

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 350997

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 30-015-54300
4. Property Code 334569	5. Property Name WELCH CD 28 STATE COM	6. Well No. 010H

7. Surface Location

UL - Lot M	Section 27	Township 17S	Range 28E	Lot Idn M	Feet From 746	N/S Line S	Feet From 186	E/W Line W	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot M	Section 28	Township 17S	Range 28E	Lot Idn M	Feet From 1205	N/S Line S	Feet From 50	E/W Line W	County Eddy
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9. Pool Information

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

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3680
16. Multiple N	17. Proposed Depth 9399	18. Formation Paddock	19. Contractor	20. Spud Date 2/15/2024
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	1175	345	0
Prod	8.75	7	32	4100	1518	0
Prod	8.75	5.5	20	9399	1518	0

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5	3000	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: 10/4/2023	Expiration Date: 10/4/2025
Date: 9/29/2023	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 30-015-54300		² Pool Code 96830	³ Pool Name ARTESIA; GLORIETA-YESO (O)
⁴ Property Code 334569	⁵ Property Name WELCH CD 28 STATE COM		⁶ Well Number 10H
⁷ OGRID NO. 328947	⁸ Operator Name SPUR ENERGY PARTNERS LLC.		⁹ Elevation 3680'

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
M	27	17S	28E		746	SOUTH	186	WEST	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
M	28	17S	28E		1205	SOUTH	50	WEST	EDDY

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
320			DEFINING WELL

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: 654982.7 - E: 590935.8 LAT: 32.8004740° N LONG: 104.1719146° W <u>FIRST TAKE POINT (FTP)</u> <u>1205' FSL & 100' FEL - SEC 28</u> N: 655437.1 - E: 590654.5 LAT: 32.8017240° N LONG: 104.1728279° W <u>LAST TAKE POINT (LTP)</u> <u>1205' FSL & 100' FWL - SEC 28</u> N: 655311.2 - E: 585659.3 LAT: 32.8013977° N LONG: 104.1890857° W <u>BOTTOM HOLE (BH)</u> N: 655309.9 - E: 585609.3 LAT: 32.8013944° N LONG: 104.1892483° W	<u>CORNER DATA</u> NAD 83 GRID - NM EAST A: FOUND BRASS CAP "1941" N: 654104.0 - E: 585547.5 B: FOUND BRASS CAP "1941" N: 656702.1 - E: 585573.1 C: FOUND BRASS CAP "1941" N: 659297.8 - E: 585602.6 D: FOUND BRASS CAP "1941" N: 659377.1 - E: 588198.9 E: FOUND BRASS CAP "1941" N: 659457.7 - E: 590794.9 F: FOUND BRASS CAP "1941" N: 659466.8 - E: 593406.4 G: FOUND BRASS CAP "1941" N: 659475.1 - E: 596017.9 H: FOUND BRASS CAP "1941" N: 656886.5 - E: 595997.7 I: FOUND BRASS CAP "1941" N: 654298.0 - E: 595977.3 J: FOUND BRASS CAP "1941" N: 654266.7 - E: 593360.1 K: FOUND BRASS CAP "1941" N: 654235.0 - E: 590741.9 L: FOUND BRASS CAP "1941" N: 654169.8 - E: 588139.7 M: FOUND BRASS CAP "1941" N: 656846.0 - E: 590769.0
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The map shows Section 28 (dashed red) and Section 27 (solid black). A dashed red rectangle outlines the area around the well. Key points are labeled: B.H. (Bottom Hole), LTP (Last Take Point), FTP (First Take Point), and S.L. (Surface Location). Distances are marked: 1205' from the corner to the LTP, 50' from the LTP to the B.H., 186' from the FTP to the S.L., and 746' from the S.L. to the corner. A bearing and distance of S 88°33'22" W 5048.09' are shown between the LTP and FTP.

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Sarah Chapman 03/07/2023
Signature Date

SARAH CHAPMAN

Printed Name

SCHAPMAN@SPUREENERGY.COM

E-mail Address

The diagram shows the well path starting from the surface location (S.L.) and going down to the bottom hole (B.H.). The distance from the S.L. to the B.H. is 1205'. The horizontal distance from the FTP to the S.L. is 186'. The vertical distance from the FTP to the B.H. is 746'. The well path is shown as a solid line, and the surface location is marked with a red dot.

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

12/15/2022

Date of Survey

Signature and Seal of Professional Surveyor:

DALE E. BELL
NEW MEXICO
PROFESSIONAL SURVEYOR
14400
01/11/2023

14400

Certificate Number

LS22121345

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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 350997

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: Spur Energy Partners LLC [328947] 9655 Katy Freeway Houston, TX 77024	API Number: 30-015-54300
	Well: WELCH CD 28 STATE COM #010H

OCD Reviewer	Condition
ward.rikala	Potable waters shall be protected by properly setting and cementing in surface casing prior to penetrating any potential oil and/or gas bearing strata.
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 intermediate1 strings of casing
ward.rikala	If cement does not circulate on any string , a CBL is required for that string 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)
WELCH CD 28 STATE COM
10H**

**Wellbore #1
PERMIT**

Anticollision Report

20 March, 2023



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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:	Unlimited
Results Limited by:	Maximum separation factor of 10.00
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	03/20/23
From (usft)	To (usft)	Survey (Wellbore)
0.00	9,399.14	PERMIT (Wellbore #1)
		Tool Name
		MWD+IFR1+SAG+FDIR
		Description
		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						
HALBERD 27 STATE COM						
50H - Wellbore #1 - Wellbore #1						Out of range
51H - Wellbore #1 - Wellbore #1						Out of range
71H - Wellbore #1 - Wellbore #1	4,248.64	10,063.00	1,434.46	1,282.11	9.415	CC
71H - Wellbore #1 - Wellbore #1	4,250.00	10,063.00	1,434.47	1,282.10	9.414	ES
71H - Wellbore #1 - Wellbore #1	4,350.11	10,063.00	1,442.12	1,288.14	9.365	SF
72H - Wellbore #1 - Wellbore #1						Out of range
90H - Wellbore #1 - Wellbore #1						Out of range
WELCH B 28 FED						
10H - Wellbore #1 - PERMIT						Out of range
70H - Wellbore #1 - PERMIT						Out of range
WELCH CD 28 STATE COM						
20H - Wellbore #1 - PERMIT	7,100.00	7,151.87	810.57	729.00	9.938	CC
20H - Wellbore #1 - PERMIT	9,399.14	9,420.28	814.33	684.12	6.254	ES, SF
21H - Wellbore #1 - PERMIT	397.37	397.97	19.97	17.55	8.256	CC
21H - Wellbore #1 - PERMIT	450.00	450.87	20.08	17.28	7.170	ES
21H - Wellbore #1 - PERMIT	9,399.14	9,507.06	779.57	650.09	6.021	SF
50H - Wellbore #1 - PERMIT						Out of range
51H - Wellbore #1 - PERMIT	350.00	349.65	19.99	17.91	9.628	CC
51H - Wellbore #1 - PERMIT	400.00	399.30	20.21	17.78	8.305	ES
51H - Wellbore #1 - PERMIT	600.00	597.60	24.33	20.48	6.321	SF
70H - Wellbore #1 - PERMIT						Out of range
91H - Wellbore #1 - PERMIT	700.00	694.41	44.22	39.64	9.651	CC, ES
91H - Wellbore #1 - PERMIT	1,250.00	1,239.25	66.24	57.63	7.690	SF
OFFSET: COLLIER STATE 2 - Wellbore #1 - Wellbore #						Out of range
OFFSET: COLLIER STATE 3 - Wellbore #1 - Wellbore #						Out of range
OFFSET: COLLIER STATE 4 - Wellbore #1 - Wellbore #						Out of range
OFFSET: COLLIER-STATE 1 - Wellbore #1 - Wellbore #						Out of range
OFFSET: DELHI 'B' STATE 4 - Wellbore #1 - Wellbore #	9,166.73	3,194.00	1,036.38	927.61	9.528	CC, ES
OFFSET: DELHI 'B' STATE 4 - Wellbore #1 - Wellbore #	9,250.00	3,194.00	1,039.72	930.11	9.485	SF
OFFSET: DELHI B STATE 3 - Wellbore #1 - Wellbore #1						Out of range
OFFSET: DELHI-STATE B 2 - Wellbore #1 - Wellbore #1	8,491.80	3,644.01	874.93	753.86	7.227	CC
OFFSET: DELHI-STATE B 2 - Wellbore #1 - Wellbore #1	8,500.00	3,643.76	874.96	753.82	7.222	ES
OFFSET: DELHI-STATE B 2 - Wellbore #1 - Wellbore #1	8,550.00	3,642.28	876.86	755.20	7.208	SF
OFFSET: ELK STATE 1 - Wellbore #1 - Wellbore #1	2,237.03	2,161.04	348.94	297.02	6.721	CC
OFFSET: ELK STATE 1 - Wellbore #1 - Wellbore #1	2,350.00	2,268.65	350.64	295.78	6.391	ES

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
WELCH CD 28 STATE COM						
OFFSET: ELK STATE 1 - Wellbore #1 - Wellbore #1	2,850.00	2,749.00	395.88	328.47	5.873	SF
OFFSET: GERONIMO '27' STATE COM 2 - Wellbore #1	2,491.33	2,414.18	72.82	16.83	1.301	Level 3, CC
OFFSET: GERONIMO '27' STATE COM 2 - Wellbore #1	2,500.00	2,422.43	72.87	16.68	1.297	Level 3, ES, SF
OFFSET: GERONIMO '28' STATE COM 1 - Wellbore #1	6,041.49	3,729.89	295.88	191.89	2.845	CC, ES
OFFSET: GERONIMO '28' STATE COM 1 - Wellbore #1	6,050.00	3,729.64	296.01	191.94	2.844	SF
OFFSET: GERONIMO 28 STATE SWD 2 - Wellbore #1 -						Out of range
OFFSET: HALBERD 27 STATE 3H - Wellbore #1 - Wellb						Out of range
OFFSET: HALBERD 27 STATE COM 1H - Wellbore #1 -	3,968.76	8,810.00	339.23	185.72	2.210	CC, ES, SF
OFFSET: HANOVER STATE #3 14 - Wellbore #1 - Wellb	4,610.85	3,757.37	874.51	786.62	9.950	CC, ES
OFFSET: HANOVER STATE #3 14 - Wellbore #1 - Wellb	4,650.00	3,756.21	875.38	787.26	9.934	SF
OFFSET: KERSEY WILLIAMS A FEDERAL 10 - Wellbor						Out of range
OFFSET: KERSEY WILLIAMS A FEDERAL 7 - Wellbore						Out of range
OFFSET: MALOOF STATE 1 - Wellbore #1 - Wellbore #1						Out of range
OFFSET: OXY SPARKY FEDERAL 1 - Wellbore #1 - We						Out of range
OFFSET: PAN AMERICAN-TE B 1 - Wellbore #1 - Wellb	1,851.91	1,789.17	339.74	301.20	8.815	CC
OFFSET: PAN AMERICAN-TE B 1 - Wellbore #1 - Wellb	1,950.00	1,882.59	341.05	300.15	8.337	ES
OFFSET: PAN AMERICAN-TE B 1 - Wellbore #1 - Wellb	2,100.00	2,006.00	348.60	304.53	7.909	SF
OFFSET: PHILLIPS N G STATE 17 - Wellbore #1 - Wellt						Out of range
OFFSET: PHILLIPS N G STATE 31 - Wellbore #1 - Wellt						Out of range
OFFSET: PHILLIPS N G STATE 8 - Wellbore #1 - Wellbc						Out of range
OFFSET: PHILLIPS STATE /NG/ 11 - Wellbore #1 - Well						Out of range
OFFSET: PHILLIPS STATE N G 14 - Wellbore #1 - Wellt						Out of range
OFFSET: RED LAKE 28 K STATE 1 - Wellbore #1 - Wel	7,781.96	3,666.14	445.75	329.64	3.839	CC, ES
OFFSET: RED LAKE 28 K STATE 1 - Wellbore #1 - Wel	7,800.00	3,665.61	446.11	329.82	3.836	SF
OFFSET: Red Lake 28 K State 2 - Wellbore #1 - Wellbor						Out of range
OFFSET: RED LAKE 28 K STATE 3 - Wellbore #1 - Wel	7,757.82	3,627.82	1,105.89	993.90	9.874	CC, ES
OFFSET: RED LAKE 28 K STATE 3 - Wellbore #1 - Wel	7,850.00	3,625.08	1,109.72	996.79	9.826	SF
OFFSET: RED LAKE 28 K STATE 4 - Wellbore #1 - Wel	7,121.05	3,684.72	445.83	346.75	4.500	CC, ES
OFFSET: RED LAKE 28 K STATE 4 - Wellbore #1 - Wel	7,150.00	3,683.85	446.77	347.39	4.496	SF
OFFSET: RED LAKE 28 N STATE 1 - Wellbore #1 - Wel	7,480.03	3,674.13	874.50	761.19	7.718	CC, ES
OFFSET: RED LAKE 28 N STATE 1 - Wellbore #1 - Wel	7,550.00	3,672.05	877.29	763.29	7.695	SF
OFFSET: RED LAKE 28 N STATE 2 - Wellbore #1 - Wel	7,762.61	3,657.67	254.41	143.20	2.288	CC, ES, SF
OFFSET: RED LAKE 28 N STATE 3 - Wellbore #1 - Wel	7,830.29	3,660.71	874.54	757.81	7.492	CC, ES
OFFSET: RED LAKE 28 N STATE 3 - Wellbore #1 - Wel	7,900.00	3,658.64	877.31	759.88	7.470	SF
OFFSET: RED LAKE 28 N STATE 4 - Wellbore #1 - Wel	7,145.13	3,646.06	214.31	105.17	1.964	CC, ES
OFFSET: RED LAKE 28 N STATE 4 - Wellbore #1 - Wel	7,150.00	3,645.92	214.37	105.17	1.963	SF
OFFSET: SAN JUAN-STATE 1 - Wellbore #1 - Wellbore	8,665.10	3,638.52	405.28	279.79	3.230	CC, ES, SF
OFFSET: STATE /B/ 2 - Wellbore #1 - Wellbore #1						Out of range
OFFSET: STATE 2 - Wellbore #1 - Wellbore #1						Out of range
OFFSET: STATE-FEDERAL GAS C 1 - Wellbore #1 - We						Out of range
OFFSET: SUNRAY-STATE 1 - Wellbore #1 - Wellbore #1	3,240.41	3,132.50	546.68	484.50	8.792	CC
OFFSET: SUNRAY-STATE 1 - Wellbore #1 - Wellbore #1	3,250.00	3,141.75	546.72	484.35	8.766	ES
OFFSET: SUNRAY-STATE 1 - Wellbore #1 - Wellbore #1	3,350.00	3,236.21	552.72	488.75	8.641	SF
OFFSET: TIGNER STATE 1 - Wellbore #1 - Wellbore #1	8,420.48	3,550.00	1,107.43	988.84	9.338	CC, ES
OFFSET: TIGNER STATE 1 - Wellbore #1 - Wellbore #1	8,550.00	3,550.00	1,114.98	994.98	9.292	SF
OFFSET: TIGNER STATE 2 - Wellbore #1 - Wellbore #1	9,055.82	3,535.00	451.30	323.02	3.518	CC, ES, SF
OFFSET: TIGNER STATE 3 - Wellbore #1 - Wellbore #1	9,079.63	3,583.90	1,105.76	974.76	8.441	CC
OFFSET: TIGNER STATE 3 - Wellbore #1 - Wellbore #1	9,100.00	3,583.30	1,105.95	974.73	8.429	ES
OFFSET: TIGNER STATE 3 - Wellbore #1 - Wellbore #1	9,200.00	3,580.33	1,112.29	980.05	8.411	SF
OFFSET: TIGNER STATE 4 - Wellbore #1 - Wellbore #1	8,440.65	3,635.59	505.70	380.50	4.039	CC
OFFSET: TIGNER STATE 4 - Wellbore #1 - Wellbore #1	8,450.00	3,635.31	505.79	380.49	4.037	ES, SF
OFFSET: WELCH RL STATE 1 - Wellbore #1 - Wellbore						Out of range
OFFSET: WELCH RL STATE 14 - Wellbore #1 - Wellbor						Out of range

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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

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						
WELCH CD 28 STATE COM						
OFFSET: WELCH RL STATE 2 - Wellbore #1 - Wellbore						Out of range
OFFSET: WELCH RL STATE 20 - Wellbore #1 - Wellbor						Out of range
OFFSET: WELCH RL STATE 21 - Wellbore #1 - Wellbor						Out of range
OFFSET: WELCH RL STATE 5 - Wellbore #1 - Wellbore						Out of range
OFFSET: WILLIAMS KERSEY A FEDERAL 6 - Wellbore						Out of range
OFFSET: WILLIAMS KERSEY A FEDERAL 9 - Wellbore						Out of range
SA 10H - Wellbore #1 - PERMIT						Out of range

