,282.20	4,362.00	4,268.90	60.66	80.77	88.763	-858.22	7,340.52	2,470.20	2,328.86	141.34	17.477		
9,150.00	4,283.14	4,362.00	4,268.90	61.21	80.77	88.763	-858.22	7,340.52	2,430.57	2,288.68	141.89	17.131		
9,200.00	4,284.08	4,362.00	4,268.90	61.75	80.77	88.763	-858.22	7,340.52	2,391.31	2,248.88	142.43	16.789		
9,250.00	4,285.02	4,362.00	4,268.90	62.30	80.77	88.763	-858.22	7,340.52	2,352.47	2,209.50	142.98	16.454		
9,300.00	4,285.96	4,362.00	4,268.90	62.84	80.77	88.763	-858.22	7,340.52	2,314.06	2,170.54	143.52	16.123		
9,350.00	4,286.90	4,362.00	4,268.90	63.39	80.77	88.763	-858.22	7,340.52	2,276.09	2,132.02	144.07	15.799		
9,400.00	4,287.83	4,362.00	4,268.90	63.94	80.79	88.799	-858.22	7,340.52	2,238.60	2,093.97	144.63	15.478		
9,450.00	4,288.77	4,363.87	4,268.77	64.48	80.81	88.835	-858.22	7,340.52	2,201.61	2,056.40	145.20	15.162		
9,500.00	4,289.71	4,364.81	4,289.71	65.03	80.83	88.871	-858.22	7,340.52	2,165.13	2,019.36	145.77	14.853		
9,550.00	4,290.65	4,365.75	4,290.65	65.58	80.85	88.907	-858.22	7,340.52	2,129.21	1,982.87	146.34	14.550		
9,600.00	4,291.59	4,366.69	4,291.59	66.13	80.86	88.943	-858.22	7,340.52	2,093.86	1,946.96	146.91	14.253		
9,650.00	4,292.53	4,367.63	4,292.53	66.67	80.88	88.979	-858.22	7,340.52	2,059.12	1,911.65	147.47	13.963		
9,700.00	4,293.46	4,368.57	4,293.46	67.22	80.90	89.015	-858.22	7,340.52	2,025.02	1,876.98	148.04	13.679		
9,750.00	4,294.40	4,369.50	4,294.40	67.77	80.92	89.051	-858.22	7,340.52	1,991.59	1,842.98	148.61	13.401		
9,800.00	4,295.34	4,370.44	4,295.34	68.32	80.93	89.087	-858.22	7,340.52	1,958.87	1,809.69	149.18	13.131		
9,850.00	4,296.28	4,391.38	4,296.28	68.87	80.95	89.123	-858.22	7,340.52	1,926.88	1,777.14	149.75	12.867		
9,900.00	4,297.22	4,392.32	4,297.22	69.42	80.97	89.159	-858.22	7,340.52	1,895.68	1,745.36	150.32	12.611		
9,950.00	4,298.16	4,393.26	4,298.16	69.96	80.99	89.195	-858.22	7,340.52	1,865.29	1,714.41	150.89	12.362		
10,000.00	4,299.10	4,394.20	4,299.10	70.51	81.01	89.231	-858.22	7,340.52	1,835.77	1,684.31	151.46	12.121		
10,050.00	4,300.03	4,395.14	4,300.03	71.06	81.02	89.267	-858.22	7,340.52	1,807.14	1,655.11	152.03	11.887		
10,100.00	4,300.97	4,396.07	4,300.97	71.61	81.04	89.303	-858.22	7,340.52	1,779.46	1,626.86	152.60	11.661		
10,150.00	4,301.91	4,397.01	4,301.91	72.16	81.06	89.339	-858.22	7,340.52	1,752.76	1,599.59	153.17	11.443		
10,200.00	4,302.85	4,397.95	4,302.85	72.71	81.08	89.375	-858.22	7,340.52	1,727.10	1,573.36	153.74	11.234		
10,250.00	4,303.79	4,398.89	4,303.79	73.26	81.10	89.411	-858.22	7,340.52	1,702.52	1,548.22	154.31	11.033		
10,300.00	4,304.73	4,399.83	4,304.73	73.81	81.11	89.447	-858.22	7,340.52	1,679.08	1,524.20	154.88	10.841		
10,350.00	4,305.66	4,400.77	4,305.66	74.36	81.13	89.483	-858.22	7,340.52	1,656.80	1,501.35	155.45	10.658		
10,400.00	4,306.60	4,401.70	4,306.60	74.92	81.15	89.519	-858.22	7,340.52	1,635.76	1,479.74	156.02	10.484		
10,450.00	4,307.54	4,402.64	4,307.54	75.47	81.17	89.555	-858.22	7,340.52	1,615.98	1,459.39	156.59	10.320		
10,500.00	4,308.48	4,403.58	4,308.48	76.02	81.18	89.591	-858.22	7,340.52	1,597.53	1,440.37	157.16	10.165		
10,550.00	4,309.42	4,404.52	4,309.42	76.57	81.20	89.627	-858.22	7,340.52	1,580.44	1,422.71	157.73	10.020		
10,600.00	4,310.36	4,405.46	4,310.36	77.12	81.22	89.663	-858.22	7,340.52	1,564.76	1,406.46	158.30	9.884		
10,650.00	4,311.29	4,406.40	4,311.29	77.67	81.24	89.699	-858.22	7,340.52	1,550.54	1,391.67	158.88	9.759		
10,700.00	4,312.23	4,407.33	4,312.23	78.22	81.26	89.735	-858.22	7,340.52	1,537.81	1,378.37	159.45	9.645		
10,750.00	4,313.17	4,408.27	4,313.17	78.78	81.27	89.771	-858.22	7,340.52	1,526.62	1,366.60	160.02	9.540		

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,800.00	4,314.11	4,409.21	4,314.11	79.33	81.29	89.807	-858.22	7,340.52	1,516.99	1,356.40	160.59	9.446	
10,850.00	4,315.05	4,410.15	4,315.05	79.88	81.31	89.843	-858.22	7,340.52	1,508.95	1,347.79	161.16	9.363	
10,900.00	4,315.99	4,411.09	4,315.99	80.43	81.33	89.879	-858.22	7,340.52	1,502.54	1,340.80	161.73	9.290	
10,950.00	4,316.92	4,412.03	4,316.92	80.99	81.35	89.915	-858.22	7,340.52	1,497.76	1,335.46	162.31	9.228	
11,000.00	4,317.86	4,412.96	4,317.86	81.54	81.36	89.951	-858.22	7,340.52	1,494.65	1,331.77	162.88	9.176	
11,050.00	4,318.80	4,413.90	4,318.80	82.09	81.38	89.987	-858.22	7,340.52	1,493.20	1,329.75	163.45	9.135	
11,068.23	4,319.14	4,414.25	4,319.14	82.29	81.39	90.000	-858.22	7,340.52	1,493.09	1,329.43	163.66	9.123	CC
11,100.00	4,319.74	4,414.84	4,319.74	82.65	81.40	90.023	-858.22	7,340.52	1,493.43	1,329.41	164.02	9.105	ES
11,150.00	4,320.68	4,415.78	4,320.68	83.20	81.42	90.059	-858.22	7,340.52	1,495.33	1,330.73	164.60	9.085	
11,200.00	4,321.62	4,416.72	4,321.62	83.75	81.43	90.095	-858.22	7,340.52	1,498.89	1,333.73	165.17	9.075	SF
11,250.00	4,322.56	4,417.66	4,322.56	84.31	81.45	90.131	-858.22	7,340.52	1,504.11	1,338.37	165.74	9.075	
11,300.00	4,323.49	4,418.60	4,323.49	84.86	81.47	90.167	-858.22	7,340.52	1,510.97	1,344.66	166.31	9.085	
11,330.25	4,324.06	4,419.16	4,324.06	85.19	81.48	90.189	-858.22	7,340.52	1,515.90	1,349.24	166.66	9.096	
11,350.00	4,324.43	4,419.53	4,324.43	85.41	81.49	90.203	-858.22	7,340.52	1,519.44	1,352.55	166.89	9.105	
11,380.28	4,325.00	4,420.10	4,325.00	85.75	81.50	90.225	-858.22	7,340.52	1,525.34	1,358.11	167.23	9.121	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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													Offset Site Error:	0.00 usft
Survey Program: 335-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,750.00	4,219.33	4,327.52	4,219.33	25.99	88.75	59.898	462.10	7,342.24	5,350.50	5,251.75	98.76	54.178		
5,800.00	4,220.27	4,328.46	4,220.27	26.44	88.77	60.131	462.10	7,342.24	5,300.54	5,201.12	99.42	53.315		
5,850.00	4,221.21	4,329.39	4,221.21	26.91	88.79	60.365	462.10	7,342.24	5,250.57	5,150.49	100.09	52.460		
5,900.00	4,222.15	4,330.33	4,222.15	27.37	88.81	60.600	462.10	7,342.24	5,200.61	5,099.85	100.76	51.615		
5,950.00	4,223.09	4,331.27	4,223.09	27.84	88.83	60.836	462.10	7,342.24	5,150.65	5,049.21	101.44	50.778		
6,000.00	4,224.02	4,332.21	4,224.02	28.31	88.85	61.073	462.10	7,342.24	5,100.68	4,998.57	102.11	49.951		
6,050.00	4,224.96	4,333.15	4,224.96	28.78	88.87	61.312	462.10	7,342.24	5,050.72	4,947.92	102.80	49.133		
6,100.00	4,225.90	4,334.09	4,225.90	29.26	88.89	61.551	462.10	7,342.24	5,000.76	4,897.28	103.48	48.324		
6,150.00	4,226.84	4,335.03	4,226.84	29.74	88.91	61.792	462.10	7,342.24	4,950.80	4,846.63	104.17	47.524		
6,200.00	4,227.78	4,335.96	4,227.78	30.23	88.94	62.034	462.10	7,342.24	4,900.84	4,795.97	104.87	46.734		
6,250.00	4,228.72	4,336.90	4,228.72	30.71	88.96	62.276	462.10	7,342.24	4,850.88	4,745.32	105.56	45.952		
6,300.00	4,229.65	4,339.00	4,230.79	31.20	89.00	62.817	462.10	7,342.24	4,800.92	4,694.35	106.57	45.050		
6,350.00	4,230.59	4,339.00	4,230.79	31.69	89.00	62.817	462.10	7,342.24	4,750.96	4,643.94	107.02	44.393		
6,400.00	4,231.53	4,339.74	4,231.53	32.19	89.02	63.011	462.10	7,342.24	4,701.00	4,593.33	107.67	43.660		
6,450.00	4,232.47	4,340.68	4,232.47	32.68	89.04	63.258	462.10	7,342.24	4,651.05	4,542.67	108.38	42.913		
6,500.00	4,233.41	4,341.62	4,233.41	33.18	89.07	63.506	462.10	7,342.24	4,601.09	4,492.00	109.09	42.176		
6,550.00	4,234.35	4,342.56	4,234.35	33.68	89.09	63.756	462.10	7,342.24	4,551.14	4,441.33	109.81	41.446		
6,600.00	4,235.28	4,343.49	4,235.28	34.18	89.11	64.006	462.10	7,342.24	4,501.18	4,390.66	110.52	40.726		
6,650.00	4,236.22	4,344.43	4,236.22	34.69	89.13	64.257	462.10	7,342.24	4,451.23	4,339.99	111.24	40.014		
6,700.00	4,237.16	4,345.37	4,237.16	35.19	89.16	64.510	462.10	7,342.24	4,401.27	4,289.31	111.96	39.310		
6,750.00	4,238.10	4,346.31	4,238.10	35.70	89.18	64.763	462.10	7,342.24	4,351.32	4,238.64	112.69	38.615		
6,800.00	4,239.04	4,347.25	4,239.04	36.21	89.20	65.018	462.10	7,342.24	4,301.37	4,187.96	113.41	37.928		
6,850.00	4,239.98	4,348.19	4,239.98	36.72	89.22	65.274	462.10	7,342.24	4,251.42	4,137.28	114.14	37.248		
6,900.00	4,240.92	4,349.12	4,240.92	37.23	89.25	65.530	462.10	7,342.24	4,201.47	4,086.61	114.86	36.578		
6,950.00	4,241.85	4,350.06	4,241.85	37.75	89.27	65.788	462.10	7,342.24	4,151.52	4,035.93	115.59	35.915		
7,000.00	4,242.79	4,351.00	4,242.79	38.26	89.29	66.047	462.10	7,342.24	4,101.58	3,985.25	116.32	35.260		
7,050.00	4,243.73	4,351.94	4,243.73	38.78	89.31	66.307	462.10	7,342.24	4,051.63	3,934.57	117.06	34.612		
7,100.00	4,244.67	4,352.88	4,244.67	39.29	89.34	66.568	462.10	7,342.24	4,001.69	3,883.89	117.79	33.973		
7,150.00	4,245.61	4,353.82	4,245.61	39.81	89.36	66.830	462.10	7,342.24	3,951.74	3,833.22	118.53	33.341		
7,200.00	4,246.55	4,354.75	4,246.55	40.33	89.38	67.093	462.10	7,342.24	3,901.80	3,782.54	119.26	32.716		
7,250.00	4,247.48	4,355.69	4,247.48	40.85	89.40	67.357	462.10	7,342.24	3,851.86	3,731.86	120.00	32.099		
7,300.00	4,248.42	4,356.63	4,248.42	41.38	89.43	67.622	462.10	7,342.24	3,801.92	3,681.18	120.74	31.489		
7,350.00	4,249.36	4,357.57	4,249.36	41.90	89.45	67.888	462.10	7,342.24	3,751.98	3,630.50	121.48	30.886		
7,400.00	4,250.30	4,358.51	4,250.30	42.42	89.47	68.155	462.10	7,342.24	3,702.04	3,579.82	122.22	30.291		
7,450.00	4,251.24	4,359.45	4,251.24	42.95	89.49	68.423	462.10	7,342.24	3,652.11	3,529.15	122.96	29.702		
7,500.00	4,252.18	4,360.38	4,252.18	43.48	89.51	68.692	462.10	7,342.24	3,602.17	3,478.47	123.70	29.120		
7,550.00	4,253.11	4,361.32	4,253.11	44.00	89.54	68.962	462.10	7,342.24	3,552.24	3,427.80	124.44	28.545		
7,600.00	4,254.05	4,362.26	4,254.05	44.53	89.56	69.233	462.10	7,342.24	3,502.31	3,377.12	125.18	27.977		
7,650.00	4,254.99	4,363.20	4,254.99	45.06	89.58	69.505	462.10	7,342.24	3,452.38	3,326.45	125.93	27.416		
7,700.00	4,255.93	4,364.14	4,255.93	45.59	89.60	69.777	462.10	7,342.24	3,402.45	3,275.78	126.67	26.861		
7,750.00	4,256.87	4,365.08	4,256.87	46.12	89.63	70.051	462.10	7,342.24	3,352.53	3,225.11	127.41	26.312		
7,800.00	4,257.81	4,366.02	4,257.81	46.65	89.65	70.326	462.10	7,342.24	3,302.60	3,174.45	128.16	25.770		
7,850.00	4,258.74	4,366.95	4,258.74	47.18	89.67	70.602	462.10	7,342.24	3,252.68	3,123.78	128.90	25.234		
7,900.00	4,259.68	4,367.89	4,259.68	47.72	89.69	70.879	462.10	7,342.24	3,202.76	3,073.12	129.65	24.704		
7,950.00	4,260.62	4,368.83	4,260.62	48.25	89.72	71.156	462.10	7,342.24	3,152.85	3,022.46	130.39	24.180		
8,000.00	4,261.56	4,369.77	4,261.56	48.78	89.74	71.435	462.10	7,342.24	3,102.93	2,971.80	131.13	23.662		
8,050.00	4,262.50	4,370.71	4,262.50	49.32	89.76	71.714	462.10	7,342.24	3,053.02	2,921.14	131.88	23.151		
8,100.00	4,263.44	4,371.65	4,263.44	49.85	89.78	71.995	462.10	7,342.24	3,003.11	2,870.49	132.62	22.645		
8,150.00	4,264.37	4,372.58	4,264.37	50.39	89.81	72.276	462.10	7,342.24	2,953.20	2,819.84	133.36	22.144		
8,200.00	4,265.31	4,373.52	4,265.31	50.92	89.83	72.558	462.10	7,342.24	2,903.30	2,769.19	134.10	21.650		
8,250.00	4,266.25	4,374.46	4,266.25	51.46	89.85	72.841	462.10	7,342.24	2,853.40	2,718.55	134.85	21.160		
8,300.00	4,267.19	4,375.40	4,267.19	52.00	89.87	73.125	462.10	7,342.24	2,803.50	2,667.91	135.59	20.677		

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
8,350.00	4,268.13	4,376.34	4,268.13	52.54	89.90	73.410	462.10	7,342.24	2,753.61	2,617.28	136.33	20.198		
8,400.00	4,269.07	4,377.28	4,269.07	53.08	89.92	73.696	462.10	7,342.24	2,703.72	2,566.65	137.07	19.725		
8,450.00	4,270.01	4,378.21	4,270.01	53.62	89.94	73.982	462.10	7,342.24	2,653.83	2,516.02	137.81	19.258		
8,500.00	4,270.94	4,379.15	4,270.94	54.16	89.96	74.269	462.10	7,342.24	2,603.95	2,465.40	138.54	18.795		
8,550.00	4,271.88	4,380.09	4,271.88	54.70	89.99	74.557	462.10	7,342.24	2,554.07	2,414.79	139.28	18.337		
8,600.00	4,272.82	4,381.03	4,272.82	55.24	90.01	74.846	462.10	7,342.24	2,504.19	2,364.18	140.02	17.885		
8,650.00	4,273.76	4,381.97	4,273.76	55.78	90.03	75.136	462.10	7,342.24	2,454.33	2,313.57	140.75	17.437		
8,700.00	4,274.70	4,382.91	4,274.70	56.32	90.05	75.427	462.10	7,342.24	2,404.46	2,262.98	141.49	16.994		
8,750.00	4,275.64	4,383.84	4,275.64	56.86	90.08	75.718	462.10	7,342.24	2,354.60	2,212.39	142.22	16.556		
8,800.00	4,276.57	4,384.78	4,276.57	57.40	90.10	76.010	462.10	7,342.24	2,304.75	2,161.80	142.95	16.123		
8,850.00	4,277.51	4,385.72	4,277.51	57.95	90.12	76.302	462.10	7,342.24	2,254.90	2,111.23	143.68	15.694		
8,900.00	4,278.45	4,386.66	4,278.45	58.49	90.14	76.596	462.10	7,342.24	2,205.06	2,060.66	144.41	15.270		
8,950.00	4,279.39	4,387.60	4,279.39	59.03	90.17	76.890	462.10	7,342.24	2,155.23	2,010.10	145.13	14.850		
9,000.00	4,280.33	4,388.54	4,280.33	59.58	90.19	77.185	462.10	7,342.24	2,105.40	1,959.55	145.86	14.435		
9,050.00	4,281.27	4,389.48	4,281.27	60.12	90.21	77.481	462.10	7,342.24	2,055.59	1,909.01	146.58	14.024		
9,100.00	4,282.20	4,390.41	4,282.20	60.66	90.23	77.777	462.10	7,342.24	2,005.78	1,858.48	147.30	13.617		
9,150.00	4,283.14	4,391.35	4,283.14	61.21	90.26	78.074	462.10	7,342.24	1,955.98	1,807.96	148.02	13.214		
9,200.00	4,284.08	4,392.29	4,284.08	61.75	90.28	78.371	462.10	7,342.24	1,906.19	1,757.45	148.73	12.816		
9,250.00	4,285.02	4,393.23	4,285.02	62.30	90.30	78.670	462.10	7,342.24	1,856.41	1,706.96	149.45	12.422		
9,300.00	4,285.96	4,394.17	4,285.96	62.84	90.32	78.968	462.10	7,342.24	1,806.64	1,656.48	150.16	12.031		
9,350.00	4,286.90	4,395.11	4,286.90	63.39	90.35	79.268	462.10	7,342.24	1,756.89	1,606.01	150.87	11.645		
9,400.00	4,287.83	4,396.04	4,287.83	63.94	90.37	79.568	462.10	7,342.24	1,707.15	1,555.57	151.58	11.262		
9,450.00	4,288.77	4,396.98	4,288.77	64.48	90.39	79.868	462.10	7,342.24	1,657.42	1,505.13	152.28	10.884		
9,500.00	4,289.71	4,397.92	4,289.71	65.03	90.41	80.170	462.10	7,342.24	1,607.71	1,454.72	152.99	10.509		
9,550.00	4,290.65	4,398.86	4,290.65	65.58	90.44	80.471	462.10	7,342.24	1,558.02	1,404.33	153.69	10.138		
9,600.00	4,291.59	4,399.80	4,291.59	66.13	90.46	80.774	462.10	7,342.24	1,508.35	1,353.96	154.39	9.770		
9,650.00	4,292.53	4,400.74	4,292.53	66.67	90.48	81.076	462.10	7,342.24	1,458.70	1,303.62	155.08	9.406		
9,700.00	4,293.46	4,401.67	4,293.46	67.22	90.50	81.380	462.10	7,342.24	1,409.07	1,253.30	155.77	9.046		
9,750.00	4,294.40	4,402.61	4,294.40	67.77	90.53	81.684	462.10	7,342.24	1,359.47	1,203.01	156.46	8.689		
9,800.00	4,295.34	4,403.55	4,295.34	68.32	90.55	81.988	462.10	7,342.24	1,309.91	1,152.76	157.15	8.335		
9,850.00	4,296.28	4,404.49	4,296.28	68.87	90.57	82.292	462.10	7,342.24	1,260.37	1,102.54	157.83	7.985		
9,900.00	4,297.22	4,405.43	4,297.22	69.42	90.59	82.598	462.10	7,342.24	1,210.87	1,052.36	158.51	7.639		
9,950.00	4,298.16	4,406.37	4,298.16	69.96	90.62	82.903	462.10	7,342.24	1,161.42	1,002.23	159.19	7.296		
10,000.00	4,299.10	4,407.30	4,299.10	70.51	90.64	83.209	462.10	7,342.24	1,112.01	952.14	159.87	6.956		
10,050.00	4,300.03	4,408.24	4,300.03	71.06	90.66	83.516	462.10	7,342.24	1,062.66	902.12	160.54	6.619		
10,100.00	4,300.97	4,409.18	4,300.97	71.61	90.68	83.822	462.10	7,342.24	1,013.37	852.16	161.20	6.286		
10,150.00	4,301.91	4,410.12	4,301.91	72.16	90.71	84.129	462.10	7,342.24	964.15	802.28	161.87	5.956		
10,200.00	4,302.85	4,411.06	4,302.85	72.71	90.73	84.437	462.10	7,342.24	915.01	752.48	162.53	5.630		
10,250.00	4,303.79	4,412.00	4,303.79	73.26	90.75	84.745	462.10	7,342.24	865.98	702.79	163.19	5.307		
10,300.00	4,304.73	4,412.93	4,304.73	73.81	90.77	85.053	462.10	7,342.24	817.05	653.22	163.84	4.987		
10,350.00	4,305.66	4,413.87	4,305.66	74.36	90.80	85.361	462.10	7,342.24	768.27	603.78	164.49	4.671		
10,400.00	4,306.60	4,414.81	4,306.60	74.92	90.82	85.670	462.10	7,342.24	719.65	554.52	165.14	4.358		
10,450.00	4,307.54	4,415.75	4,307.54	75.47	90.84	85.978	462.10	7,342.24	671.24	505.46	165.78	4.049		
10,500.00	4,308.48	4,416.69	4,308.48	76.02	90.86	86.287	462.10	7,342.24	623.07	456.66	166.42	3.744		
10,550.00	4,309.42	4,417.63	4,309.42	76.57	90.89	86.597	462.10	7,342.24	575.22	408.17	167.05	3.443		
10,600.00	4,310.36	4,418.57	4,310.36	77.12	90.91	86.906	462.10	7,342.24	527.76	360.08	167.68	3.147		
10,650.00	4,311.29	4,419.50	4,311.29	77.67	90.93	87.216	462.10	7,342.24	480.81	312.51	168.31	2.857		
10,700.00	4,312.23	4,420.44	4,312.23	78.22	90.95	87.526	462.10	7,342.24	434.55	265.62	168.93	2.572		
10,750.00	4,313.17	4,421.38	4,313.17	78.78	90.98	87.836	462.10	7,342.24	389.21	219.66	169.55	2.296		
10,800.00	4,314.11	4,422.32	4,314.11	79.33	91.00	88.146	462.10	7,342.24	345.15	174.99	170.16	2.028		
10,850.00	4,315.05	4,423.26	4,315.05	79.88	91.02	88.456	462.10	7,342.24	302.94	132.17	170.77	1.774		
10,900.00	4,315.99	4,424.20	4,315.99	80.43	91.04	88.767	462.10	7,342.24	263.47	92.09	171.38	1.537		

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,950.00	4,316.92	4,425.13	4,316.92	80.99	91.07	89.077	462.10	7,342.24	228.16	56.18	171.98	1.327	Level 3
11,000.00	4,317.86	4,426.07	4,317.86	81.54	91.09	89.387	462.10	7,342.24	199.24	26.67	172.58	1.155	Level 2
11,050.00	4,318.80	4,427.01	4,318.80	82.09	91.11	89.698	462.10	7,342.24	179.82	6.66	173.17	1.038	Level 2
11,098.64	4,319.71	4,427.92	4,319.71	82.63	91.13	90.000	462.10	7,342.24	173.12	-0.62	173.74	0.996	Level 1, CC
11,100.00	4,319.74	4,427.95	4,319.74	82.65	91.13	90.008	462.10	7,342.24	173.13	-0.63	173.76	0.996	Level 1, ES, SF
11,150.00	4,320.68	4,428.89	4,320.68	83.20	91.16	90.319	462.10	7,342.24	180.58	6.24	174.34	1.036	Level 2
11,200.00	4,321.62	4,429.83	4,321.62	83.75	91.18	90.629	462.10	7,342.24	200.60	25.68	174.92	1.147	Level 2
11,250.00	4,322.56	4,430.76	4,322.56	84.31	91.20	90.940	462.10	7,342.24	229.94	54.45	175.49	1.310	Level 3
11,300.00	4,323.49	4,431.70	4,323.49	84.86	91.22	91.250	462.10	7,342.24	265.52	89.46	176.06	1.508	
11,330.25	4,324.06	4,432.27	4,324.06	85.19	91.24	91.438	462.10	7,342.24	289.12	112.72	176.40	1.639	
11,350.00	4,324.43	4,432.64	4,324.43	85.41	91.25	91.561	462.10	7,342.24	305.17	128.54	176.63	1.728	
11,380.28	4,325.00	4,433.21	4,325.00	85.75	91.26	91.748	462.10	7,342.24	330.55	153.58	176.97	1.868	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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													Offset Site Error:	0.00 usft
Survey Program: 821-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,700.00	4,199.28	4,300.39	4,199.28	17.85	75.56	-65.656	1,116.86	5,362.58	4,463.47	4,377.54	85.93	51.943		
4,719.94	4,200.00	4,301.11	4,200.00	17.97	75.57	-81.027	1,116.86	5,362.58	4,443.68	4,351.06	92.63	47.975		
4,750.00	4,200.56	4,301.67	4,200.56	18.15	75.58	-81.088	1,116.86	5,362.58	4,413.83	4,321.00	92.83	47.547		
4,800.00	4,201.50	4,302.61	4,201.50	18.46	75.60	-81.188	1,116.86	5,362.58	4,364.20	4,271.03	93.17	46.841		
4,850.00	4,202.44	4,303.55	4,202.44	18.78	75.62	-81.288	1,116.86	5,362.58	4,314.58	4,221.04	93.53	46.129		
4,900.00	4,203.38	4,304.49	4,203.38	19.11	75.64	-81.388	1,116.86	5,362.58	4,264.96	4,171.07	93.90	45.423		
4,950.00	4,204.32	4,305.42	4,204.32	19.46	75.66	-81.488	1,116.86	5,362.58	4,215.35	4,121.08	94.28	44.712		
5,000.00	4,205.26	4,306.36	4,205.26	19.80	75.67	-81.588	1,116.86	5,362.58	4,165.76	4,071.09	94.66	44.007		
5,050.00	4,206.19	4,307.30	4,206.19	20.17	75.69	-81.689	1,116.86	5,362.58	4,116.17	4,021.10	95.06	43.300		
5,100.00	4,207.13	4,308.24	4,207.13	20.54	75.71	-81.789	1,116.86	5,362.58	4,066.59	3,971.12	95.46	42.598		
5,150.00	4,208.07	4,309.18	4,208.07	20.92	75.73	-81.890	1,116.86	5,362.58	4,017.02	3,921.14	95.88	41.895		
5,200.00	4,209.01	4,310.12	4,209.01	21.30	75.75	-81.990	1,116.86	5,362.58	3,967.46	3,871.16	96.30	41.199		
5,250.00	4,209.95	4,311.05	4,209.95	21.70	75.76	-82.091	1,116.86	5,362.58	3,917.92	3,821.18	96.73	40.502		
5,300.00	4,210.89	4,311.99	4,210.89	22.10	75.78	-82.191	1,116.86	5,362.58	3,868.38	3,771.21	97.17	39.812		
5,350.00	4,211.83	4,312.93	4,211.83	22.51	75.80	-82.292	1,116.86	5,362.58	3,818.86	3,721.24	97.61	39.122		
5,400.00	4,212.76	4,313.87	4,212.76	22.92	75.82	-82.392	1,116.86	5,362.58	3,769.34	3,671.28	98.06	38.439		
5,450.00	4,213.70	4,314.81	4,213.70	23.35	75.83	-82.493	1,116.86	5,362.58	3,719.85	3,621.33	98.52	37.758		
5,500.00	4,214.64	4,315.75	4,214.64	23.77	75.85	-82.594	1,116.86	5,362.58	3,670.36	3,571.38	98.98	37.083		
5,550.00	4,215.58	4,316.68	4,215.58	24.21	75.87	-82.695	1,116.86	5,362.58	3,620.89	3,521.44	99.45	36.410		
5,600.00	4,216.52	4,317.62	4,216.52	24.64	75.89	-82.796	1,116.86	5,362.58	3,571.43	3,471.52	99.92	35.744		
5,650.00	4,217.46	4,318.56	4,217.46	25.09	75.91	-82.896	1,116.86	5,362.58	3,521.99	3,421.60	100.40	35.081		
5,700.00	4,218.39	4,319.50	4,218.39	25.53	75.92	-82.997	1,116.86	5,362.58	3,472.57	3,371.69	100.87	34.425		
5,750.00	4,219.33	4,320.44	4,219.33	25.99	75.94	-83.098	1,116.86	5,362.58	3,423.16	3,321.80	101.36	33.772		
5,800.00	4,220.27	4,321.38	4,220.27	26.44	75.96	-83.199	1,116.86	5,362.58	3,373.77	3,271.92	101.85	33.125		
5,850.00	4,221.21	4,322.32	4,221.21	26.91	75.98	-83.300	1,116.86	5,362.58	3,324.39	3,222.05	102.35	32.482		
5,900.00	4,222.15	4,323.25	4,222.15	27.37	76.00	-83.402	1,116.86	5,362.58	3,275.04	3,172.19	102.84	31.846		
5,950.00	4,223.09	4,324.19	4,223.09	27.84	76.01	-83.503	1,116.86	5,362.58	3,225.70	3,122.36	103.34	31.213		
6,000.00	4,224.02	4,325.13	4,224.02	28.31	76.03	-83.604	1,116.86	5,362.58	3,176.38	3,072.54	103.85	30.588		
6,050.00	4,224.96	4,326.07	4,224.96	28.78	76.05	-83.705	1,116.86	5,362.58	3,127.09	3,022.74	104.35	29.966		
6,100.00	4,225.90	4,327.01	4,225.90	29.26	76.07	-83.806	1,116.86	5,362.58	3,077.82	2,972.96	104.86	29.351		
6,150.00	4,226.84	4,327.95	4,226.84	29.74	76.08	-83.908	1,116.86	5,362.58	3,028.57	2,923.19	105.38	28.740		
6,200.00	4,227.78	4,328.88	4,227.78	30.23	76.10	-84.009	1,116.86	5,362.58	2,979.35	2,873.46	105.89	28.136		
6,250.00	4,228.72	4,329.82	4,228.72	30.71	76.12	-84.111	1,116.86	5,362.58	2,930.15	2,823.74	106.41	27.536		
6,300.00	4,229.65	4,330.76	4,229.65	31.20	76.14	-84.212	1,116.86	5,362.58	2,880.98	2,774.05	106.93	26.943		
6,350.00	4,230.59	4,331.70	4,230.59	31.69	76.16	-84.313	1,116.86	5,362.58	2,831.84	2,724.38	107.45	26.354		
6,400.00	4,231.53	4,332.64	4,231.53	32.19	76.17	-84.415	1,116.86	5,362.58	2,782.73	2,674.75	107.98	25.771		
6,450.00	4,232.47	4,333.58	4,232.47	32.68	76.19	-84.516	1,116.86	5,362.58	2,733.65	2,625.14	108.51	25.193		
6,500.00	4,233.41	4,334.51	4,233.41	33.18	76.21	-84.618	1,116.86	5,362.58	2,684.60	2,575.57	109.03	24.622		
6,550.00	4,234.35	4,335.45	4,234.35	33.68	76.23	-84.720	1,116.86	5,362.58	2,635.59	2,526.03	109.57	24.055		
6,600.00	4,235.28	4,336.39	4,235.28	34.18	76.25	-84.821	1,116.86	5,362.58	2,586.62	2,476.52	110.10	23.494		
6,650.00	4,236.22	4,337.33	4,236.22	34.69	76.26	-84.923	1,116.86	5,362.58	2,537.69	2,427.06	110.63	22.938		
6,700.00	4,237.16	4,338.27	4,237.16	35.19	76.28	-85.025	1,116.86	5,362.58	2,488.80	2,377.63	111.17	22.388		
6,750.00	4,238.10	4,339.21	4,238.10	35.70	76.30	-85.126	1,116.86	5,362.58	2,439.95	2,328.25	111.71	21.842		
6,800.00	4,239.04	4,340.14	4,239.04	36.21	76.32	-85.228	1,116.86	5,362.58	2,391.16	2,278.91	112.24	21.303		
6,850.00	4,239.98	4,341.08	4,239.98	36.72	76.33	-85.330	1,116.86	5,362.58	2,342.41	2,229.62	112.79	20.769		
6,900.00	4,240.92	4,342.02	4,240.92	37.23	76.35	-85.432	1,116.86	5,362.58	2,293.71	2,180.39	113.33	20.240		
6,950.00	4,241.85	4,342.96	4,241.85	37.75	76.37	-85.534	1,116.86	5,362.58	2,245.07	2,131.20	113.87	19.716		
7,000.00	4,242.79	4,343.90	4,242.79	38.26	76.39	-85.636	1,116.86	5,362.58	2,196.50	2,082.08	114.41	19.198		
7,050.00	4,243.73	4,344.84	4,243.73	38.78	76.41	-85.737	1,116.86	5,362.58	2,147.99	2,033.03	114.96	18.685		
7,100.00	4,244.67	4,345.77	4,244.67	39.29	76.42	-85.839	1,116.86	5,362.58	2,099.54	1,984.04	115.50	18.177		
7,150.00	4,245.61	4,346.71	4,245.61	39.81	76.44	-85.941	1,116.86	5,362.58	2,051.18	1,935.12	116.05	17.675		
7,200.00	4,246.55	4,347.65	4,246.55	40.33	76.46	-86.043	1,116.86	5,362.58	2,002.89	1,886.29	116.60	17.177		