Offset Design HALBERD 27 STATE COM - 71H - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 148-, 1179-												Offset Well Error:	0.00 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis			Distance						
				Reference	Offset	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,033.09	3,698.49	9,922.74	4,418.34	14.35	151.41	116.73	1,734.46	24.33	1,461.92	1,313.85	148.07	9.873	
4,050.00	3,706.73	9,938.19	4,418.33	14.43	151.81	116.79	1,734.48	8.88	1,458.22	1,309.74	148.48	9.821	
4,100.00	3,728.49	9,985.30	4,418.35	14.64	153.05	116.90	1,734.49	-38.23	1,448.74	1,298.92	149.82	9.670	
4,150.00	3,746.25	10,032.38	4,418.41	14.87	154.29	116.94	1,734.42	-85.31	1,441.38	1,290.13	151.25	9.530	
4,200.00	3,759.87	10,063.00	4,418.45	15.10	155.09	117.08	1,734.38	-115.93	1,436.23	1,284.05	152.18	9.437	
4,248.64	3,769.04	10,063.00	4,418.45	15.33	155.09	117.24	1,734.38	-115.93	1,434.46	1,282.11	152.36	9.415 CC	
4,250.00	3,769.24	10,063.00	4,418.45	15.34	155.09	117.24	1,734.38	-115.93	1,434.47	1,282.10	152.37	9.414 ES	
4,300.00	3,774.30	10,063.00	4,418.45	15.58	155.09	117.06	1,734.38	-115.93	1,436.43	1,283.46	152.97	9.390	
4,350.00	3,775.00	10,063.00	4,418.45	15.82	155.09	116.55	1,734.38	-115.93	1,442.11	1,288.12	153.98	9.365	
4,350.11	3,775.00	10,063.00	4,418.45	15.82	155.09	116.55	1,734.38	-115.93	1,442.12	1,288.14	153.99	9.365 SF	
4,400.00	3,773.52	10,063.00	4,418.45	16.07	155.09	116.55	1,734.38	-115.93	1,450.46	1,296.24	154.22	9.405	
4,450.00	3,772.03	10,063.00	4,418.45	16.34	155.09	116.55	1,734.38	-115.93	1,460.47	1,306.00	154.48	9.454	
4,500.00	3,770.55	10,063.00	4,418.45	16.62	155.09	116.55	1,734.38	-115.93	1,472.12	1,317.38	154.73	9.514	
4,550.00	3,769.06	10,063.00	4,418.45	16.92	155.09	116.55	1,734.38	-115.93	1,485.35	1,330.34	155.02	9.582	
4,600.00	3,767.58	10,063.00	4,418.45	17.22	155.09	116.55	1,734.38	-115.93	1,500.14	1,344.84	155.30	9.660	
4,650.00	3,766.09	10,063.00	4,418.45	17.55	155.09	116.55	1,734.38	-115.93	1,516.43	1,360.83	155.61	9.745	
4,700.00	3,764.61	10,063.00	4,418.45	17.88	155.09	116.55	1,734.38	-115.93	1,534.18	1,378.27	155.92	9.840	
4,750.00	3,763.12	10,063.00	4,418.45	18.23	155.09	116.55	1,734.38	-115.93	1,553.34	1,397.10	156.24	9.942	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 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	
7,100.00	3,693.30	7,151.87	3,793.94	40.42	41.92	97.13	1,189.11	-3,051.35	810.57	729.00	81.56	9.938	CC
7,150.00	3,691.82	7,201.87	3,792.94	40.94	42.45	97.17	1,187.85	-3,101.32	810.63	728.02	82.61	9.813	
7,200.00	3,690.33	7,251.86	3,791.95	41.47	42.99	97.20	1,186.60	-3,151.29	810.69	727.04	83.66	9.691	
7,250.00	3,688.85	7,301.86	3,790.96	42.00	43.52	97.24	1,185.34	-3,201.27	810.76	726.05	84.70	9.572	
7,300.00	3,687.36	7,351.86	3,789.97	42.53	44.05	97.27	1,184.08	-3,251.24	810.82	725.07	85.75	9.455	
7,350.00	3,685.88	7,401.86	3,788.98	43.06	44.59	97.31	1,182.82	-3,301.21	810.89	724.08	86.80	9.342	
7,400.00	3,684.39	7,451.85	3,787.99	43.59	45.12	97.34	1,181.56	-3,351.18	810.95	723.09	87.86	9.230	
7,450.00	3,682.91	7,501.85	3,787.00	44.12	45.66	97.38	1,180.30	-3,401.15	811.01	722.10	88.91	9.122	
7,500.00	3,681.42	7,551.85	3,786.01	44.65	46.20	97.41	1,179.04	-3,451.13	811.08	721.11	89.96	9.016	
7,550.00	3,679.94	7,601.85	3,785.02	45.19	46.73	97.44	1,177.78	-3,501.10	811.14	720.12	91.02	8.912	
7,600.00	3,678.45	7,651.84	3,784.03	45.72	47.27	97.48	1,176.52	-3,551.07	811.21	719.13	92.08	8.810	
7,650.00	3,676.96	7,701.84	3,783.04	46.26	47.81	97.51	1,175.27	-3,601.04	811.28	718.14	93.13	8.711	
7,700.00	3,675.48	7,751.84	3,782.05	46.79	48.35	97.55	1,174.01	-3,651.01	811.34	717.15	94.19	8.614	
7,750.00	3,673.99	7,801.84	3,781.06	47.33	48.89	97.58	1,172.75	-3,700.99	811.41	716.16	95.25	8.519	
7,800.00	3,672.51	7,851.83	3,780.07	47.86	49.43	97.62	1,171.49	-3,750.96	811.47	715.16	96.31	8.425	
7,850.00	3,671.02	7,901.83	3,779.08	48.40	49.97	97.65	1,170.23	-3,800.93	811.54	714.17	97.37	8.334	
7,900.00	3,669.54	7,951.83	3,778.09	48.94	50.51	97.69	1,168.97	-3,850.90	811.61	713.17	98.44	8.245	
7,950.00	3,668.05	8,001.83	3,777.10	49.48	51.05	97.72	1,167.71	-3,900.87	811.68	712.18	99.50	8.158	
8,000.00	3,666.57	8,051.82	3,776.11	50.02	51.60	97.76	1,166.45	-3,950.84	811.74	711.18	100.56	8.072	
8,050.00	3,665.08	8,101.82	3,775.12	50.56	52.14	97.79	1,165.20	-4,000.82	811.81	710.18	101.63	7.988	
8,100.00	3,663.60	8,151.82	3,774.13	51.10	52.68	97.83	1,163.94	-4,050.79	811.88	709.19	102.69	7.906	
8,150.00	3,662.11	8,201.82	3,773.14	51.64	53.22	97.86	1,162.68	-4,100.76	811.95	708.19	103.76	7.825	
8,200.00	3,660.62	8,251.81	3,772.15	52.18	53.77	97.90	1,161.42	-4,150.73	812.02	707.19	104.83	7.746	
8,250.00	3,659.14	8,301.81	3,771.16	52.72	54.31	97.93	1,160.16	-4,200.70	812.09	706.19	105.89	7.669	
8,300.00	3,657.65	8,351.81	3,770.17	53.26	54.86	97.96	1,158.90	-4,250.68	812.16	705.20	106.96	7.593	
8,350.00	3,656.17	8,401.81	3,769.18	53.80	55.40	98.00	1,157.64	-4,300.65	812.23	704.20	108.03	7.519	
8,400.00	3,654.68	8,451.80	3,768.18	54.34	55.95	98.03	1,156.38	-4,350.62	812.30	703.20	109.10	7.446	
8,450.00	3,653.20	8,501.80	3,767.19	54.89	56.49	98.07	1,155.12	-4,400.59	812.37	702.20	110.17	7.374	
8,500.00	3,651.71	8,551.80	3,766.20	55.43	57.04	98.10	1,153.87	-4,450.56	812.44	701.20	111.24	7.304	
8,550.00	3,650.23	8,601.80	3,765.21	55.97	57.58	98.14	1,152.61	-4,500.54	812.51	700.20	112.31	7.235	
8,600.00	3,648.74	8,651.79	3,764.22	56.52	58.13	98.17	1,151.35	-4,550.51	812.58	699.20	113.38	7.167	
8,650.00	3,647.26	8,701.79	3,763.23	57.06	58.68	98.21	1,150.09	-4,600.48	812.65	698.20	114.45	7.100	
8,700.00	3,645.77	8,751.79	3,762.24	57.61	59.22	98.24	1,148.83	-4,650.45	812.72	697.20	115.52	7.035	
8,750.00	3,644.29	8,801.79	3,761.25	58.15	59.77	98.28	1,147.57	-4,700.42	812.80	696.20	116.59	6.971	
8,800.00	3,642.80	8,851.78	3,760.26	58.70	60.32	98.31	1,146.31	-4,750.40	812.87	695.20	117.67	6.908	
8,850.00	3,641.31	8,901.78	3,759.27	59.24	60.87	98.34	1,145.05	-4,800.37	812.94	694.20	118.74	6.846	
8,900.00	3,639.83	8,951.78	3,758.28	59.79	61.41	98.38	1,143.80	-4,850.34	813.01	693.20	119.81	6.786	
8,950.00	3,638.34	9,001.78	3,757.29	60.34	61.96	98.41	1,142.54	-4,900.31	813.09	692.20	120.89	6.726	
9,000.00	3,636.86	9,051.78	3,756.30	60.88	62.51	98.45	1,141.28	-4,950.28	813.16	691.20	121.96	6.667	
9,050.00	3,635.37	9,101.77	3,755.31	61.43	63.06	98.48	1,140.02	-5,000.25	813.23	690.20	123.04	6.610	
9,100.00	3,633.89	9,151.77	3,754.32	61.98	63.61	98.52	1,138.76	-5,050.23	813.31	689.20	124.11	6.553	
9,150.00	3,632.40	9,201.77	3,753.33	62.52	64.16	98.55	1,137.50	-5,100.20	813.38	688.20	125.19	6.497	
9,200.00	3,630.92	9,251.77	3,752.34	63.07	64.71	98.59	1,136.24	-5,150.17	813.46	687.20	126.26	6.443	
9,250.00	3,629.43	9,301.76	3,751.35	63.62	65.26	98.62	1,134.98	-5,200.14	813.53	686.20	127.34	6.389	
9,300.00	3,627.95	9,351.76	3,750.36	64.17	65.81	98.65	1,133.73	-5,250.11	813.61	685.20	128.41	6.336	
9,349.10	3,626.49	9,400.86	3,749.38	64.70	66.35	98.69	1,132.49	-5,299.19	813.68	684.22	129.47	6.285	
9,350.00	3,626.46	9,401.76	3,749.37	64.71	66.36	98.69	1,132.47	-5,300.09	813.68	684.20	129.49	6.284	
9,399.14	3,625.00	9,420.28	3,749.00	65.25	66.56	98.70	1,132.00	-5,318.60	814.33	684.12	130.22	6.254	ES, 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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 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							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		
350.00	350.00	350.32	350.32	1.04	1.04	-148.88	-1.26	-19.59	20.00	17.92	2.08	9.628		
397.37	397.35	397.97	397.95	1.21	1.20	-152.20	-1.70	-18.43	19.97	17.55	2.42	8.256 CC		
400.00	399.98	400.62	400.59	1.22	1.21	-152.45	-1.73	-18.35	19.97	17.53	2.44	8.192		
450.00	449.93	450.87	450.80	1.40	1.39	-158.37	-2.51	-16.29	20.08	17.28	2.80	7.170 ES		
500.00	499.84	501.07	500.90	1.58	1.56	-166.41	-3.61	-13.41	20.60	17.43	3.17	6.506		
550.00	549.68	551.18	550.86	1.76	1.74	-175.92	-5.01	-9.71	21.81	18.27	3.54	6.167		
600.00	599.45	601.19	600.63	1.94	1.92	174.13	-6.72	-5.22	24.00	20.09	3.90	6.147		
650.00	649.13	651.08	650.20	2.12	2.10	164.75	-8.74	0.08	27.33	23.06	4.27	6.400		
700.00	698.70	700.82	699.52	2.30	2.27	156.62	-11.05	6.17	31.87	27.24	4.63	6.881		
750.00	748.15	750.41	748.56	2.48	2.45	149.91	-13.66	13.03	37.56	32.57	4.99	7.525		
800.00	797.47	799.82	797.28	2.66	2.63	144.52	-16.56	20.65	44.35	39.00	5.35	8.291		
850.00	846.63	849.03	845.67	2.84	2.81	140.21	-19.75	29.02	52.16	46.45	5.71	9.138		
7,000.00	3,696.28	7,107.92	3,821.97	39.37	39.55	-99.28	-381.57	-2,913.52	779.57	701.33	78.24	9.964		
7,050.00	3,694.79	7,157.92	3,820.49	39.89	40.08	-99.28	-382.83	-2,963.48	779.57	700.29	79.28	9.833		
7,100.00	3,693.30	7,207.92	3,819.00	40.42	40.60	-99.28	-384.09	-3,013.45	779.57	699.25	80.32	9.706		
7,150.00	3,691.82	7,257.92	3,817.52	40.94	41.13	-99.28	-385.35	-3,063.41	779.57	698.21	81.36	9.582		
7,200.00	3,690.33	7,307.92	3,816.03	41.47	41.65	-99.28	-386.61	-3,113.37	779.57	697.16	82.40	9.460		
7,250.00	3,688.85	7,357.92	3,814.54	42.00	42.18	-99.28	-387.87	-3,163.33	779.57	696.12	83.45	9.342		
7,300.00	3,687.36	7,407.92	3,813.06	42.53	42.71	-99.28	-389.13	-3,213.29	779.57	695.07	84.50	9.226		
7,350.00	3,685.88	7,457.92	3,811.57	43.06	43.24	-99.28	-390.39	-3,263.26	779.57	694.02	85.55	9.113		
7,400.00	3,684.39	7,507.92	3,810.09	43.59	43.77	-99.28	-391.65	-3,313.22	779.57	692.97	86.60	9.002		
7,450.00	3,682.91	7,557.92	3,808.60	44.12	44.30	-99.28	-392.91	-3,363.18	779.57	691.92	87.65	8.894		
7,500.00	3,681.42	7,607.92	3,807.12	44.65	44.83	-99.28	-394.16	-3,413.14	779.57	690.86	88.70	8.788		
7,550.00	3,679.94	7,657.92	3,805.63	45.19	45.36	-99.28	-395.42	-3,463.10	779.57	689.81	89.76	8.685		
7,600.00	3,678.45	7,707.92	3,804.15	45.72	45.90	-99.28	-396.68	-3,513.07	779.57	688.75	90.82	8.584		
7,650.00	3,676.96	7,757.92	3,802.66	46.26	46.43	-99.28	-397.94	-3,563.03	779.57	687.69	91.88	8.485		
7,700.00	3,675.48	7,807.92	3,801.17	46.79	46.96	-99.28	-399.20	-3,612.99	779.57	686.63	92.93	8.388		
7,750.00	3,673.99	7,857.92	3,799.69	47.33	47.50	-99.28	-400.46	-3,662.95	779.57	685.57	94.00	8.294		
7,800.00	3,672.51	7,907.92	3,798.20	47.86	48.03	-99.28	-401.72	-3,712.91	779.57	684.51	95.06	8.201		
7,850.00	3,671.02	7,957.92	3,796.72	48.40	48.57	-99.28	-402.98	-3,762.88	779.57	683.45	96.12	8.110		
7,900.00	3,669.54	8,007.92	3,795.23	48.94	49.11	-99.28	-404.24	-3,812.84	779.57	682.38	97.19	8.021		
7,950.00	3,668.05	8,057.92	3,793.75	49.48	49.64	-99.28	-405.50	-3,862.80	779.57	681.32	98.25	7.934		
8,000.00	3,666.57	8,107.92	3,792.26	50.02	50.18	-99.28	-406.76	-3,912.76	779.57	680.25	99.32	7.849		
8,050.00	3,665.08	8,157.92	3,790.78	50.56	50.72	-99.28	-408.02	-3,962.73	779.57	679.18	100.39	7.766		
8,100.00	3,663.60	8,207.92	3,789.29	51.10	51.26	-99.28	-409.28	-4,012.69	779.57	678.12	101.45	7.684		
8,150.00	3,662.11	8,257.92	3,787.80	51.64	51.80	-99.28	-410.54	-4,062.65	779.57	677.05	102.52	7.604		
8,200.00	3,660.62	8,307.92	3,786.32	52.18	52.34	-99.28	-411.80	-4,112.61	779.57	675.98	103.59	7.525		
8,250.00	3,659.14	8,357.92	3,784.83	52.72	52.88	-99.28	-413.06	-4,162.57	779.57	674.91	104.67	7.448		
8,300.00	3,657.65	8,407.92	3,783.35	53.26	53.42	-99.28	-414.32	-4,212.54	779.57	673.83	105.74	7.373		
8,350.00	3,656.17	8,457.92	3,781.86	53.80	53.96	-99.28	-415.58	-4,262.50	779.57	672.76	106.81	7.299		
8,400.00	3,654.68	8,507.92	3,780.38	54.34	54.50	-99.28	-416.84	-4,312.46	779.57	671.69	107.88	7.226		
8,450.00	3,653.20	8,557.92	3,778.89	54.89	55.05	-99.28	-418.10	-4,362.42	779.57	670.61	108.96	7.155		
8,500.00	3,651.71	8,607.92	3,777.41	55.43	55.59	-99.28	-419.36	-4,412.38	779.57	669.54	110.03	7.085		
8,550.00	3,650.23	8,657.92	3,775.92	55.97	56.13	-99.28	-420.62	-4,462.35	779.57	668.46	111.11	7.016		
8,600.00	3,648.74	8,707.92	3,774.43	56.52	56.67	-99.28	-421.88	-4,512.31	779.57	667.38	112.19	6.949		
8,650.00	3,647.26	8,757.92	3,772.95	57.06	57.22	-99.28	-423.14	-4,562.27	779.57	666.31	113.27	6.883		
8,700.00	3,645.77	8,807.92	3,771.46	57.61	57.76	-99.28	-424.40	-4,612.23	779.57	665.23	114.34	6.818		
8,750.00	3,644.29	8,857.92	3,769.98	58.15	58.31	-99.28	-425.66	-4,662.19	779.57	664.15	115.42	6.754		
8,800.00	3,642.80	8,907.92	3,768.49	58.70	58.85	-99.28	-426.92	-4,712.16	779.57	663.07	116.50	6.691		
8,850.00	3,641.31	8,957.92	3,767.01	59.24	59.40	-99.28	-428.18	-4,762.12	779.57	661.99	117.58	6.630		
8,900.00	3,639.83	9,007.92	3,765.52	59.79	59.94	-99.28	-429.44	-4,812.08	779.57	660.91	118.66	6.570		
8,950.00	3,638.34	9,057.92	3,764.04	60.34	60.49	-99.28	-430.70	-4,862.04	779.57	659.83	119.75	6.510		

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 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
9,000.00	3,636.86	9,107.92	3,762.55	60.88	61.03	-99.28	-431.96	-4,912.00	779.57	658.74	120.83	6.452	
9,050.00	3,635.37	9,157.92	3,761.06	61.43	61.58	-99.28	-433.22	-4,961.97	779.57	657.66	121.91	6.395	
9,100.00	3,633.89	9,207.92	3,759.58	61.98	62.13	-99.28	-434.48	-5,011.93	779.57	656.58	122.99	6.338	
9,150.00	3,632.40	9,257.92	3,758.09	62.52	62.67	-99.28	-435.74	-5,061.89	779.57	655.49	124.08	6.283	
9,200.00	3,630.92	9,307.92	3,756.61	63.07	63.22	-99.28	-437.00	-5,111.85	779.57	654.41	125.16	6.228	
9,250.00	3,629.43	9,357.92	3,755.12	63.62	63.77	-99.28	-438.26	-5,161.81	779.57	653.32	126.25	6.175	
9,300.00	3,627.95	9,407.92	3,753.64	64.17	64.32	-99.28	-439.52	-5,211.78	779.57	652.24	127.33	6.122	
9,349.10	3,626.49	9,457.02	3,752.18	64.70	64.85	-99.28	-440.75	-5,260.84	779.57	651.17	128.40	6.071	
9,350.00	3,626.46	9,457.92	3,752.15	64.71	64.86	-99.28	-440.78	-5,261.74	779.57	651.15	128.42	6.071	
9,399.14	3,625.00	9,507.06	3,750.69	65.25	65.40	-99.28	-442.01	-5,310.84	779.57	650.09	129.49	6.021 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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - 51H - 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	
350.00	350.00	349.65	349.65	1.04	1.03	33.37	0.98	20.33	19.99	17.91	2.08	9.628	CC
400.00	399.98	399.30	399.28	1.22	1.21	35.70	0.92	21.62	20.21	17.78	2.43	8.305	ES
450.00	449.93	448.93	448.86	1.40	1.38	39.46	0.81	23.77	20.65	17.86	2.79	7.398	
500.00	499.84	498.52	498.36	1.58	1.56	44.44	0.67	26.77	21.40	18.26	3.14	6.807	
550.00	549.68	548.08	547.77	1.76	1.74	50.27	0.48	30.62	22.59	19.10	3.50	6.458	
600.00	599.45	597.60	597.06	1.94	1.91	56.53	0.26	35.33	24.33	20.48	3.85	6.321	SF
650.00	649.13	647.05	646.20	2.12	2.09	62.77	-0.01	40.87	26.71	22.51	4.20	6.357	
700.00	698.70	696.44	695.18	2.30	2.27	68.64	-0.32	47.26	29.78	25.22	4.55	6.540	
750.00	748.15	745.76	743.96	2.48	2.45	73.92	-0.66	54.47	33.56	28.65	4.91	6.837	
800.00	797.47	794.99	792.53	2.66	2.63	78.52	-1.05	62.51	38.05	32.78	5.27	7.227	
850.00	846.63	844.13	840.86	2.84	2.81	82.44	-1.47	71.36	43.23	37.61	5.63	7.684	
900.00	895.62	893.17	888.94	3.03	2.99	85.75	-1.94	81.02	49.09	43.10	5.99	8.197	
950.00	944.44	942.10	936.73	3.21	3.17	88.53	-2.44	91.47	55.59	49.23	6.36	8.747	
1,000.00	993.06	990.91	984.23	3.40	3.36	90.86	-2.98	102.72	62.72	55.99	6.72	9.328	
1,050.00	1,041.46	1,039.60	1,031.41	3.58	3.54	92.81	-3.56	114.73	70.45	63.36	7.09	9.930	
7,150.00	3,691.82	7,582.22	4,130.87	40.94	42.11	-130.21	-135.79	-3,076.85	680.30	612.07	68.23	9.970	
7,200.00	3,690.33	7,632.22	4,129.63	41.47	42.63	-130.22	-137.05	-3,126.82	680.46	611.38	69.08	9.850	
7,250.00	3,688.85	7,682.22	4,128.39	42.00	43.16	-130.24	-138.31	-3,176.79	680.62	610.70	69.92	9.734	
7,300.00	3,687.36	7,732.21	4,127.15	42.53	43.68	-130.26	-139.57	-3,226.76	680.78	610.01	70.77	9.619	
7,350.00	3,685.88	7,782.21	4,125.91	43.06	44.21	-130.27	-140.83	-3,276.73	680.94	609.32	71.62	9.508	
7,400.00	3,684.39	7,832.21	4,124.68	43.59	44.73	-130.29	-142.09	-3,326.69	681.10	608.63	72.47	9.399	
7,450.00	3,682.91	7,882.21	4,123.44	44.12	45.26	-130.30	-143.35	-3,376.66	681.26	607.94	73.32	9.292	
7,500.00	3,681.42	7,932.21	4,122.20	44.65	45.79	-130.32	-144.61	-3,426.63	681.42	607.25	74.17	9.188	
7,550.00	3,679.94	7,982.21	4,120.96	45.19	46.32	-130.34	-145.87	-3,476.60	681.58	606.56	75.02	9.085	
7,600.00	3,678.45	8,032.21	4,119.72	45.72	46.84	-130.35	-147.12	-3,526.57	681.74	605.86	75.87	8.985	
7,650.00	3,676.96	8,082.21	4,118.49	46.26	47.37	-130.37	-148.38	-3,576.53	681.90	605.17	76.72	8.888	
7,700.00	3,675.48	8,132.21	4,117.25	46.79	47.91	-130.38	-149.64	-3,626.50	682.05	604.48	77.58	8.792	
7,750.00	3,673.99	8,182.21	4,116.01	47.33	48.44	-130.40	-150.90	-3,676.47	682.21	603.78	78.43	8.698	
7,800.00	3,672.51	8,232.21	4,114.77	47.86	48.97	-130.41	-152.16	-3,726.44	682.37	603.09	79.29	8.606	
7,850.00	3,671.02	8,282.21	4,113.53	48.40	49.50	-130.43	-153.42	-3,776.41	682.53	602.39	80.14	8.516	
7,900.00	3,669.54	8,332.21	4,112.30	48.94	50.04	-130.45	-154.68	-3,826.38	682.69	601.69	81.00	8.428	
7,950.00	3,668.05	8,382.21	4,111.06	49.48	50.57	-130.46	-155.94	-3,876.34	682.85	601.00	81.86	8.342	
8,000.00	3,666.57	8,432.21	4,109.82	50.02	51.11	-130.48	-157.20	-3,926.31	683.01	600.30	82.72	8.257	
8,050.00	3,665.08	8,482.21	4,108.58	50.56	51.64	-130.49	-158.45	-3,976.28	683.17	599.60	83.57	8.174	
8,100.00	3,663.60	8,532.20	4,107.34	51.10	52.18	-130.51	-159.71	-4,026.25	683.33	598.90	84.43	8.093	
8,150.00	3,662.11	8,582.20	4,106.11	51.64	52.71	-130.53	-160.97	-4,076.22	683.49	598.20	85.29	8.014	
8,200.00	3,660.62	8,632.20	4,104.87	52.18	53.25	-130.54	-162.23	-4,126.18	683.65	597.50	86.15	7.935	
8,250.00	3,659.14	8,682.20	4,103.63	52.72	53.79	-130.56	-163.49	-4,176.15	683.81	596.80	87.01	7.859	
8,300.00	3,657.65	8,732.20	4,102.39	53.26	54.33	-130.57	-164.75	-4,226.12	683.97	596.10	87.87	7.784	
8,350.00	3,656.17	8,782.20	4,101.15	53.80	54.86	-130.59	-166.01	-4,276.09	684.13	595.40	88.73	7.710	
8,400.00	3,654.68	8,832.20	4,099.91	54.34	55.40	-130.60	-167.27	-4,326.06	684.29	594.70	89.60	7.638	
8,450.00	3,653.20	8,882.20	4,098.68	54.89	55.94	-130.62	-168.53	-4,376.03	684.45	594.00	90.46	7.567	
8,500.00	3,651.71	8,932.20	4,097.44	55.43	56.48	-130.64	-169.78	-4,425.99	684.62	593.30	91.32	7.497	
8,550.00	3,650.23	8,982.20	4,096.20	55.97	57.02	-130.65	-171.04	-4,475.96	684.78	592.59	92.18	7.428	
8,600.00	3,648.74	9,032.20	4,094.96	56.52	57.56	-130.67	-172.30	-4,525.93	684.94	591.89	93.05	7.361	
8,650.00	3,647.26	9,082.20	4,093.72	57.06	58.11	-130.68	-173.56	-4,575.90	685.10	591.19	93.91	7.295	
8,700.00	3,645.77	9,132.20	4,092.49	57.61	58.65	-130.70	-174.82	-4,625.87	685.26	590.49	94.77	7.231	
8,750.00	3,644.29	9,182.20	4,091.25	58.15	59.19	-130.72	-176.08	-4,675.83	685.42	589.78	95.64	7.167	
8,800.00	3,642.80	9,232.20	4,090.01	58.70	59.73	-130.73	-177.34	-4,725.80	685.58	589.08	96.50	7.104	
8,850.00	3,641.31	9,282.20	4,088.77	59.24	60.27	-130.75	-178.60	-4,775.77	685.74	588.38	97.36	7.043	
8,900.00	3,639.83	9,332.20	4,087.53	59.79	60.82	-130.76	-179.86	-4,825.74	685.90	587.67	98.23	6.983	
8,950.00	3,638.34	9,382.19	4,086.30	60.34	61.36	-130.78	-181.11	-4,875.71	686.06	586.97	99.09	6.923	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - 51H - 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
9,000.00	3,636.86	9,432.19	4,085.06	60.88	61.90	-130.79	-182.37	-4,925.68	686.22	586.26	99.96	6.865	
9,050.00	3,635.37	9,482.19	4,083.82	61.43	62.45	-130.81	-183.63	-4,975.64	686.38	585.56	100.82	6.808	
9,100.00	3,633.89	9,532.19	4,082.58	61.98	62.99	-130.83	-184.89	-5,025.61	686.54	584.86	101.69	6.751	
9,150.00	3,632.40	9,582.19	4,081.34	62.52	63.54	-130.84	-186.15	-5,075.58	686.71	584.15	102.55	6.696	
9,200.00	3,630.92	9,632.19	4,080.11	63.07	64.08	-130.86	-187.41	-5,125.55	686.87	583.45	103.42	6.642	
9,250.00	3,629.43	9,682.19	4,078.87	63.62	64.63	-130.87	-188.67	-5,175.52	687.03	582.74	104.28	6.588	
9,300.00	3,627.95	9,732.19	4,077.63	64.17	65.17	-130.89	-189.93	-5,225.48	687.19	582.04	105.15	6.535	
9,349.10	3,626.49	9,781.29	4,076.41	64.70	65.71	-130.90	-191.16	-5,274.56	687.35	581.35	106.00	6.484	
9,350.00	3,626.46	9,782.19	4,076.39	64.71	65.72	-130.90	-191.19	-5,275.45	687.35	581.34	106.02	6.484	
9,399.14	3,625.00	9,831.33	4,075.17	65.25	66.26	-130.92	-192.42	-5,324.56	687.51	580.64	106.87	6.433	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - 91H - 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		
700.00	698.70	694.41	693.17	2.30	2.27	43.68	9.58	66.08	44.22	39.64	4.58	9.651	CC, ES	
750.00	748.15	743.65	741.88	2.48	2.45	46.31	11.53	72.99	45.59	40.65	4.94	9.232		
800.00	797.47	792.87	790.45	2.66	2.63	49.06	13.71	80.70	47.22	41.93	5.29	8.923		
850.00	846.63	842.07	838.84	2.84	2.81	51.86	16.11	89.20	49.14	43.49	5.65	8.700		
900.00	895.62	891.24	887.05	3.03	2.99	54.68	18.74	98.50	51.37	45.37	6.00	8.558		
950.00	944.44	941.08	935.82	3.21	3.17	57.77	21.53	108.36	53.62	47.26	6.37	8.424		
1,000.00	993.06	990.92	984.60	3.40	3.36	61.38	24.32	118.23	55.59	48.87	6.72	8.268		
1,050.00	1,041.46	1,040.71	1,033.33	3.58	3.55	65.51	27.11	128.08	57.41	50.32	7.09	8.098		
1,100.00	1,089.64	1,090.45	1,082.00	3.77	3.73	70.15	29.89	137.92	59.21	51.75	7.46	7.936		
1,150.00	1,137.58	1,140.12	1,130.61	3.97	3.92	75.26	32.67	147.75	61.16	53.32	7.84	7.801		
1,187.75	1,173.61	1,177.56	1,167.25	4.11	4.06	79.38	34.77	155.16	62.83	54.70	8.13	7.729		
1,200.00	1,185.28	1,189.70	1,179.13	4.16	4.11	80.75	35.45	157.57	63.43	55.21	8.22	7.713		
1,250.00	1,232.89	1,239.25	1,227.62	4.36	4.30	86.07	38.22	167.37	66.24	57.63	8.61	7.690	SF	
1,300.00	1,280.51	1,288.80	1,276.12	4.55	4.48	90.92	40.99	177.18	69.57	60.57	9.00	7.726		
1,350.00	1,328.13	1,338.36	1,324.61	4.75	4.67	95.31	43.77	186.99	73.37	63.97	9.40	7.808		
1,400.00	1,375.75	1,387.91	1,373.10	4.95	4.86	99.25	46.54	196.79	77.55	67.76	9.79	7.923		
1,450.00	1,423.37	1,437.46	1,421.60	5.15	5.05	102.77	49.31	206.60	82.05	71.88	10.18	8.063		
1,500.00	1,470.99	1,487.02	1,470.09	5.35	5.24	105.92	52.09	216.41	86.84	76.28	10.56	8.221		
1,550.00	1,518.61	1,536.57	1,518.59	5.55	5.43	108.74	54.86	226.22	91.86	80.91	10.95	8.389		
1,600.00	1,566.22	1,586.12	1,567.08	5.75	5.62	111.26	57.63	236.02	97.09	85.75	11.33	8.566		
1,650.00	1,613.84	1,635.68	1,615.57	5.95	5.81	113.52	60.41	245.83	102.47	90.76	11.72	8.745		
1,700.00	1,661.46	1,685.23	1,664.07	6.15	5.99	115.56	63.18	255.64	108.01	95.91	12.10	8.926		
1,750.00	1,709.08	1,734.78	1,712.56	6.35	6.18	117.39	65.95	265.44	113.66	101.18	12.48	9.107		
1,800.00	1,756.70	1,784.34	1,761.06	6.56	6.37	119.05	68.73	275.25	119.42	106.56	12.86	9.285		
1,850.00	1,804.32	1,833.89	1,809.55	6.76	6.56	120.56	71.50	285.06	125.26	112.02	13.24	9.461		
1,900.00	1,851.93	1,883.45	1,858.05	6.96	6.75	121.93	74.27	294.87	131.19	117.57	13.62	9.633		
1,950.00	1,899.55	1,933.00	1,906.54	7.17	6.94	123.19	77.05	304.67	137.19	123.19	14.00	9.800		
2,000.00	1,947.17	1,982.55	1,955.03	7.37	7.13	124.33	79.82	314.48	143.24	128.86	14.38	9.964		