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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													Offset Site Error:	0.00 usft
Survey Program: 821-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,250.00	4,247.48	4,348.59	4,247.48	40.85	76.48	-86.145	1,116.86	5,362.58	1,954.68	1,837.54	117.15	16.685		
7,300.00	4,248.42	4,349.53	4,248.42	41.38	76.50	-86.247	1,116.86	5,362.58	1,906.57	1,788.88	117.70	16.199		
7,350.00	4,249.36	4,350.47	4,249.36	41.90	76.51	-86.349	1,116.86	5,362.58	1,858.56	1,740.31	118.25	15.717		
7,400.00	4,250.30	4,351.41	4,250.30	42.42	76.53	-86.452	1,116.86	5,362.58	1,810.66	1,691.86	118.80	15.241		
7,450.00	4,251.24	4,352.34	4,251.24	42.95	76.55	-86.554	1,116.86	5,362.58	1,762.87	1,643.52	119.35	14.770		
7,500.00	4,252.18	4,353.28	4,252.18	43.48	76.57	-86.656	1,116.86	5,362.58	1,715.21	1,595.30	119.91	14.305		
7,550.00	4,253.11	4,354.22	4,253.11	44.00	76.58	-86.758	1,116.86	5,362.58	1,667.68	1,547.22	120.46	13.844		
7,600.00	4,254.05	4,355.16	4,254.05	44.53	76.60	-86.860	1,116.86	5,362.58	1,620.30	1,499.29	121.01	13.390		
7,650.00	4,254.99	4,356.10	4,254.99	45.06	76.62	-86.962	1,116.86	5,362.58	1,573.09	1,451.52	121.57	12.940		
7,700.00	4,255.93	4,357.04	4,255.93	45.59	76.64	-87.065	1,116.86	5,362.58	1,526.05	1,403.92	122.12	12.496		
7,750.00	4,256.87	4,357.97	4,256.87	46.12	76.66	-87.167	1,116.86	5,362.58	1,479.20	1,356.52	122.68	12.058		
7,800.00	4,257.81	4,358.91	4,257.81	46.65	76.67	-87.269	1,116.86	5,362.58	1,432.57	1,309.33	123.23	11.625		
7,850.00	4,258.74	4,359.85	4,258.74	47.18	76.69	-87.371	1,116.86	5,362.58	1,386.17	1,262.38	123.79	11.198		
7,900.00	4,259.68	4,360.79	4,259.68	47.72	76.71	-87.474	1,116.86	5,362.58	1,340.03	1,215.68	124.35	10.776		
7,950.00	4,260.62	4,361.73	4,260.62	48.25	76.73	-87.576	1,116.86	5,362.58	1,294.17	1,169.27	124.90	10.361		
8,000.00	4,261.56	4,362.67	4,261.56	48.78	76.75	-87.678	1,116.86	5,362.58	1,248.64	1,123.17	125.46	9.952		
8,050.00	4,262.50	4,363.60	4,262.50	49.32	76.76	-87.780	1,116.86	5,362.58	1,203.45	1,077.43	126.02	9.550		
8,100.00	4,263.44	4,364.54	4,263.44	49.85	76.78	-87.883	1,116.86	5,362.58	1,158.66	1,032.08	126.58	9.154		
8,150.00	4,264.37	4,365.48	4,264.37	50.39	76.80	-87.985	1,116.86	5,362.58	1,114.32	987.18	127.14	8.765		
8,200.00	4,265.31	4,366.42	4,265.31	50.92	76.82	-88.088	1,116.86	5,362.58	1,070.47	942.77	127.70	8.383		
8,250.00	4,266.25	4,367.36	4,266.25	51.46	76.83	-88.190	1,116.86	5,362.58	1,027.18	898.93	128.25	8.009		
8,300.00	4,267.19	4,368.30	4,267.19	52.00	76.85	-88.292	1,116.86	5,362.58	984.53	855.72	128.81	7.643		
8,350.00	4,268.13	4,369.23	4,268.13	52.54	76.87	-88.395	1,116.86	5,362.58	942.60	813.23	129.37	7.286		
8,400.00	4,269.07	4,370.17	4,269.07	53.08	76.89	-88.497	1,116.86	5,362.58	901.49	771.56	129.93	6.938		
8,450.00	4,270.01	4,371.11	4,270.01	53.62	76.91	-88.600	1,116.86	5,362.58	861.32	730.83	130.49	6.601		
8,500.00	4,270.94	4,372.05	4,270.94	54.16	76.92	-88.702	1,116.86	5,362.58	822.23	691.18	131.05	6.274		
8,550.00	4,271.88	4,372.99	4,271.88	54.70	76.94	-88.804	1,116.86	5,362.58	784.38	652.77	131.61	5.960		
8,600.00	4,272.82	4,373.93	4,272.82	55.24	76.96	-88.907	1,116.86	5,362.58	747.96	615.79	132.17	5.659		
8,650.00	4,273.76	4,374.87	4,273.76	55.78	76.98	-89.009	1,116.86	5,362.58	713.18	580.45	132.73	5.373		
8,700.00	4,274.70	4,375.80	4,274.70	56.32	77.00	-89.112	1,116.86	5,362.58	680.30	547.01	133.29	5.104		
8,750.00	4,275.64	4,376.74	4,275.64	56.86	77.01	-89.214	1,116.86	5,362.58	649.61	515.76	133.85	4.853		
8,800.00	4,276.57	4,377.68	4,276.57	57.40	77.03	-89.317	1,116.86	5,362.58	621.43	487.01	134.41	4.623		
8,850.00	4,277.51	4,378.62	4,277.51	57.95	77.05	-89.419	1,116.86	5,362.58	596.11	461.14	134.97	4.417		
8,900.00	4,278.45	4,379.56	4,278.45	58.49	77.07	-89.522	1,116.86	5,362.58	574.04	438.51	135.53	4.235		
8,950.00	4,279.39	4,380.50	4,279.39	59.03	77.08	-89.624	1,116.86	5,362.58	555.61	419.51	136.09	4.083		
9,000.00	4,280.33	4,381.43	4,280.33	59.58	77.10	-89.727	1,116.86	5,362.58	541.18	404.52	136.65	3.960		
9,050.00	4,281.27	4,382.37	4,281.27	60.12	77.12	-89.829	1,116.86	5,362.58	531.08	393.86	137.21	3.870		
9,100.00	4,282.20	4,383.31	4,282.20	60.66	77.14	-89.932	1,116.86	5,362.58	525.56	387.78	137.77	3.815		
9,133.33	4,282.83	4,383.94	4,282.83	61.03	77.15	-90.000	1,116.86	5,362.58	524.50	386.35	138.15	3.797 CC, ES		
9,150.00	4,283.14	4,384.25	4,283.14	61.21	77.16	-90.034	1,116.86	5,362.58	524.76	386.43	138.33	3.793 SF		
9,200.00	4,284.08	4,385.19	4,284.08	61.75	77.17	-90.137	1,116.86	5,362.58	528.72	389.83	138.89	3.807		
9,250.00	4,285.02	4,386.13	4,285.02	62.30	77.19	-90.239	1,116.86	5,362.58	537.31	397.86	139.45	3.853		
9,300.00	4,285.96	4,387.06	4,285.96	62.84	77.21	-90.342	1,116.86	5,362.58	550.34	410.32	140.01	3.931		
9,350.00	4,286.90	4,388.00	4,286.90	63.39	77.23	-90.444	1,116.86	5,362.58	567.48	426.90	140.57	4.037		
9,400.00	4,287.83	4,388.94	4,287.83	63.94	77.24	-90.547	1,116.86	5,362.58	588.38	447.25	141.13	4.169		
9,450.00	4,288.77	4,389.88	4,288.77	64.48	77.26	-90.649	1,116.86	5,362.58	612.65	470.96	141.69	4.324		
9,500.00	4,289.71	4,390.82	4,289.71	65.03	77.28	-90.752	1,116.86	5,362.58	639.92	497.67	142.25	4.499		
9,550.00	4,290.65	4,391.76	4,290.65	65.58	77.30	-90.854	1,116.86	5,362.58	669.81	527.01	142.81	4.690		
9,600.00	4,291.59	4,392.69	4,291.59	66.13	77.32	-90.956	1,116.86	5,362.58	702.00	558.63	143.37	4.897		
9,650.00	4,292.53	4,393.63	4,292.53	66.67	77.33	-91.059	1,116.86	5,362.58	736.17	592.25	143.92	5.115		
9,700.00	4,293.46	4,394.57	4,293.46	67.22	77.35	-91.161	1,116.86	5,362.58	772.07	627.59	144.48	5.344		
9,750.00	4,294.40	4,395.51	4,294.40	67.77	77.37	-91.264	1,116.86	5,362.58	809.47	664.43	145.04	5.581		

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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													Offset Site Error:	0.00 usft
Survey Program: 821-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,800.00	4,295.34	4,396.45	4,295.34	68.32	77.39	-91.366	1,116.86	5,362.58	848.17	702.57	145.60	5.825		
9,850.00	4,296.28	4,397.39	4,296.28	68.87	77.41	-91.469	1,116.86	5,362.58	887.99	741.84	146.16	6.076		
9,900.00	4,297.22	4,398.32	4,297.22	69.42	77.42	-91.571	1,116.86	5,362.58	928.80	782.09	146.71	6.331		
9,950.00	4,298.16	4,399.26	4,298.16	69.96	77.44	-91.674	1,116.86	5,362.58	970.47	823.20	147.27	6.590		
10,000.00	4,299.10	4,400.20	4,299.10	70.51	77.46	-91.776	1,116.86	5,362.58	1,012.89	865.06	147.83	6.852		
10,050.00	4,300.03	4,401.14	4,300.03	71.06	77.48	-91.878	1,116.86	5,362.58	1,055.98	907.59	148.38	7.117		
10,100.00	4,300.97	4,402.08	4,300.97	71.61	77.49	-91.981	1,116.86	5,362.58	1,099.64	950.71	148.94	7.383		
10,150.00	4,301.91	4,403.02	4,301.91	72.16	77.51	-92.083	1,116.86	5,362.58	1,143.83	994.34	149.49	7.651		
10,200.00	4,302.85	4,403.96	4,302.85	72.71	77.53	-92.185	1,116.86	5,362.58	1,188.48	1,038.43	150.05	7.921		
10,250.00	4,303.79	4,404.89	4,303.79	73.26	77.55	-92.288	1,116.86	5,362.58	1,233.53	1,082.93	150.61	8.191		
10,300.00	4,304.73	4,405.83	4,304.73	73.81	77.57	-92.390	1,116.86	5,362.58	1,278.96	1,127.80	151.16	8.461		
10,350.00	4,305.66	4,406.77	4,305.66	74.36	77.58	-92.492	1,116.86	5,362.58	1,324.71	1,173.00	151.71	8.732		
10,400.00	4,306.60	4,407.71	4,306.60	74.92	77.60	-92.595	1,116.86	5,362.58	1,370.76	1,218.49	152.27	9.002		
10,450.00	4,307.54	4,408.65	4,307.54	75.47	77.62	-92.697	1,116.86	5,362.58	1,417.08	1,264.25	152.82	9.273		
10,500.00	4,308.48	4,409.59	4,308.48	76.02	77.64	-92.799	1,116.86	5,362.58	1,463.63	1,310.26	153.38	9.543		
10,550.00	4,309.42	4,410.52	4,309.42	76.57	77.66	-92.901	1,116.86	5,362.58	1,510.41	1,356.48	153.93	9.812		
10,600.00	4,310.36	4,411.46	4,310.36	77.12	77.67	-93.004	1,116.86	5,362.58	1,557.39	1,402.91	154.48	10.081		
10,650.00	4,311.29	4,412.40	4,311.29	77.67	77.69	-93.106	1,116.86	5,362.58	1,604.55	1,449.51	155.03	10.350		
10,700.00	4,312.23	4,413.34	4,312.23	78.22	77.71	-93.208	1,116.86	5,362.58	1,651.87	1,496.29	155.58	10.617		
10,750.00	4,313.17	4,414.28	4,313.17	78.78	77.73	-93.310	1,116.86	5,362.58	1,699.35	1,543.22	156.14	10.884		
10,800.00	4,314.11	4,415.22	4,314.11	79.33	77.74	-93.412	1,116.86	5,362.58	1,746.97	1,590.28	156.69	11.149		
10,850.00	4,315.05	4,416.15	4,315.05	79.88	77.76	-93.514	1,116.86	5,362.58	1,794.72	1,637.48	157.24	11.414		
10,900.00	4,315.99	4,417.09	4,315.99	80.43	77.78	-93.617	1,116.86	5,362.58	1,842.58	1,684.80	157.79	11.678		
10,950.00	4,316.92	4,418.03	4,316.92	80.99	77.80	-93.719	1,116.86	5,362.58	1,890.56	1,732.22	158.34	11.940		
11,000.00	4,317.86	4,418.97	4,317.86	81.54	77.82	-93.821	1,116.86	5,362.58	1,938.64	1,779.75	158.89	12.201		
11,050.00	4,318.80	4,419.91	4,318.80	82.09	77.83	-93.923	1,116.86	5,362.58	1,986.81	1,827.38	159.43	12.462		
11,100.00	4,319.74	4,420.85	4,319.74	82.65	77.85	-94.025	1,116.86	5,362.58	2,035.07	1,875.09	159.98	12.721		
11,150.00	4,320.68	4,421.78	4,320.68	83.20	77.87	-94.127	1,116.86	5,362.58	2,083.41	1,922.88	160.53	12.978		
11,200.00	4,321.62	4,422.72	4,321.62	83.75	77.89	-94.229	1,116.86	5,362.58	2,131.83	1,970.75	161.08	13.235		
11,250.00	4,322.56	4,423.66	4,322.56	84.31	77.91	-94.330	1,116.86	5,362.58	2,180.32	2,018.70	161.63	13.490		
11,300.00	4,323.49	4,424.60	4,323.49	84.86	77.92	-94.432	1,116.86	5,362.58	2,228.88	2,066.71	162.17	13.744		
11,330.25	4,324.06	4,425.17	4,324.06	85.19	77.93	-94.494	1,116.86	5,362.58	2,258.28	2,095.78	162.50	13.897		
11,350.00	4,324.43	4,425.54	4,324.43	85.41	77.94	-94.534	1,116.86	5,362.58	2,277.50	2,114.78	162.72	13.997		
11,380.28	4,325.00	4,426.11	4,325.00	85.75	77.95	-94.596	1,116.86	5,362.58	2,306.97	2,143.92	163.05	14.149		

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 209-INC-ONLY												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toelface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
650.00	649.13	638.14	649.13	2.13	10.95	29.280	587.20	384.72	683.27	670.20	13.07	52.292	
700.00	698.70	687.71	698.70	2.31	12.00	29.606	587.20	384.72	677.58	663.29	14.28	47.440	
719.90	718.40	707.41	718.40	2.39	12.42	29.750	587.20	384.72	675.10	660.34	14.76	45.726	
750.00	748.18	737.18	748.18	2.49	13.05	29.935	587.20	384.72	671.28	655.79	15.50	43.322	
800.00	797.64	786.65	797.64	2.67	14.10	30.248	587.20	384.72	664.95	648.24	16.71	39.793	
850.00	847.10	836.11	847.10	2.85	15.15	30.568	587.20	384.72	658.63	640.70	17.93	36.734	
900.00	896.57	885.58	896.57	3.02	16.20	30.893	587.20	384.72	652.34	633.19	19.14	34.074	
950.00	946.03	935.06	946.03	3.20	17.26	31.224	587.20	384.72	646.06	625.70	20.36	31.726	
1,000.00	995.49	984.52	995.49	3.38	18.31	31.562	587.20	384.72	639.81	618.22	21.59	29.641	
1,050.00	1,044.96	1,033.99	1,044.96	3.56	19.36	31.907	587.20	384.72	633.58	610.77	22.81	27.780	
1,100.00	1,094.42	1,083.45	1,094.42	3.74	20.41	32.258	587.20	384.72	627.38	603.35	24.03	26.108	
1,150.00	1,143.89	1,132.92	1,143.89	3.93	21.47	32.617	587.20	384.72	621.19	595.94	25.25	24.599	
1,200.00	1,193.35	1,182.38	1,193.35	4.11	22.52	32.982	587.20	384.72	615.04	588.56	26.48	23.230	
1,250.00	1,242.81	1,231.84	1,242.81	4.29	23.57	33.355	587.20	384.72	608.90	581.20	27.70	21.982	
1,300.00	1,292.28	1,281.31	1,292.28	4.47	24.62	33.736	587.20	384.72	602.80	573.87	28.93	20.840	
1,350.00	1,341.74	1,330.77	1,341.74	4.66	25.67	34.124	587.20	384.72	596.72	566.57	30.15	19.791	
1,400.00	1,391.21	1,376.00	1,386.95	4.84	26.64	34.485	587.20	384.72	590.68	559.39	31.29	18.880	
1,450.00	1,440.67	1,429.72	1,440.67	5.02	27.78	34.924	587.20	384.72	584.64	552.04	32.60	17.932	
1,500.00	1,490.13	1,479.19	1,490.13	5.20	28.83	35.336	587.20	384.72	578.65	544.82	33.83	17.105	
1,550.00	1,539.60	1,528.65	1,539.60	5.39	29.88	35.757	587.20	384.72	572.69	537.63	35.06	16.336	
1,600.00	1,589.06	1,578.11	1,589.06	5.57	30.94	36.187	587.20	384.72	566.75	530.47	36.28	15.620	
1,650.00	1,638.52	1,627.58	1,638.52	5.75	31.99	36.626	587.20	384.72	560.86	523.34	37.51	14.951	
1,700.00	1,687.99	1,677.04	1,687.99	5.94	33.04	37.074	587.20	384.72	554.99	516.25	38.74	14.326	
1,750.00	1,737.45	1,726.51	1,737.45	6.12	34.10	37.531	587.20	384.72	549.16	509.19	39.97	13.739	
1,800.00	1,786.92	1,775.97	1,786.92	6.30	35.15	37.999	587.20	384.72	543.36	502.16	41.20	13.189	
1,850.00	1,836.38	1,825.43	1,836.38	6.49	36.20	38.476	587.20	384.72	537.60	495.17	42.43	12.671	
1,900.00	1,885.84	1,874.92	1,885.84	6.67	37.29	38.963	587.20	384.72	531.88	488.18	43.70	12.171	
1,950.00	1,935.31	1,924.39	1,935.31	6.85	38.43	39.461	587.20	384.72	526.20	481.18	45.02	11.689	
2,000.00	1,984.77	1,973.85	1,984.77	7.04	39.57	39.970	587.20	384.72	520.56	474.22	46.33	11.235	
2,050.00	2,034.24	2,023.31	2,034.24	7.22	40.71	40.489	587.20	384.72	514.96	467.31	47.65	10.808	
2,100.00	2,083.70	2,072.78	2,083.70	7.40	41.85	41.020	587.20	384.72	509.40	460.43	48.96	10.403	
2,150.00	2,133.16	2,122.24	2,133.16	7.59	42.99	41.563	587.20	384.72	503.89	453.60	50.28	10.021	
2,200.00	2,182.63	2,171.72	2,182.63	7.77	44.10	42.117	587.20	384.72	498.42	446.84	51.58	9.663	
2,250.00	2,232.09	2,221.18	2,232.09	7.95	45.15	42.683	587.20	384.72	493.00	440.19	52.81	9.335	
2,300.00	2,281.56	2,270.65	2,281.56	8.14	46.21	43.262	587.20	384.72	487.63	433.59	54.05	9.023	
2,350.00	2,331.02	2,320.11	2,331.02	8.32	47.26	43.853	587.20	384.72	482.31	427.03	55.28	8.725	
2,400.00	2,380.48	2,369.58	2,380.48	8.50	48.31	44.458	587.20	384.72	477.04	420.53	56.51	8.441	
2,450.00	2,429.95	2,419.07	2,429.95	8.69	49.32	45.076	587.20	384.72	471.83	414.13	57.71	8.176	
2,500.00	2,479.41	2,468.53	2,479.41	8.87	50.25	45.707	587.20	384.72	466.68	407.86	58.82	7.934	
2,550.00	2,528.87	2,517.99	2,528.87	9.05	51.18	46.352	587.20	384.72	461.58	401.65	59.93	7.702	
2,600.00	2,578.34	2,567.46	2,578.34	9.24	52.11	47.012	587.20	384.72	456.54	395.50	61.04	7.479	
2,650.00	2,627.80	2,616.92	2,627.80	9.42	53.03	47.685	587.20	384.72	451.56	389.41	62.15	7.265	
2,700.00	2,677.27	2,666.39	2,677.27	9.60	53.96	48.374	587.20	384.72	446.65	383.38	63.27	7.060	
2,750.00	2,726.73	2,715.85	2,726.73	9.79	54.89	49.078	587.20	384.72	441.80	377.42	64.38	6.862	
2,800.00	2,776.19	2,765.31	2,776.19	9.97	55.81	49.796	587.20	384.72	437.03	371.53	65.49	6.673	
2,850.00	2,825.66	2,814.78	2,825.66	10.15	56.74	50.531	587.20	384.72	432.32	365.71	66.61	6.490	
2,900.00	2,875.12	2,864.24	2,875.12	10.34	57.67	51.281	587.20	384.72	427.68	359.96	67.72	6.315	
2,950.00	2,924.59	2,913.71	2,924.59	10.52	58.60	52.048	587.20	384.72	423.12	354.28	68.84	6.147	
3,000.00	2,974.05	2,963.17	2,974.05	10.70	59.52	52.830	587.20	384.72	418.64	348.69	69.96	5.984	
3,050.00	3,023.51	3,012.63	3,023.51	10.89	60.45	53.630	587.20	384.72	414.24	343.17	71.07	5.828	
3,100.00	3,072.98	3,062.10	3,072.98	11.07	61.38	54.446	587.20	384.72	409.92	337.73	72.19	5.678	
3,150.00	3,122.44	3,111.56	3,122.44	11.25	62.31	55.279	587.20	384.72	405.69	332.38	73.31	5.534	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 209-INC-ONLY												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
3,200.00	3,171.90	3,161.02	3,171.90	11.44	63.23	56.129	587.20	384.72	401.54	327.12	74.42	5.395	
3,239.93	3,211.41	3,200.53	3,211.41	11.58	63.98	56.820	587.20	384.72	398.30	322.98	75.32	5.288	
3,250.00	3,221.37	3,210.49	3,221.37	11.62	64.16	52.888	587.20	384.72	397.44	321.95	75.49	5.265	
3,300.00	3,270.79	3,259.92	3,270.79	11.81	65.09	34.686	587.20	384.72	391.91	315.65	76.27	5.139	
3,350.00	3,320.03	3,309.16	3,320.03	11.99	66.02	20.465	587.20	384.72	384.22	307.34	76.88	4.998	
3,400.00	3,368.97	3,358.11	3,368.97	12.17	66.94	10.218	587.20	384.72	374.34	297.04	77.30	4.843	
3,450.00	3,417.47	3,406.60	3,417.47	12.35	67.86	2.781	587.20	384.72	362.27	284.74	77.53	4.672	
3,500.00	3,465.40	3,454.53	3,465.40	12.53	68.76	-2.901	587.20	384.72	348.04	270.45	77.59	4.486	
3,550.00	3,512.62	3,501.75	3,512.62	12.70	69.65	-7.559	587.20	384.72	331.69	254.22	77.47	4.282	
3,600.00	3,559.01	3,548.14	3,559.01	12.87	70.52	-11.693	587.20	384.72	313.27	236.07	77.20	4.058	
3,650.00	3,604.43	3,593.56	3,604.43	13.04	71.38	-15.668	587.20	384.72	292.88	216.03	76.85	3.811	
3,700.00	3,648.77	3,637.90	3,648.77	13.20	72.22	-19.790	587.20	384.72	270.66	194.16	76.50	3.538	
3,750.00	3,691.90	3,681.03	3,691.90	13.37	73.03	-24.361	587.20	384.72	246.80	170.49	76.31	3.234	
3,800.00	3,733.71	3,722.85	3,733.71	13.54	73.86	-29.718	587.20	384.72	221.58	145.03	76.55	2.895	
3,850.00	3,774.07	3,763.22	3,774.07	13.71	74.68	-36.265	587.20	384.72	195.44	117.86	77.58	2.519	
3,900.00	3,812.89	3,802.03	3,812.89	13.88	75.47	-44.473	587.20	384.72	169.13	89.34	79.79	2.120	
3,950.00	3,850.04	3,839.19	3,850.04	14.06	76.23	-54.777	587.20	384.72	143.92	60.51	83.41	1.725	
4,000.00	3,885.44	3,874.59	3,885.44	14.25	76.96	-67.264	587.20	384.72	122.20	34.30	87.90	1.390 Level 3	
4,050.00	3,918.98	3,908.13	3,918.98	14.45	77.64	-81.213	587.20	384.72	107.97	16.43	91.54	1.180 Level 2	
4,081.30	3,939.00	3,928.14	3,939.00	14.57	78.05	-90.000	587.20	384.72	105.16	12.63	92.52	1.137 Level 2, CC, ES, SF	
4,100.00	3,950.58	3,939.72	3,950.58	14.65	78.29	-95.044	587.20	384.72	106.21	13.69	92.52	1.148 Level 2	
4,150.00	3,980.13	3,969.28	3,980.13	14.87	78.89	-107.167	587.20	384.72	119.08	28.51	90.57	1.315 Level 3	
4,200.00	4,007.58	3,996.72	4,007.58	15.09	79.46	-116.833	587.20	384.72	143.93	57.12	86.81	1.658	
4,230.69	4,023.34	4,012.48	4,023.34	15.23	79.78	-121.550	587.20	384.72	163.32	79.17	84.15	1.941	
4,250.00	4,032.99	4,022.14	4,032.99	15.33	79.98	-124.802	587.20	384.72	176.61	94.31	82.30	2.146	
4,300.00	4,057.99	4,047.14	4,057.99	15.57	80.49	-132.145	587.20	384.72	213.26	135.59	77.67	2.746	
4,350.00	4,082.99	4,072.14	4,082.99	15.84	81.00	-138.111	587.20	384.72	252.04	178.44	73.60	3.424	
4,400.00	4,107.99	4,097.14	4,107.99	16.10	81.51	-142.955	587.20	384.72	292.08	221.87	70.22	4.160	
4,430.69	4,123.34	4,112.48	4,123.34	16.27	81.82	-145.476	587.20	384.72	317.09	248.61	68.48	4.631	
4,450.00	4,132.71	4,121.86	4,132.71	16.38	82.01	-145.317	587.20	384.72	333.10	265.65	67.45	4.939	
4,500.00	4,154.28	4,143.43	4,154.28	16.66	82.46	-143.967	587.20	384.72	376.23	310.33	65.90	5.709	
4,550.00	4,171.84	4,160.99	4,171.84	16.96	82.82	-140.863	587.20	384.72	421.43	354.50	66.93	6.297	
4,600.00	4,185.26	4,174.00	4,185.26	17.26	83.08	-134.932	587.20	384.72	468.27	396.10	72.17	6.489	
4,650.00	4,194.43	4,183.58	4,194.43	17.55	83.28	-124.549	587.20	384.72	516.31	433.64	82.66	6.246	
4,700.00	4,199.28	4,188.43	4,199.28	17.85	83.38	-106.090	587.20	384.72	565.14	468.41	96.73	5.842	
4,719.94	4,200.00	4,189.15	4,200.00	17.97	83.39	-95.980	587.20	384.72	584.74	484.20	100.54	5.816	
4,750.00	4,200.56	4,189.71	4,200.56	18.15	83.40	-96.289	587.20	384.72	614.35	513.69	100.66	6.103	
4,800.00	4,201.50	4,190.65	4,201.50	18.46	83.42	-96.804	587.20	384.72	663.69	562.82	100.86	6.580	
4,850.00	4,202.44	4,191.59	4,202.44	18.78	83.44	-97.317	587.20	384.72	713.11	612.03	101.08	7.055	
4,900.00	4,203.38	4,192.53	4,203.38	19.11	83.46	-97.829	587.20	384.72	762.61	661.32	101.29	7.529	
4,950.00	4,204.32	4,193.47	4,204.32	19.46	83.48	-98.340	587.20	384.72	812.17	710.66	101.51	8.001	
5,000.00	4,205.26	4,194.41	4,205.26	19.80	83.50	-98.850	587.20	384.72	861.78	760.06	101.72	8.472	
5,050.00	4,206.19	4,195.35	4,206.19	20.17	83.52	-99.358	587.20	384.72	911.43	809.49	101.95	8.940	
5,100.00	4,207.13	4,196.28	4,207.13	20.54	83.54	-99.865	587.20	384.72	961.12	858.96	102.16	9.408	
5,150.00	4,208.07	4,197.22	4,208.07	20.92	83.56	-100.370	587.20	384.72	1,010.84	908.45	102.39	9.873	
5,200.00	4,209.01	4,198.16	4,209.01	21.30	83.58	-100.873	587.20	384.72	1,060.58	957.98	102.60	10.337	
5,250.00	4,209.95	4,199.10	4,209.95	21.70	83.59	-101.375	587.20	384.72	1,110.35	1,007.52	102.83	10.798	
5,300.00	4,210.89	4,200.04	4,210.89	22.10	83.61	-101.875	587.20	384.72	1,160.13	1,057.09	103.04	11.259	
5,350.00	4,211.83	4,200.98	4,211.83	22.51	83.63	-102.374	587.20	384.72	1,209.93	1,106.67	103.27	11.717	
5,400.00	4,212.76	4,201.91	4,212.76	22.92	83.65	-102.870	587.20	384.72	1,259.75	1,156.27	103.48	12.174	
5,450.00	4,213.70	4,202.85	4,213.70	23.35	83.67	-103.364	587.20	384.72	1,309.58	1,205.88	103.70	12.629	
5,500.00	4,214.64	4,203.79	4,214.64	23.77	83.69	-103.857	587.20	384.72	1,359.42	1,255.51	103.91	13.083	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 209-INC-ONLY												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,550.00	4,215.58	4,204.73	4,215.58	24.21	83.71	-104.347	587.20	384.72	1,409.27	1,305.15	104.12	13.535	
5,600.00	4,216.52	4,205.67	4,216.52	24.64	83.73	-104.835	587.20	384.72	1,459.13	1,354.81	104.32	13.987	
5,650.00	4,217.46	4,206.61	4,217.46	25.09	83.75	-105.321	587.20	384.72	1,509.00	1,404.47	104.53	14.436	
5,700.00	4,218.39	4,207.54	4,218.39	25.53	83.77	-105.805	587.20	384.72	1,558.88	1,454.15	104.73	14.885	
5,750.00	4,219.33	4,208.48	4,219.33	25.99	83.79	-106.286	587.20	384.72	1,608.77	1,503.84	104.93	15.332	
5,800.00	4,220.27	4,209.42	4,220.27	26.44	83.81	-106.765	587.20	384.72	1,658.66	1,553.54	105.12	15.778	
5,850.00	4,221.21	4,210.36	4,221.21	26.91	83.82	-107.242	587.20	384.72	1,708.56	1,603.24	105.31	16.223	
5,900.00	4,222.15	4,211.30	4,222.15	27.37	83.84	-107.716	587.20	384.72	1,758.46	1,652.96	105.50	16.668	
5,950.00	4,223.09	4,212.24	4,223.09	27.84	83.86	-108.188	587.20	384.72	1,808.37	1,702.68	105.69	17.111	
6,000.00	4,224.02	4,213.17	4,224.02	28.31	83.88	-108.657	587.20	384.72	1,858.28	1,752.41	105.86	17.554	
6,050.00	4,224.96	4,214.11	4,224.96	28.78	83.90	-109.124	587.20	384.72	1,908.19	1,802.15	106.04	17.995	
6,100.00	4,225.90	4,215.05	4,225.90	29.26	83.92	-109.588	587.20	384.72	1,958.11	1,851.90	106.21	18.436	
6,150.00	4,226.84	4,215.99	4,226.84	29.74	83.94	-110.049	587.20	384.72	2,008.04	1,901.66	106.38	18.876	
6,200.00	4,227.78	4,216.93	4,227.78	30.23	83.96	-110.508	587.20	384.72	2,057.96	1,951.42	106.54	19.317	
6,250.00	4,228.72	4,217.87	4,228.72	30.71	83.98	-110.964	587.20	384.72	2,107.89	2,001.20	106.70	19.756	
6,300.00	4,229.65	4,218.80	4,229.65	31.20	84.00	-111.417	587.20	384.72	2,157.83	2,050.98	106.85	20.195	
6,350.00	4,230.59	4,219.74	4,230.59	31.69	84.02	-111.867	587.20	384.72	2,207.76	2,100.76	107.00	20.633	
6,400.00	4,231.53	4,220.68	4,231.53	32.19	84.04	-112.315	587.20	384.72	2,257.70	2,150.55	107.15	21.071	
6,450.00	4,232.47	4,221.62	4,232.47	32.68	84.05	-112.759	587.20	384.72	2,307.64	2,200.35	107.29	21.509	
6,500.00	4,233.41	4,222.56	4,233.41	33.18	84.07	-113.201	587.20	384.72	2,357.58	2,250.16	107.42	21.947	
6,550.00	4,234.35	4,223.50	4,234.35	33.68	84.09	-113.640	587.20	384.72	2,407.53	2,299.97	107.56	22.384	
6,600.00	4,235.28	4,224.44	4,235.28	34.18	84.11	-114.076	587.20	384.72	2,457.47	2,349.79	107.68	22.821	
6,650.00	4,236.22	4,225.37	4,236.22	34.69	84.13	-114.509	587.20	384.72	2,507.42	2,399.61	107.81	23.258	
6,700.00	4,237.16	4,226.31	4,237.16	35.19	84.15	-114.939	587.20	384.72	2,557.37	2,449.44	107.93	23.695	
6,750.00	4,238.10	4,227.25	4,238.10	35.70	84.17	-115.366	587.20	384.72	2,607.32	2,499.28	108.04	24.132	
6,800.00	4,239.04	4,228.19	4,239.04	36.21	84.19	-115.790	587.20	384.72	2,657.27	2,549.12	108.15	24.570	
6,850.00	4,239.98	4,229.13	4,239.98	36.72	84.21	-116.211	587.20	384.72	2,707.23	2,598.97	108.26	25.007	
6,900.00	4,240.92	4,230.07	4,240.92	37.23	84.23	-116.629	587.20	384.72	2,757.18	2,648.82	108.36	25.444	
6,950.00	4,241.85	4,231.00	4,241.85	37.75	84.25	-117.044	587.20	384.72	2,807.14	2,698.68	108.46	25.882	
7,000.00	4,242.79	4,231.94	4,242.79	38.26	84.27	-117.456	587.20	384.72	2,857.10	2,748.54	108.55	26.319	
7,050.00	4,243.73	4,232.88	4,243.73	38.78	84.29	-117.865	587.20	384.72	2,907.06	2,798.41	108.65	26.757	
7,100.00	4,244.67	4,233.82	4,244.67	39.29	84.30	-118.271	587.20	384.72	2,957.02	2,848.29	108.73	27.196	
7,150.00	4,245.61	4,234.76	4,245.61	39.81	84.32	-118.674	587.20	384.72	3,006.98	2,898.17	108.81	27.634	
7,200.00	4,246.55	4,235.70	4,246.55	40.33	84.34	-119.073	587.20	384.72	3,056.94	2,948.05	108.89	28.073	
7,250.00	4,247.48	4,236.63	4,247.48	40.85	84.36	-119.470	587.20	384.72	3,106.91	2,997.94	108.97	28.512	
7,300.00	4,248.42	4,237.57	4,248.42	41.38	84.38	-119.864	587.20	384.72	3,156.87	3,047.83	109.04	28.951	
7,350.00	4,249.36	4,238.51	4,249.36	41.90	84.40	-120.254	587.20	384.72	3,206.83	3,097.73	109.11	29.391	
7,400.00	4,250.30	4,239.45	4,250.30	42.42	84.42	-120.641	587.20	384.72	3,256.80	3,147.63	109.17	29.831	
7,450.00	4,251.24	4,240.39	4,251.24	42.95	84.44	-121.026	587.20	384.72	3,306.77	3,197.53	109.24	30.272	
7,500.00	4,252.18	4,241.33	4,252.18	43.48	84.46	-121.407	587.20	384.72	3,356.73	3,247.44	109.29	30.713	
7,550.00	4,253.11	4,242.26	4,253.11	44.00	84.48	-121.785	587.20	384.72	3,406.70	3,297.35	109.35	31.155	
7,600.00	4,254.05	4,243.20	4,254.05	44.53	84.50	-122.160	587.20	384.72	3,456.67	3,347.27	109.40	31.597	
7,650.00	4,254.99	4,244.14	4,254.99	45.06	84.52	-122.532	587.20	384.72	3,506.64	3,397.19	109.45	32.039	
7,700.00	4,255.93	4,245.08	4,255.93	45.59	84.53	-122.901	587.20	384.72	3,556.61	3,447.12	109.49	32.482	
7,750.00	4,256.87	4,246.02	4,256.87	46.12	84.55	-123.267	587.20	384.72	3,606.58	3,497.04	109.54	32.926	
7,800.00	4,257.81	4,246.96	4,257.81	46.65	84.57	-123.630	587.20	384.72	3,656.55	3,546.98	109.58	33.370	
7,850.00	4,258.74	4,247.89	4,258.74	47.18	84.59	-123.990	587.20	384.72	3,706.52	3,596.91	109.61	33.815	
7,900.00	4,259.68	4,248.83	4,259.68	47.72	84.61	-124.347	587.20	384.72	3,756.49	3,646.85	109.65	34.260	
7,950.00	4,260.62	4,249.77	4,260.62	48.25	84.63	-124.700	587.20	384.72	3,806.47	3,696.79	109.68	34.705	
8,000.00	4,261.56	4,250.71	4,261.56	48.78	84.65	-125.051	587.20	384.72	3,856.44	3,746.73	109.71	35.152	
8,050.00	4,262.50	4,251.65	4,262.50	49.32	84.67	-125.399	587.20	384.72	3,906.41	3,796.68	109.74	35.598	
8,100.00	4,263.44	4,252.59	4,263.44	49.85	84.69	-125.744	587.20	384.72	3,956.39	3,846.63	109.76	36.046	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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												Offset Site Error:	0.00 usft
Survey Program: 209-INC-ONLY												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toelface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,150.00	4,264.37	4,253.53	4,264.37	50.39	84.71	-126.086	587.20	384.72	4,006.36	3,896.58	109.78	36.494	
8,200.00	4,265.31	4,254.46	4,265.31	50.92	84.73	-126.425	587.20	384.72	4,056.34	3,946.54	109.80	36.942	
8,250.00	4,266.25	4,255.40	4,266.25	51.46	84.75	-126.761	587.20	384.72	4,106.31	3,996.49	109.82	37.391	
8,300.00	4,267.19	4,256.34	4,267.19	52.00	84.76	-127.094	587.20	384.72	4,156.29	4,046.45	109.84	37.841	
8,350.00	4,268.13	4,257.28	4,268.13	52.54	84.78	-127.424	587.20	384.72	4,206.26	4,096.41	109.85	38.291	
8,400.00	4,269.07	4,258.22	4,269.07	53.08	84.80	-127.751	587.20	384.72	4,256.24	4,146.38	109.86	38.742	
8,450.00	4,270.01	4,259.16	4,270.01	53.62	84.82	-128.076	587.20	384.72	4,306.22	4,196.35	109.87	39.193	
8,500.00	4,270.94	4,260.09	4,270.94	54.16	84.84	-128.397	587.20	384.72	4,356.19	4,246.31	109.88	39.645	
8,550.00	4,271.88	4,261.03	4,271.88	54.70	84.86	-128.716	587.20	384.72	4,406.17	4,296.28	109.89	40.097	
8,600.00	4,272.82	4,261.97	4,272.82	55.24	84.88	-129.032	587.20	384.72	4,456.15	4,346.26	109.89	40.550	
8,650.00	4,273.76	4,262.91	4,273.76	55.78	84.90	-129.345	587.20	384.72	4,506.13	4,396.23	109.90	41.004	
8,700.00	4,274.70	4,263.85	4,274.70	56.32	84.92	-129.656	587.20	384.72	4,556.11	4,446.21	109.90	41.458	
8,750.00	4,275.64	4,264.79	4,275.64	56.86	84.94	-129.963	587.20	384.72	4,606.08	4,496.19	109.90	41.912	
8,800.00	4,276.57	4,265.72	4,276.57	57.40	84.96	-130.268	587.20	384.72	4,656.06	4,546.17	109.90	42.367	
8,850.00	4,277.51	4,266.66	4,277.51	57.95	84.98	-130.570	587.20	384.72	4,706.04	4,596.15	109.90	42.823	
8,900.00	4,278.45	4,267.60	4,278.45	58.49	85.00	-130.869	587.20	384.72	4,756.02	4,646.13	109.89	43.279	
8,950.00	4,279.39	4,268.54	4,279.39	59.03	85.01	-131.166	587.20	384.72	4,806.00	4,696.11	109.89	43.736	
9,000.00	4,280.33	4,269.48	4,280.33	59.58	85.03	-131.460	587.20	384.72	4,855.98	4,746.10	109.88	44.193	
9,050.00	4,281.27	4,270.42	4,281.27	60.12	85.05	-131.752	587.20	384.72	4,905.96	4,796.08	109.88	44.650	
9,100.00	4,282.20	4,271.35	4,282.20	60.66	85.07	-132.041	587.20	384.72	4,955.94	4,846.07	109.87	45.108	
9,150.00	4,283.14	4,272.29	4,283.14	61.21	85.09	-132.327	587.20	384.72	5,005.92	4,896.06	109.86	45.567	
9,200.00	4,284.08	4,273.23	4,284.08	61.75	85.11	-132.610	587.20	384.72	5,055.90	4,946.05	109.85	46.025	
9,250.00	4,285.02	4,274.17	4,285.02	62.30	85.13	-132.891	587.20	384.72	5,105.88	4,996.04	109.84	46.485	
9,300.00	4,285.96	4,275.11	4,285.96	62.84	85.15	-133.170	587.20	384.72	5,155.86	5,046.03	109.83	46.944	
9,350.00	4,286.90	4,276.05	4,286.90	63.39	85.17	-133.446	587.20	384.72	5,205.85	5,096.03	109.82	47.404	
9,400.00	4,287.83	4,276.98	4,287.83	63.94	85.19	-133.719	587.20	384.72	5,255.83	5,146.02	109.81	47.865	
9,450.00	4,288.77	4,277.92	4,288.77	64.48	85.21	-133.990	587.20	384.72	5,305.81	5,196.02	109.79	48.326	
9,500.00	4,289.71	4,278.86	4,289.71	65.03	85.23	-134.259	587.20	384.72	5,355.79	5,246.01	109.78	48.787	
9,550.00	4,290.65	4,279.80	4,290.65	65.58	85.24	-134.525	587.20	384.72	5,405.77	5,296.01	109.77	49.248	
9,600.00	4,291.59	4,280.74	4,291.59	66.13	85.26	-134.789	587.20	384.72	5,455.75	5,346.00	109.75	49.710	
9,650.00	4,292.53	4,281.68	4,292.53	66.67	85.28	-135.050	587.20	384.72	5,505.74	5,396.00	109.74	50.173	
9,700.00	4,293.46	4,282.62	4,293.46	67.22	85.30	-135.309	587.20	384.72	5,555.72	5,446.00	109.72	50.635	
9,750.00	4,294.40	4,283.55	4,294.40	67.77	85.32	-135.566	587.20	384.72	5,605.70	5,496.00	109.71	51.098	
9,800.00	4,295.34	4,284.49	4,295.34	68.32	85.34	-135.820	587.20	384.72	5,655.68	5,546.00	109.69	51.561	
9,850.00	4,296.28	4,285.43	4,296.28	68.87	85.36	-136.072	587.20	384.72	5,705.67	5,595.99	109.67	52.024	
9,900.00	4,297.22	4,286.37	4,297.22	69.42	85.38	-136.322	587.20	384.72	5,755.65	5,645.99	109.66	52.488	
9,950.00	4,298.16	4,287.31	4,298.16	69.96	85.40	-136.569	587.20	384.72	5,805.63	5,695.99	109.64	52.951	
10,000.00	4,299.10	4,288.25	4,299.10	70.51	85.42	-136.815	587.20	384.72	5,855.62	5,745.99	109.62	53.415	
10,050.00	4,300.03	4,289.18	4,300.03	71.06	85.44	-137.058	587.20	384.72	5,905.60	5,795.99	109.61	53.879	
10,100.00	4,300.97	4,290.12	4,300.97	71.61	85.46	-137.298	587.20	384.72	5,955.58	5,845.99	109.59	54.344	
10,150.00	4,301.91	4,291.06	4,301.91	72.16	85.47	-137.537	587.20	384.72	6,005.57	5,895.99	109.57	54.808	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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