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: DELHI 'B' STATE 4 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 505-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	
8,950.00	3,638.34	3,194.00	3,205.95	60.34	56.34	-65.72	-611.04	-5,057.80	1,058.80	952.23	106.57	9.935	
9,000.00	3,636.86	3,194.00	3,205.95	60.88	56.34	-65.72	-611.04	-5,057.80	1,049.71	942.63	107.08	9.803	
9,050.00	3,635.37	3,194.00	3,205.95	61.43	56.34	-65.72	-611.04	-5,057.80	1,042.93	935.35	107.59	9.694	
9,100.00	3,633.89	3,194.00	3,205.95	61.98	56.34	-65.72	-611.04	-5,057.80	1,038.53	930.43	108.09	9.608	
9,150.00	3,632.40	3,194.00	3,205.95	62.52	56.34	-65.72	-611.04	-5,057.80	1,036.51	927.92	108.60	9.544	
9,166.73	3,631.90	3,194.00	3,205.95	62.71	56.34	-65.72	-611.04	-5,057.80	1,036.38	927.61	108.77	9.528 CC, ES	
9,200.00	3,630.92	3,194.00	3,205.95	63.07	56.34	-65.72	-611.04	-5,057.80	1,036.91	927.81	109.11	9.504	
9,250.00	3,629.43	3,194.00	3,205.95	63.62	56.34	-65.72	-611.04	-5,057.80	1,039.72	930.11	109.61	9.485 SF	
9,300.00	3,627.95	3,194.00	3,205.95	64.17	56.34	-65.72	-611.04	-5,057.80	1,044.91	934.79	110.12	9.489	
9,349.10	3,626.49	3,194.00	3,205.95	64.70	56.34	-65.72	-611.04	-5,057.80	1,052.30	941.68	110.62	9.513	
9,350.00	3,626.46	3,194.00	3,205.95	64.71	56.34	-65.72	-611.04	-5,057.80	1,052.46	941.83	110.63	9.513	
9,399.14	3,625.00	3,194.00	3,205.95	65.25	56.34	-65.72	-611.04	-5,057.80	1,062.12	950.99	111.13	9.558	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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: 505-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
7,800.00	3,672.51	3,664.56	3,672.51	47.86	66.17	-91.35	-524.59	-4,397.80	1,115.20	1,001.17	114.03	9.780	
7,850.00	3,671.02	3,663.07	3,671.02	48.40	66.14	-91.25	-524.59	-4,397.80	1,084.92	970.38	114.54	9.472	
7,900.00	3,669.54	3,661.59	3,669.54	48.94	66.11	-91.15	-524.59	-4,397.80	1,056.13	941.09	115.04	9.180	
7,950.00	3,668.05	3,660.10	3,668.05	49.48	66.07	-91.05	-524.59	-4,397.80	1,028.97	913.42	115.55	8.905	
8,000.00	3,666.57	3,658.62	3,666.57	50.02	66.04	-90.96	-524.59	-4,397.80	1,003.57	887.51	116.06	8.647	
8,050.00	3,665.08	3,657.13	3,665.08	50.56	66.01	-90.86	-524.59	-4,397.80	980.06	863.49	116.57	8.408	
8,100.00	3,663.60	3,655.65	3,663.60	51.10	65.98	-90.76	-524.59	-4,397.80	958.58	841.50	117.08	8.188	
8,150.00	3,662.11	3,654.16	3,662.11	51.64	65.95	-90.66	-524.59	-4,397.80	939.27	821.68	117.58	7.988	
8,200.00	3,660.62	3,652.67	3,660.62	52.18	65.92	-90.57	-524.59	-4,397.80	922.26	804.17	118.09	7.810	
8,250.00	3,659.14	3,651.19	3,659.14	52.72	65.89	-90.47	-524.59	-4,397.80	907.70	789.10	118.60	7.653	
8,300.00	3,657.65	3,649.70	3,657.65	53.26	65.85	-90.37	-524.59	-4,397.80	895.69	776.58	119.11	7.520	
8,350.00	3,656.17	3,648.22	3,656.17	53.80	65.82	-90.28	-524.59	-4,397.80	886.33	766.72	119.62	7.410	
8,400.00	3,654.68	3,646.73	3,654.68	54.34	65.79	-90.18	-524.59	-4,397.80	879.73	759.60	120.13	7.323	
8,450.00	3,653.20	3,645.25	3,653.20	54.89	65.76	-90.08	-524.59	-4,397.80	875.92	755.29	120.64	7.261	
8,491.80	3,651.96	3,644.01	3,651.96	55.34	65.73	-90.00	-524.59	-4,397.80	874.93	753.86	121.06	7.227 CC	
8,500.00	3,651.71	3,643.76	3,651.71	55.43	65.73	-89.98	-524.59	-4,397.80	874.96	753.82	121.15	7.222 ES	
8,550.00	3,650.23	3,642.28	3,650.23	55.97	65.70	-89.89	-524.59	-4,397.80	876.86	755.20	121.65	7.208 SF	
8,600.00	3,648.74	3,640.79	3,648.74	56.52	65.67	-89.79	-524.59	-4,397.80	881.59	759.42	122.16	7.216	
8,650.00	3,647.26	3,639.31	3,647.26	57.06	65.64	-89.69	-524.59	-4,397.80	889.10	766.43	122.67	7.248	
8,700.00	3,645.77	3,637.82	3,645.77	57.61	65.60	-89.60	-524.59	-4,397.80	899.34	776.15	123.18	7.301	
8,750.00	3,644.29	3,636.33	3,644.29	58.15	65.57	-89.50	-524.59	-4,397.80	912.20	788.51	123.69	7.375	
8,800.00	3,642.80	3,634.85	3,642.80	58.70	65.54	-89.40	-524.59	-4,397.80	927.58	803.38	124.20	7.468	
8,850.00	3,641.31	3,633.36	3,641.31	59.24	65.51	-89.30	-524.59	-4,397.80	945.35	820.64	124.71	7.580	
8,900.00	3,639.83	3,631.88	3,639.83	59.79	65.48	-89.21	-524.59	-4,397.80	965.39	840.17	125.22	7.710	
8,950.00	3,638.34	3,630.39	3,638.34	60.34	65.45	-89.11	-524.59	-4,397.80	987.55	861.82	125.73	7.855	
9,000.00	3,636.86	3,628.91	3,636.86	60.88	65.42	-89.01	-524.59	-4,397.80	1,011.70	885.46	126.24	8.014	
9,050.00	3,635.37	3,627.42	3,635.37	61.43	65.38	-88.91	-524.59	-4,397.80	1,037.69	910.95	126.75	8.187	
9,100.00	3,633.89	3,625.94	3,633.89	61.98	65.35	-88.82	-524.59	-4,397.80	1,065.40	938.14	127.25	8.372	
9,150.00	3,632.40	3,624.45	3,632.40	62.52	65.32	-88.72	-524.59	-4,397.80	1,094.69	966.92	127.76	8.568	
9,200.00	3,630.92	3,622.97	3,630.92	63.07	65.29	-88.62	-524.59	-4,397.80	1,125.43	997.16	128.27	8.774	
9,250.00	3,629.43	3,621.48	3,629.43	63.62	65.26	-88.53	-524.59	-4,397.80	1,157.52	1,028.74	128.78	8.988	
9,300.00	3,627.95	3,619.99	3,627.95	64.17	65.23	-88.43	-524.59	-4,397.80	1,190.84	1,061.55	129.29	9.211	
9,349.10	3,626.49	3,618.54	3,626.49	64.70	65.20	-88.33	-524.59	-4,397.80	1,224.67	1,094.88	129.79	9.436	
9,350.00	3,626.46	3,618.51	3,626.46	64.71	65.20	-88.33	-524.59	-4,397.80	1,225.29	1,095.50	129.80	9.440	
9,399.14	3,625.00	3,617.05	3,625.00	65.25	65.17	-88.24	-524.59	-4,397.80	1,260.17	1,129.88	130.29	9.672	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: ELK STATE 1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 510-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 Toelface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,800.00	1,756.70	1,744.75	1,756.70	6.56	32.38	70.01	-19.47	574.20	373.52	334.83	38.70	9.653	
1,850.00	1,804.32	1,792.39	1,804.32	6.76	33.75	72.15	-19.47	574.20	368.36	328.05	40.31	9.138	
1,900.00	1,851.93	1,840.01	1,851.93	6.96	35.17	74.33	-19.47	574.20	363.76	321.80	41.97	8.668	
1,950.00	1,899.55	1,887.63	1,899.55	7.17	36.59	76.56	-19.47	574.20	359.75	316.13	43.62	8.247	
2,000.00	1,947.17	1,935.28	1,947.17	7.37	38.00	78.84	-19.47	574.20	356.35	311.08	45.27	7.872	
2,050.00	1,994.79	1,982.90	1,994.79	7.57	39.29	81.15	-19.47	574.20	353.57	306.78	46.79	7.556	
2,100.00	2,042.41	2,030.54	2,042.41	7.78	40.56	83.49	-19.47	574.20	351.43	303.14	48.29	7.277	
2,150.00	2,090.03	2,078.16	2,090.03	7.98	41.67	85.86	-19.47	574.20	349.95	300.33	49.62	7.052	
2,200.00	2,137.65	2,125.78	2,137.65	8.19	42.77	88.23	-19.47	574.20	349.12	298.18	50.94	6.853	
2,237.03	2,172.91	2,161.04	2,172.91	8.34	43.59	90.00	-19.47	574.20	348.94	297.02	51.92	6.721 CC	
2,250.00	2,185.26	2,173.40	2,185.26	8.39	43.87	90.62	-19.47	574.20	348.96	296.71	52.26	6.678	
2,300.00	2,232.88	2,221.03	2,232.88	8.60	44.97	93.00	-19.47	574.20	349.47	295.90	53.56	6.524	
2,350.00	2,280.50	2,268.65	2,280.50	8.80	46.08	95.37	-19.47	574.20	350.64	295.78	54.86	6.391 ES	
2,400.00	2,328.12	2,316.27	2,328.12	9.00	47.18	97.72	-19.47	574.20	352.46	296.31	56.15	6.277	
2,450.00	2,375.74	2,363.88	2,375.74	9.21	48.28	100.05	-19.47	574.20	354.93	297.51	57.43	6.181	
2,500.00	2,423.36	2,411.50	2,423.36	9.42	49.39	102.35	-19.47	574.20	358.04	299.34	58.69	6.100	
2,550.00	2,470.97	2,459.12	2,470.97	9.62	50.49	104.60	-19.47	574.20	361.76	301.81	59.95	6.034	
2,600.00	2,518.59	2,506.74	2,518.59	9.83	51.59	106.81	-19.47	574.20	366.08	304.88	61.20	5.982	
2,650.00	2,566.21	2,554.36	2,566.21	10.03	52.69	108.97	-19.47	574.20	370.97	308.53	62.44	5.941	
2,700.00	2,613.83	2,601.98	2,613.83	10.24	53.80	111.07	-19.47	574.20	376.42	312.75	63.67	5.912	
2,750.00	2,661.45	2,649.60	2,661.45	10.44	54.90	113.12	-19.47	574.20	382.40	317.51	64.89	5.893	
2,800.00	2,709.07	2,697.21	2,709.07	10.65	56.00	115.11	-19.47	574.20	388.89	322.78	66.11	5.882	
2,850.00	2,756.69	2,744.80	2,756.69	10.85	57.20	117.19	-19.47	574.20	395.88	328.47	67.41	5.873 SF	
2,894.44	2,799.01	2,787.20	2,799.01	11.04	58.05	118.69	-19.47	574.20	402.43	334.08	68.35	5.888	
2,900.00	2,804.31	2,792.50	2,804.31	11.06	58.17	119.67	-19.47	574.20	403.28	334.80	68.48	5.889	
2,950.00	2,852.44	2,840.63	2,852.44	11.26	59.23	129.96	-19.47	574.20	411.11	341.48	69.63	5.904	
3,000.00	2,901.23	2,889.42	2,901.23	11.45	60.32	144.31	-19.47	574.20	419.09	348.24	70.85	5.916	
3,050.00	2,950.44	2,938.63	2,950.44	11.63	61.41	164.94	-19.47	574.20	426.99	354.88	72.11	5.921	
3,100.00	2,999.83	2,988.02	2,999.83	11.80	62.50	-169.29	-19.47	574.20	434.68	361.28	73.40	5.922	
3,150.00	3,049.17	3,037.36	3,049.17	11.95	63.60	-146.08	-19.47	574.20	442.11	367.41	74.69	5.919	
3,200.00	3,098.21	3,086.40	3,098.21	12.10	64.21	-129.89	-19.47	574.20	449.82	374.31	75.51	5.957	
3,250.00	3,146.71	3,134.90	3,146.71	12.24	64.21	-118.70	-19.47	574.20	461.72	385.99	75.72	6.097	
3,300.00	3,194.44	3,182.63	3,194.44	12.38	64.21	-110.65	-19.47	574.20	478.24	402.28	75.96	6.296	
3,350.00	3,241.16	3,229.35	3,241.16	12.50	64.21	-104.30	-19.47	574.20	498.85	422.65	76.20	6.546	
3,400.00	3,286.65	3,274.84	3,286.65	12.62	64.21	-98.88	-19.47	574.20	522.96	446.53	76.43	6.842	
3,450.00	3,330.68	3,318.87	3,330.68	12.74	64.21	-93.95	-19.47	574.20	550.02	473.41	76.61	7.180	
3,500.00	3,373.04	3,361.23	3,373.04	12.85	64.21	-89.29	-19.47	574.20	579.47	502.80	76.67	7.558	
3,550.00	3,413.53	3,401.72	3,413.53	12.96	64.21	-84.78	-19.47	574.20	610.86	534.30	76.56	7.979	
3,600.00	3,451.95	3,440.14	3,451.95	13.07	64.21	-80.37	-19.47	574.20	643.74	567.54	76.20	8.448	
3,650.00	3,488.10	3,476.29	3,488.10	13.18	64.21	-76.07	-19.47	574.20	677.76	602.24	75.52	8.975	
3,700.00	3,521.82	3,510.01	3,521.82	13.29	64.21	-71.88	-19.47	574.20	712.60	638.13	74.47	9.569	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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: 202-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	
1,500.00	1,470.99	1,470.02	1,470.99	5.35	27.96	14.19	250.43	477.20	310.95	278.99	31.96	9.729	
1,550.00	1,518.61	1,517.64	1,518.61	5.55	28.94	14.92	250.43	477.20	296.15	263.08	33.07	8.954	
1,600.00	1,566.22	1,565.26	1,566.22	5.75	29.91	15.71	250.43	477.20	281.40	247.21	34.19	8.230	
1,650.00	1,613.84	1,612.90	1,613.84	5.95	30.86	16.60	250.43	477.20	266.70	231.41	35.29	7.558	
1,700.00	1,661.46	1,660.52	1,661.46	6.15	31.80	17.58	250.43	477.20	252.06	215.69	36.37	6.930	
1,750.00	1,709.08	1,708.14	1,709.08	6.35	32.74	18.69	250.43	477.20	237.51	200.04	37.47	6.339	
1,800.00	1,756.70	1,755.76	1,756.70	6.56	33.67	19.94	250.43	477.20	223.04	184.48	38.56	5.784	
1,850.00	1,804.32	1,803.38	1,804.32	6.76	34.61	21.35	250.43	477.20	208.69	169.02	39.67	5.261	
1,900.00	1,851.93	1,851.00	1,851.93	6.96	35.54	22.98	250.43	477.20	194.48	153.69	40.79	4.768	
1,950.00	1,899.55	1,898.62	1,899.55	7.17	36.48	24.85	250.43	477.20	180.43	138.51	41.91	4.305	
2,000.00	1,947.17	1,946.23	1,947.17	7.37	37.42	27.04	250.43	477.20	166.59	123.54	43.06	3.869	
2,050.00	1,994.79	1,993.85	1,994.79	7.57	38.35	29.60	250.43	477.20	153.02	108.80	44.22	3.460	
2,100.00	2,042.41	2,041.47	2,042.41	7.78	39.29	32.65	250.43	477.20	139.80	94.39	45.41	3.079	
2,150.00	2,090.03	2,089.10	2,090.03	7.98	40.22	36.30	250.43	477.20	127.03	80.40	46.64	2.724	
2,200.00	2,137.65	2,136.72	2,137.65	8.19	41.16	40.72	250.43	477.20	114.87	66.96	47.91	2.398	
2,250.00	2,185.26	2,184.34	2,185.26	8.39	42.10	46.10	250.43	477.20	103.53	54.29	49.25	2.102	
2,300.00	2,232.88	2,231.96	2,232.88	8.60	43.04	52.65	250.43	477.20	93.31	42.67	50.64	1.843	
2,350.00	2,280.50	2,279.58	2,280.50	8.80	43.97	60.59	250.43	477.20	84.62	32.53	52.09	1.624	
2,400.00	2,328.12	2,327.20	2,328.12	9.00	44.91	69.99	250.43	477.20	77.97	24.41	53.56	1.456 Level 3	
2,450.00	2,375.74	2,374.81	2,375.74	9.21	45.85	80.64	250.43	477.20	73.91	18.95	54.96	1.345 Level 3	
2,491.33	2,415.10	2,414.18	2,415.10	9.38	46.62	90.00	250.43	477.20	72.82	16.83	55.99	1.301 Level 3, CC	
2,500.00	2,423.36	2,422.43	2,423.36	9.42	46.78	91.98	250.43	477.20	72.87	16.68	56.19	1.297 Level 3, ES, SF	
2,550.00	2,470.97	2,470.05	2,470.97	9.62	47.72	103.17	250.43	477.20	74.99	17.77	57.22	1.311 Level 3	
2,600.00	2,518.59	2,517.67	2,518.59	9.83	48.66	113.43	250.43	477.20	80.01	21.93	58.07	1.378 Level 3	
2,650.00	2,566.21	2,565.30	2,566.21	10.03	49.59	122.32	250.43	477.20	87.43	28.59	58.84	1.486 Level 3	
2,700.00	2,613.83	2,612.92	2,613.83	10.24	50.53	129.77	250.43	477.20	96.71	37.11	59.59	1.623	
2,750.00	2,661.45	2,660.54	2,661.45	10.44	51.47	135.89	250.43	477.20	107.36	46.98	60.38	1.778	
2,800.00	2,709.07	2,708.16	2,709.07	10.65	52.41	140.91	250.43	477.20	119.01	57.80	61.21	1.944	
2,850.00	2,756.69	2,755.78	2,756.69	10.85	53.38	145.04	250.43	477.20	131.40	69.29	62.11	2.115	
2,894.44	2,799.01	2,798.10	2,799.01	11.04	54.25	148.12	250.43	477.20	142.88	79.93	62.95	2.270	
2,900.00	2,804.31	2,803.40	2,804.31	11.06	54.35	149.28	250.43	477.20	144.33	81.22	63.11	2.287	
2,950.00	2,852.44	2,851.53	2,852.44	11.26	55.34	160.49	250.43	477.20	156.61	92.02	64.59	2.425	
3,000.00	2,901.23	2,900.32	2,901.23	11.45	56.34	174.77	250.43	477.20	167.24	101.09	66.15	2.528	
3,050.00	2,950.44	2,949.53	2,950.44	11.63	57.34	-165.36	250.43	477.20	176.01	108.33	67.68	2.601	
3,100.00	2,999.83	2,998.93	2,999.83	11.80	58.35	-140.89	250.43	477.20	182.90	113.78	69.13	2.646	
3,150.00	3,049.17	3,048.26	3,049.17	11.95	59.36	-119.42	250.43	477.20	188.06	117.58	70.48	2.668	
3,200.00	3,098.21	3,097.30	3,098.21	12.10	60.36	-105.85	250.43	477.20	191.71	119.96	71.76	2.672	
3,250.00	3,146.71	3,145.80	3,146.71	12.24	61.35	-98.88	250.43	477.20	194.26	121.28	72.98	2.662	
3,300.00	3,194.44	3,193.53	3,194.44	12.38	62.33	-96.21	250.43	477.20	196.22	122.04	74.18	2.645	
3,350.00	3,241.16	3,240.27	3,241.16	12.50	63.29	-96.31	250.43	477.20	198.23	122.88	75.35	2.631	
3,400.00	3,286.65	3,285.76	3,286.65	12.62	64.22	-98.21	250.43	477.20	201.07	124.63	76.44	2.630	
3,450.00	3,330.68	3,329.79	3,330.68	12.74	65.12	-101.26	250.43	477.20	205.58	128.20	77.39	2.657	
3,500.00	3,373.04	3,372.15	3,373.04	12.85	65.98	-104.91	250.43	477.20	212.61	134.55	78.06	2.724	
3,550.00	3,413.53	3,412.64	3,413.53	12.96	66.81	-108.74	250.43	477.20	222.89	144.51	78.39	2.844	
3,600.00	3,451.95	3,451.06	3,451.95	13.07	67.60	-112.41	250.43	477.20	236.97	158.65	78.32	3.026	
3,650.00	3,488.10	3,487.21	3,488.10	13.18	68.34	-115.66	250.43	477.20	255.13	177.22	77.91	3.275	
3,700.00	3,521.82	3,520.93	3,521.82	13.29	69.02	-118.31	250.43	477.20	277.42	200.15	77.26	3.591	
3,750.00	3,552.94	3,552.05	3,552.94	13.42	69.66	-120.27	250.43	477.20	303.65	227.12	76.53	3.968	
3,800.00	3,581.30	3,580.41	3,581.30	13.54	70.24	-121.45	250.43	477.20	333.55	257.64	75.91	4.394	
3,833.09	3,598.49	3,597.60	3,598.49	13.64	70.59	-121.79	250.43	477.20	355.17	279.50	75.66	4.694	
3,850.00	3,606.95	3,606.06	3,606.95	13.69	70.77	-123.13	250.43	477.20	366.68	291.55	75.13	4.881	
3,900.00	3,631.95	3,631.06	3,631.95	13.84	71.28	-126.86	250.43	477.20	401.92	328.39	73.53	5.466	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: GERONIMO '27' STATE COM 2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 202-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	
3,950.00	3,656.95	3,657.00	3,657.87	14.03	71.81	-130.37	250.43	477.20	438.60	366.71	71.89	6.101	
4,000.00	3,681.95	3,681.08	3,681.95	14.22	72.28	-133.34	250.43	477.20	476.39	405.98	70.42	6.765	
4,033.09	3,698.49	3,697.62	3,698.49	14.35	72.61	-135.23	250.43	477.20	501.89	432.44	69.45	7.227	
4,050.00	3,706.73	3,705.86	3,706.73	14.43	72.77	-134.64	250.43	477.20	515.17	445.73	69.44	7.419	
4,100.00	3,728.49	3,727.62	3,728.49	14.64	73.20	-132.11	250.43	477.20	556.07	485.79	70.29	7.912	
4,150.00	3,746.25	3,745.38	3,746.25	14.87	73.55	-128.07	250.43	477.20	599.17	526.34	72.82	8.228	
4,200.00	3,759.87	3,759.00	3,759.87	15.10	73.81	-121.95	250.43	477.20	644.05	566.76	77.29	8.332	
4,250.00	3,769.24	3,768.37	3,769.24	15.34	74.00	-112.94	250.43	477.20	690.32	607.08	83.25	8.293	
4,300.00	3,774.30	3,773.43	3,774.30	15.58	74.10	-100.31	250.43	477.20	737.56	648.95	88.60	8.324	
4,350.00	3,775.00	3,774.13	3,775.00	15.82	74.11	-84.31	250.43	477.20	785.34	696.05	89.29	8.795	
4,350.11	3,775.00	3,774.13	3,775.00	15.82	74.11	-84.27	250.43	477.20	785.45	696.16	89.29	8.797	
4,400.00	3,773.52	3,772.65	3,773.52	16.07	74.08	-83.89	250.43	477.20	833.38	743.95	89.43	9.319	
4,450.00	3,772.03	3,771.16	3,772.03	16.34	74.05	-83.52	250.43	477.20	881.64	792.04	89.60	9.840	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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: 108-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	
5,150.00	3,751.24	3,756.38	3,751.24	21.34	74.95	95.11	707.58	-1,978.85	938.93	843.20	95.74	9.807	
5,200.00	3,749.75	3,754.89	3,749.75	21.76	74.92	94.83	707.58	-1,978.85	891.64	795.46	96.18	9.271	
5,250.00	3,748.27	3,753.41	3,748.27	22.19	74.89	94.54	707.58	-1,978.85	844.66	748.03	96.62	8.742	
5,300.00	3,746.78	3,751.92	3,746.78	22.62	74.86	94.26	707.58	-1,978.85	798.04	700.97	97.07	8.221	
5,350.00	3,745.29	3,750.44	3,745.29	23.06	74.84	93.97	707.58	-1,978.85	751.85	654.32	97.53	7.709	
5,400.00	3,743.81	3,748.95	3,743.81	23.51	74.81	93.68	707.58	-1,978.85	706.18	608.20	97.98	7.207	
5,450.00	3,742.32	3,747.46	3,742.32	23.96	74.78	93.40	707.58	-1,978.85	661.13	562.69	98.44	6.716	
5,500.00	3,740.84	3,745.98	3,740.84	24.41	74.75	93.11	707.58	-1,978.85	616.84	517.94	98.90	6.237	
5,550.00	3,739.35	3,744.49	3,739.35	24.87	74.72	92.82	707.58	-1,978.85	573.49	474.12	99.37	5.771	
5,600.00	3,737.87	3,743.01	3,737.87	25.33	74.69	92.54	707.58	-1,978.85	531.31	431.47	99.83	5.322	
5,650.00	3,736.38	3,741.52	3,736.38	25.80	74.66	92.25	707.58	-1,978.85	490.58	390.28	100.30	4.891	
5,700.00	3,734.90	3,740.04	3,734.90	26.27	74.63	91.96	707.58	-1,978.85	451.73	350.96	100.77	4.483	
5,750.00	3,733.41	3,738.55	3,733.41	26.75	74.60	91.68	707.58	-1,978.85	415.25	314.02	101.24	4.102	
5,800.00	3,731.93	3,737.07	3,731.93	27.22	74.57	91.39	707.58	-1,978.85	381.85	280.14	101.71	3.754	
5,850.00	3,730.44	3,735.58	3,730.44	27.71	74.54	91.10	707.58	-1,978.85	352.39	250.21	102.18	3.449	
5,900.00	3,728.95	3,734.10	3,728.95	28.19	74.51	90.81	707.58	-1,978.85	327.95	225.29	102.65	3.195	
5,950.00	3,727.47	3,732.61	3,727.47	28.68	74.48	90.53	707.58	-1,978.85	309.69	206.57	103.13	3.003	
6,000.00	3,725.98	3,731.12	3,725.98	29.17	74.46	90.24	707.58	-1,978.85	298.78	195.18	103.60	2.884	
6,041.49	3,724.75	3,729.89	3,724.75	29.58	74.43	90.00	707.58	-1,978.85	295.88	191.89	103.99	2.845 CC, ES	
6,050.00	3,724.50	3,729.64	3,724.50	29.66	74.43	89.95	707.58	-1,978.85	296.01	191.94	104.07	2.844 SF	
6,100.00	3,723.01	3,728.15	3,723.01	30.15	74.40	89.66	707.58	-1,978.85	301.61	197.07	104.54	2.885	
6,150.00	3,721.53	3,726.67	3,721.53	30.65	74.37	89.38	707.58	-1,978.85	315.14	210.12	105.02	3.001	
6,200.00	3,720.04	3,725.18	3,720.04	31.15	74.34	89.09	707.58	-1,978.85	335.64	230.15	105.49	3.182	
6,250.00	3,718.56	3,723.70	3,718.56	31.65	74.31	88.80	707.58	-1,978.85	361.92	255.96	105.96	3.416	
6,300.00	3,717.07	3,722.21	3,717.07	32.15	74.28	88.51	707.58	-1,978.85	392.83	286.40	106.43	3.691	
6,350.00	3,715.59	3,720.73	3,715.59	32.66	74.25	88.23	707.58	-1,978.85	427.37	320.47	106.90	3.998	
6,400.00	3,714.10	3,719.24	3,714.10	33.17	74.22	87.94	707.58	-1,978.85	464.72	357.35	107.37	4.328	
6,450.00	3,712.62	3,717.76	3,712.62	33.68	74.19	87.65	707.58	-1,978.85	504.27	396.43	107.84	4.676	
6,500.00	3,711.13	3,716.27	3,711.13	34.18	74.16	87.37	707.58	-1,978.85	545.53	437.22	108.31	5.037	
6,550.00	3,709.64	3,714.78	3,709.64	34.70	74.13	87.08	707.58	-1,978.85	588.14	479.37	108.77	5.407	
6,600.00	3,708.16	3,713.30	3,708.16	35.21	74.10	86.79	707.58	-1,978.85	631.83	522.59	109.24	5.784	
6,650.00	3,706.67	3,711.81	3,706.67	35.73	74.08	86.51	707.58	-1,978.85	676.40	566.69	109.70	6.166	
6,700.00	3,705.19	3,710.33	3,705.19	36.24	74.05	86.22	707.58	-1,978.85	721.67	611.51	110.16	6.551	
6,750.00	3,703.70	3,708.84	3,703.70	36.76	74.02	85.93	707.58	-1,978.85	767.53	656.90	110.62	6.938	
6,800.00	3,702.22	3,707.36	3,702.22	37.28	73.99	85.65	707.58	-1,978.85	813.87	702.79	111.08	7.327	
6,850.00	3,700.73	3,705.87	3,700.73	37.80	73.96	85.36	707.58	-1,978.85	860.62	749.08	111.54	7.716	
6,900.00	3,699.25	3,704.39	3,699.25	38.32	73.93	85.08	707.58	-1,978.85	907.71	795.72	112.00	8.105	
6,950.00	3,697.76	3,702.90	3,697.76	38.84	73.90	84.79	707.58	-1,978.85	955.10	842.65	112.45	8.494	
7,000.00	3,696.28	3,701.42	3,696.28	39.37	73.87	84.51	707.58	-1,978.85	1,002.74	889.84	112.90	8.882	
7,050.00	3,694.79	3,699.93	3,694.79	39.89	73.84	84.22	707.58	-1,978.85	1,050.60	937.24	113.35	9.268	
7,100.00	3,693.30	3,698.44	3,693.30	40.42	73.81	83.94	707.58	-1,978.85	1,098.64	984.84	113.80	9.654	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: HALBERD 27 STATE COM 1H - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 100-MWD+IGRF												Offset Well Error:	0.00 usft
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
2,750.00	2,661.45	8,502.95	3,815.71	10.44	150.23	163.95	172.34	475.76	1,168.94	1,046.53	122.40	9.550	
2,800.00	2,709.07	8,489.86	3,816.00	10.65	149.82	162.77	172.50	488.85	1,123.67	999.44	124.23	9.045	
2,850.00	2,756.69	8,476.25	3,816.31	10.85	149.40	161.50	172.67	502.45	1,078.65	952.52	126.13	8.552	
2,894.44	2,799.01	8,464.16	3,816.59	11.04	149.02	160.33	172.81	514.54	1,038.87	911.06	127.81	8.128	
2,900.00	2,804.31	8,462.67	3,816.62	11.06	148.97	160.22	172.83	516.03	1,033.90	904.74	129.17	8.004	
2,950.00	2,852.44	8,451.12	3,816.88	11.26	148.61	160.36	172.97	527.58	988.91	848.14	140.76	7.025	
3,000.00	2,901.23	8,442.97	3,817.07	11.45	148.35	164.26	173.07	535.72	943.50	793.28	150.21	6.281	
3,050.00	2,950.44	8,438.27	3,817.17	11.63	148.21	174.64	173.13	540.43	897.94	741.75	156.19	5.749	
3,100.00	2,999.83	8,437.02	3,817.20	11.80	148.17	-169.03	173.15	541.67	852.51	694.32	158.19	5.389	
3,150.00	3,049.17	8,439.25	3,817.15	11.95	148.24	-153.94	173.12	539.44	807.48	650.73	156.75	5.151	
3,200.00	3,098.21	8,444.94	3,817.02	12.10	148.42	-144.70	173.05	533.76	763.14	610.03	153.11	4.984	
3,250.00	3,146.71	8,454.05	3,816.82	12.24	148.70	-139.99	172.94	524.64	719.77	571.22	148.55	4.845	
3,300.00	3,194.44	8,466.56	3,816.53	12.38	149.09	-137.62	172.79	512.14	677.63	533.61	144.02	4.705	
3,350.00	3,241.16	8,482.39	3,816.17	12.50	149.59	-136.27	172.59	496.32	637.02	496.89	140.13	4.546	
3,400.00	3,286.65	8,501.31	3,815.75	12.62	150.18	-135.31	172.36	477.41	598.19	461.05	137.14	4.362	
3,450.00	3,330.68	8,523.28	3,815.27	12.74	150.87	-134.39	172.10	455.44	561.41	426.21	135.20	4.153	
3,500.00	3,373.04	8,548.34	3,814.74	12.85	151.66	-133.34	171.82	430.38	526.91	392.58	134.33	3.922	
3,550.00	3,413.53	8,576.38	3,814.18	12.96	152.53	-132.09	171.51	402.36	494.90	360.39	134.51	3.679	
3,600.00	3,451.95	8,607.61	3,813.59	13.07	153.51	-130.57	171.21	371.13	465.52	329.82	135.71	3.430	
3,650.00	3,488.10	8,641.74	3,813.02	13.18	154.58	-128.83	170.98	337.01	438.86	301.09	137.77	3.185	
3,700.00	3,521.82	8,678.00	3,812.47	13.29	155.72	-126.93	170.86	300.75	414.94	274.47	140.47	2.954	
3,750.00	3,552.94	8,715.75	3,812.02	13.42	156.90	-124.94	170.75	263.00	393.80	250.20	143.59	2.742	
3,800.00	3,581.30	8,756.62	3,811.59	13.54	158.19	-122.77	170.61	222.14	375.34	228.07	147.26	2.549	
3,833.09	3,598.49	8,784.70	3,811.30	13.64	159.07	-121.32	170.51	194.06	364.48	214.66	149.82	2.433	
3,850.00	3,606.95	8,799.26	3,811.15	13.69	159.52	-120.29	170.46	179.50	359.26	207.53	151.73	2.368	
3,900.00	3,631.95	8,810.00	3,811.03	13.84	159.86	-119.51	170.43	168.76	346.13	192.87	153.26	2.258	
3,950.00	3,656.95	8,810.00	3,811.03	14.03	159.86	-119.51	170.43	168.76	339.75	186.31	153.44	2.214	
3,968.76	3,666.33	8,810.00	3,811.03	14.10	159.86	-119.51	170.43	168.76	339.23	185.72	153.51	2.210 CC, ES, SF	
4,000.00	3,681.95	8,810.00	3,811.03	14.22	159.86	-119.51	170.43	168.76	340.67	187.05	153.62	2.218	
4,033.09	3,698.49	8,810.00	3,811.03	14.35	159.86	-119.51	170.43	168.76	345.28	191.53	153.75	2.246	
4,050.00	3,706.73	8,810.00	3,811.03	14.43	159.86	-119.18	170.43	168.76	348.95	194.66	154.29	2.262	
4,100.00	3,728.49	8,810.00	3,811.03	14.64	159.86	-117.63	170.43	168.76	365.49	208.89	156.60	2.334	
4,150.00	3,746.25	8,810.00	3,811.03	14.87	159.86	-115.17	170.43	168.76	389.55	229.63	159.92	2.436	
4,200.00	3,759.87	8,810.00	3,811.03	15.10	159.86	-111.69	170.43	168.76	419.67	255.65	164.02	2.559	
4,250.00	3,769.24	8,810.00	3,811.03	15.34	159.86	-107.12	170.43	168.76	454.44	285.95	168.49	2.697	
4,300.00	3,774.30	8,810.00	3,811.03	15.58	159.86	-101.36	170.43	168.76	492.64	320.04	172.60	2.854	
4,350.00	3,775.00	8,810.00	3,811.03	15.82	159.86	-94.44	170.43	168.76	533.29	357.95	175.34	3.041	
4,350.11	3,775.00	8,810.00	3,811.03	15.82	159.86	-94.43	170.43	168.76	533.38	358.04	175.34	3.042	
4,400.00	3,773.52	8,810.00	3,811.03	16.07	159.86	-94.43	170.43	168.76	575.54	399.95	175.59	3.278	
4,450.00	3,772.03	8,810.00	3,811.03	16.34	159.86	-94.43	170.43	168.76	618.95	443.09	175.87	3.519	
4,500.00	3,770.55	8,810.00	3,811.03	16.62	159.86	-94.43	170.43	168.76	663.29	487.15	176.14	3.766	
4,550.00	3,769.06	8,810.00	3,811.03	16.92	159.86	-94.43	170.43	168.76	708.38	531.94	176.44	4.015	
4,600.00	3,767.58	8,810.00	3,811.03	17.22	159.86	-94.43	170.43	168.76	754.09	577.35	176.75	4.267	
4,650.00	3,766.09	8,810.00	3,811.03	17.55	159.86	-94.43	170.43	168.76	800.32	623.25	177.07	4.520	
4,700.00	3,764.61	8,810.00	3,811.03	17.88	159.86	-94.43	170.43	168.76	846.97	669.57	177.40	4.774	
4,750.00	3,763.12	8,810.00	3,811.03	18.23	159.86	-94.43	170.43	168.76	893.99	716.24	177.75	5.029	
4,800.00	3,761.63	8,810.00	3,811.03	18.59	159.86	-94.43	170.43	168.76	941.31	763.21	178.10	5.285	
4,850.00	3,760.15	8,810.00	3,811.03	18.96	159.86	-94.43	170.43	168.76	988.90	810.43	178.47	5.541	
4,900.00	3,758.66	8,810.00	3,811.03	19.33	159.86	-94.43	170.43	168.76	1,036.71	857.87	178.84	5.797	
4,950.00	3,757.18	8,810.00	3,811.03	19.72	159.86	-94.43	170.43	168.76	1,084.72	905.50	179.23	6.052	
5,000.00	3,755.69	8,810.00	3,811.03	20.11	159.86	-94.43	170.43	168.76	1,132.91	953.29	179.62	6.307	
5,050.00	3,754.21	8,810.00	3,811.03	20.51	159.86	-94.43	170.43	168.76	1,181.24	1,001.22	180.02	6.562	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: HALBERD 27 STATE COM 1H - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 100-MWD+IGRF												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
5,100.00	3,752.72	8,810.00	3,811.03	20.92	159.86	-94.43	170.43	168.76	1,229.71	1,049.29	180.42	6.816	
5,150.00	3,751.24	8,810.00	3,811.03	21.34	159.86	-94.43	170.43	168.76	1,278.29	1,097.45	180.84	7.069	
5,200.00	3,749.75	8,810.00	3,811.03	21.76	159.86	-94.43	170.43	168.76	1,326.98	1,145.73	181.26	7.321	
5,250.00	3,748.27	8,810.00	3,811.03	22.19	159.86	-94.43	170.43	168.76	1,375.77	1,194.08	181.69	7.572	
5,300.00	3,746.78	8,810.00	3,811.03	22.62	159.86	-94.43	170.43	168.76	1,424.64	1,242.52	182.12	7.823	
5,350.00	3,745.29	8,810.00	3,811.03	23.06	159.86	-94.43	170.43	168.76	1,473.58	1,291.03	182.56	8.072	
5,400.00	3,743.81	8,810.00	3,811.03	23.51	159.86	-94.43	170.43	168.76	1,522.60	1,339.60	183.00	8.320	
5,450.00	3,742.32	8,810.00	3,811.03	23.96	159.86	-94.43	170.43	168.76	1,571.67	1,388.22	183.45	8.567	
5,500.00	3,740.84	8,810.00	3,811.03	24.41	159.86	-94.43	170.43	168.76	1,620.80	1,436.90	183.90	8.814	
5,550.00	3,739.35	8,810.00	3,811.03	24.87	159.86	-94.43	170.43	168.76	1,669.99	1,485.63	184.36	9.058	
5,600.00	3,737.87	8,810.00	3,811.03	25.33	159.86	-94.43	170.43	168.76	1,719.22	1,534.40	184.82	9.302	
5,650.00	3,736.38	8,810.00	3,811.03	25.80	159.86	-94.43	170.43	168.76	1,768.49	1,583.21	185.28	9.545	
5,700.00	3,734.90	8,810.00	3,811.03	26.27	159.86	-94.43	170.43	168.76	1,817.80	1,632.05	185.75	9.786	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: HANOVER STATE #3 14 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 542-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
4,600.00	3,767.58	3,757.69	3,767.58	17.22	70.60	-90.02	-426.40	-519.80	874.58	786.75	87.83	9.958	
4,610.85	3,767.25	3,757.37	3,767.25	17.30	70.60	-90.00	-426.40	-519.80	874.51	786.62	87.89	9.950 CC, ES	
4,650.00	3,766.09	3,756.21	3,766.09	17.55	70.57	-89.92	-426.40	-519.80	875.38	787.26	88.12	9.934 SF	
4,700.00	3,764.61	3,754.72	3,764.61	17.88	70.54	-89.83	-426.40	-519.80	879.04	790.62	88.42	9.942	
4,750.00	3,763.12	3,753.23	3,763.12	18.23	70.51	-89.73	-426.40	-519.80	885.50	796.77	88.73	9.979	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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		WELCH CD 28 STATE COM - OFFSET: PAN AMERICAN-TE B 1 - Wellbore #1 - Wellbore #1										Offset Site Error:	0.00 usft
Survey Program: 385-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
1,700.00	1,661.46	1,644.50	1,661.46	6.15	28.72	82.60	-80.10	473.20	342.88	308.05	34.83	9.844	
1,750.00	1,709.08	1,692.12	1,709.08	6.35	29.72	85.02	-80.10	473.20	341.16	305.10	36.06	9.462	
1,800.00	1,756.70	1,739.74	1,756.70	6.56	30.73	87.46	-80.10	473.20	340.11	302.83	37.28	9.124	
1,850.00	1,804.32	1,787.35	1,804.32	6.76	31.74	89.91	-80.10	473.20	339.74	301.25	38.49	8.826	
1,851.91	1,806.13	1,789.17	1,806.13	6.77	31.78	90.00	-80.10	473.20	339.74	301.20	38.54	8.815 CC	
1,900.00	1,851.93	1,834.97	1,851.93	6.96	32.74	92.35	-80.10	473.20	340.06	300.35	39.70	8.565	
1,950.00	1,899.55	1,882.59	1,899.55	7.17	33.75	94.79	-80.10	473.20	341.05	300.15	40.91	8.337 ES	
2,000.00	1,947.17	1,930.21	1,947.17	7.37	34.76	97.22	-80.10	473.20	342.73	300.62	42.11	8.140	
2,050.00	1,994.79	1,977.83	1,994.79	7.57	35.77	99.61	-80.10	473.20	345.07	301.77	43.30	7.970	
2,100.00	2,042.41	2,006.00	2,022.95	7.78	36.36	101.01	-80.10	473.20	348.60	304.53	44.08	7.909 SF	
2,150.00	2,090.03	2,006.00	2,022.95	7.98	36.36	101.01	-80.10	473.20	358.03	313.75	44.28	8.085	
2,200.00	2,137.65	2,006.00	2,022.95	8.19	36.36	101.01	-80.10	473.20	373.96	329.47	44.49	8.406	
2,250.00	2,185.26	2,006.00	2,022.95	8.39	36.36	101.01	-80.10	473.20	395.61	350.92	44.69	8.852	
2,300.00	2,232.88	2,006.00	2,022.95	8.60	36.36	101.01	-80.10	473.20	422.10	377.20	44.90	9.402	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: RED LAKE 28 K STATE 1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 512-INC-ONLY												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,850.00	3,700.73	3,693.83	3,700.73	37.80	69.04	93.55	813.55	-3,721.78	1,032.70	926.18	106.52	9.695	
6,900.00	3,699.25	3,692.35	3,699.25	38.32	69.01	93.36	813.55	-3,721.78	987.86	880.82	107.04	9.229	
6,950.00	3,697.76	3,690.86	3,697.76	38.84	68.98	93.17	813.55	-3,721.78	943.52	835.97	107.55	8.773	
7,000.00	3,696.28	3,689.37	3,696.28	39.37	68.95	92.98	813.55	-3,721.78	899.79	791.72	108.07	8.326	
7,050.00	3,694.79	3,687.89	3,694.79	39.89	68.92	92.79	813.55	-3,721.78	856.73	748.14	108.59	7.890	
7,100.00	3,693.30	3,686.40	3,693.30	40.42	68.89	92.60	813.55	-3,721.78	814.46	705.36	109.10	7.465	
7,150.00	3,691.82	3,684.92	3,691.82	40.94	68.85	92.41	813.55	-3,721.78	773.12	663.50	109.62	7.053	
7,200.00	3,690.33	3,683.43	3,690.33	41.47	68.82	92.22	813.55	-3,721.78	732.85	622.72	110.13	6.654	
7,250.00	3,688.85	3,681.95	3,688.85	42.00	68.79	92.03	813.55	-3,721.78	693.85	583.20	110.65	6.271	
7,300.00	3,687.36	3,680.46	3,687.36	42.53	68.76	91.84	813.55	-3,721.78	656.33	545.17	111.16	5.904	
7,350.00	3,685.88	3,678.98	3,685.88	43.06	68.73	91.65	813.55	-3,721.78	620.58	508.90	111.68	5.557	
7,400.00	3,684.39	3,677.49	3,684.39	43.59	68.70	91.46	813.55	-3,721.78	586.90	474.71	112.19	5.231	
7,450.00	3,682.91	3,676.01	3,682.91	44.12	68.67	91.27	813.55	-3,721.78	555.69	442.98	112.71	4.930	
7,500.00	3,681.42	3,674.52	3,681.42	44.65	68.63	91.08	813.55	-3,721.78	527.37	414.15	113.22	4.658	
7,550.00	3,679.94	3,673.03	3,679.94	45.19	68.60	90.89	813.55	-3,721.78	502.44	388.71	113.74	4.418	
7,600.00	3,678.45	3,671.55	3,678.45	45.72	68.57	90.69	813.55	-3,721.78	481.43	367.18	114.25	4.214	
7,650.00	3,676.96	3,670.06	3,676.96	46.26	68.54	90.50	813.55	-3,721.78	464.86	350.09	114.76	4.051	
7,700.00	3,675.48	3,668.58	3,675.48	46.79	68.51	90.31	813.55	-3,721.78	453.22	337.94	115.27	3.932	
7,750.00	3,673.99	3,667.09	3,673.99	47.33	68.48	90.12	813.55	-3,721.78	446.89	331.11	115.79	3.860	
7,781.96	3,673.04	3,666.14	3,673.04	47.67	68.46	90.00	813.55	-3,721.78	445.75	329.64	116.11	3.839 CC, ES	
7,800.00	3,672.51	3,665.61	3,672.51	47.86	68.44	89.93	813.55	-3,721.78	446.11	329.82	116.30	3.836 SF	
7,850.00	3,671.02	3,664.12	3,671.02	48.40	68.41	89.74	813.55	-3,721.78	450.91	334.10	116.81	3.860	
7,900.00	3,669.54	3,662.64	3,669.54	48.94	68.38	89.55	813.55	-3,721.78	461.10	343.78	117.32	3.930	
7,950.00	3,668.05	3,661.15	3,668.05	49.48	68.35	89.36	813.55	-3,721.78	476.35	358.52	117.83	4.043	
8,000.00	3,666.57	3,659.67	3,666.57	50.02	68.32	89.17	813.55	-3,721.78	496.18	377.84	118.34	4.193	
8,050.00	3,665.08	3,658.18	3,665.08	50.56	68.29	88.98	813.55	-3,721.78	520.07	401.23	118.84	4.376	
8,100.00	3,663.60	3,656.70	3,663.60	51.10	68.26	88.79	813.55	-3,721.78	547.50	428.15	119.35	4.587	
8,150.00	3,662.11	3,655.21	3,662.11	51.64	68.22	88.60	813.55	-3,721.78	577.95	458.09	119.86	4.822	
8,200.00	3,660.62	3,653.72	3,660.62	52.18	68.19	88.40	813.55	-3,721.78	610.98	490.62	120.36	5.076	
8,250.00	3,659.14	3,652.24	3,659.14	52.72	68.16	88.21	813.55	-3,721.78	646.19	525.32	120.87	5.346	
8,300.00	3,657.65	3,650.75	3,657.65	53.26	68.13	88.02	813.55	-3,721.78	683.24	561.87	121.37	5.629	
8,350.00	3,656.17	3,649.27	3,656.17	53.80	68.10	87.83	813.55	-3,721.78	721.86	599.98	121.87	5.923	
8,400.00	3,654.68	3,647.78	3,654.68	54.34	68.07	87.64	813.55	-3,721.78	761.79	639.42	122.37	6.225	