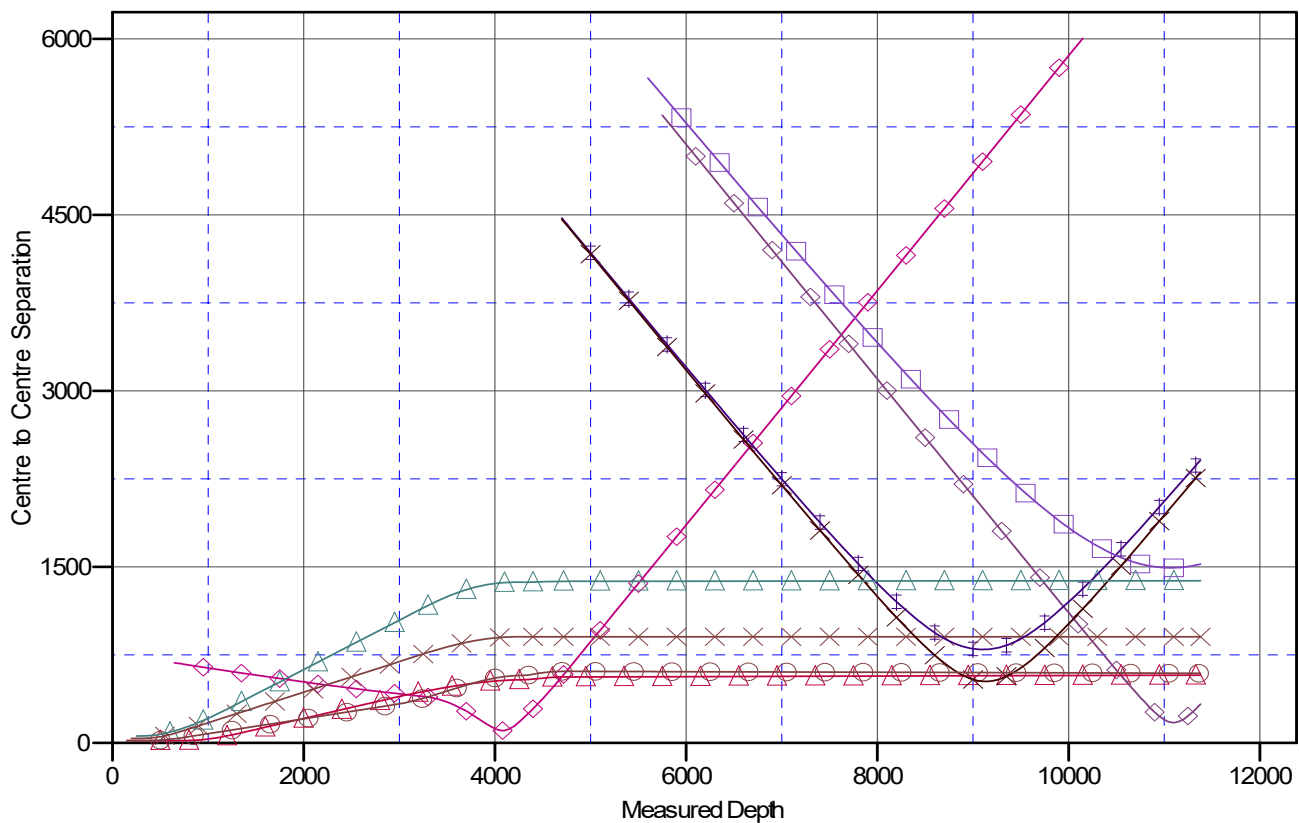
Reference Depths are relative to RKB = 20' @ 3620.00usft (AKITA 57) Coordinates are relative to: 60H

Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Central Meridian is -104.3333333

Ladder Plot



LEGEND

OFFSET: PUMA #1, Wellbore #1, Wellbore #1 V0	20H, Wellbore #1, PERMIT V0	OFFSET: AID STATE #9, Wellbore #1, Wellbore #1 V0
OFFSET: AID STATE #8, Wellbore #1, Wellbore #1 V0	OFFSET: AID STATE #10, Wellbore #1, Wellbore #1 V0	21H, Wellbore #1, PERMIT V0
61H, Wellbore #1, PERMIT V0	OFFSET: AID STATE #6, Wellbore #1, Wellbore #1 V0	10H, Wellbore #1, PERMIT V0

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 60H
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:	60H	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: 60H

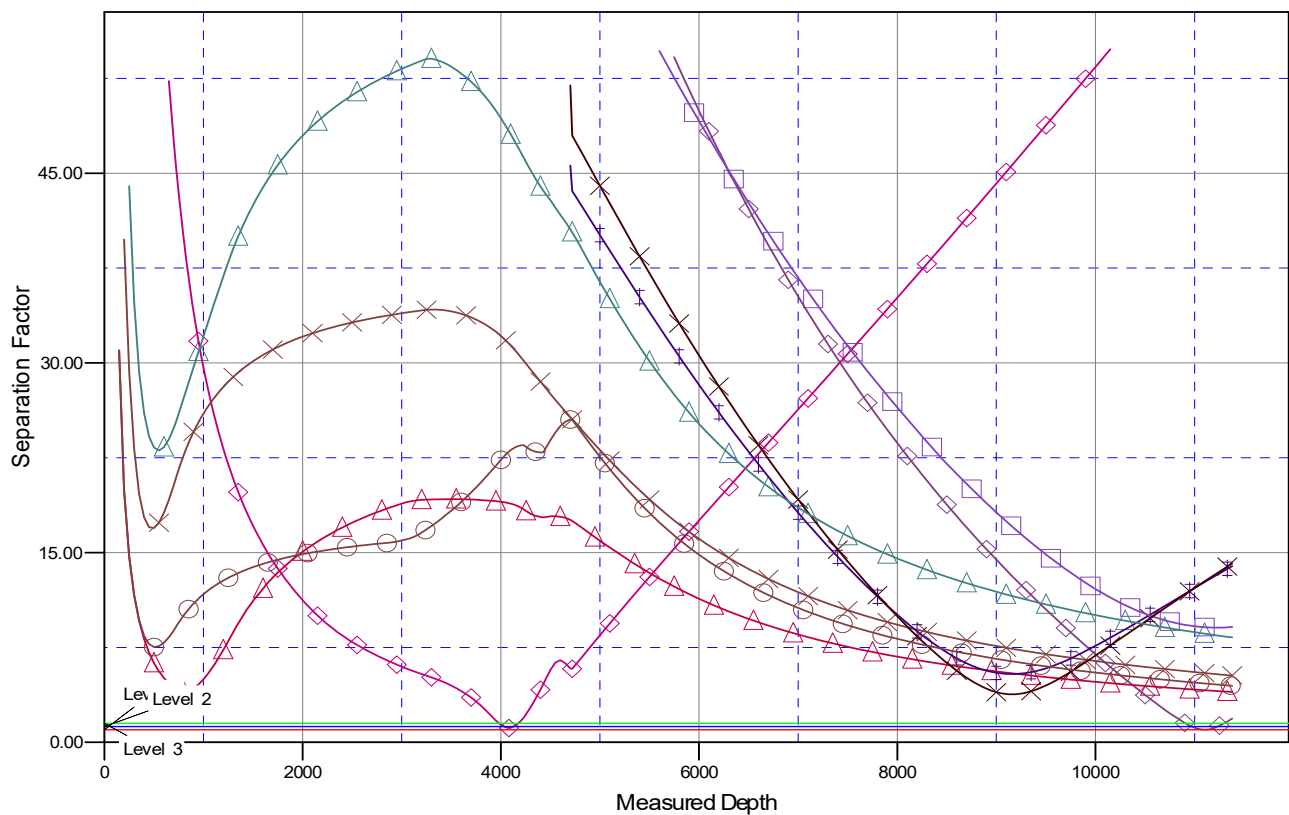
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Central Meridian is -104.333333