8,450.00	3,653.20	3,646.30	3,653.20	54.89	68.04	87.45	813.55	-3,721.78	802.86	679.98	122.88	6.534	
8,500.00	3,651.71	3,644.81	3,651.71	55.43	68.00	87.26	813.55	-3,721.78	844.88	721.50	123.38	6.848	
8,550.00	3,650.23	3,643.33	3,650.23	55.97	67.97	87.07	813.55	-3,721.78	887.73	763.85	123.87	7.166	
8,600.00	3,648.74	3,641.84	3,648.74	56.52	67.94	86.88	813.55	-3,721.78	931.29	806.91	124.37	7.488	
8,650.00	3,647.26	3,640.36	3,647.26	57.06	67.91	86.69	813.55	-3,721.78	975.46	850.59	124.87	7.812	
8,700.00	3,645.77	3,638.87	3,645.77	57.61	67.88	86.50	813.55	-3,721.78	1,020.17	894.81	125.37	8.138	
8,750.00	3,644.29	3,637.38	3,644.29	58.15	67.85	86.31	813.55	-3,721.78	1,065.35	939.49	125.86	8.465	
8,800.00	3,642.80	3,635.90	3,642.80	58.70	67.82	86.12	813.55	-3,721.78	1,110.94	984.59	126.35	8.792	
8,850.00	3,641.31	3,634.41	3,641.31	59.24	67.78	85.93	813.55	-3,721.78	1,156.89	1,030.05	126.85	9.120	
8,900.00	3,639.83	3,632.93	3,639.83	59.79	67.75	85.74	813.55	-3,721.78	1,203.16	1,075.83	127.34	9.449	
8,950.00	3,638.34	3,631.44	3,638.34	60.34	67.72	85.55	813.55	-3,721.78	1,249.72	1,121.90	127.83	9.777	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: RED LAKE 28 K STATE 3 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 420-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	
7,700.00	3,675.48	3,629.53	3,675.48	46.79	64.63	90.09	1,474.09	-3,714.30	1,107.40	996.00	111.41	9.940	
7,750.00	3,673.99	3,628.05	3,673.99	47.33	64.60	90.01	1,474.09	-3,714.30	1,105.92	994.00	111.92	9.882	
7,757.82	3,673.76	3,627.82	3,673.76	47.41	64.60	90.00	1,474.09	-3,714.30	1,105.89	993.90	111.99	9.874 CC, ES	
7,800.00	3,672.51	3,626.56	3,672.51	47.86	64.57	89.94	1,474.09	-3,714.30	1,106.69	994.27	112.42	9.844	
7,850.00	3,671.02	3,625.08	3,671.02	48.40	64.54	89.86	1,474.09	-3,714.30	1,109.72	996.79	112.94	9.826 SF	
7,900.00	3,669.54	3,623.59	3,669.54	48.94	64.51	89.78	1,474.09	-3,714.30	1,114.99	1,001.54	113.45	9.828	
7,950.00	3,668.05	3,622.11	3,668.05	49.48	64.49	89.70	1,474.09	-3,714.30	1,122.45	1,008.49	113.96	9.850	
8,000.00	3,666.57	3,620.62	3,666.57	50.02	64.46	89.63	1,474.09	-3,714.30	1,132.08	1,017.61	114.47	9.890	
8,050.00	3,665.08	3,619.14	3,665.08	50.56	64.43	89.55	1,474.09	-3,714.30	1,143.80	1,028.83	114.98	9.948	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: RED LAKE 28 K STATE 4 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 1014-INC-ONLY												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,350.00	3,715.59	3,707.62	3,715.59	32.66	58.88	92.94	830.28	-3,061.37	890.37	799.04	91.32	9.750	
6,400.00	3,714.10	3,706.14	3,714.10	33.17	58.86	92.75	830.28	-3,061.37	847.47	755.65	91.82	9.230	
6,450.00	3,712.62	3,704.65	3,712.62	33.68	58.83	92.56	830.28	-3,061.37	805.40	713.08	92.32	8.724	
6,500.00	3,711.13	3,703.17	3,711.13	34.18	58.80	92.37	830.28	-3,061.37	764.28	671.46	92.82	8.234	
6,550.00	3,709.64	3,701.68	3,709.64	34.70	58.77	92.18	830.28	-3,061.37	724.27	630.95	93.32	7.761	
6,600.00	3,708.16	3,700.19	3,708.16	35.21	58.75	91.99	830.28	-3,061.37	685.57	591.75	93.83	7.307	
6,650.00	3,706.67	3,698.71	3,706.67	35.73	58.72	91.80	830.28	-3,061.37	648.42	554.09	94.33	6.874	
6,700.00	3,705.19	3,697.22	3,705.19	36.24	58.69	91.61	830.28	-3,061.37	613.10	518.26	94.83	6.465	
6,750.00	3,703.70	3,695.74	3,703.70	36.76	58.66	91.42	830.28	-3,061.37	579.93	484.59	95.34	6.083	
6,800.00	3,702.22	3,694.25	3,702.22	37.28	58.64	91.23	830.28	-3,061.37	549.31	453.47	95.84	5.732	
6,850.00	3,700.73	3,692.77	3,700.73	37.80	58.61	91.03	830.28	-3,061.37	521.69	425.35	96.35	5.415	
6,900.00	3,699.25	3,691.28	3,699.25	38.32	58.58	90.84	830.28	-3,061.37	497.58	400.73	96.85	5.138	
6,950.00	3,697.76	3,689.80	3,697.76	38.84	58.55	90.65	830.28	-3,061.37	477.49	380.13	97.36	4.905	
7,000.00	3,696.28	3,688.31	3,696.28	39.37	58.53	90.46	830.28	-3,061.37	461.96	364.10	97.86	4.721	
7,050.00	3,694.79	3,686.83	3,694.79	39.89	58.50	90.27	830.28	-3,061.37	451.45	353.08	98.37	4.589	
7,100.00	3,693.30	3,685.34	3,693.30	40.42	58.47	90.08	830.28	-3,061.37	446.33	347.45	98.87	4.514	
7,121.05	3,692.68	3,684.72	3,692.68	40.64	58.46	90.00	830.28	-3,061.37	445.83	346.75	99.08	4.500 CC, ES	
7,150.00	3,691.82	3,683.85	3,691.82	40.94	58.44	89.89	830.28	-3,061.37	446.77	347.39	99.38	4.496 SF	
7,200.00	3,690.33	3,682.37	3,690.33	41.47	58.42	89.70	830.28	-3,061.37	452.76	352.88	99.88	4.533	
7,250.00	3,688.85	3,680.88	3,688.85	42.00	58.39	89.51	830.28	-3,061.37	464.09	363.70	100.39	4.623	
7,300.00	3,687.36	3,679.40	3,687.36	42.53	58.36	89.32	830.28	-3,061.37	480.38	379.48	100.89	4.761	
7,350.00	3,685.88	3,677.91	3,685.88	43.06	58.33	89.13	830.28	-3,061.37	501.14	399.74	101.40	4.942	
7,400.00	3,684.39	3,676.43	3,684.39	43.59	58.31	88.94	830.28	-3,061.37	525.84	423.94	101.90	5.160	
7,450.00	3,682.91	3,674.94	3,682.91	44.12	58.28	88.74	830.28	-3,061.37	553.97	451.56	102.40	5.410	
7,500.00	3,681.42	3,673.46	3,681.42	44.65	58.25	88.55	830.28	-3,061.37	585.02	482.11	102.91	5.685	
7,550.00	3,679.94	3,671.97	3,679.94	45.19	58.23	88.36	830.28	-3,061.37	618.55	515.14	103.41	5.982	
7,600.00	3,678.45	3,670.49	3,678.45	45.72	58.20	88.17	830.28	-3,061.37	654.19	550.27	103.91	6.296	
7,650.00	3,676.96	3,669.00	3,676.96	46.26	58.17	87.98	830.28	-3,061.37	691.60	587.18	104.41	6.624	
7,700.00	3,675.48	3,667.52	3,675.48	46.79	58.14	87.79	830.28	-3,061.37	730.52	625.60	104.92	6.963	
7,750.00	3,673.99	3,666.03	3,673.99	47.33	58.12	87.60	830.28	-3,061.37	770.71	665.30	105.42	7.311	
7,800.00	3,672.51	3,664.54	3,672.51	47.86	58.09	87.41	830.28	-3,061.37	812.00	706.08	105.92	7.666	
7,850.00	3,671.02	3,663.06	3,671.02	48.40	58.06	87.22	830.28	-3,061.37	854.21	747.79	106.42	8.027	
7,900.00	3,669.54	3,661.57	3,669.54	48.94	58.03	87.03	830.28	-3,061.37	897.22	790.30	106.92	8.392	
7,950.00	3,668.05	3,660.09	3,668.05	49.48	58.01	86.84	830.28	-3,061.37	940.92	833.50	107.42	8.760	
8,000.00	3,666.57	3,658.60	3,666.57	50.02	57.98	86.65	830.28	-3,061.37	985.21	877.30	107.91	9.130	
8,050.00	3,665.08	3,657.12	3,665.08	50.56	57.95	86.46	830.28	-3,061.37	1,030.03	921.62	108.41	9.501	
8,100.00	3,663.60	3,655.63	3,663.60	51.10	57.92	86.27	830.28	-3,061.37	1,075.30	966.39	108.91	9.874	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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: 542-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
6,900.00	3,699.25	3,691.36	3,699.25	38.32	69.23	-91.13	-498.67	-3,386.80	1,049.23	941.68	107.55	9.756	
6,950.00	3,697.76	3,689.88	3,697.76	38.84	69.20	-91.03	-498.67	-3,386.80	1,022.46	914.42	108.04	9.464	
7,000.00	3,696.28	3,688.39	3,696.28	39.37	69.17	-90.93	-498.67	-3,386.80	997.48	888.95	108.53	9.191	
7,050.00	3,694.79	3,686.90	3,694.79	39.89	69.14	-90.84	-498.67	-3,386.80	974.42	865.40	109.03	8.937	
7,100.00	3,693.30	3,685.42	3,693.30	40.42	69.11	-90.74	-498.67	-3,386.80	953.43	843.91	109.52	8.705	
7,150.00	3,691.82	3,683.93	3,691.82	40.94	69.07	-90.64	-498.67	-3,386.80	934.65	824.63	110.02	8.495	
7,200.00	3,690.33	3,682.45	3,690.33	41.47	69.04	-90.54	-498.67	-3,386.80	918.20	807.69	110.51	8.309	
7,250.00	3,688.85	3,680.96	3,688.85	42.00	69.01	-90.45	-498.67	-3,386.80	904.22	793.21	111.01	8.145	
7,300.00	3,687.36	3,679.48	3,687.36	42.53	68.98	-90.35	-498.67	-3,386.80	892.82	781.31	111.51	8.007	
7,350.00	3,685.88	3,677.99	3,685.88	43.06	68.95	-90.25	-498.67	-3,386.80	884.10	772.10	112.00	7.893	
7,400.00	3,684.39	3,676.51	3,684.39	43.59	68.92	-90.16	-498.67	-3,386.80	878.15	765.64	112.50	7.806	
7,450.00	3,682.91	3,675.02	3,682.91	44.12	68.89	-90.06	-498.67	-3,386.80	875.01	762.01	113.00	7.743	
7,480.03	3,682.01	3,674.13	3,682.01	44.44	68.87	-90.00	-498.67	-3,386.80	874.50	761.19	113.30	7.718 CC, ES	
7,500.00	3,681.42	3,673.54	3,681.42	44.65	68.86	-89.96	-498.67	-3,386.80	874.72	761.22	113.50	7.707	
7,550.00	3,679.94	3,672.05	3,679.94	45.19	68.83	-89.86	-498.67	-3,386.80	877.29	763.29	114.00	7.695 SF	
7,600.00	3,678.45	3,670.56	3,678.45	45.72	68.80	-89.77	-498.67	-3,386.80	882.68	768.18	114.50	7.709	
7,650.00	3,676.96	3,669.08	3,676.96	46.26	68.77	-89.67	-498.67	-3,386.80	890.85	775.85	115.00	7.746	
7,700.00	3,675.48	3,667.59	3,675.48	46.79	68.74	-89.57	-498.67	-3,386.80	901.71	786.21	115.50	7.807	
7,750.00	3,673.99	3,666.11	3,673.99	47.33	68.71	-89.47	-498.67	-3,386.80	915.19	799.18	116.00	7.889	
7,800.00	3,672.51	3,664.62	3,672.51	47.86	68.68	-89.38	-498.67	-3,386.80	931.15	814.64	116.50	7.992	
7,850.00	3,671.02	3,663.14	3,671.02	48.40	68.65	-89.28	-498.67	-3,386.80	949.48	832.47	117.01	8.115	
7,900.00	3,669.54	3,661.65	3,669.54	48.94	68.62	-89.18	-498.67	-3,386.80	970.03	852.53	117.51	8.255	
7,950.00	3,668.05	3,660.17	3,668.05	49.48	68.59	-89.09	-498.67	-3,386.80	992.69	874.68	118.01	8.412	
8,000.00	3,666.57	3,658.68	3,666.57	50.02	68.56	-88.99	-498.67	-3,386.80	1,017.29	898.78	118.51	8.584	
8,050.00	3,665.08	3,657.20	3,665.08	50.56	68.53	-88.89	-498.67	-3,386.80	1,043.71	924.69	119.02	8.770	
8,100.00	3,663.60	3,655.71	3,663.60	51.10	68.50	-88.79	-498.67	-3,386.80	1,071.81	952.29	119.52	8.968	
8,150.00	3,662.11	3,654.23	3,662.11	51.64	68.47	-88.70	-498.67	-3,386.80	1,101.46	981.44	120.02	9.177	
8,200.00	3,660.62	3,652.74	3,660.62	52.18	68.44	-88.60	-498.67	-3,386.80	1,132.54	1,012.02	120.52	9.397	
8,250.00	3,659.14	3,651.25	3,659.14	52.72	68.41	-88.50	-498.67	-3,386.80	1,164.94	1,043.91	121.03	9.626	
8,300.00	3,657.65	3,649.77	3,657.65	53.26	68.38	-88.41	-498.67	-3,386.80	1,198.54	1,077.02	121.53	9.862	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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: 535-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	
6,800.00	3,702.22	3,686.27	3,702.22	37.28	64.29	-96.41	114.10	-3,684.80	995.25	894.10	101.15	9.839	
6,850.00	3,700.73	3,684.79	3,700.73	37.80	64.26	-96.08	114.10	-3,684.80	947.02	845.33	101.69	9.313	
6,900.00	3,699.25	3,683.30	3,699.25	38.32	64.23	-95.75	114.10	-3,684.80	898.98	796.75	102.23	8.794	
6,950.00	3,697.76	3,681.82	3,697.76	38.84	64.20	-95.42	114.10	-3,684.80	851.16	748.40	102.77	8.282	
7,000.00	3,696.28	3,680.33	3,696.28	39.37	64.18	-95.09	114.10	-3,684.80	803.61	700.31	103.30	7.779	
7,050.00	3,694.79	3,678.84	3,694.79	39.89	64.15	-94.75	114.10	-3,684.80	756.37	652.53	103.84	7.284	
7,100.00	3,693.30	3,677.36	3,693.30	40.42	64.12	-94.42	114.10	-3,684.80	709.50	605.13	104.37	6.798	
7,150.00	3,691.82	3,675.87	3,691.82	40.94	64.09	-94.09	114.10	-3,684.80	663.09	558.19	104.90	6.321	
7,200.00	3,690.33	3,674.39	3,690.33	41.47	64.07	-93.76	114.10	-3,684.80	617.23	511.81	105.43	5.855	
7,250.00	3,688.85	3,672.90	3,688.85	42.00	64.04	-93.42	114.10	-3,684.80	572.07	466.12	105.95	5.399	
7,300.00	3,687.36	3,671.42	3,687.36	42.53	64.01	-93.09	114.10	-3,684.80	527.77	421.30	106.48	4.957	
7,350.00	3,685.88	3,669.93	3,685.88	43.06	63.98	-92.76	114.10	-3,684.80	484.58	377.59	107.00	4.529	
7,400.00	3,684.39	3,668.45	3,684.39	43.59	63.96	-92.42	114.10	-3,684.80	442.83	335.31	107.52	4.119	
7,450.00	3,682.91	3,666.96	3,682.91	44.12	63.93	-92.09	114.10	-3,684.80	402.94	294.91	108.03	3.730	
7,500.00	3,681.42	3,665.48	3,681.42	44.65	63.90	-91.76	114.10	-3,684.80	365.55	257.00	108.55	3.368	
7,550.00	3,679.94	3,663.99	3,679.94	45.19	63.87	-91.42	114.10	-3,684.80	331.49	222.43	109.06	3.040	
7,600.00	3,678.45	3,662.50	3,678.45	45.72	63.85	-91.09	114.10	-3,684.80	301.90	192.33	109.57	2.755	
7,650.00	3,676.96	3,661.02	3,676.96	46.26	63.82	-90.75	114.10	-3,684.80	278.20	168.12	110.08	2.527	
7,700.00	3,675.48	3,659.53	3,675.48	46.79	63.79	-90.42	114.10	-3,684.80	261.99	151.42	110.58	2.369	
7,750.00	3,673.99	3,658.05	3,673.99	47.33	63.76	-90.08	114.10	-3,684.80	254.72	143.64	111.08	2.293	
7,762.61	3,673.62	3,657.67	3,673.62	47.46	63.76	-90.00	114.10	-3,684.80	254.41	143.20	111.21	2.288 CC, ES, SF	
7,800.00	3,672.51	3,656.56	3,672.51	47.86	63.74	-89.75	114.10	-3,684.80	257.14	145.56	111.58	2.305	
7,850.00	3,671.02	3,655.08	3,671.02	48.40	63.71	-89.42	114.10	-3,684.80	268.99	156.91	112.07	2.400	
7,900.00	3,669.54	3,653.59	3,669.54	48.94	63.68	-89.08	114.10	-3,684.80	289.11	176.54	112.57	2.568	
7,950.00	3,668.05	3,652.11	3,668.05	49.48	63.65	-88.75	114.10	-3,684.80	315.92	202.87	113.05	2.794	
8,000.00	3,666.57	3,650.62	3,666.57	50.02	63.63	-88.41	114.10	-3,684.80	347.89	234.35	113.54	3.064	
8,050.00	3,665.08	3,649.14	3,665.08	50.56	63.60	-88.08	114.10	-3,684.80	383.72	269.70	114.02	3.365	
8,100.00	3,663.60	3,647.65	3,663.60	51.10	63.57	-87.74	114.10	-3,684.80	422.44	307.94	114.50	3.689	
8,150.00	3,662.11	3,646.16	3,662.11	51.64	63.54	-87.41	114.10	-3,684.80	463.32	348.34	114.98	4.030	
8,200.00	3,660.62	3,644.68	3,660.62	52.18	63.52	-87.08	114.10	-3,684.80	505.83	390.38	115.45	4.381	
8,250.00	3,659.14	3,643.19	3,659.14	52.72	63.49	-86.74	114.10	-3,684.80	549.60	433.68	115.92	4.741	
8,300.00	3,657.65	3,641.71	3,657.65	53.26	63.46	-86.41	114.10	-3,684.80	594.35	477.97	116.39	5.107	
8,350.00	3,656.17	3,640.22	3,656.17	53.80	63.43	-86.08	114.10	-3,684.80	639.88	523.03	116.85	5.476	
8,400.00	3,654.68	3,638.74	3,654.68	54.34	63.41	-85.75	114.10	-3,684.80	686.02	568.72	117.31	5.848	
8,450.00	3,653.20	3,637.25	3,653.20	54.89	63.38	-85.41	114.10	-3,684.80	732.67	614.91	117.76	6.222	
8,500.00	3,651.71	3,635.77	3,651.71	55.43	63.35	-85.08	114.10	-3,684.80	779.73	661.52	118.21	6.596	
8,550.00	3,650.23	3,634.28	3,650.23	55.97	63.33	-84.75	114.10	-3,684.80	827.14	708.48	118.66	6.971	
8,600.00	3,648.74	3,632.80	3,648.74	56.52	63.30	-84.42	114.10	-3,684.80	874.83	755.72	119.11	7.345	
8,650.00	3,647.26	3,631.31	3,647.26	57.06	63.27	-84.09	114.10	-3,684.80	922.76	803.21	119.55	7.719	
8,700.00	3,645.77	3,629.82	3,645.77	57.61	63.24	-83.76	114.10	-3,684.80	970.90	850.92	119.98	8.092	
8,750.00	3,644.29	3,628.34	3,644.29	58.15	63.22	-83.43	114.10	-3,684.80	1,019.22	898.80	120.42	8.464	
8,800.00	3,642.80	3,626.85	3,642.80	58.70	63.19	-83.10	114.10	-3,684.80	1,067.68	946.84	120.85	8.835	
8,850.00	3,641.31	3,625.37	3,641.31	59.24	63.16	-82.77	114.10	-3,684.80	1,116.29	995.01	121.27	9.205	
8,900.00	3,639.83	3,623.88	3,639.83	59.79	63.13	-82.44	114.10	-3,684.80	1,165.00	1,043.31	121.69	9.573	
8,950.00	3,638.34	3,622.40	3,638.34	60.34	63.11	-82.11	114.10	-3,684.80	1,213.83	1,091.71	122.11	9.940	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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: 405-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	
7,200.00	3,690.33	3,679.43	3,690.33	41.47	68.96	-91.23	-507.54	-3,736.80	1,077.84	967.41	110.43	9.761	
7,250.00	3,688.85	3,677.95	3,688.85	42.00	68.93	-91.13	-507.54	-3,736.80	1,049.41	938.49	110.92	9.461	
7,300.00	3,687.36	3,676.46	3,687.36	42.53	68.89	-91.03	-507.54	-3,736.80	1,022.64	911.21	111.42	9.178	
7,350.00	3,685.88	3,674.98	3,685.88	43.06	68.86	-90.93	-507.54	-3,736.80	997.65	885.73	111.92	8.914	
7,400.00	3,684.39	3,673.49	3,684.39	43.59	68.83	-90.84	-507.54	-3,736.80	974.58	862.16	112.42	8.669	
7,450.00	3,682.91	3,672.01	3,682.91	44.12	68.80	-90.74	-507.54	-3,736.80	953.58	840.66	112.92	8.445	
7,500.00	3,681.42	3,670.52	3,681.42	44.65	68.77	-90.64	-507.54	-3,736.80	934.78	821.36	113.42	8.242	
7,550.00	3,679.94	3,669.04	3,679.94	45.19	68.74	-90.55	-507.54	-3,736.80	918.32	804.40	113.92	8.061	
7,600.00	3,678.45	3,667.55	3,678.45	45.72	68.71	-90.45	-507.54	-3,736.80	904.33	789.91	114.42	7.903	
7,650.00	3,676.96	3,666.07	3,676.96	46.26	68.67	-90.35	-507.54	-3,736.80	892.92	777.99	114.92	7.770	
7,700.00	3,675.48	3,664.58	3,675.48	46.79	68.64	-90.25	-507.54	-3,736.80	884.19	768.76	115.43	7.660	
7,750.00	3,673.99	3,663.09	3,673.99	47.33	68.61	-90.16	-507.54	-3,736.80	878.22	762.29	115.93	7.575	
7,800.00	3,672.51	3,661.61	3,672.51	47.86	68.58	-90.06	-507.54	-3,736.80	875.07	758.63	116.43	7.516	
7,830.29	3,671.61	3,660.71	3,671.61	48.19	68.56	-90.00	-507.54	-3,736.80	874.54	757.81	116.74	7.492 CC, ES	
7,850.00	3,671.02	3,660.12	3,671.02	48.40	68.55	-89.96	-507.54	-3,736.80	874.76	757.83	116.93	7.481	
7,900.00	3,669.54	3,658.64	3,669.54	48.94	68.52	-89.86	-507.54	-3,736.80	877.31	759.88	117.44	7.470 SF	
7,950.00	3,668.05	3,657.15	3,668.05	49.48	68.49	-89.77	-507.54	-3,736.80	882.69	764.75	117.94	7.484	
8,000.00	3,666.57	3,655.67	3,666.57	50.02	68.45	-89.67	-507.54	-3,736.80	890.84	772.40	118.44	7.521	
8,050.00	3,665.08	3,654.18	3,665.08	50.56	68.42	-89.57	-507.54	-3,736.80	901.69	782.75	118.95	7.581	
8,100.00	3,663.60	3,652.70	3,663.60	51.10	68.39	-89.48	-507.54	-3,736.80	915.15	795.70	119.45	7.661	
8,150.00	3,662.11	3,651.21	3,662.11	51.64	68.36	-89.38	-507.54	-3,736.80	931.10	811.14	119.96	7.762	
8,200.00	3,660.62	3,649.73	3,660.62	52.18	68.33	-89.28	-507.54	-3,736.80	949.41	828.95	120.46	7.882	
8,250.00	3,659.14	3,648.24	3,659.14	52.72	68.30	-89.18	-507.54	-3,736.80	969.96	849.00	120.96	8.019	
8,300.00	3,657.65	3,646.76	3,657.65	53.26	68.27	-89.09	-507.54	-3,736.80	992.60	871.13	121.47	8.172	
8,350.00	3,656.17	3,645.27	3,656.17	53.80	68.23	-88.99	-507.54	-3,736.80	1,017.19	895.22	121.97	8.339	
8,400.00	3,654.68	3,643.78	3,654.68	54.34	68.20	-88.89	-507.54	-3,736.80	1,043.60	921.12	122.48	8.521	
8,450.00	3,653.20	3,642.30	3,653.20	54.89	68.17	-88.79	-507.54	-3,736.80	1,071.69	948.71	122.98	8.714	
8,500.00	3,651.71	3,640.81	3,651.71	55.43	68.14	-88.70	-507.54	-3,736.80	1,101.33	977.85	123.49	8.919	
8,550.00	3,650.23	3,639.33	3,650.23	55.97	68.11	-88.60	-507.54	-3,736.80	1,132.41	1,008.42	123.99	9.133	
8,600.00	3,648.74	3,637.84	3,648.74	56.52	68.08	-88.50	-507.54	-3,736.80	1,164.80	1,040.30	124.50	9.356	
8,650.00	3,647.26	3,636.36	3,647.26	57.06	68.05	-88.41	-507.54	-3,736.80	1,198.39	1,073.40	125.00	9.587	
8,700.00	3,645.77	3,634.87	3,645.77	57.61	68.01	-88.31	-507.54	-3,736.80	1,233.10	1,107.60	125.50	9.825	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: RED LAKE 28 N STATE 4 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 405-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	
6,200.00	3,720.04	3,674.14	3,720.04	31.15	68.86	-97.46	169.74	-3,068.80	968.72	869.29	99.43	9.743	
6,250.00	3,718.56	3,672.66	3,718.56	31.65	68.83	-97.07	169.74	-3,068.80	920.05	820.08	99.97	9.204	
6,300.00	3,717.07	3,671.17	3,717.07	32.15	68.80	-96.68	169.74	-3,068.80	871.52	771.02	100.50	8.672	
6,350.00	3,715.59	3,669.69	3,715.59	32.66	68.77	-96.29	169.74	-3,068.80	823.17	722.14	101.03	8.147	
6,400.00	3,714.10	3,668.20	3,714.10	33.17	68.74	-95.89	169.74	-3,068.80	775.02	673.46	101.56	7.631	
6,450.00	3,712.62	3,666.72	3,712.62	33.68	68.71	-95.50	169.74	-3,068.80	727.13	625.03	102.09	7.122	
6,500.00	3,711.13	3,665.23	3,711.13	34.18	68.68	-95.11	169.74	-3,068.80	679.53	576.91	102.62	6.622	
6,550.00	3,709.64	3,663.75	3,709.64	34.70	68.64	-94.71	169.74	-3,068.80	632.30	529.15	103.14	6.130	
6,600.00	3,708.16	3,662.26	3,708.16	35.21	68.61	-94.32	169.74	-3,068.80	585.52	481.86	103.66	5.648	
6,650.00	3,706.67	3,660.77	3,706.67	35.73	68.58	-93.92	169.74	-3,068.80	539.32	435.14	104.18	5.177	
6,700.00	3,705.19	3,659.29	3,705.19	36.24	68.55	-93.53	169.74	-3,068.80	493.86	389.16	104.70	4.717	
6,750.00	3,703.70	3,657.80	3,703.70	36.76	68.52	-93.13	169.74	-3,068.80	449.36	344.14	105.21	4.271	
6,800.00	3,702.22	3,656.32	3,702.22	37.28	68.49	-92.74	169.74	-3,068.80	406.13	300.41	105.72	3.842	
6,850.00	3,700.73	3,654.83	3,700.73	37.80	68.46	-92.34	169.74	-3,068.80	364.63	258.40	106.23	3.433	
6,900.00	3,699.25	3,653.35	3,699.25	38.32	68.42	-91.95	169.74	-3,068.80	325.53	218.79	106.73	3.050	
6,950.00	3,697.76	3,651.86	3,697.76	38.84	68.39	-91.55	169.74	-3,068.80	289.78	182.55	107.23	2.702	
7,000.00	3,696.28	3,650.38	3,696.28	39.37	68.36	-91.15	169.74	-3,068.80	258.80	151.07	107.73	2.402	
7,050.00	3,694.79	3,648.89	3,694.79	39.89	68.33	-90.76	169.74	-3,068.80	234.46	126.24	108.22	2.167	
7,100.00	3,693.30	3,647.41	3,693.30	40.42	68.30	-90.36	169.74	-3,068.80	219.01	110.30	108.71	2.015	
7,145.13	3,691.96	3,646.06	3,691.96	40.89	68.27	-90.00	169.74	-3,068.80	214.31	105.17	109.15	1.964 CC, ES	
7,150.00	3,691.82	3,645.92	3,691.82	40.94	68.27	-89.96	169.74	-3,068.80	214.37	105.17	109.19	1.963 SF	
7,200.00	3,690.33	3,644.43	3,690.33	41.47	68.24	-89.56	169.74	-3,068.80	221.22	111.54	109.68	2.017	
7,250.00	3,688.85	3,642.95	3,688.85	42.00	68.20	-89.17	169.74	-3,068.80	238.57	128.42	110.15	2.166	
7,300.00	3,687.36	3,641.46	3,687.36	42.53	68.17	-88.77	169.74	-3,068.80	264.37	153.75	110.63	2.390	
7,350.00	3,685.88	3,639.98	3,685.88	43.06	68.14	-88.37	169.74	-3,068.80	296.42	185.32	111.09	2.668	
7,400.00	3,684.39	3,638.49	3,684.39	43.59	68.11	-87.98	169.74	-3,068.80	332.91	221.35	111.56	2.984	
7,450.00	3,682.91	3,637.01	3,682.91	44.12	68.08	-87.58	169.74	-3,068.80	372.55	260.53	112.02	3.326	
7,500.00	3,681.42	3,635.52	3,681.42	44.65	68.05	-87.18	169.74	-3,068.80	414.43	301.95	112.47	3.685	
7,550.00	3,679.94	3,634.04	3,679.94	45.19	68.02	-86.79	169.74	-3,068.80	457.93	345.01	112.93	4.055	
7,600.00	3,678.45	3,632.55	3,678.45	45.72	67.98	-86.39	169.74	-3,068.80	502.65	389.27	113.37	4.434	
7,650.00	3,676.96	3,631.07	3,676.96	46.26	67.95	-86.00	169.74	-3,068.80	548.27	434.45	113.81	4.817	
7,700.00	3,675.48	3,629.58	3,675.48	46.79	67.92	-85.60	169.74	-3,068.80	594.59	480.34	114.25	5.204	
7,750.00	3,673.99	3,628.09	3,673.99	47.33	67.89	-85.21	169.74	-3,068.80	641.46	526.78	114.68	5.593	
7,800.00	3,672.51	3,626.61	3,672.51	47.86	67.86	-84.82	169.74	-3,068.80	688.77	573.66	115.11	5.984	
7,850.00	3,671.02	3,625.12	3,671.02	48.40	67.83	-84.42	169.74	-3,068.80	736.43	620.90	115.53	6.374	
7,900.00	3,669.54	3,623.64	3,669.54	48.94	67.80	-84.03	169.74	-3,068.80	784.38	668.43	115.95	6.765	
7,950.00	3,668.05	3,622.15	3,668.05	49.48	67.76	-83.64	169.74	-3,068.80	832.57	716.21	116.36	7.155	
8,000.00	3,666.57	3,620.67	3,666.57	50.02	67.73	-83.24	169.74	-3,068.80	880.96	764.19	116.77	7.544	
8,050.00	3,665.08	3,619.18	3,665.08	50.56	67.70	-82.85	169.74	-3,068.80	929.51	812.34	117.17	7.933	
8,100.00	3,663.60	3,617.70	3,663.60	51.10	67.67	-82.46	169.74	-3,068.80	978.21	860.64	117.57	8.320	
8,150.00	3,662.11	3,616.21	3,662.11	51.64	67.64	-82.07	169.74	-3,068.80	1,027.03	909.07	117.96	8.706	
8,200.00	3,660.62	3,614.73	3,660.62	52.18	67.61	-81.68	169.74	-3,068.80	1,075.96	957.61	118.35	9.091	
8,250.00	3,659.14	3,613.24	3,659.14	52.72	67.58	-81.30	169.74	-3,068.80	1,124.98	1,006.25	118.73	9.475	
8,300.00	3,657.65	3,611.76	3,657.65	53.26	67.55	-80.91	169.74	-3,068.80	1,174.08	1,054.98	119.11	9.857	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: SAN JUAN-STATE 1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 542-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	
7,600.00	3,678.45	3,670.16	3,678.45	45.72	68.92	-94.46	-59.46	-4,582.80	1,139.16	1,024.72	114.44	9.954	
7,650.00	3,676.96	3,668.68	3,676.96	46.26	68.89	-94.25	-59.46	-4,582.80	1,092.60	977.63	114.97	9.503	
7,700.00	3,675.48	3,667.19	3,675.48	46.79	68.86	-94.04	-59.46	-4,582.80	1,046.35	930.86	115.49	9.060	
7,750.00	3,673.99	3,665.71	3,673.99	47.33	68.83	-93.84	-59.46	-4,582.80	1,000.46	884.44	116.02	8.623	
7,800.00	3,672.51	3,664.22	3,672.51	47.86	68.80	-93.63	-59.46	-4,582.80	954.98	838.44	116.54	8.194	
7,850.00	3,671.02	3,662.74	3,671.02	48.40	68.77	-93.42	-59.46	-4,582.80	909.97	792.91	117.07	7.773	
7,900.00	3,669.54	3,661.25	3,669.54	48.94	68.74	-93.21	-59.46	-4,582.80	865.51	747.92	117.59	7.360	
7,950.00	3,668.05	3,659.77	3,668.05	49.48	68.71	-93.00	-59.46	-4,582.80	821.69	703.57	118.11	6.957	
8,000.00	3,666.57	3,658.28	3,666.57	50.02	68.68	-92.79	-59.46	-4,582.80	778.60	659.97	118.64	6.563	
8,050.00	3,665.08	3,656.80	3,665.08	50.56	68.65	-92.58	-59.46	-4,582.80	736.39	617.23	119.16	6.180	
8,100.00	3,663.60	3,655.31	3,663.60	51.10	68.62	-92.37	-59.46	-4,582.80	695.20	575.53	119.68	5.809	
8,150.00	3,662.11	3,653.83	3,662.11	51.64	68.59	-92.16	-59.46	-4,582.80	655.24	535.05	120.20	5.451	
8,200.00	3,660.62	3,652.34	3,660.62	52.18	68.56	-91.95	-59.46	-4,582.80	616.75	496.03	120.71	5.109	
8,250.00	3,659.14	3,650.85	3,659.14	52.72	68.53	-91.74	-59.46	-4,582.80	580.01	458.77	121.23	4.784	
8,300.00	3,657.65	3,649.37	3,657.65	53.26	68.50	-91.53	-59.46	-4,582.80	545.37	423.63	121.75	4.480	
8,350.00	3,656.17	3,647.88	3,656.17	53.80	68.47	-91.32	-59.46	-4,582.80	513.28	391.01	122.26	4.198	
8,400.00	3,654.68	3,646.40	3,654.68	54.34	68.43	-91.11	-59.46	-4,582.80	484.22	361.44	122.78	3.944	
8,450.00	3,653.20	3,644.91	3,653.20	54.89	68.40	-90.90	-59.46	-4,582.80	458.78	335.49	123.29	3.721	
8,500.00	3,651.71	3,643.43	3,651.71	55.43	68.37	-90.69	-59.46	-4,582.80	437.59	313.79	123.80	3.535	
8,550.00	3,650.23	3,641.94	3,650.23	55.97	68.34	-90.48	-59.46	-4,582.80	421.29	296.98	124.31	3.389	
8,600.00	3,648.74	3,640.46	3,648.74	56.52	68.31	-90.27	-59.46	-4,582.80	410.47	285.65	124.82	3.288	
8,650.00	3,647.26	3,638.97	3,647.26	57.06	68.28	-90.06	-59.46	-4,582.80	405.56	280.23	125.33	3.236	
8,665.10	3,646.81	3,638.52	3,646.81	57.23	68.27	-90.00	-59.46	-4,582.80	405.28	279.79	125.49	3.230 CC, ES, SF	
8,700.00	3,645.77	3,637.49	3,645.77	57.61	68.25	-89.85	-59.46	-4,582.80	406.78	280.94	125.84	3.232	
8,750.00	3,644.29	3,636.00	3,644.29	58.15	68.22	-89.64	-59.46	-4,582.80	414.07	287.72	126.35	3.277	
8,800.00	3,642.80	3,634.51	3,642.80	58.70	68.19	-89.43	-59.46	-4,582.80	427.12	300.27	126.85	3.367	
8,850.00	3,641.31	3,633.03	3,641.31	59.24	68.16	-89.22	-59.46	-4,582.80	445.43	318.08	127.36	3.498	
8,900.00	3,639.83	3,631.54	3,639.83	59.79	68.13	-89.01	-59.46	-4,582.80	468.38	340.52	127.86	3.663	
8,950.00	3,638.34	3,630.06	3,638.34	60.34	68.10	-88.80	-59.46	-4,582.80	495.33	366.97	128.36	3.859	
9,000.00	3,636.86	3,628.57	3,636.86	60.88	68.07	-88.59	-59.46	-4,582.80	525.65	396.80	128.86	4.079	
9,050.00	3,635.37	3,627.09	3,635.37	61.43	68.04	-88.38	-59.46	-4,582.80	558.81	429.45	129.36	4.320	
9,100.00	3,633.89	3,625.60	3,633.89	61.98	68.01	-88.17	-59.46	-4,582.80	594.33	464.47	129.85	4.577	
9,150.00	3,632.40	3,624.12	3,632.40	62.52	67.98	-87.97	-59.46	-4,582.80	631.80	501.45	130.35	4.847	
9,200.00	3,630.92	3,622.63	3,630.92	63.07	67.95	-87.76	-59.46	-4,582.80	670.91	540.07	130.84	5.128	
9,250.00	3,629.43	3,621.15	3,629.43	63.62	67.92	-87.55	-59.46	-4,582.80	711.38	580.04	131.34	5.416	
9,300.00	3,627.95	3,619.66	3,627.95	64.17	67.89	-87.34	-59.46	-4,582.80	752.99	621.16	131.83	5.712	
9,349.10	3,626.49	3,618.20	3,626.49	64.70	67.86	-87.13	-59.46	-4,582.80	794.80	662.49	132.31	6.007	
9,350.00	3,626.46	3,618.17	3,626.46	64.71	67.86	-87.13	-59.46	-4,582.80	795.57	663.25	132.32	6.013	
9,399.14	3,625.00	3,616.71	3,625.00	65.25	67.83	-86.92	-59.46	-4,582.80	838.21	705.41	132.80	6.312	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: SUNRAY-STATE 1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 770-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
3,050.00	2,950.44	2,945.48	2,950.44	11.63	47.23	13.32	913.65	801.52	562.30	504.60	57.70	9.745	
3,100.00	2,999.83	2,994.88	2,999.83	11.80	48.14	39.24	913.65	801.52	555.37	496.38	58.99	9.415	
3,150.00	3,049.17	3,044.21	3,049.17	11.95	49.08	63.25	913.65	801.52	550.37	490.16	60.21	9.140	
3,200.00	3,098.21	3,093.25	3,098.21	12.10	50.01	80.39	913.65	801.52	547.44	486.10	61.34	8.925	
3,240.41	3,137.46	3,132.50	3,137.46	12.22	50.79	90.00	913.65	801.52	546.68	484.50	62.18	8.792 CC	
3,250.00	3,146.71	3,141.75	3,146.71	12.24	50.97	91.88	913.65	801.52	546.72	484.35	62.37	8.766 ES	
3,300.00	3,194.44	3,189.48	3,194.44	12.38	51.93	99.91	913.65	801.52	548.42	485.16	63.25	8.670	
3,350.00	3,241.16	3,236.21	3,241.16	12.50	52.89	105.88	913.65	801.52	552.72	488.75	63.97	8.641 SF	
3,400.00	3,286.65	3,281.70	3,286.65	12.62	53.82	110.56	913.65	801.52	559.83	495.35	64.47	8.683	
3,450.00	3,330.68	3,325.74	3,330.68	12.74	54.74	114.34	913.65	801.52	569.92	505.15	64.77	8.799	
3,500.00	3,373.04	3,368.10	3,373.04	12.85	55.64	117.47	913.65	801.52	583.16	518.31	64.85	8.992	
3,550.00	3,413.53	3,400.00	3,404.94	12.96	56.32	119.57	913.65	801.52	599.70	535.05	64.65	9.276	
3,600.00	3,451.95	3,447.01	3,451.95	13.07	57.34	122.13	913.65	801.52	619.41	555.00	64.42	9.616	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: TIGNER STATE 1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 511-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
8,150.00	3,662.11	3,550.00	3,594.92	51.64	64.10	86.94	1,457.40	-4,374.70	1,139.99	1,024.32	115.67	9.856	
8,200.00	3,660.62	3,550.00	3,594.92	52.18	64.10	86.94	1,457.40	-4,374.70	1,129.17	1,012.96	116.21	9.717	
8,250.00	3,659.14	3,550.00	3,594.92	52.72	64.10	86.94	1,457.40	-4,374.70	1,120.48	1,003.73	116.75	9.598	
8,300.00	3,657.65	3,550.00	3,594.92	53.26	64.10	86.94	1,457.40	-4,374.70	1,113.97	996.68	117.29	9.498	
8,350.00	3,656.17	3,550.00	3,594.92	53.80	64.10	86.94	1,457.40	-4,374.70	1,109.67	991.85	117.83	9.418	
8,400.00	3,654.68	3,550.00	3,594.92	54.34	64.10	86.94	1,457.40	-4,374.70	1,107.62	989.25	118.37	9.357	
8,420.48	3,654.07	3,550.00	3,594.92	54.57	64.10	86.94	1,457.40	-4,374.70	1,107.43	988.84	118.59	9.338 CC, ES	
8,450.00	3,653.20	3,550.00	3,594.92	54.89	64.10	86.94	1,457.40	-4,374.70	1,107.83	988.91	118.91	9.316	
8,500.00	3,651.71	3,550.00	3,594.92	55.43	64.10	86.94	1,457.40	-4,374.70	1,110.29	990.83	119.46	9.295	
8,550.00	3,650.23	3,550.00	3,594.92	55.97	64.10	86.94	1,457.40	-4,374.70	1,114.98	994.98	120.00	9.292 SF	
8,600.00	3,648.74	3,550.00	3,594.92	56.52	64.10	86.94	1,457.40	-4,374.70	1,121.89	1,001.35	120.54	9.307	
8,650.00	3,647.26	3,550.00	3,594.92	57.06	64.10	86.94	1,457.40	-4,374.70	1,130.97	1,009.88	121.09	9.340	
8,700.00	3,645.77	3,550.00	3,594.92	57.61	64.10	86.94	1,457.40	-4,374.70	1,142.16	1,020.53	121.63	9.390	
8,750.00	3,644.29	3,550.00	3,594.92	58.15	64.10	86.94	1,457.40	-4,374.70	1,155.42	1,033.24	122.18	9.457	
8,800.00	3,642.80	3,550.00	3,594.92	58.70	64.10	86.94	1,457.40	-4,374.70	1,170.66	1,047.94	122.72	9.539	
8,850.00	3,641.31	3,550.00	3,594.92	59.24	64.10	86.94	1,457.40	-4,374.70	1,187.81	1,064.55	123.27	9.636	
8,900.00	3,639.83	3,550.00	3,594.92	59.79	64.10	86.94	1,457.40	-4,374.70	1,206.79	1,082.98	123.81	9.747	
8,950.00	3,638.34	3,550.00	3,594.92	60.34	64.10	86.94	1,457.40	-4,374.70	1,227.52	1,103.16	124.36	9.871	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: TIGNER STATE 2 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 380-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		
8,000.00	3,666.57	3,535.00	3,563.86	50.02	68.01	80.90	781.38	-4,992.55	1,148.23	1,031.31	116.91	9.821		
8,050.00	3,665.08	3,535.00	3,563.86	50.56	68.01	80.90	781.38	-4,992.55	1,102.42	984.98	117.45	9.386		
8,100.00	3,663.60	3,535.00	3,563.86	51.10	68.01	80.90	781.38	-4,992.55	1,057.00	939.02	117.98	8.959		
8,150.00	3,662.11	3,535.00	3,563.86	51.64	68.01	80.90	781.38	-4,992.55	1,012.02	893.50	118.52	8.539		
8,200.00	3,660.62	3,535.00	3,563.86	52.18	68.01	80.90	781.38	-4,992.55	967.52	848.47	119.05	8.127		
8,250.00	3,659.14	3,535.00	3,563.86	52.72	68.01	80.90	781.38	-4,992.55	923.59	804.00	119.59	7.723		
8,300.00	3,657.65	3,535.00	3,563.86	53.26	68.01	80.90	781.38	-4,992.55	880.30	760.18	120.12	7.328		
8,350.00	3,656.17	3,535.00	3,563.86	53.80	68.01	80.90	781.38	-4,992.55	837.76	717.10	120.66	6.943		
8,400.00	3,654.68	3,535.00	3,563.86	54.34	68.01	80.90	781.38	-4,992.55	796.10	674.90	121.20	6.569		
8,450.00	3,653.20	3,535.00	3,563.86	54.89	68.01	80.90	781.38	-4,992.55	755.44	633.70	121.74	6.206		
8,500.00	3,651.71	3,535.00	3,563.86	55.43	68.01	80.90	781.38	-4,992.55	715.96	593.69	122.27	5.855		
8,550.00	3,650.23	3,535.00	3,563.86	55.97	68.01	80.90	781.38	-4,992.55	677.88	555.07	122.81	5.520		
8,600.00	3,648.74	3,535.00	3,563.86	56.52	68.01	80.90	781.38	-4,992.55	641.44	518.08	123.35	5.200		
8,650.00	3,647.26	3,535.00	3,563.86	57.06	68.01	80.90	781.38	-4,992.55	606.93	483.04	123.89	4.899		
8,700.00	3,645.77	3,535.00	3,563.86	57.61	68.01	80.90	781.38	-4,992.55	574.70	450.27	124.43	4.619		
8,750.00	3,644.29	3,535.00	3,563.86	58.15	68.01	80.90	781.38	-4,992.55	545.16	420.19	124.97	4.362		
8,800.00	3,642.80	3,535.00	3,563.86	58.70	68.01	80.90	781.38	-4,992.55	518.76	393.25	125.51	4.133		
8,850.00	3,641.31	3,535.00	3,563.86	59.24	68.01	80.90	781.38	-4,992.55	496.01	369.97	126.05	3.935		
8,900.00	3,639.83	3,535.00	3,563.86	59.79	68.01	80.90	781.38	-4,992.55	477.44	350.85	126.59	3.772		
8,950.00	3,638.34	3,535.00	3,563.86	60.34	68.01	80.90	781.38	-4,992.55	463.54	336.41	127.13	3.646		
9,000.00	3,636.86	3,535.00	3,563.86	60.88	68.01	80.90	781.38	-4,992.55	454.74	327.06	127.67	3.562		
9,050.00	3,635.37	3,535.00	3,563.86	61.43	68.01	80.90	781.38	-4,992.55	451.33	323.12	128.21	3.520		
9,055.82	3,635.20	3,535.00	3,563.86	61.49	68.01	80.90	781.38	-4,992.55	451.30	323.02	128.28	3.518 CC, ES, SF		
9,100.00	3,633.89	3,535.00	3,563.86	61.98	68.01	80.90	781.38	-4,992.55	453.45	324.70	128.76	3.522		
9,150.00	3,632.40	3,535.00	3,563.86	62.52	68.01	80.90	781.38	-4,992.55	461.02	331.72	129.30	3.566		
9,200.00	3,630.92	3,535.00	3,563.86	63.07	68.01	80.90	781.38	-4,992.55	473.77	343.93	129.84	3.649		
9,250.00	3,629.43	3,535.00	3,563.86	63.62	68.01	80.90	781.38	-4,992.55	491.30	360.92	130.38	3.768		
9,300.00	3,627.95	3,535.00	3,563.86	64.17	68.01	80.90	781.38	-4,992.55	513.12	382.20	130.93	3.919		
9,349.10	3,626.49	3,535.00	3,563.86	64.70	68.01	80.90	781.38	-4,992.55	538.22	406.76	131.46	4.094		
9,350.00	3,626.46	3,535.00	3,563.86	64.71	68.01	80.90	781.38	-4,992.55	538.71	407.24	131.47	4.098		
9,399.14	3,625.00	3,535.00	3,563.86	65.25	68.01	80.90	781.38	-4,992.55	567.04	435.04	132.00	4.296		