Grid Convergence at Surface is: 0.101°

Separation Factor Plot



LEGEND

OFFSET: PUMA #1, Wellbore #1, Wellbore #1 V0	20H, Wellbore #1, PERMIT V0	Offset: AID STATE #9, Wellbore #1, Wellbore #
Offset: AID STATE #8, Wellbore #1, Wellbore #1 V0	Offset: AID STATE #10, Wellbore #1, Wellbore #1 V0	21H, Wellbore #1, PERMIT V0
61H, Wellbore #1, PERMIT V0	Offset: AID STATE #6, Wellbore #1, Wellbore #1 V0	10H, Wellbore #1, PERMIT V0

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



SPUR ENERGY PARTNERS, LLC

EDDY COUNTY, NM (NAD 83 - NME)

AID NORTH 14-13 STATE COM

60H

Wellbore #1

Plan: PERMIT

Standard Planning Report

01 August, 2023



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 60H
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:	60H	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	60H					
Well Position	+N/-S	20.00 usft	Northing:	669,090.00 usft	Latitude:	32.8392142
	+E/-W	-0.20 usft	Easting:	598,767.70 usft	Longitude:	-104.1463444
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	88.75	

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	
719.90	8.40	4.98	718.40	30.60	2.67	2.00	2.00	0.00	4.982	
3,239.93	8.40	4.98	3,211.41	397.26	34.63	0.00	0.00	0.00	0.000	
4,230.69	60.00	88.75	4,023.34	486.85	513.58	6.00	5.21	8.46	88.676	
4,430.69	60.00	88.75	4,123.34	490.61	686.74	0.00	0.00	0.00	0.000	
4,719.94	88.92	88.75	4,200.00	496.60	962.40	10.00	10.00	0.00	0.000	AID NORTH 60H F
11,330.25	88.92	88.75	4,324.06	640.21	7,569.98	0.00	0.00	0.00	0.000	AID NORTH 60H L
11,380.28	88.92	88.75	4,325.00	641.30	7,620.00	0.00	0.00	0.00	0.000	AID NORTH 60H B



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 60H
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:	60H	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 60H SHL: 1288' 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	4.98	399.98	1.74	0.15	0.19	2.00	2.00	0.00
500.00	4.00	4.98	499.84	6.95	0.61	0.76	2.00	2.00	0.00
600.00	6.00	4.98	599.45	15.63	1.36	1.70	2.00	2.00	0.00
700.00	8.00	4.98	698.70	27.77	2.42	3.03	2.00	2.00	0.00
719.90	8.40	4.98	718.40	30.60	2.67	3.33	2.00	2.00	0.00
800.00	8.40	4.98	797.64	42.26	3.68	4.60	0.00	0.00	0.00
900.00	8.40	4.98	896.57	56.81	4.95	6.19	0.00	0.00	0.00
1,000.00	8.40	4.98	995.49	71.36	6.22	7.78	0.00	0.00	0.00
1,100.00	8.40	4.98	1,094.42	85.91	7.49	9.36	0.00	0.00	0.00
1,200.00	8.40	4.98	1,193.35	100.46	8.76	10.95	0.00	0.00	0.00
1,300.00	8.40	4.98	1,292.28	115.01	10.02	12.53	0.00	0.00	0.00
1,400.00	8.40	4.98	1,391.21	129.56	11.29	14.12	0.00	0.00	0.00
1,500.00	8.40	4.98	1,490.13	144.11	12.56	15.70	0.00	0.00	0.00
1,600.00	8.40	4.98	1,589.06	158.65	13.83	17.29	0.00	0.00	0.00
1,700.00	8.40	4.98	1,687.99	173.20	15.10	18.87	0.00	0.00	0.00
1,800.00	8.40	4.98	1,786.92	187.75	16.37	20.46	0.00	0.00	0.00
1,900.00	8.40	4.98	1,885.84	202.30	17.63	22.04	0.00	0.00	0.00
2,000.00	8.40	4.98	1,984.77	216.85	18.90	23.63	0.00	0.00	0.00
2,100.00	8.40	4.98	2,083.70	231.40	20.17	25.21	0.00	0.00	0.00
2,200.00	8.40	4.98	2,182.63	245.95	21.44	26.80	0.00	0.00	0.00
2,300.00	8.40	4.98	2,281.56	260.50	22.71	28.38	0.00	0.00	0.00
2,400.00	8.40	4.98	2,380.48	275.05	23.98	29.97	0.00	0.00	0.00
2,500.00	8.40	4.98	2,479.41	289.60	25.24	31.56	0.00	0.00	0.00
2,600.00	8.40	4.98	2,578.34	304.15	26.51	33.14	0.00	0.00	0.00
2,700.00	8.40	4.98	2,677.27	318.70	27.78	34.73	0.00	0.00	0.00
2,800.00	8.40	4.98	2,776.19	333.25	29.05	36.31	0.00	0.00	0.00
2,900.00	8.40	4.98	2,875.12	347.80	30.32	37.90	0.00	0.00	0.00
3,000.00	8.40	4.98	2,974.05	362.35	31.59	39.48	0.00	0.00	0.00
3,100.00	8.40	4.98	3,072.98	376.90	32.85	41.07	0.00	0.00	0.00
3,200.00	8.40	4.98	3,171.90	391.45	34.12	42.65	0.00	0.00	0.00
3,239.93	8.40	4.98	3,211.41	397.26	34.63	43.29	0.00	0.00	0.00
AID NORTH 60H KOP: 3239.93' MD									
3,250.00	8.43	9.10	3,221.37	398.72	34.81	43.50	6.00	0.35	40.93
3,300.00	9.21	28.10	3,270.79	405.88	37.27	46.12	6.00	1.55	38.00
3,350.00	10.79	42.88	3,320.03	412.84	42.34	51.34	6.00	3.16	29.55
3,400.00	12.88	53.43	3,368.97	419.59	50.01	59.15	6.00	4.18	21.11
3,450.00	15.27	60.91	3,417.47	426.11	60.24	69.52	6.00	4.78	14.96
3,500.00	17.84	66.35	3,465.40	432.38	73.01	82.42	6.00	5.15	10.87
3,550.00	20.53	70.43	3,512.62	438.39	88.29	97.83	6.00	5.37	8.16
3,600.00	23.29	73.59	3,559.01	444.12	106.03	115.70	6.00	5.52	6.32
3,650.00	26.10	76.11	3,604.43	449.56	126.19	135.97	6.00	5.62	5.04
3,700.00	28.94	78.16	3,648.77	454.68	148.72	158.60	6.00	5.69	4.11
3,750.00	31.81	79.88	3,691.90	459.48	173.54	183.52	6.00	5.74	3.43
3,800.00	34.71	81.34	3,733.71	463.94	200.59	210.66	6.00	5.78	2.92
3,850.00	37.61	82.60	3,774.07	468.05	229.80	239.95	6.00	5.81	2.52
3,900.00	40.53	83.70	3,812.89	471.80	261.09	271.32	6.00	5.84	2.21
3,950.00	43.46	84.68	3,850.04	475.17	294.36	304.66	6.00	5.86	1.96
4,000.00	46.39	85.56	3,885.44	478.17	329.54	339.89	6.00	5.87	1.76
4,050.00	49.33	86.36	3,918.98	480.77	366.52	376.92	6.00	5.88	1.59



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 60H
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:	60H	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)
4,100.00	52.28	87.09	3,950.58	482.98	405.21	415.65	6.00	5.89	1.46
4,150.00	55.23	87.76	3,980.13	484.79	445.49	455.96	6.00	5.90	1.35
4,200.00	58.19	88.39	4,007.58	486.19	487.25	497.74	6.00	5.91	1.25
4,230.69	60.00	88.75	4,023.34	486.85	513.58	524.07	6.00	5.91	1.19
4,300.00	60.00	88.75	4,057.99	488.15	573.59	584.10	0.00	0.00	0.00
4,400.00	60.00	88.75	4,107.99	490.03	660.17	670.70	0.00	0.00	0.00
4,430.69	60.00	88.75	4,123.34	490.61	686.74	697.28	0.00	0.00	0.00
4,450.00	61.93	88.75	4,132.71	490.98	703.62	714.16	10.00	10.00	0.00
4,500.00	66.93	88.75	4,154.28	491.96	748.70	759.25	10.00	10.00	0.00
4,550.00	71.93	88.75	4,171.84	492.97	795.48	806.05	10.00	10.00	0.00
4,600.00	76.93	88.75	4,185.26	494.02	843.62	854.20	10.00	10.00	0.00
4,650.00	81.93	88.75	4,194.43	495.09	892.75	903.33	10.00	10.00	0.00
4,700.00	86.93	88.75	4,199.28	496.17	942.48	953.08	10.00	10.00	0.00
4,719.94	88.92	88.75	4,200.00	496.60	962.40	973.00	10.00	10.00	0.00
AID NORTH 60H FTP: 804' FNL, 1405' FEL									
4,800.00	88.92	88.75	4,201.50	498.34	1,042.43	1,053.05	0.00	0.00	0.00
4,900.00	88.92	88.75	4,203.38	500.51	1,142.39	1,153.04	0.00	0.00	0.00
5,000.00	88.92	88.75	4,205.26	502.68	1,242.35	1,253.02	0.00	0.00	0.00
5,100.00	88.92	88.75	4,207.13	504.86	1,342.31	1,353.00	0.00	0.00	0.00
5,200.00	88.92	88.75	4,209.01	507.03	1,442.27	1,452.98	0.00	0.00	0.00
5,300.00	88.92	88.75	4,210.89	509.20	1,542.22	1,552.97	0.00	0.00	0.00
5,400.00	88.92	88.75	4,212.76	511.37	1,642.18	1,652.95	0.00	0.00	0.00
5,500.00	88.92	88.75	4,214.64	513.55	1,742.14	1,752.93	0.00	0.00	0.00
5,600.00	88.92	88.75	4,216.52	515.72	1,842.10	1,852.91	0.00	0.00	0.00
5,700.00	88.92	88.75	4,218.39	517.89	1,942.06	1,952.90	0.00	0.00	0.00
5,800.00	88.92	88.75	4,220.27	520.07	2,042.02	2,052.88	0.00	0.00	0.00
5,900.00	88.92	88.75	4,222.15	522.24	2,141.98	2,152.86	0.00	0.00	0.00
6,000.00	88.92	88.75	4,224.02	524.41	2,241.94	2,252.84	0.00	0.00	0.00
6,100.00	88.92	88.75	4,225.90	526.58	2,341.90	2,352.83	0.00	0.00	0.00
6,200.00	88.92	88.75	4,227.78	528.76	2,441.85	2,452.81	0.00	0.00	0.00
6,300.00	88.92	88.75	4,229.65	530.93	2,541.81	2,552.79	0.00	0.00	0.00
6,400.00	88.92	88.75	4,231.53	533.10	2,641.77	2,652.77	0.00	0.00	0.00
6,500.00	88.92	88.75	4,233.41	535.27	2,741.73	2,752.75	0.00	0.00	0.00
6,600.00	88.92	88.75	4,235.28	537.45	2,841.69	2,852.74	0.00	0.00	0.00
6,700.00	88.92	88.75	4,237.16	539.62	2,941.65	2,952.72	0.00	0.00	0.00
6,800.00	88.92	88.75	4,239.04	541.79	3,041.61	3,052.70	0.00	0.00	0.00
6,900.00	88.92	88.75	4,240.92	543.96	3,141.57	3,152.68	0.00	0.00	0.00
7,000.00	88.92	88.75	4,242.79	546.14	3,241.52	3,252.67	0.00	0.00	0.00
7,100.00	88.92	88.75	4,244.67	548.31	3,341.48	3,352.65	0.00	0.00	0.00
7,200.00	88.92	88.75	4,246.55	550.48	3,441.44	3,452.63	0.00	0.00	0.00
7,300.00	88.92	88.75	4,248.42	552.65	3,541.40	3,552.61	0.00	0.00	0.00
7,400.00	88.92	88.75	4,250.30	554.83	3,641.36	3,652.60	0.00	0.00	0.00
7,500.00	88.92	88.75	4,252.18	557.00	3,741.32	3,752.58	0.00	0.00	0.00
7,600.00	88.92	88.75	4,254.05	559.17	3,841.28	3,852.56	0.00	0.00	0.00
7,700.00	88.92	88.75	4,255.93	561.34	3,941.24	3,952.54	0.00	0.00	0.00
7,800.00	88.92	88.75	4,257.81	563.52	4,041.19	4,052.53	0.00	0.00	0.00
7,900.00	88.92	88.75	4,259.68	565.69	4,141.15	4,152.51	0.00	0.00	0.00
8,000.00	88.92	88.75	4,261.56	567.86	4,241.11	4,252.49	0.00	0.00	0.00
8,100.00	88.92	88.75	4,263.44	570.03	4,341.07	4,352.47	0.00	0.00	0.00
8,200.00	88.92	88.75	4,265.31	572.21	4,441.03	4,452.46	0.00	0.00	0.00
8,300.00	88.92	88.75	4,267.19	574.38	4,540.99	4,552.44	0.00	0.00	0.00
8,400.00	88.92	88.75	4,269.07	576.55	4,640.95	4,652.42	0.00	0.00	0.00
8,500.00	88.92	88.75	4,270.94	578.72	4,740.91	4,752.40	0.00	0.00	0.00
8,600.00	88.92	88.75	4,272.82	580.90	4,840.86	4,852.38	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 60H
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:	60H	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	88.92	88.75	4,274.70	583.07	4,940.82	4,952.37	0.00	0.00	0.00
8,800.00	88.92	88.75	4,276.57	585.24	5,040.78	5,052.35	0.00	0.00	0.00
8,900.00	88.92	88.75	4,278.45	587.41	5,140.74	5,152.33	0.00	0.00	0.00
9,000.00	88.92	88.75	4,280.33	589.59	5,240.70	5,252.31	0.00	0.00	0.00
9,100.00	88.92	88.75	4,282.20	591.76	5,340.66	5,352.30	0.00	0.00	0.00
9,200.00	88.92	88.75	4,284.08	593.93	5,440.62	5,452.28	0.00	0.00	0.00
9,300.00	88.92	88.75	4,285.96	596.10	5,540.58	5,552.26	0.00	0.00	0.00
9,400.00	88.92	88.75	4,287.83	598.28	5,640.54	5,652.24	0.00	0.00	0.00
9,500.00	88.92	88.75	4,289.71	600.45	5,740.49	5,752.23	0.00	0.00	0.00
9,600.00	88.92	88.75	4,291.59	602.62	5,840.45	5,852.21	0.00	0.00	0.00
9,700.00	88.92	88.75	4,293.46	604.79	5,940.41	5,952.19	0.00	0.00	0.00
9,800.00	88.92	88.75	4,295.34	606.97	6,040.37	6,052.17	0.00	0.00	0.00
9,900.00	88.92	88.75	4,297.22	609.14	6,140.33	6,152.16	0.00	0.00	0.00
10,000.00	88.92	88.75	4,299.10	611.31	6,240.29	6,252.14	0.00	0.00	0.00
10,100.00	88.92	88.75	4,300.97	613.49	6,340.25	6,352.12	0.00	0.00	0.00
10,200.00	88.92	88.75	4,302.85	615.66	6,440.21	6,452.10	0.00	0.00	0.00
10,300.00	88.92	88.75	4,304.73	617.83	6,540.16	6,552.09	0.00	0.00	0.00
10,400.00	88.92	88.75	4,306.60	620.00	6,640.12	6,652.07	0.00	0.00	0.00
10,500.00	88.92	88.75	4,308.48	622.18	6,740.08	6,752.05	0.00	0.00	0.00
10,600.00	88.92	88.75	4,310.36	624.35	6,840.04	6,852.03	0.00	0.00	0.00
10,700.00	88.92	88.75	4,312.23	626.52	6,940.00	6,952.02	0.00	0.00	0.00
10,800.00	88.92	88.75	4,314.11	628.69	7,039.96	7,052.00	0.00	0.00	0.00
10,900.00	88.92	88.75	4,315.99	630.87	7,139.92	7,151.98	0.00	0.00	0.00
11,000.00	88.92	88.75	4,317.86	633.04	7,239.88	7,251.96	0.00	0.00	0.00
11,100.00	88.92	88.75	4,319.74	635.21	7,339.83	7,351.94	0.00	0.00	0.00
11,200.00	88.92	88.75	4,321.62	637.38	7,439.79	7,451.93	0.00	0.00	0.00
11,300.00	88.92	88.75	4,323.49	639.56	7,539.75	7,551.91	0.00	0.00	0.00
11,330.25	88.92	88.75	4,324.06	640.21	7,569.98	7,582.15	0.00	0.00	0.00
AID NORTH 60H LTP: 100' FEL									
11,380.28	88.92	88.75	4,325.00	641.30	7,620.00	7,632.18	0.00	0.00	0.00
AID NORTH 60H BHL: 810' FNL, 50' FEL									



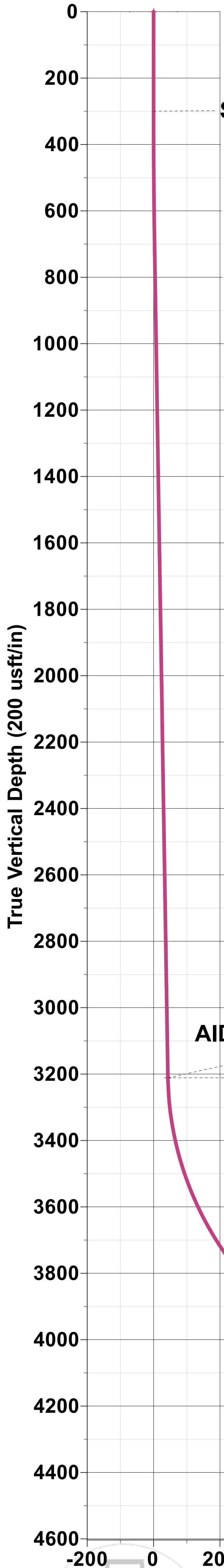
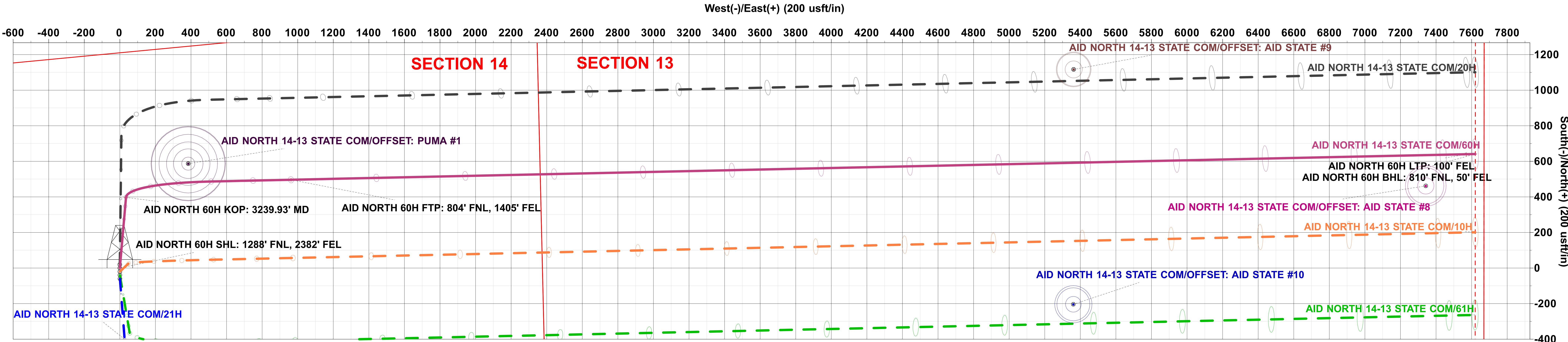
Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 60H
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:	60H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
AID NORTH 60H SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	669,090.00	598,767.70	32.8392142	-104.1463444
AID NORTH 60H KOF - plan hits target center - Point	0.00	0.00	3,211.41	397.26	34.63	669,487.27	598,802.33	32.8403060	-104.1462294
AID NORTH 60H FTP - plan hits target center - Point	0.00	0.00	4,200.00	496.60	962.40	669,586.60	599,730.10	32.8405745	-104.1432080
AID NORTH 60H LTP - plan misses target center by 0.71usft at 11330.25usft MD (4324.06 TVD, 640.21 N, 7569.98 E) - Point	0.00	0.00	4,324.06	639.50	7,570.00	669,729.50	606,337.70	32.8409327	-104.1216930
AID NORTH 60H BHL - plan hits target center - Point	0.00	0.00	4,325.00	641.30	7,620.00	669,731.30	606,387.70	32.8409374	-104.1215302



Project: EDDY COUNTY, NM (NAD 83 - NME)
Site: AID NORTH 14-13 STATE COM
Well: 60H
Wellbore: Wellbore #1
Design: PERMIT



Start Build 2.00

WELL DETAILS: 60H

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	669090.00	598767.70	32.8392142	-104.1463445

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	719.90	8.40	4.98	718.40	30.60	2.67	2.00	3.33	
4	3239.93	8.40	4.98	3211.41	397.26	34.63	0.00	43.29	
5	4230.69	60.00	88.75	4023.34	486.84	513.58	6.00	524.07	
6	4430.69	60.00	88.75	4123.34	490.61	686.74	0.00	697.28	
7	4719.94	88.92	88.75	4200.00	496.60	962.40	10.00	973.00	
8	11330.25	88.92	88.75	4324.06	640.21	7569.98	0.00	7582.15	
9	11380.28	88.92	88.75	4325.00	641.30	7620.00	0.00	7632.18	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
AID NORTH 60H SHL: 1288' FNL, 2382' FEL	0.00	0.00	0.00	669090.00	598767.70	32.8392142	-104.1463445
AID NORTH 60H KOP: 3239.93' MD	3211.41	397.26	34.63	669487.26	598802.33	32.8403060	-104.1462294
AID NORTH 60H FTP: 804' FNL, 1405' FEL	4200.00	496.60	962.40	669586.60	599730.10	32.8405745	-104.1432080
AID NORTH 60H LTP: 100' FEL	4324.06	639.50	7570.00	669729.50	606337.70	32.8409327	-104.1216930
AID NORTH 60H BHL: 810' FNL, 50' FEL	4325.00	641.30	7620.00	669731.30	606387.70	32.8409374	-104.1215302

AID NORTH 60H KOP: 3239.93' MD

Start DLS 6.00 TFO 88.676

Start 200.00 hold at 4230.69 MD

Start Build 10.00

AID NORTH 60H FTP: 804' FNL, 1405' FEL

TD at 11380.28

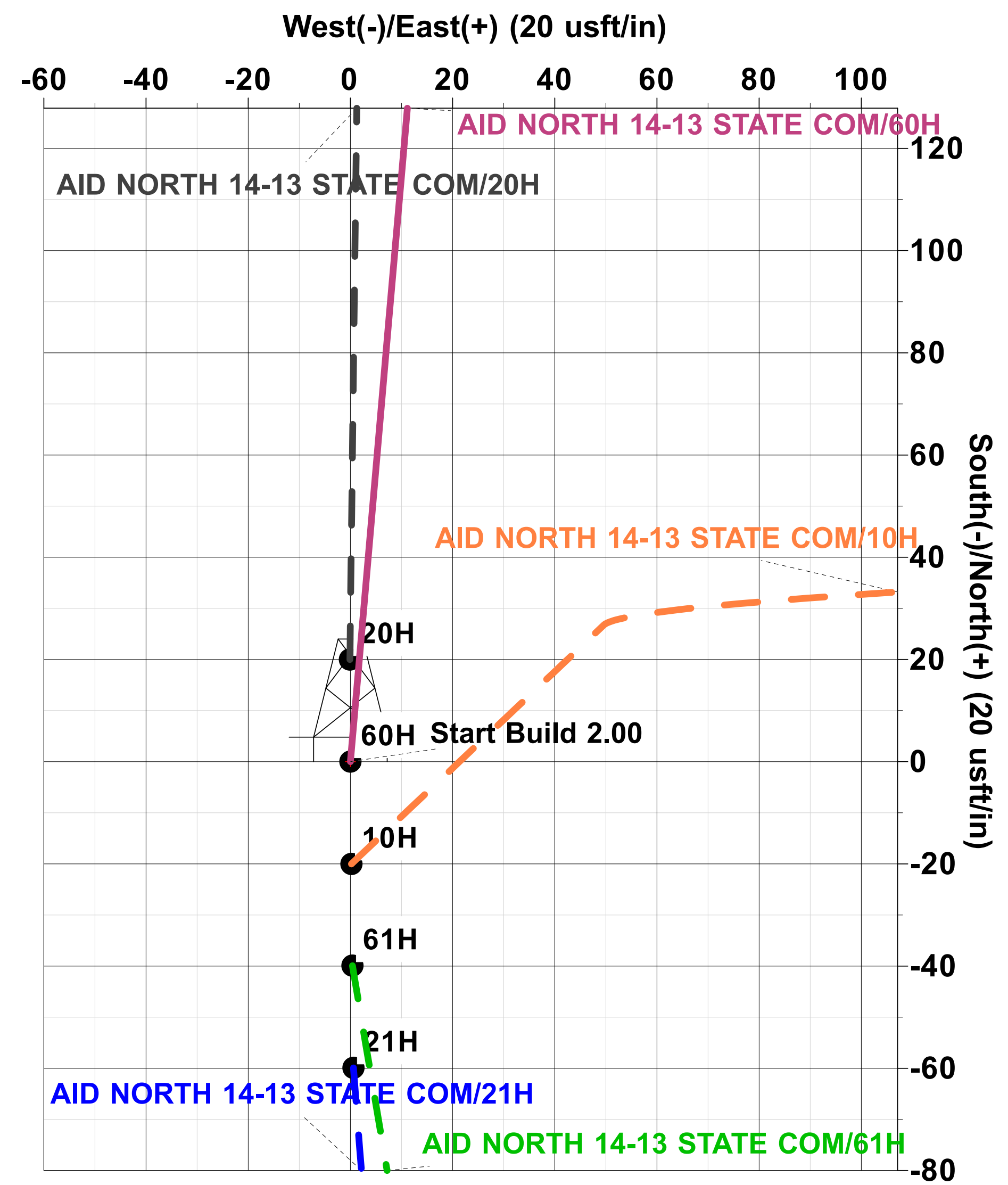
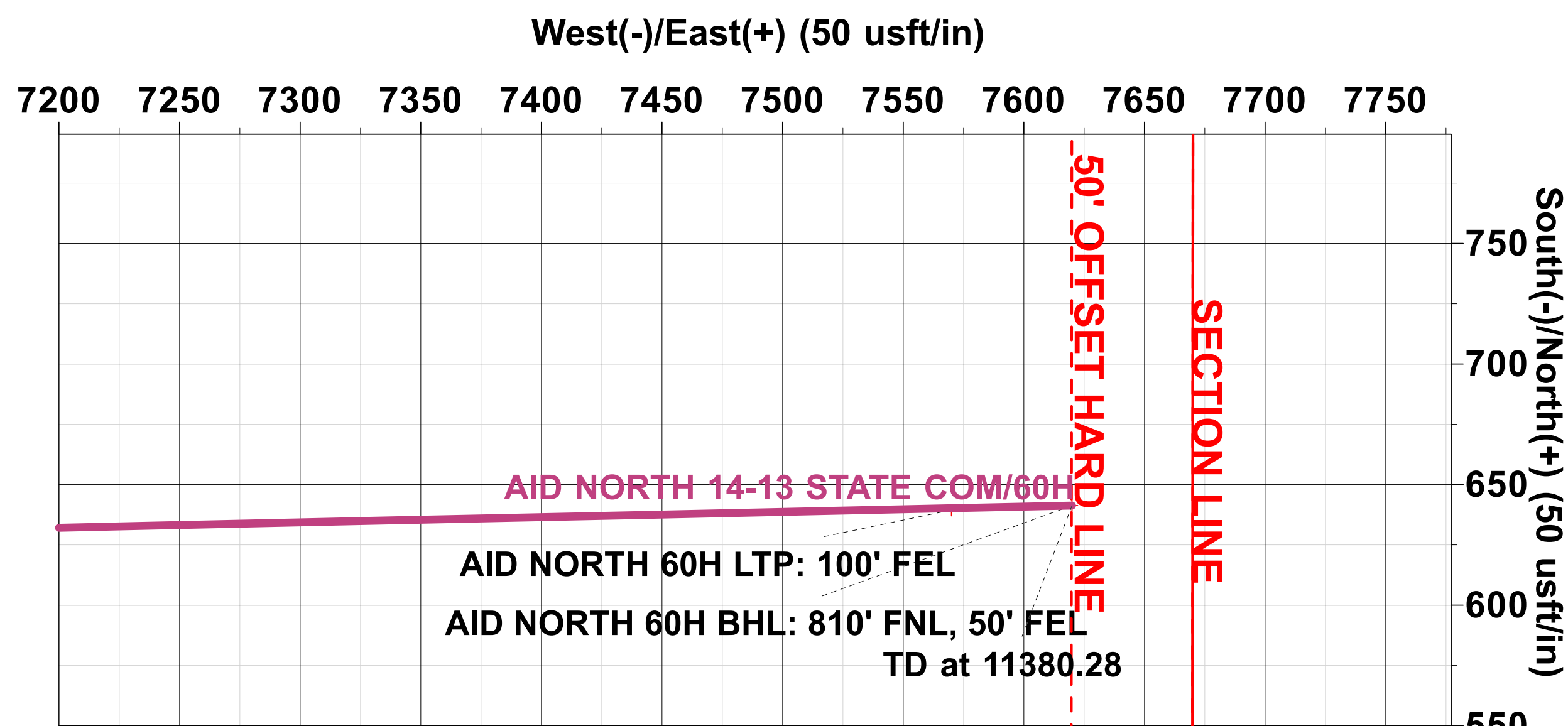
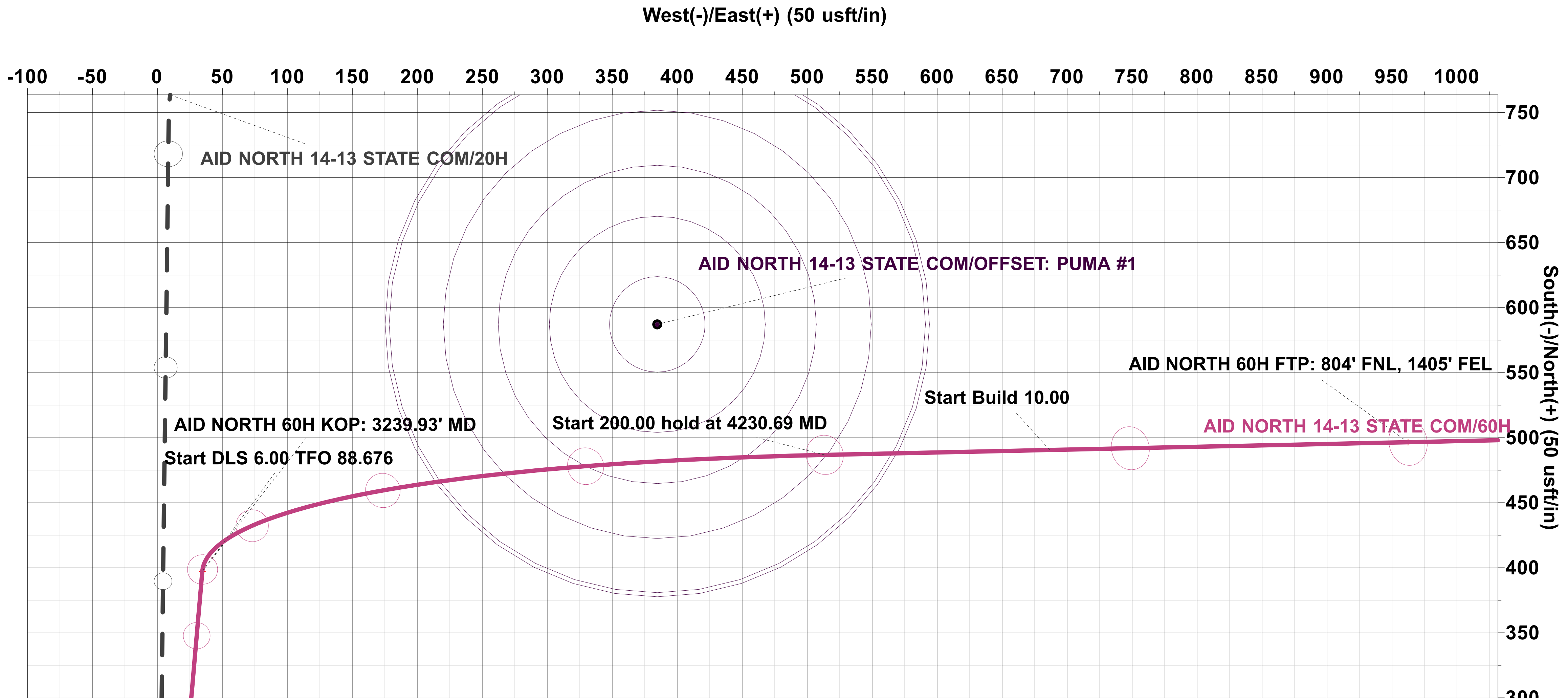
AID NORTH 60H LTP: 100' FEL

AID NORTH 60H BHL: 810' FNL, 50' FEL

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

AID NORTH 60H FTP: 804' FNL, 1405' FEL
AID NORTH 60H LTP: 100' FEL
AID NORTH 60H BHL: 810' FNL, 50' FEL



Plan: PERMIT (60H/Wellbore #1)

Created By: PROTOTYPE WELL PLANNING / Date: 16:52, August 01 2023

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Spur Energy Partners LLC – Aid North 14-13 State Com 60H

1. Geologic Formations

TVD of Target	4,325'
MD at TD	11,380'

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
Blinberry	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 (lbs)	Grade	Conn.	SF	SF Burst	Body SF	Joint SF
		From (ft)	To (ft)					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	4500	7	32	L-80	BK-HT	1.125	1.2	1.4	1.4
Yeso	8.75	4500	11380	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 60H

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing String	Top (ft)	Bottom (ft)	% Excess
Surface (Lead)	0	950	100%
Surface (Tail)	950	1275	100%
Production (Lead)	0	3500	100%
Production (Tail)	3500	11380	25%

Casing String	# Sks	Wt. (lb/gal)	Yld (ft3/sack)	H2O (gal/sk)	500# Comp. Strength (hours)	Slurry Description
Surface (Lead)	259	12	2.4	13.48	8:12	Clas C Premium Plus Cement
Surface (Tail)	119	13.2	1.87	9.92	6:59	Clas C Premium Plus Cement
Production (Lead)	365	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 60H

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	2002 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	115°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.