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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		WELCH CD 28 STATE COM - OFFSET: TIGNER STATE 3 - Wellbore #1 - Wellbore #1										Offset Site Error:	0.00 usft
Survey Program:		380-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
8,500.00	3,651.71	3,601.12	3,651.71	55.43	69.69	90.89	1,440.66	-5,035.10	1,248.35	1,123.29	125.06	9.982	
8,550.00	3,650.23	3,599.64	3,650.23	55.97	69.65	90.81	1,440.66	-5,035.10	1,225.96	1,100.38	125.57	9.763	
8,600.00	3,648.74	3,598.15	3,648.74	56.52	69.61	90.74	1,440.66	-5,035.10	1,205.22	1,079.13	126.08	9.559	
8,650.00	3,647.26	3,596.67	3,647.26	57.06	69.58	90.66	1,440.66	-5,035.10	1,186.22	1,059.63	126.60	9.370	
8,700.00	3,645.77	3,595.18	3,645.77	57.61	69.54	90.58	1,440.66	-5,035.10	1,169.06	1,041.95	127.11	9.197	
8,750.00	3,644.29	3,593.70	3,644.29	58.15	69.50	90.51	1,440.66	-5,035.10	1,153.81	1,026.18	127.62	9.041	
8,800.00	3,642.80	3,592.21	3,642.80	58.70	69.47	90.43	1,440.66	-5,035.10	1,140.54	1,012.41	128.14	8.901	
8,850.00	3,641.31	3,590.73	3,641.31	59.24	69.43	90.35	1,440.66	-5,035.10	1,129.33	1,000.68	128.65	8.778	
8,900.00	3,639.83	3,589.24	3,639.83	59.79	69.40	90.28	1,440.66	-5,035.10	1,120.24	991.08	129.16	8.673	
8,950.00	3,638.34	3,587.75	3,638.34	60.34	69.36	90.20	1,440.66	-5,035.10	1,113.33	983.65	129.67	8.586	
9,000.00	3,636.86	3,586.27	3,636.86	60.88	69.32	90.12	1,440.66	-5,035.10	1,108.62	978.43	130.19	8.516	
9,050.00	3,635.37	3,584.78	3,635.37	61.43	69.29	90.05	1,440.66	-5,035.10	1,106.16	975.46	130.70	8.463	
9,079.63	3,634.49	3,583.90	3,634.49	61.75	69.27	90.00	1,440.66	-5,035.10	1,105.76	974.76	131.01	8.441 CC	
9,100.00	3,633.89	3,583.30	3,633.89	61.98	69.25	89.97	1,440.66	-5,035.10	1,105.95	974.73	131.22	8.429 ES	
9,150.00	3,632.40	3,581.81	3,632.40	62.52	69.22	89.89	1,440.66	-5,035.10	1,108.00	976.27	131.73	8.411	
9,200.00	3,630.92	3,580.33	3,630.92	63.07	69.18	89.81	1,440.66	-5,035.10	1,112.29	980.05	132.24	8.411 SF	
9,250.00	3,629.43	3,578.84	3,629.43	63.62	69.14	89.74	1,440.66	-5,035.10	1,118.80	986.04	132.76	8.427	
9,300.00	3,627.95	3,577.36	3,627.95	64.17	69.11	89.66	1,440.66	-5,035.10	1,127.49	994.22	133.27	8.460	
9,349.10	3,626.49	3,575.90	3,626.49	64.70	69.07	89.59	1,440.66	-5,035.10	1,138.10	1,004.32	133.77	8.508	
9,350.00	3,626.46	3,575.87	3,626.46	64.71	69.07	89.58	1,440.66	-5,035.10	1,138.31	1,004.53	133.78	8.509	
9,399.14	3,625.00	3,574.41	3,625.00	65.25	69.04	89.51	1,440.66	-5,035.10	1,150.96	1,016.67	134.29	8.571	

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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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 WELCH CD 28 STATE COM - OFFSET: TIGNER STATE 4 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 380-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	
7,450.00	3,682.91	3,660.00	3,677.85	44.12	71.03	92.76	856.89	-4,381.48	1,111.88	996.96	114.92	9.675	
7,500.00	3,681.42	3,660.00	3,677.85	44.65	71.03	92.76	856.89	-4,381.48	1,067.61	952.15	115.46	9.247	
7,550.00	3,679.94	3,660.00	3,677.85	45.19	71.03	92.76	856.89	-4,381.48	1,023.86	907.87	115.99	8.827	
7,600.00	3,678.45	3,660.00	3,677.85	45.72	71.03	92.76	856.89	-4,381.48	980.71	864.19	116.52	8.417	
7,650.00	3,676.96	3,659.08	3,676.96	46.26	71.00	92.66	856.89	-4,381.48	938.25	821.20	117.05	8.016	
7,700.00	3,675.48	3,657.59	3,675.48	46.79	70.97	92.49	856.89	-4,381.48	896.56	778.99	117.56	7.626	
7,750.00	3,673.99	3,656.11	3,673.99	47.33	70.93	92.32	856.89	-4,381.48	855.75	737.67	118.08	7.247	
7,800.00	3,672.51	3,654.62	3,672.51	47.86	70.90	92.15	856.89	-4,381.48	815.97	697.37	118.60	6.880	
7,850.00	3,671.02	3,653.13	3,671.02	48.40	70.86	91.99	856.89	-4,381.48	777.36	658.24	119.12	6.526	
7,900.00	3,669.54	3,651.65	3,669.54	48.94	70.82	91.82	856.89	-4,381.48	740.12	620.48	119.64	6.186	
7,950.00	3,668.05	3,650.16	3,668.05	49.48	70.79	91.65	856.89	-4,381.48	704.46	584.30	120.15	5.863	
8,000.00	3,666.57	3,648.68	3,666.57	50.02	70.75	91.48	856.89	-4,381.48	670.62	549.95	120.67	5.557	
8,050.00	3,665.08	3,647.19	3,665.08	50.56	70.71	91.31	856.89	-4,381.48	638.91	517.72	121.19	5.272	
8,100.00	3,663.60	3,645.71	3,663.60	51.10	70.68	91.15	856.89	-4,381.48	609.65	487.95	121.70	5.009	
8,150.00	3,662.11	3,644.22	3,662.11	51.64	70.64	90.98	856.89	-4,381.48	583.21	461.00	122.22	4.772	
8,200.00	3,660.62	3,642.74	3,660.62	52.18	70.61	90.81	856.89	-4,381.48	560.00	437.26	122.73	4.563	
8,250.00	3,659.14	3,641.25	3,659.14	52.72	70.57	90.64	856.89	-4,381.48	540.42	417.17	123.25	4.385	
8,300.00	3,657.65	3,639.77	3,657.65	53.26	70.53	90.47	856.89	-4,381.48	524.88	401.12	123.76	4.241	
8,350.00	3,656.17	3,638.28	3,656.17	53.80	70.50	90.30	856.89	-4,381.48	513.76	389.48	124.27	4.134	
8,400.00	3,654.68	3,636.79	3,654.68	54.34	70.46	90.14	856.89	-4,381.48	507.33	382.55	124.79	4.066	
8,440.65	3,653.48	3,635.59	3,653.48	54.79	70.43	90.00	856.89	-4,381.48	505.70	380.50	125.20	4.039 CC	
8,450.00	3,653.20	3,635.31	3,653.20	54.89	70.43	89.97	856.89	-4,381.48	505.79	380.49	125.30	4.037 ES, SF	
8,500.00	3,651.71	3,633.82	3,651.71	55.43	70.39	89.80	856.89	-4,381.48	509.17	383.36	125.81	4.047	
8,550.00	3,650.23	3,632.34	3,650.23	55.97	70.35	89.63	856.89	-4,381.48	517.38	391.06	126.32	4.096	
8,600.00	3,648.74	3,630.85	3,648.74	56.52	70.32	89.46	856.89	-4,381.48	530.19	403.36	126.83	4.180	
8,650.00	3,647.26	3,629.37	3,647.26	57.06	70.28	89.30	856.89	-4,381.48	547.29	419.95	127.34	4.298	
8,700.00	3,645.77	3,627.88	3,645.77	57.61	70.25	89.13	856.89	-4,381.48	568.28	440.43	127.85	4.445	
8,750.00	3,644.29	3,626.40	3,644.29	58.15	70.21	88.96	856.89	-4,381.48	592.75	464.39	128.36	4.618	
8,800.00	3,642.80	3,624.91	3,642.80	58.70	70.17	88.79	856.89	-4,381.48	620.29	491.42	128.87	4.813	
8,850.00	3,641.31	3,623.43	3,641.31	59.24	70.14	88.62	856.89	-4,381.48	650.51	521.13	129.38	5.028	
8,900.00	3,639.83	3,621.94	3,639.83	59.79	70.10	88.45	856.89	-4,381.48	683.05	553.17	129.88	5.259	
8,950.00	3,638.34	3,620.45	3,638.34	60.34	70.06	88.29	856.89	-4,381.48	717.60	587.21	130.39	5.504	
9,000.00	3,636.86	3,618.97	3,636.86	60.88	70.03	88.12	856.89	-4,381.48	753.88	622.99	130.89	5.760	
9,050.00	3,635.37	3,617.48	3,635.37	61.43	69.99	87.95	856.89	-4,381.48	791.66	660.26	131.39	6.025	
9,100.00	3,633.89	3,616.00	3,633.89	61.98	69.96	87.78	856.89	-4,381.48	830.72	698.82	131.90	6.298	
9,150.00	3,632.40	3,614.51	3,632.40	62.52	69.92	87.61	856.89	-4,381.48	870.90	738.50	132.40	6.578	
9,200.00	3,630.92	3,613.03	3,630.92	63.07	69.88	87.45	856.89	-4,381.48	912.05	779.15	132.90	6.863	
9,250.00	3,629.43	3,611.54	3,629.43	63.62	69.85	87.28	856.89	-4,381.48	954.05	820.65	133.40	7.152	
9,300.00	3,627.95	3,610.06	3,627.95	64.17	69.81	87.11	856.89	-4,381.48	996.78	862.88	133.90	7.444	
9,349.10	3,626.49	3,608.60	3,626.49	64.70	69.78	86.95	856.89	-4,381.48	1,039.37	904.98	134.39	7.734	
9,350.00	3,626.46	3,608.57	3,626.46	64.71	69.78	86.94	856.89	-4,381.48	1,040.16	905.76	134.40	7.739	
9,399.14	3,625.00	3,607.11	3,625.00	65.25	69.74	86.78	856.89	-4,381.48	1,083.34	948.46	134.89	8.031	