Spur Energy Partners LLC – Aid North 14-13 State Com 60H

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	11380	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 60H

7. Logging and Testing Procedures

Logging, Coring and Testing.		
Yes	Will run GR from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.	
No	Logs are planned based on well control or offset log information.	
No	Drill stem test? If yes, explain	
No	Coring? If yes, explain	
Additional logs planned		Interval
No	Resistivity	
No	Density	
No	CBL	
Yes	Mud log	SCP - TD
No	PEX	

8. Drilling Conditions

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

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

Total estimated cuttings volume: 1032.3 bbls.

Spur Energy Partners LLC – Aid North 14-13 State Com 60H**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

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

10. Company Personnel

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

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:	<i>Sarah Chapman</i>
Printed Name:	SARAH CHAPMAN
Title:	REGULATORY DIRECTOR
E-mail Address:	SCHAPMAN@SPUREENERGY.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 igniter 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



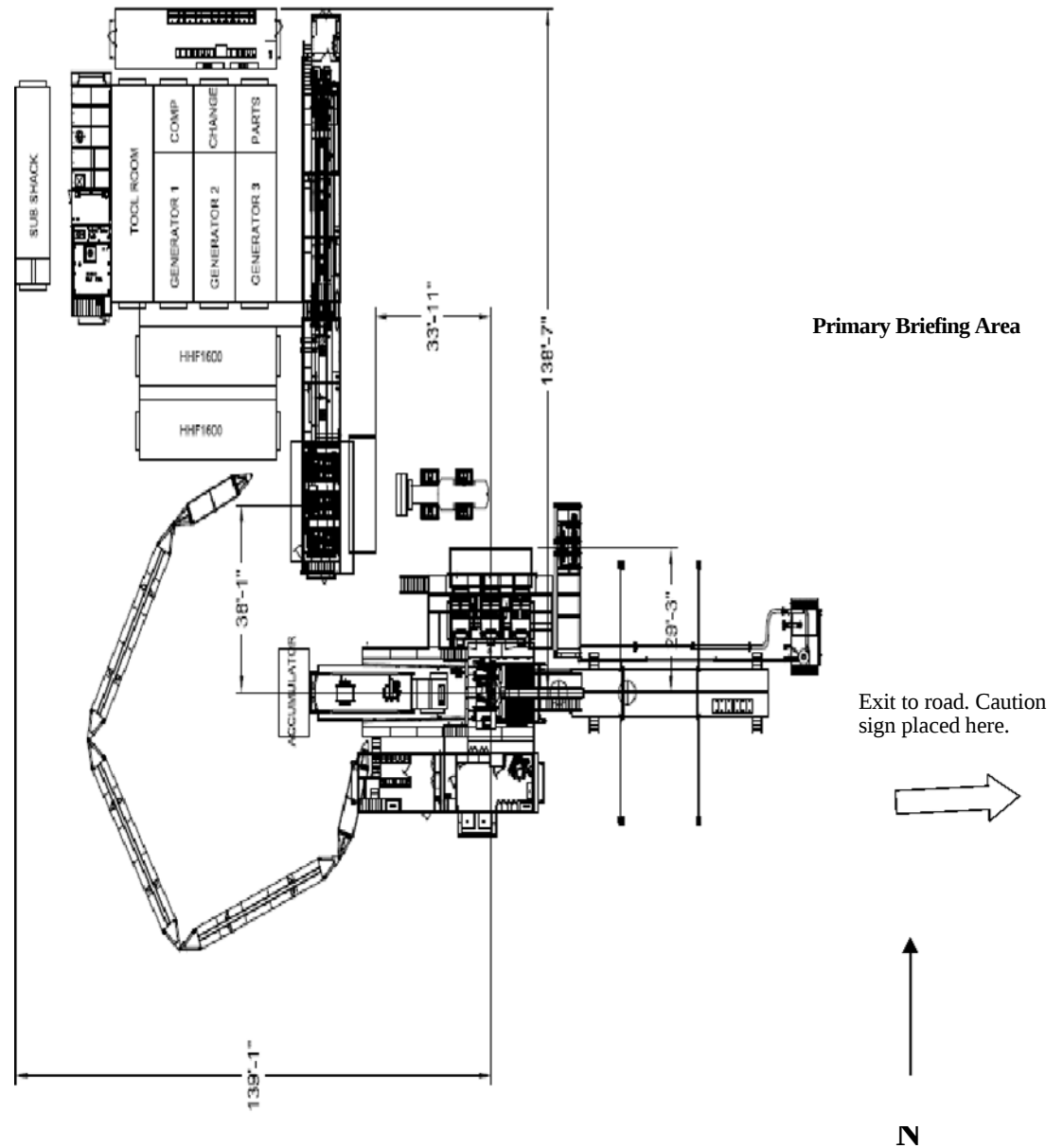
that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing equipment.

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



WIND: Prevailing winds are from the Southwest

Secondary Egress

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 H₂S 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 (H₂S).

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. H₂S Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing 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 H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.
5. The procedures for operating process equipment.

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

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

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

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

E. Protective equipment controls:

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

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

F. Emergency Procedures

1. Spill or Release of H₂S gas

If a spill or leak releases H₂S 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 H₂S 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 H₂S 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 Sherri's Department	Eunice	575-384-2020
Lea County Sherri's Department	Hobbs	575-393-2515
Lea County Sherri'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	CHASER 8 STATE 2 TANK BATTERY
ARABIAN 6 FEE TANK BATTERY	CHEYENNE FEDERAL TNK BTY
ARCO 26 A STATE OIL BATTERY	CLYDESDALE 1 FEE #1H BAT
ARCO B FEDERAL COM NO. 001	CLYDESDALE 1 FEE 6H - BATTERY
ARKANSAS STATE 23 TANK BATTERY	COAL TRAIN FEDERAL COM #1
AVALON FEDERAL #001	COFFIN STATE #1
B&B/ROSS RANCH OIL TANK BATTERY	COLLIER 22 STATE COM #43H
BC FEDERAL 10 (9-13) TNK BTY	COLLIER STATE OIL BATTERY
BC FEDERAL 1-8 &14 TNK BTY	CONOCO 8 STATE 4 TB
BC FEDERAL 42 TNK BTY	CONTINENTAL A STATE TNK BTY
BEE FED OIL BATTERY	CONTINENTAL B YESO TANK BTY
BEECH 25 FEDERAL #9H BATTERY	CONTINENTAL STATE 15A TNK BTY
BEECH FEDERAL 1	CRYPT 30 STATE #1H
BEECH FEDERAL 2 BATTERY	DAGGER DRAW FED/FOSTER FED TANK BATTERY
BERRY A FEDERAL #005 SWB	DARNER 9 STATE 1 TANK BATTERY
BERRY A FEDERAL PADD BATTERY	DARNER 9 STATE 2
BIG BOY STATE TB	DARTER 9 STATE 8 TANK BATTERY
BLUETAIL 8 FEDERAL 2 TANK BATTERY	DARNER 9 STATE CTB
BONE YARD 11 FEE TANK BATTERY	DEXTER FEDERAL PAD TNK BTY
BOOT HILL 25 1H SWB	DODD 10A OIL BATTERY
BOSE IKARD 4 ST COM 18H BATTERY	DODD 10B TK BTTY
BRANTLEY FEDERAL #001	DODD FED #14C TK BATT
BR-549 STATE BATTERY	DODD FED 11A BATTERY
BRADLEY 8 FEE #3H-BATTERY	DODD FED UNIT 980H BATTERY
BRADLEY 8 FEE BATTERY	DODD FEDERAL 14A-TB
BRAGG 10 FEE 1 BATTERY	DODD FEDERAL UNIT 15A BTTY
BRIGHAM H 2	DODD FEDERAL UNIT NORTH BTTY
BRIGHAM H FED (NORTH) BATTERY	DODD FEDERAL UNIT SOUTH BTTY
BURCH KEELY 13C TK BTY	DOGWOOD FEDERAL TNK BTY
BURCH KEELY 18A TK BATT	DORAMI 33 FEDERAL COM 2H.4H.9H TANK BATTERY
BURCH KEELY 19A OIL BATT	EBONY STATE TB
BURCH KEELY 23A TK BATT	EDWARD STATE TNK BTY
BURCH KEELY EAST 18B TANK BAT	ELECTRA FEDERAL 33 (NORTH) BATTERY
BURCH KEELY SEC 13A NORTH BTTY	ELECTRA FEDERAL 5 (SWEET) TNK BTY
BURCH KEELY SEC 13B SOUTH BTTY	ELECTRA FEDERAL SOUR TNK BTY
BURCH KEELY UNIT CTB BTTY	EMPIRE SOUTH DEEP UNIT 21
BURCH KEELY UNIT E BATTERY	FALABELLA 31 FEE #1H TK BATT
BURKETT 16 STATE	FALABELLA 31 FEE 8H TK BTY
CADDO FEDERAL BATTERY	FAT TIRE 12 COM FEDERAL CTB
CADILLAC ST 4 BATTERY	FEDERAL BA COM NO. 001
CALIFORNIA 29 FEE 1	FEDERAL BB NO. 001
CARMEN 3 FEDERAL BATTERY	FLAT HEAD FED COM 6H TANK BATTERY
CARRINGTON 12 ST 3,4,7 BATTERY	FLAT HEAD FED COM 27H TANK BATTERY

ATTACHMENT 1: SPUR FACILITIES WITH ROE REVIEW

FIR FEDERAL TNK BTY	IVAR THE BONELESS FED 11H - BATTERY
FIRECRACKER STATE TB	JC FEDERAL 13 TNK BTY
FLEMMING STATE OIL BATTERY	JC FEDERAL 2 (SOUR) TNK BTY
FOLK FEDERAL B TNK BTY	JC FEDERAL 27 TNK BTY
FOLK FEDERAL TNK BTY	JENKINS B FEDERAL TNK BTY
FOLK STATE TANK BATTERY	JG STATE 16 1 TANK BATTERY
FORAN STATE OIL BATTERY	JG STATE 16 7 TANK BATTERY
GC FEDERAL 11 TNK BTY	JON BOB 1
GC FEDERAL 27 TNK BTY	JUNIPER STATE TNK BTY
GC FEDERAL TNK BTY	KIOWA OIL BATTERY
GILLESPIE STATE OIL BATTERY	KOOL AID STATE
GISSLER FEDERAL 13H TANK BATT	LAKEWOOD NORTH TANK BATTERY
GJ WEST COOP SOUTH TB	LAKEWOOD SOUTH TANK BATTERY
GJ WEST COOP UNIT 092 BTY	LARA MICHELLE STATE OIL BTTY
GJ WEST COOP UNIT 191 BTY	LEAKER CC STATE TB
GJ WEST COOP UNIT 210 BTY	LEE 3 FEE 6H - TK BATT
GJ WEST COOP UNIT CENTRAL	LIVE OAK TANK BATTERY
GJ WEST COOP UNIT N TNK BTY	MALCO 23 FEDERAL COM #13H
GOLD STAR TNK BTY	MAPLE STATE
GOODMAN 22 TANK BATTERY	MARACAS 22 STATE TANK BATTERY
GRAVE DIGGER FEDERAL COM TANK BATTERY	MARY FEDERAL OIL BATTERY
GRAVE DIGGER ST COM #3H TANK BATTERY	MAYARO 22 STATE TANK BATTERY
GRAVE DIGGER STATE COM #8H SWB	MC FEDERAL 14 TANK BATTERY
HALBERD 27 ST 3H BATTERY	MC FEDERAL 6 DEVONIAN
HANOVER STATE #3 (YESO)	MC FEDERAL PADDOCK TNK BTY
HARPER STATE TNK BTY	MC SOUTHEAST BATTERY
HARVARD FEDERAL TNK BTY	MC STATE OIL BATTERY
HATFIELD B TB	MCCOY STATE TB
HEARSE 36 ST COM TANK BATTERY	MCINTYRE A EAST TANK BATTERY
HOBGOBLIN 7 FED COM 4H TK BAT	MCINTYRE B 10
HOLDER CB 11 TNK BTY	MCINTYRE B 4
HOLDER CB FEDERAL 6&7 TNK BTY	MCINTYRE B TNK BTY
HOLIDAY	MCINTYRE DK 15 TNK BTY
HOUMA STATE TNK BTY	MCINTYRE DK FEDERAL 28H SWB
HT 18 FED 01.05.04 TANK BATTERY	MEADOWHAWK 5 FEDERAL 3
HT 18 FEDERAL 8	MELROSE FEDERAL TNK BTY
HUBER 10,11,12 FEDERAL OIL TANK BATTERY	MERAK 7 FEDERAL 8 TANK BATTERY
HUBER 3 FEDERAL OIL TANK BATTERY	MESILLA STATE 3 & 5 TNK BTY
HUBER 5 FEDERAL OIL TANK BATTERY	MESILLA STATE TNK BTY
HYDRUS 10 FED 03.07.08.11 TANK BATTERY	MESQUITE STATE TANK BATTERY
HYDRUS 10 FED 04.05 TANK BATTERY	MIMOSA STATE TNK BTY
HYDRUS 10 FED 06.09.10.12 TANK BATTERY	MIRANDA FEDERAL B TNK BTY
IMPERIAL STATE TNK BTY	MIRANDA FEDERAL TB

ATTACHMENT 1: SPUR FACILITIES WITH ROE REVIEW

MOE FEDERAL OIL BATTERY	ROSE SOUTH TANK BATTERY
MOHAWK FEDERAL TNK BTY	ROSS RANCH 09.13.14 BATTERY
MONCRIEF 3 OIL BATTERY	SAM ADAMS 12 FED 4H UBB TK BATT
MOORE STATE OIL BATTERY	SANDY CROSSING 32 STATE COM 1
MORRIS BOYD 26 FEE COM 1H	SCHLEY FEDERAL TNK BTY
MORRIS BOYD TANK BATTERY	SHAWNEE FEDERAL TNK BTY
MORRIS E & F TANK BATTERY	SHELBY 23 BATTERY
MUSKEGON SOUTH STATE OIL BATTERY	SHERMAN 4 FEE 4H BATTERY
NAVAHO FEDERAL TNK BTY	SHERMAN 4 FEE 6H BATTERY
NELSON 13.23. TNK BATT	SHORTY 2 STATE COM TANK BATTERY
NEWCASTLE 6 FED COM - TANK BATTERY	SINCLAIR PARKE (PADDOCK) TNK BTY
NIRVANA TANK BATTERY	SKELLY 605 BATTERY
NOOSE FED 10 TANK BATTERY	SKELLY 942 BATTERY
NOOSE FED 5 TANK BATTERY	SKELLY 968 BATTERY
OKLAHOMA 32 TANK BATTERY	SKELLY 973 BATTERY
OSAGE BOYD 15 FED 09.12.13.14 TANK BATTERY	SKELLY 989 BATTERY
OSAGE BOYD YESO TANK BATTERY	SKELLY UNIT 907 CTB BATTERY
PAINT 32 FEE OIL BATTERY	SKELLY UNIT 940 BATTERY
PAN CANADIAN A2-B3 TANK BATTERY	SOUTH BOYD FED COM OIL TANK BATTERY
PASSION 1 FED PDK 5H TK BATT	SOUTH EMPIRE STATE COM 1
PATTON 5 FEE 2H OIL BATTERY	SPIKETAIL 5 STATE 2 TANK BATTERY
PATTON 5 FEE 8H OIL BATTERY	SPRUCE FEDERAL TNK BTY
PAWNEE STATE TNK BTY	STATE B GAS COM NO. 001
PEACEMAKER 25 FEDERAL TANK BATTERY	STATE S-19 YESO (SOUR) TNK BTY
PERE MARQUETTE 18 FEDERAL 1 TANK BATTERY	STONEWALL 9 FEE #1H TBAT
PILUM 15 FEE 2H BATTERY	STONEWALL 9 FEE 8H BATTERY
PINTO 36 STATE COM 1H TNK BTY	SUBMARINE 10 FED COM 2H OIL BAT
PINTO 36 STATE COM 4H TNK BTY	TAYLOR D TANK BATTEY
PINTO 36 STATE TB	TENNECO STATE TNK BTY
POLARIS B 5-10 TANK BTTY	TEX MACK FED
POSEIDON 3 FEDERAL 4 TANK BATTERY	TEXACO BE TNK BTY
POSEIDON 3 FEDERAL 05.07.17.18 TANK BATTERY	TEXAS 32 FEE TANK BATTERY
PUCKETT 13 FEDERAL COM 35H	TEXMACK 36 STATE COM #1
PUCKETT 13 FEDERAL TB	TH STATE #1
RAGNAR FED COM 25H - BATTERY	THO STATE OIL BATTRY
RANDALL FED 3 BATTERY	THORNTAIL 31 FEDERAL 1
RED LAKE 32 TANK BATTERY	THUNDER ROAD FEDERAL OIL BTTY
REDBUD FEDERAL TNK BTY	TUMAK FED 3 BAT
RINCON STATE TANK BATTERY	VEGA 9 FED TANK BATTERY
RJ UNIT NORTH TANK BATTERY	VT 36 STATE #1H
RJ UNIT SOUTH TANK BATTERY	W D MCINTYRE C 10
RONCO FEDERAL #1	WAUKEE 36 STATE COME CTB
ROSE 02.03.04.05.06 TANK BATTERY	WD MCINTYRE C 8-9 TNK BTY

ATTACHMENT 1: SPUR FACILITIES WITH ROE REVIEW

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

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