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



Anticollision Report

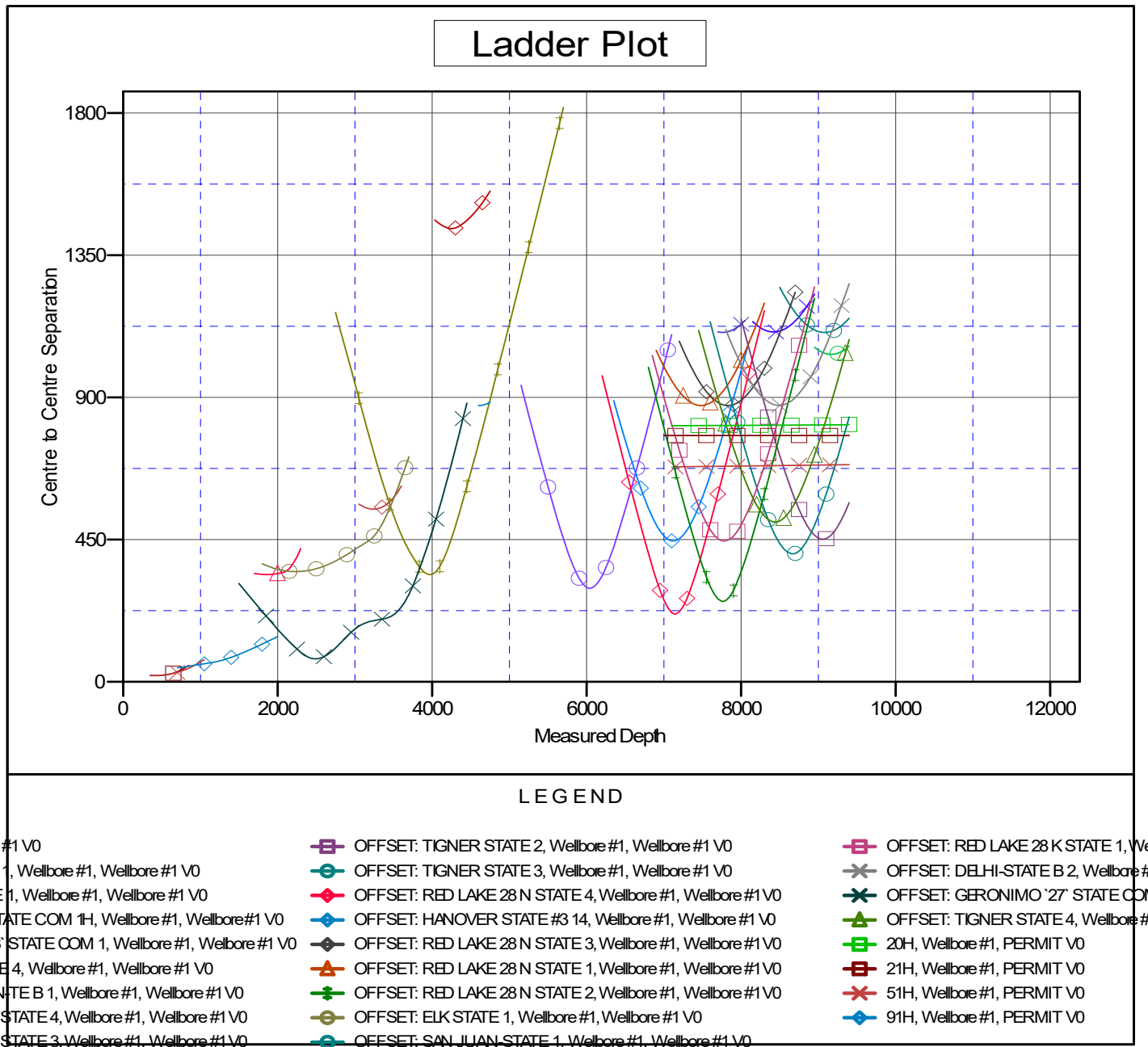
Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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' @ 3700.00usft (AKITA 57) Coordinates are relative to: 10H

Offset Depths are relative to Offset Datum

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

Grid Convergence at Surface is: 0.09°



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 10H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Reference Site:	WELCH CD 28 STATE COM	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	10H	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' @ 3700.00usft (AKITA 57) Coordinates are relative to: 10H

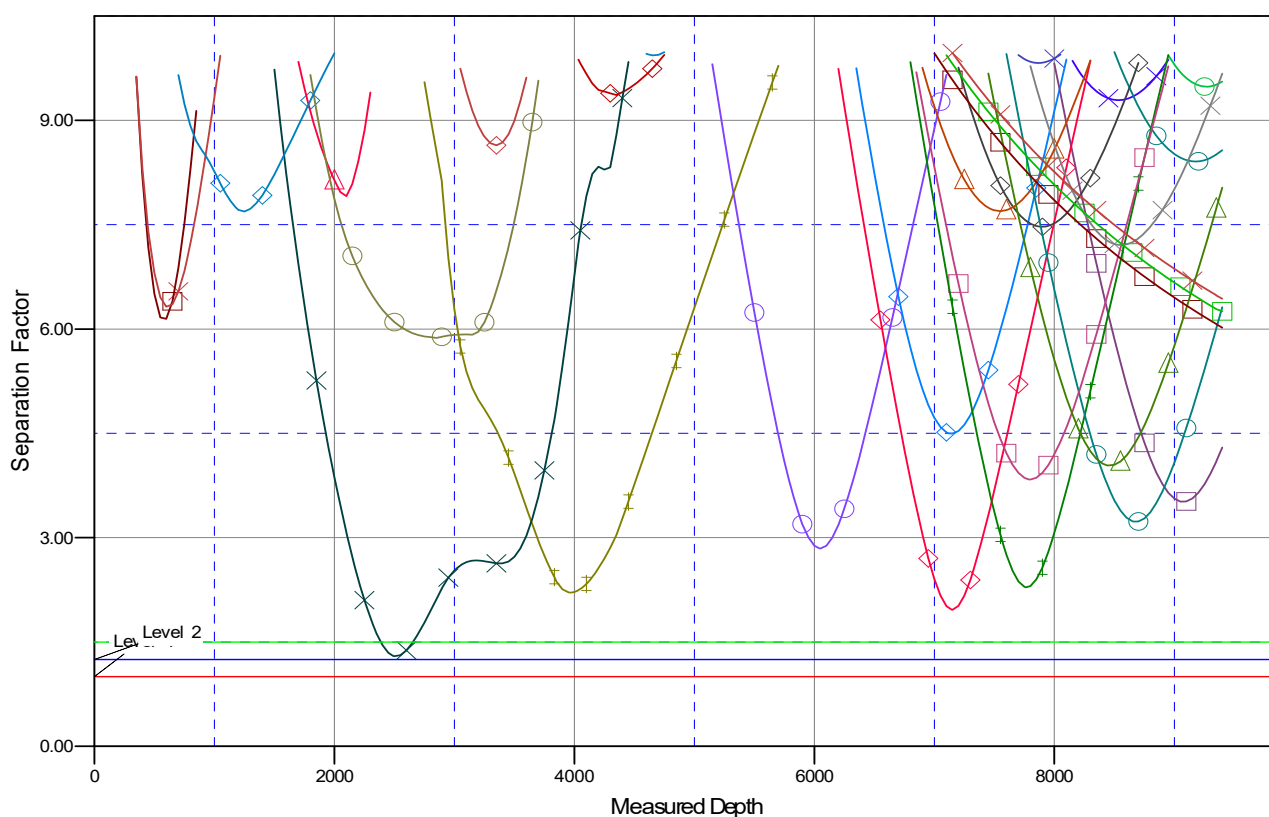
Offset Depths are relative to Offset Datum

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

Central Meridian is -104.333333

Grid Convergence at Surface is: 0.09°

Separation Factor Plot



LEGEND

e #1 V0	OFFSET: TIGNER STATE 2, Wellbore #1, Wellbore #1 V0	OFFSET: RED LAKE 28 K STATE 1, Wellbore #1, Wellbore #1 V0
E 1, Wellbore #1, Wellbore #1 V0	OFFSET: TIGNER STATE 3, Wellbore #1, Wellbore #1 V0	OFFSET: DELHI-STATE B 2, Wellbore #1, Wellbore #1 V0
STATE COM 1H, Wellbore #1, Wellbore #1 V0	OFFSET: RED LAKE 28 N STATE 4, Wellbore #1, Wellbore #1 V0	OFFSET: GERONIMO '27' STATE COM 1, Wellbore #1, Wellbore #1 V0
8' STATE COM 1, Wellbore #1, Wellbore #1 V0	OFFSET: HANOVER STATE #3 14, Wellbore #1, Wellbore #1 V0	OFFSET: TIGNER STATE 4, Wellbore #1, Wellbore #1 V0
TE 4, Wellbore #1, Wellbore #1 V0	OFFSET: RED LAKE 28 N STATE 3, Wellbore #1, Wellbore #1 V0	20H, Wellbore #1, PERMIT V0
NTE B 1, Wellbore #1, Wellbore #1 V0	OFFSET: RED LAKE 28 N STATE 1, Wellbore #1, Wellbore #1 V0	21H, Wellbore #1, PERMIT V0
< STATE 4, Wellbore #1, Wellbore #1 V0	OFFSET: RED LAKE 28 N STATE 2, Wellbore #1, Wellbore #1 V0	51H, Wellbore #1, PERMIT V0
< STATE 3, Wellbore #1, Wellbore #1 V0	OFFSET: ELK STATE 1, Wellbore #1, Wellbore #1 V0	91H, Wellbore #1, PERMIT V0
	OFFSET: SAN JUAN STATE 1, Wellbore #1, Wellbore #1 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)

WELCH CD 28 STATE COM

10H

Wellbore #1

Plan: PERMIT

Standard Planning Report

20 March, 2023



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 10H
Company:	SPUR ENERGY PARTNERS, LLC	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site:	WELCH CD 28 STATE COM	North Reference:	Grid
Well:	10H	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		WELCH CD 28 STATE COM			
Site Position:		Northing:	654,982.70 usft	Latitude:	32.8004739
From:	Map	Easting:	590,935.80 usft	Longitude:	-104.1719146
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.09 °

Well	10H					
Well Position	+N/-S	0.00 usft	Northing:	654,982.70 usft	Latitude:	32.8004739
	+E/-W	0.00 usft	Easting:	590,935.80 usft	Longitude:	-104.1719146
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,680.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	03/15/23	6.67	60.28	47,588

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	268.56	

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	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,187.75	17.76	54.54	1,173.61	79.15	111.15	2.00	2.00	0.00	54.54	
2,894.44	17.76	54.54	2,799.01	381.06	535.09	0.00	0.00	0.00	0.00	
3,833.09	60.00	268.56	3,598.49	466.41	195.25	8.00	4.50	-15.55	-149.91	
4,033.09	60.00	268.56	3,698.49	462.05	22.10	0.00	0.00	0.00	0.00	
4,350.11	91.70	268.56	3,775.00	454.40	-281.30	10.00	10.00	0.00	0.00	WELCH CD 28 STA
9,349.10	91.70	268.56	3,626.49	328.46	-5,276.50	0.00	0.00	0.00	0.00	WELCH CD 28 STA
9,399.14	91.70	268.56	3,625.00	327.20	-5,326.50	0.00	0.00	0.00	0.00	WELCH CD 28 STA



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 10H
Company:	SPUR ENERGY PARTNERS, LLC	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site:	WELCH CD 28 STATE COM	North Reference:	Grid
Well:	10H	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
WELCH CD 28 STATE COM #10H SHL: 746' FSL, 186' FWL									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	54.54	399.98	1.01	1.42	-1.45	2.00	2.00	0.00
500.00	4.00	54.54	499.84	4.05	5.68	-5.78	2.00	2.00	0.00
600.00	6.00	54.54	599.45	9.10	12.78	-13.01	2.00	2.00	0.00
700.00	8.00	54.54	698.70	16.17	22.71	-23.11	2.00	2.00	0.00
800.00	10.00	54.54	797.47	25.25	35.45	-36.08	2.00	2.00	0.00
900.00	12.00	54.54	895.62	36.31	50.99	-51.89	2.00	2.00	0.00
1,000.00	14.00	54.54	993.06	49.36	69.32	-70.53	2.00	2.00	0.00
1,100.00	16.00	54.54	1,089.64	64.38	90.40	-91.99	2.00	2.00	0.00
1,187.75	17.76	54.54	1,173.61	79.15	111.15	-113.10	2.00	2.00	0.00
1,200.00	17.76	54.54	1,185.28	81.32	114.19	-116.20	0.00	0.00	0.00
1,300.00	17.76	54.54	1,280.51	99.01	139.03	-141.48	0.00	0.00	0.00
1,400.00	17.76	54.54	1,375.75	116.70	163.87	-166.75	0.00	0.00	0.00
1,500.00	17.76	54.54	1,470.99	134.39	188.71	-192.03	0.00	0.00	0.00
1,600.00	17.76	54.54	1,566.22	152.08	213.55	-217.31	0.00	0.00	0.00
1,700.00	17.76	54.54	1,661.46	169.77	238.39	-242.58	0.00	0.00	0.00
1,800.00	17.76	54.54	1,756.70	187.46	263.23	-267.86	0.00	0.00	0.00
1,900.00	17.76	54.54	1,851.93	205.15	288.07	-293.13	0.00	0.00	0.00
2,000.00	17.76	54.54	1,947.17	222.84	312.91	-318.41	0.00	0.00	0.00
2,100.00	17.76	54.54	2,042.41	240.52	337.75	-343.69	0.00	0.00	0.00
2,200.00	17.76	54.54	2,137.65	258.21	362.59	-368.96	0.00	0.00	0.00
2,300.00	17.76	54.54	2,232.88	275.90	387.43	-394.24	0.00	0.00	0.00
2,400.00	17.76	54.54	2,328.12	293.59	412.27	-419.52	0.00	0.00	0.00
2,500.00	17.76	54.54	2,423.36	311.28	437.11	-444.79	0.00	0.00	0.00
2,600.00	17.76	54.54	2,518.59	328.97	461.95	-470.07	0.00	0.00	0.00
2,700.00	17.76	54.54	2,613.83	346.66	486.79	-495.35	0.00	0.00	0.00
2,800.00	17.76	54.54	2,709.07	364.35	511.63	-520.62	0.00	0.00	0.00
2,894.44	17.76	54.54	2,799.01	381.06	535.09	-544.49	0.00	0.00	0.00
WELCH CD 28 STATE COM #10H KOP: 2894.44' MD									
2,900.00	17.37	53.80	2,804.31	382.04	536.45	-545.88	8.00	-6.90	-13.43
2,950.00	14.08	45.35	2,852.44	390.72	546.80	-556.45	8.00	-6.58	-16.88
3,000.00	11.25	32.37	2,901.23	399.12	553.74	-563.60	8.00	-5.67	-25.97
3,050.00	9.30	12.60	2,950.44	407.19	557.24	-567.29	8.00	-3.89	-39.55
3,100.00	8.84	347.18	2,999.83	414.88	557.26	-567.51	8.00	-0.91	-50.82
3,150.00	10.09	323.85	3,049.17	422.17	553.83	-564.26	8.00	2.48	-46.66
3,200.00	12.53	307.55	3,098.21	429.01	546.94	-557.55	8.00	4.88	-32.61
3,250.00	15.62	297.03	3,146.71	435.38	536.64	-547.42	8.00	6.18	-21.04
3,300.00	19.04	290.06	3,194.44	441.23	522.98	-533.90	8.00	6.85	-13.94
3,350.00	22.65	285.19	3,241.16	446.56	506.02	-517.08	8.00	7.22	-9.74
3,400.00	26.37	281.61	3,286.65	451.32	485.84	-497.03	8.00	7.43	-7.15
3,450.00	30.15	278.87	3,330.68	455.49	462.55	-473.85	8.00	7.57	-5.48
3,500.00	33.98	276.70	3,373.04	459.06	436.25	-447.65	8.00	7.66	-4.35
3,550.00	37.84	274.92	3,413.53	462.00	407.08	-418.56	8.00	7.72	-3.56
3,600.00	41.73	273.42	3,451.95	464.31	375.18	-386.72	8.00	7.77	-2.99
3,650.00	45.63	272.14	3,488.10	465.97	340.69	-352.29	8.00	7.80	-2.57
3,700.00	49.54	271.01	3,521.82	466.97	303.80	-315.44	8.00	7.83	-2.25
3,750.00	53.47	270.01	3,552.94	467.32	264.68	-276.34	8.00	7.85	-2.00
3,800.00	57.40	269.11	3,581.30	466.99	223.52	-235.18	8.00	7.86	-1.81
3,833.09	60.00	268.56	3,598.49	466.41	195.25	-206.91	8.00	7.87	-1.68
3,900.00	60.00	268.56	3,631.95	464.95	137.32	-148.96	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 10H
Company:	SPUR ENERGY PARTNERS, LLC	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site:	WELCH CD 28 STATE COM	North Reference:	Grid
Well:	10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,000.00	60.00	268.56	3,681.95	462.77	50.75	-62.36	0.00	0.00	0.00
4,033.09	60.00	268.56	3,698.49	462.05	22.10	-33.71	0.00	0.00	0.00
4,050.00	61.69	268.56	3,706.73	461.68	7.34	-18.94	10.00	10.00	0.00
4,100.00	66.69	268.56	3,728.49	460.54	-37.65	26.06	10.00	10.00	0.00
4,150.00	71.69	268.56	3,746.25	459.37	-84.36	72.79	10.00	10.00	0.00
4,200.00	76.69	268.56	3,759.87	458.15	-132.43	120.88	10.00	10.00	0.00
4,250.00	81.69	268.56	3,769.24	456.92	-181.52	169.98	10.00	10.00	0.00
4,300.00	86.69	268.56	3,774.30	455.66	-231.23	219.70	10.00	10.00	0.00
4,350.11	91.70	268.56	3,775.00	454.40	-281.30	269.79	10.00	10.00	0.00
WELCH CD 28 STATE COM #10H FTP: 100' FEL									
4,400.00	91.70	268.56	3,773.52	453.14	-331.15	319.66	0.00	0.00	0.00
4,500.00	91.70	268.56	3,770.55	450.62	-431.08	419.62	0.00	0.00	0.00
4,600.00	91.70	268.56	3,767.58	448.10	-531.00	519.57	0.00	0.00	0.00
4,700.00	91.70	268.56	3,764.61	445.59	-630.93	619.53	0.00	0.00	0.00
4,800.00	91.70	268.56	3,761.63	443.07	-730.85	719.48	0.00	0.00	0.00
4,900.00	91.70	268.56	3,758.66	440.55	-830.77	819.44	0.00	0.00	0.00
5,000.00	91.70	268.56	3,755.69	438.03	-930.70	919.40	0.00	0.00	0.00
5,100.00	91.70	268.56	3,752.72	435.51	-1,030.62	1,019.35	0.00	0.00	0.00
5,200.00	91.70	268.56	3,749.75	432.99	-1,130.55	1,119.31	0.00	0.00	0.00
5,300.00	91.70	268.56	3,746.78	430.47	-1,230.47	1,219.26	0.00	0.00	0.00
5,400.00	91.70	268.56	3,743.81	427.95	-1,330.39	1,319.22	0.00	0.00	0.00
5,500.00	91.70	268.56	3,740.84	425.43	-1,430.32	1,419.18	0.00	0.00	0.00
5,600.00	91.70	268.56	3,737.87	422.91	-1,530.24	1,519.13	0.00	0.00	0.00
5,700.00	91.70	268.56	3,734.90	420.39	-1,630.17	1,619.09	0.00	0.00	0.00
5,800.00	91.70	268.56	3,731.93	417.87	-1,730.09	1,719.04	0.00	0.00	0.00
5,900.00	91.70	268.56	3,728.95	415.35	-1,830.01	1,819.00	0.00	0.00	0.00
6,000.00	91.70	268.56	3,725.98	412.83	-1,929.94	1,918.95	0.00	0.00	0.00
6,100.00	91.70	268.56	3,723.01	410.32	-2,029.86	2,018.91	0.00	0.00	0.00
6,200.00	91.70	268.56	3,720.04	407.80	-2,129.79	2,118.87	0.00	0.00	0.00
6,300.00	91.70	268.56	3,717.07	405.28	-2,229.71	2,218.82	0.00	0.00	0.00
6,400.00	91.70	268.56	3,714.10	402.76	-2,329.63	2,318.78	0.00	0.00	0.00
6,500.00	91.70	268.56	3,711.13	400.24	-2,429.56	2,418.73	0.00	0.00	0.00
6,600.00	91.70	268.56	3,708.16	397.72	-2,529.48	2,518.69	0.00	0.00	0.00
6,700.00	91.70	268.56	3,705.19	395.20	-2,629.41	2,618.65	0.00	0.00	0.00
6,800.00	91.70	268.56	3,702.22	392.68	-2,729.33	2,718.60	0.00	0.00	0.00
6,900.00	91.70	268.56	3,699.25	390.16	-2,829.26	2,818.56	0.00	0.00	0.00
7,000.00	91.70	268.56	3,696.28	387.64	-2,929.18	2,918.51	0.00	0.00	0.00
7,100.00	91.70	268.56	3,693.30	385.12	-3,029.10	3,018.47	0.00	0.00	0.00
7,200.00	91.70	268.56	3,690.33	382.60	-3,129.03	3,118.42	0.00	0.00	0.00
7,300.00	91.70	268.56	3,687.36	380.08	-3,228.95	3,218.38	0.00	0.00	0.00
7,400.00	91.70	268.56	3,684.39	377.56	-3,328.88	3,318.34	0.00	0.00	0.00
7,500.00	91.70	268.56	3,681.42	375.04	-3,428.80	3,418.29	0.00	0.00	0.00
7,600.00	91.70	268.56	3,678.45	372.53	-3,528.72	3,518.25	0.00	0.00	0.00
7,700.00	91.70	268.56	3,675.48	370.01	-3,628.65	3,618.20	0.00	0.00	0.00
7,800.00	91.70	268.56	3,672.51	367.49	-3,728.57	3,718.16	0.00	0.00	0.00
7,900.00	91.70	268.56	3,669.54	364.97	-3,828.50	3,818.12	0.00	0.00	0.00
8,000.00	91.70	268.56	3,666.57	362.45	-3,928.42	3,918.07	0.00	0.00	0.00
8,100.00	91.70	268.56	3,663.60	359.93	-4,028.34	4,018.03	0.00	0.00	0.00
8,200.00	91.70	268.56	3,660.62	357.41	-4,128.27	4,117.98	0.00	0.00	0.00
8,300.00	91.70	268.56	3,657.65	354.89	-4,228.19	4,217.94	0.00	0.00	0.00
8,400.00	91.70	268.56	3,654.68	352.37	-4,328.12	4,317.90	0.00	0.00	0.00
8,500.00	91.70	268.56	3,651.71	349.85	-4,428.04	4,417.85	0.00	0.00	0.00
8,600.00	91.70	268.56	3,648.74	347.33	-4,527.97	4,517.81	0.00	0.00	0.00
8,700.00	91.70	268.56	3,645.77	344.81	-4,627.89	4,617.76	0.00	0.00	0.00

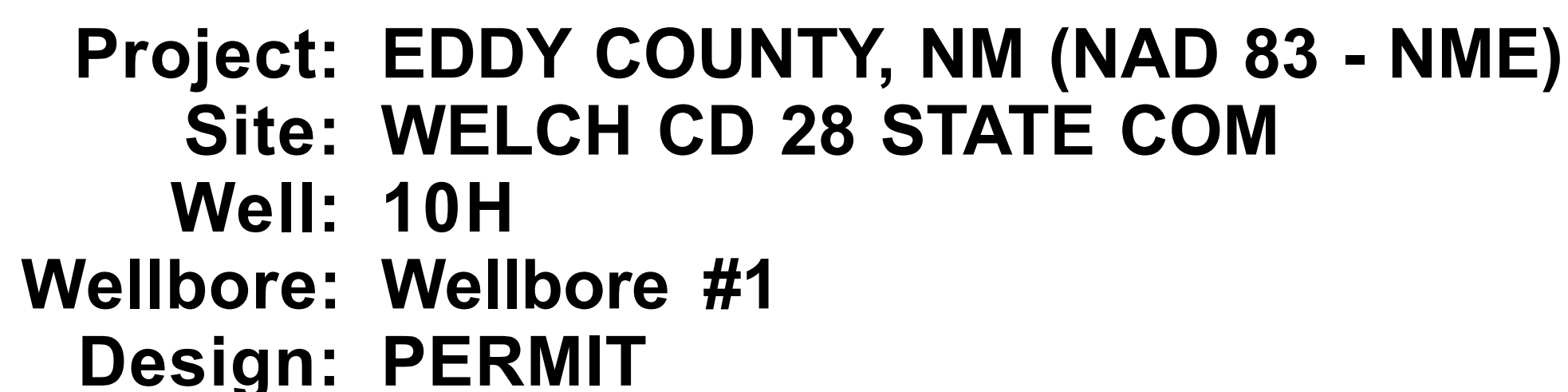


Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 10H
Company:	SPUR ENERGY PARTNERS, LLC	TVD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3700.00usft (AKITA 57)
Site:	WELCH CD 28 STATE COM	North Reference:	Grid
Well:	10H	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)
8,800.00	91.70	268.56	3,642.80	342.29	-4,727.81	4,717.72	0.00	0.00	0.00
8,900.00	91.70	268.56	3,639.83	339.77	-4,827.74	4,817.67	0.00	0.00	0.00
9,000.00	91.70	268.56	3,636.86	337.26	-4,927.66	4,917.63	0.00	0.00	0.00
9,100.00	91.70	268.56	3,633.89	334.74	-5,027.59	5,017.59	0.00	0.00	0.00
9,200.00	91.70	268.56	3,630.92	332.22	-5,127.51	5,117.54	0.00	0.00	0.00
9,300.00	91.70	268.56	3,627.95	329.70	-5,227.43	5,217.50	0.00	0.00	0.00
9,349.10	91.70	268.56	3,626.49	328.46	-5,276.50	5,266.58	0.00	0.00	0.00
WELCH CD 28 STATE COM #10H LTP: 100' FWL									
9,399.14	91.70	268.56	3,625.00	327.20	-5,326.50	5,316.60	0.00	0.00	0.00
WELCH CD 28 STATE COM #10H BHL: 1205' FSL, 50' FWL									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
WELCH CD 28 STATE - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	654,982.70	590,935.80	32.8004739	-104.1719146
WELCH CD 28 STATE - plan hits target center - Point	0.00	0.00	2,799.01	381.06	535.09	655,363.76	591,470.89	32.8015190	-104.1701713
WELCH CD 28 STATE - plan hits target center - Point	0.00	0.00	3,625.00	327.20	-5,326.50	655,309.90	585,609.30	32.8013944	-104.1892483
WELCH CD 28 STATE - plan misses target center by 0.04usft at 9349.10usft MD (3626.49 TVD, 328.46 N, -5276.50 E) - Point	0.00	0.00	3,626.49	328.50	-5,276.50	655,311.20	585,659.30	32.8013978	-104.1890856
WELCH CD 28 STATE - plan hits target center - Point	0.00	0.00	3,775.00	454.40	-281.30	655,437.10	590,654.50	32.8017241	-104.1728279



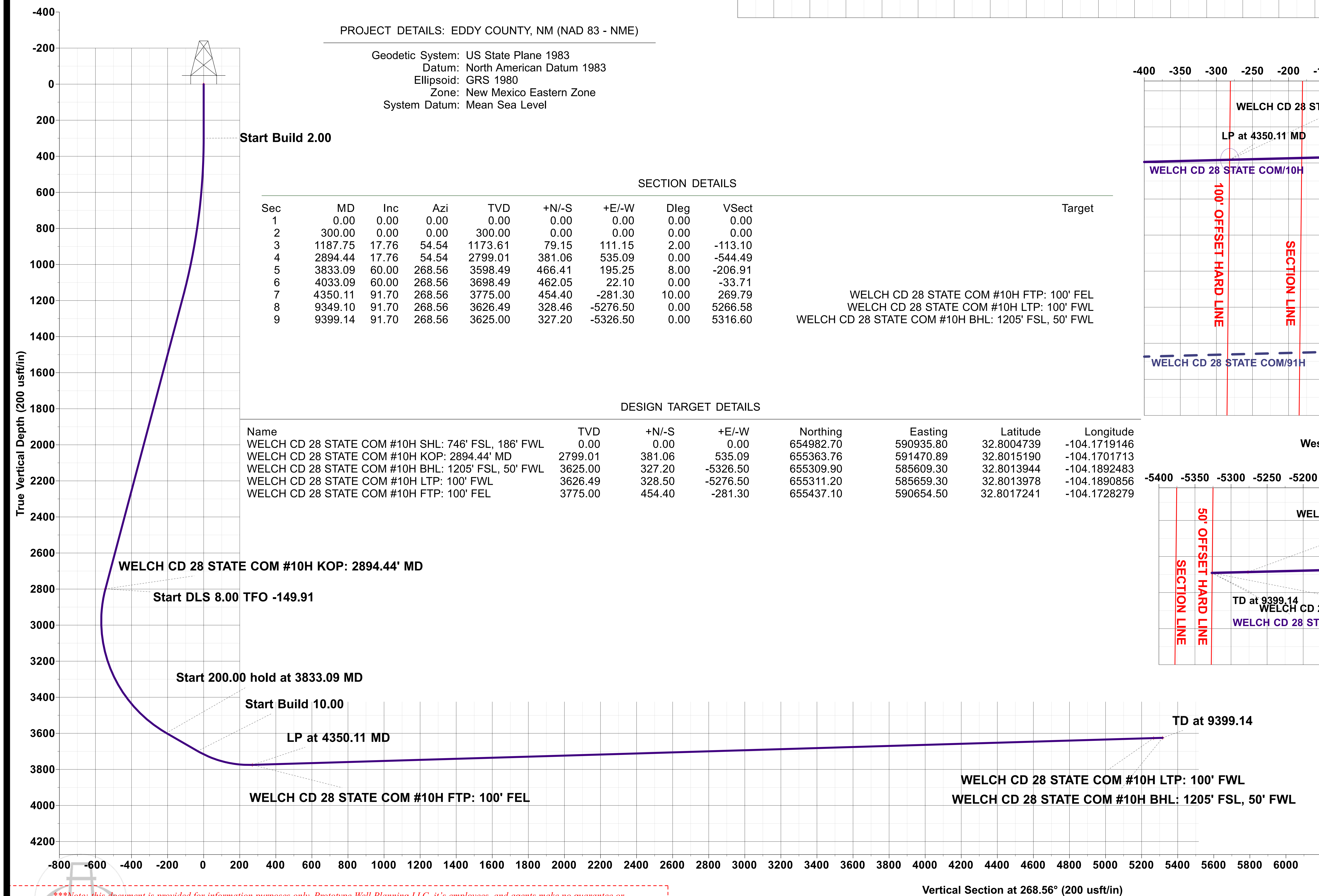
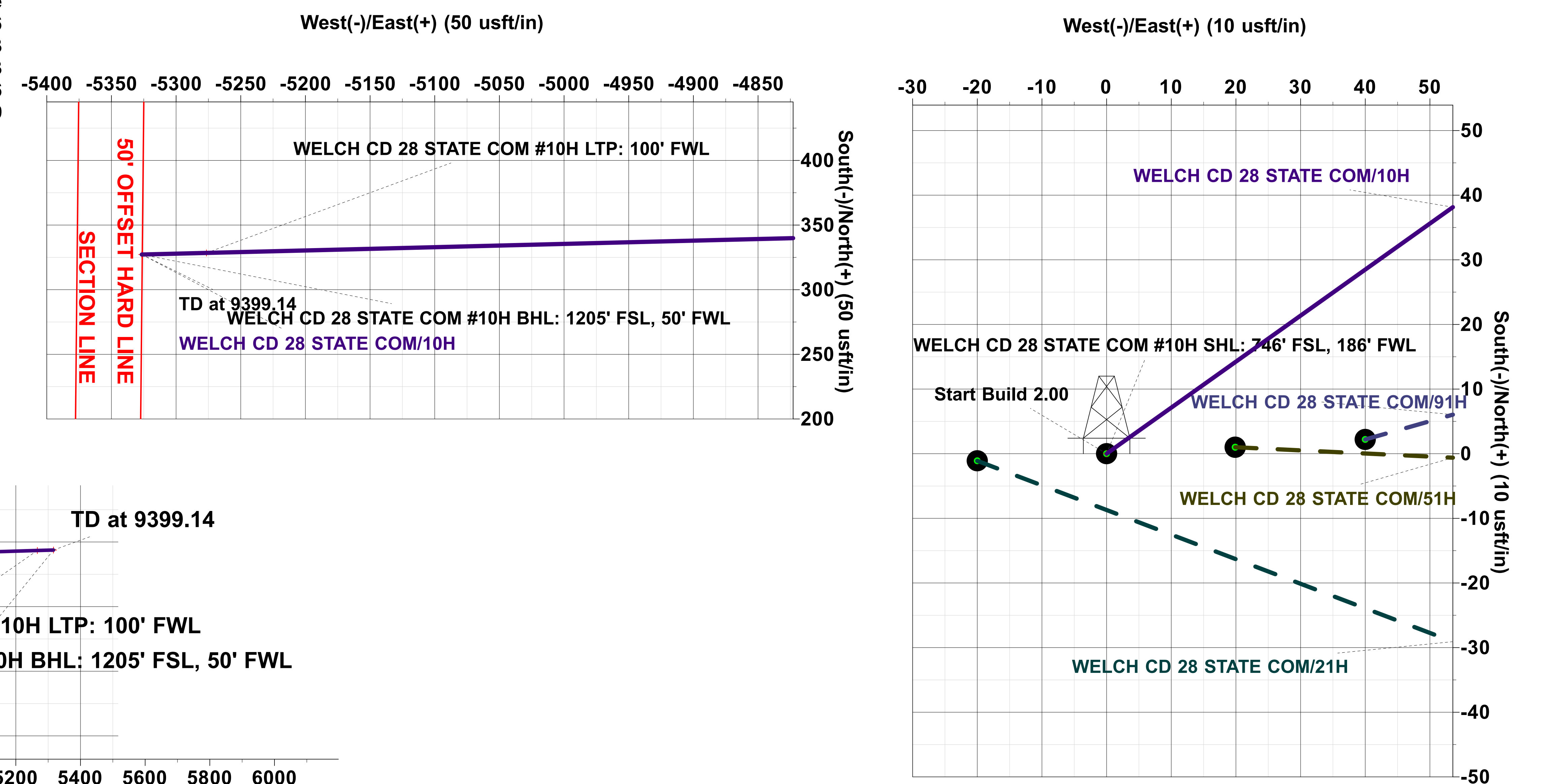
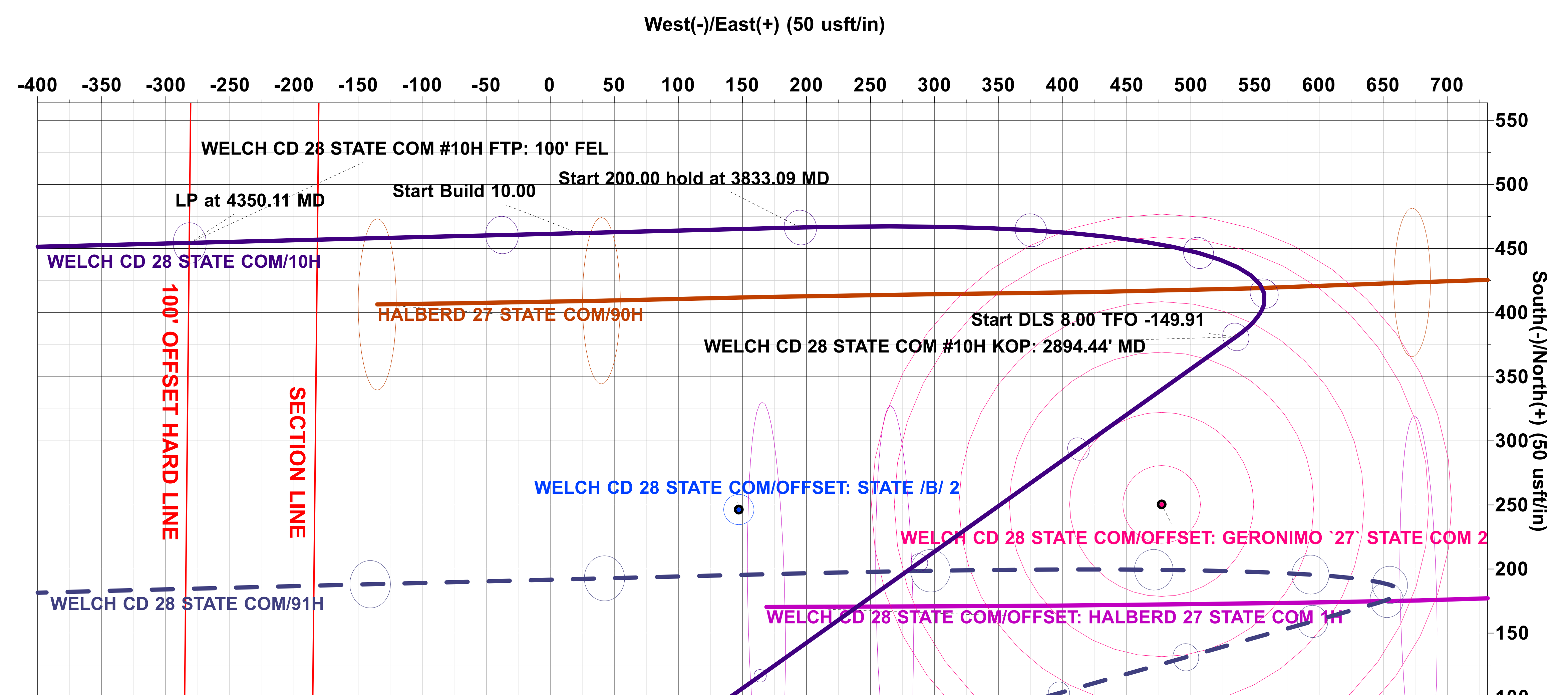
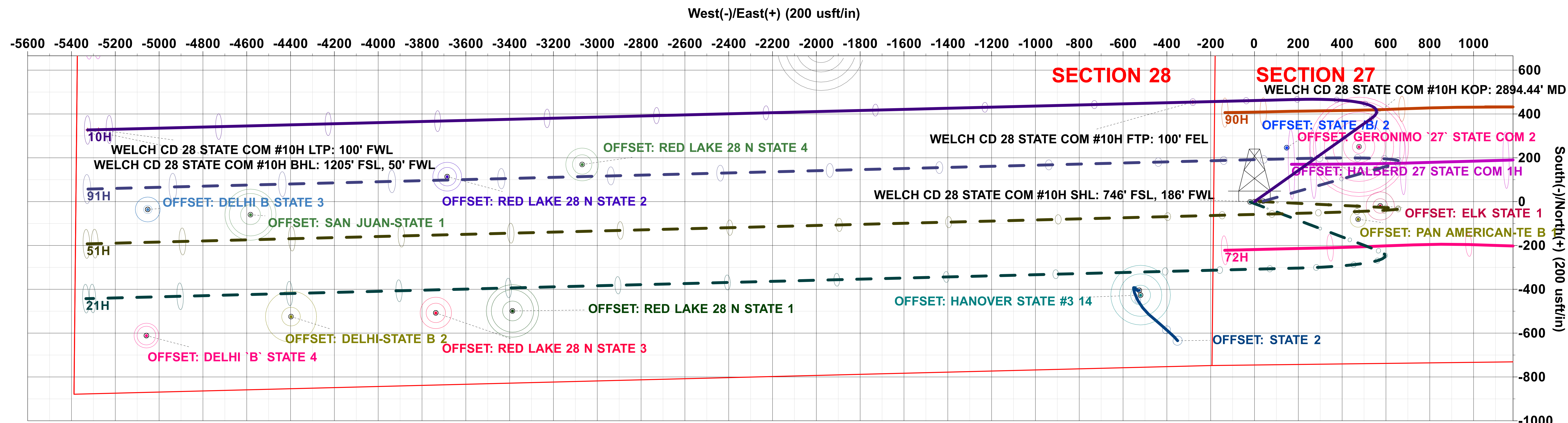
WELL DETAILS: 10H					
Rig Name:		AKITA 57 RKB = 20' @ 3700.00usft (AKITA 57)			
		Ground Level: 3680.00			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	654982.70	590935.80	32.8004739	-104.1719146

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

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	1187.75	17.76	54.54	1173.61	79.15	111.15	2.00	-113.10	
4	2894.44	17.76	54.54	2799.01	381.06	535.09	0.00	-544.49	
5	3833.09	60.00	268.56	3598.49	466.41	195.25	8.00	-206.91	
6	4033.09	60.00	268.56	3698.49	462.05	22.10	0.00	-33.71	
7	4350.11	91.70	268.56	3775.00	454.40	-281.30	10.00	269.79	WELCH CD 28 STATE COM #10H FTP: 100' FEL
8	9349.10	91.70	268.56	3626.49	328.46	-5276.50	0.00	5266.58	WELCH CD 28 STATE COM #10H LTP: 100' FWL
9	9399.14	91.70	268.56	3625.00	327.20	-5326.50	0.00	5316.60	WELCH CD 28 STATE COM #10H BHL: 1205' FSL, 50' FWL

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
WELCH CD 28 STATE COM #10H SHL: 746' FSL., 186' FWL	0.00	0.00	0.00	654982.70	590935.80	32.8004739	-104.1719146
WELCH CD 28 STATE COM #10H KOP: 2894.44' MD	2799.01	381.06	535.09	655363.76	591470.89	32.8015190	-104.1701713
WELCH CD 28 STATE COM #10H BHL: 1205' FSL, 50' FWL	3625.00	327.20	-5326.50	655309.90	585609.30	32.8013944	-104.1892483
WELCH CD 28 STATE COM #10H LTP: 100' FWL	3626.49	328.50	-5276.50	655311.20	585659.30	32.8013978	-104.1890856
WELCH CD 28 STATE COM #10H FTP: 100' FEL	3775.00	454.40	-281.30	655437.10	590654.50	32.8017241	-104.1728272



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Plan: PERMIT (10H/Wellbore #1)

Created By: PROTOTYPE WELL PLANNING / Date: 9:27, March 20 2023

Spur Energy Partners LLC – Welch CD 28 State Com 10H

1. Geologic Formations

TVD of Target	3,625'
MD at TD	9,399'

WELCH CD 28 STATE COM: SOUTH PAD			
FORMATION	DEPTH (KB TVD)	LITHOLOGY	EXPECTED FLUIDS
QUATERNARY	0'	DOLOMITE, OTHER: CALICHE	USEABLE WATER
TANSILL	400'	SANDSTONE, DOLOMITE	NONE
YATES	475'	DOLOMITE, LIMESTONE, SHALE, SILTSTONE	NONE
SEVEN RIVERS	740'	DOLOMITE, LIMESTONE	NATURAL GAS, OIL
QUEEN	1315'	SANDSTONE W INTERBEDDED DOLOMITE, ANHYDRITE	NATURAL GAS, OIL
GRAYBURG	1725'	DOLOMITE W MINOR SANDSTONE, ANHYDRITE	NATURAL GAS, OIL
SAN ANDRES	2050'	DOLOMITIC LIMESTONE	NATURAL GAS, OIL
GLORIETA	3500'	DOLOMITE, SILTSTONE	NATURAL GAS, OIL
YESO - Paddock	3615'	DOLOMITIC LIMESTONE	NATURAL GAS, OIL
YESO - upper Blinebry	4115'	DOLOMITIC LIMESTONE	NATURAL GAS, OIL
YESO - lower Blinebry	4565'	DOLOMITIC LIMESTONE	NATURAL GAS, OIL
ABO	5630'	DOLOMITIC LIMESTONE	NATURAL GAS, OIL

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

2. Casing Program

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

Casing Formation Set Interval	Hole Size (in)	Casing Interval		Csg. Size (in)	Weight	Grade	Conn.	SF	SF Burst	Body SF	Joint SF
		From (ft)	To (ft)		(lbs)			Collapse		Tension	Tension
Seven Rivers	12.25	0	1175	9.625	36	J-55	BTC	1.125	1.2	1.4	1.4
N/A	8.75	0	4100	7	32	L-80	BK-HT	1.125	1.2	1.4	1.4
Yeso	8.75	4100	9399	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 – Welch CD 28 State Com 10H

	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	1175	100%
Production (Lead)	0	3100	100%
Production (Tail)	3100	9399	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)	86	13.2	1.87	9.92	6:59	Clas C Premium Plus Cement
Production (Lead)	321	11.4	2.42	15.29	N/A	Clas C Premium Plus Cement
Production (Tail)	1197	13.2	1.56	9.81	N/A	Clas C Premium Plus Cement

Spur Energy Partners LLC – Welch CD 28 State Com 10H**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	1748 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	111°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 – Welch CD 28 State Com 10H

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	1175	Water-Based Mud	8.6-8.9	32-36	N/C
1175	9399	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 – Welch CD 28 State Com 10H

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: 870.3 bbls.

Spur Energy Partners LLC – Welch CD 28 State Com 10H**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 DepartmentSubmit Electronically
Via E-permittingOil 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:** 9/ /28 / 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
WELCH CD 28 STATE COM 10H	30-015-	M-27-17S-28E	746 FSL 186' FWL	337 BBL/D	369 MCF/D	1349 BBL/D
WELCH CD 28 STATE COM 51H	30-015-	M-27-17S-28E	747' FSL 206' FWL	326 BBL/D	525 MCF/D	1304 BBL/D
WELCH CD 28 STATE COM 91H	30-015-	M-27-17S-28E	747' FSL 226' FWL	326 BBL/D	525 MCF/D	1304 BBL/D

IV. Central Delivery Point Name: _____ [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
WELCH CD 28 STATE COM 10H	30-015-	2/15/2024	3/23/2024	4/24/2024	5/24/2024	5/29/2024
WELCH CD 28 STATE COM 51H	30-015-	3/4/2024	3/12/2024	4/24/2024	5/24/2024	5/29/2024
WELCH CD 28 STATE COM 91H	30-015-	2/24/2024	4/24/2024	4/24/2024	5/24/2024	5/29/2024

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>Cynthia Villacorta</i>
Printed Name:	CYNTHIA VILLACORTA
Title:	REGULATORY CONSULTANT
E-mail Address:	CYNTHIA.VILLACORTA@SPUREENERGY.COM
Date:	09/28/2023
Phone:	
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.



Permian Drilling

Hydrogen Sulfide Drilling Operations Plan

Welch CD 28 State Com Development

Open drill site. No homes or buildings are near the proposed location.

1. Escape

Personnel shall escape upwind of wellbore in the even of an emergency gas release.

Escape can take place through the lease road on the Southeast side of the location.

Personnel need to move to a safe distance and block the entrance to location. If the primary route is not an option due to the wind direction, then secondary egress route should be taken.

