

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER 1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. 9. API Well No. 30-015-56433
2. Name of Operator 3a. Address 3b. Phone No. (include area code)		10. Field and Pool, or Exploratory 11. Sec., T. R. M. or Blk. and Survey or Area 12. County or Parish 13. State
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		14. Distance in miles and direction from nearest town or post office* 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 16. No of acres in lease 17. Spacing Unit dedicated to this well 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 19. Proposed Depth 20. BLM/BIA Bond No. in file 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start* 23. Estimated duration
24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)		

- | | |
|---|---|
| 1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM. |
|---|---|

25. Signature Title	Name (Printed/Typed) Office	Date
Approved by (Signature) Title	Name (Printed/Typed) Office	Date

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
 Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)



C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024	
		Submittal Type:	☒ Initial Submittal
			☐ Amended Report
			☐ As Drilled

WELL LOCATION INFORMATION

API Number 30-015-56433	Pool Code 96718	Pool Name LOCO HILLS; GLORIETA-YESO
Property Code 337178	Property Name TESORO 20 FEDERAL COM	Well Number 70H
OGRID No. 328947	Operator Name SPUR ENERGY PARTNERS LLC.	Ground Level Elevation 3638'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL D	Section 20	Township 17S	Range 30E	Lot	Ft. from N/S 690 FNL	Ft. from E/W 65 FWL	Latitude 32.8253943°N	Longitude 104.0025354°W	County EDDY
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Bottom Hole Location

UL A	Section 20	Township 17S	Range 30E	Lot	Ft. from N/S 525 FNL	Ft. from E/W 50 FEL	Latitude 32.8258457°N	Longitude 103.9857220°W	County EDDY
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Dedicated Acres 320	Infill or Defining Well INFILL	Defining Well API PENDING	Overlapping Spacing Unit (Y/N) N	Consolidation Code
Order Numbers.			Well setbacks are under Common Ownership: ☒ Yes ☐ No	

Kick Off Point (KOP)

UL A	Section 19	Township 17S	Range 30E	Lot	Ft. from N/S 554 FNL	Ft. from E/W 805 FEL	Latitude 32.8257660°N	Longitude 104.0053657°W	County EDDY
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First Take Point (FTP)

UL D	Section 20	Township 17S	Range 30E	Lot	Ft. from N/S 525 FNL	Ft. from E/W 100 FWL	Latitude 32.8258478°N	Longitude 104.0024220°W	County EDDY
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Last Take Point (LTP)

UL A	Section 20	Township 17S	Range 30E	Lot	Ft. from N/S 525 FNL	Ft. from E/W 100 FEL	Latitude 32.8258457°N	Longitude 103.9858848°W	County EDDY
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Unitized Area or Area of Uniform Interest Y	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 3638'
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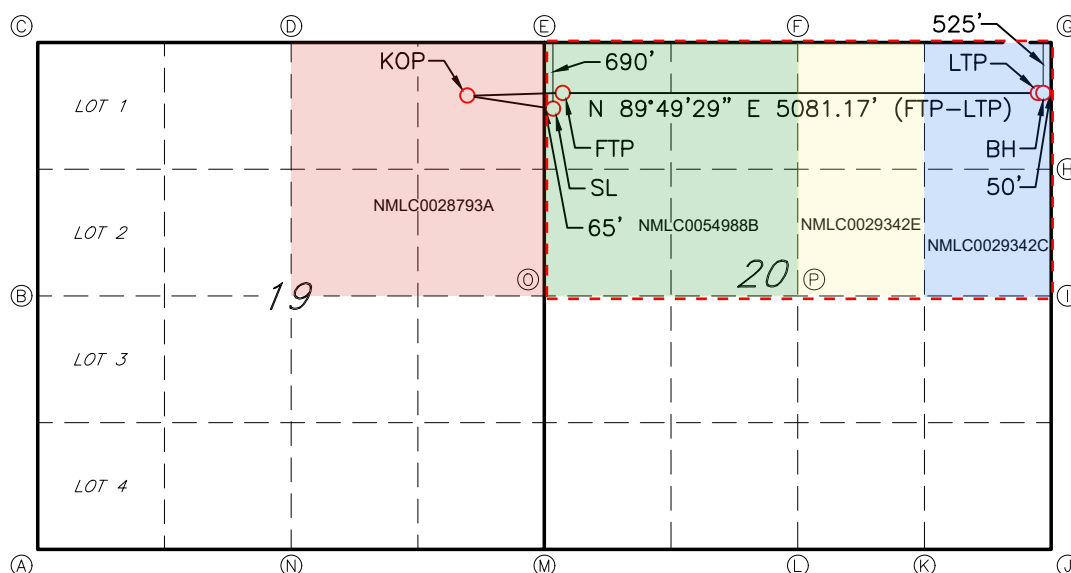
OPERATOR CERTIFICATIONS <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> <i>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</i> Sarah Chapman 08/28/2024 Signature Date		SURVEYOR CERTIFICATIONS <i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me under my supervision, and that the same is true and correct to the best of my belief.</i>  Signature and Seal of Professional Surveyor	
SARAH CHAPMAN Printed Name		26382 Certificate Number	05/28/2024 Date of Survey
SCHAPMAN@SPURENERGY.COM Email Address			

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is a directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.



GEODETTIC DATA
NAD 83 GRID - NM EAST

SURFACE LOCATION (SL)
N: 664170.3 - E: 642951.9

LAT: 32.8253943° N
LONG: 104.0025354° W

KICK OFF POINT (KOP)
554' FNL - 805' FEL SEC.19
N: 664302.8 - E: 642082.1

LAT: 32.8257660° N
LONG: 104.0053657° W

FIRST TAKE POINT (FTP)
525' FNL - 100' FWL SEC.20
N: 664335.4 - E: 642986.2

LAT: 32.8258478° N
LONG: 104.0024220° W

LAST TAKE POINT (LTP)
525' FNL - 100' FEL SEC.20
N: 664350.9 - E: 648066.1

LAT: 32.8258457° N
LONG: 103.9858848° W

BOTTOM HOLE (BH)
N: 664351.1 - E: 648116.1

LAT: 32.8258457° N
LONG: 103.9857220° W

CORNER DATA
NAD 83 GRID - NM EAST

A: FOUND 2 1/2" STEEL PIPE
N: 659567.0 - E: 637708.9

B: FOUND BRASS CAP "1914"
N: 662203.0 - E: 637700.0

C: FOUND BRASS CAP "1914"
N: 664840.4 - E: 637685.9

D: FOUND BRASS CAP "1997"
N: 664849.8 - E: 640242.9

E: FOUND BRASS CAP "1916"
N: 664860.0 - E: 642884.4

F: FOUND BRASS CAP "1916"
N: 664867.5 - E: 645524.3

G: FOUND BRASS CAP "1916"
N: 664876.1 - E: 648164.3

H: FOUND BRASS CAP "1940"
N: 663555.8 - E: 648168.8

I: FOUND ALUM CAP BLM "1984"
N: 662235.5 - E: 648173.3

J: FOUND ALUM CAP "1983"
N: 659595.4 - E: 648182.7

K: FOUND 3" ALUM CAP DOI "1984"
N: 659591.5 - E: 646862.8

L: FOUND BRASS CAP "1916"
N: 659587.8 - E: 645542.7

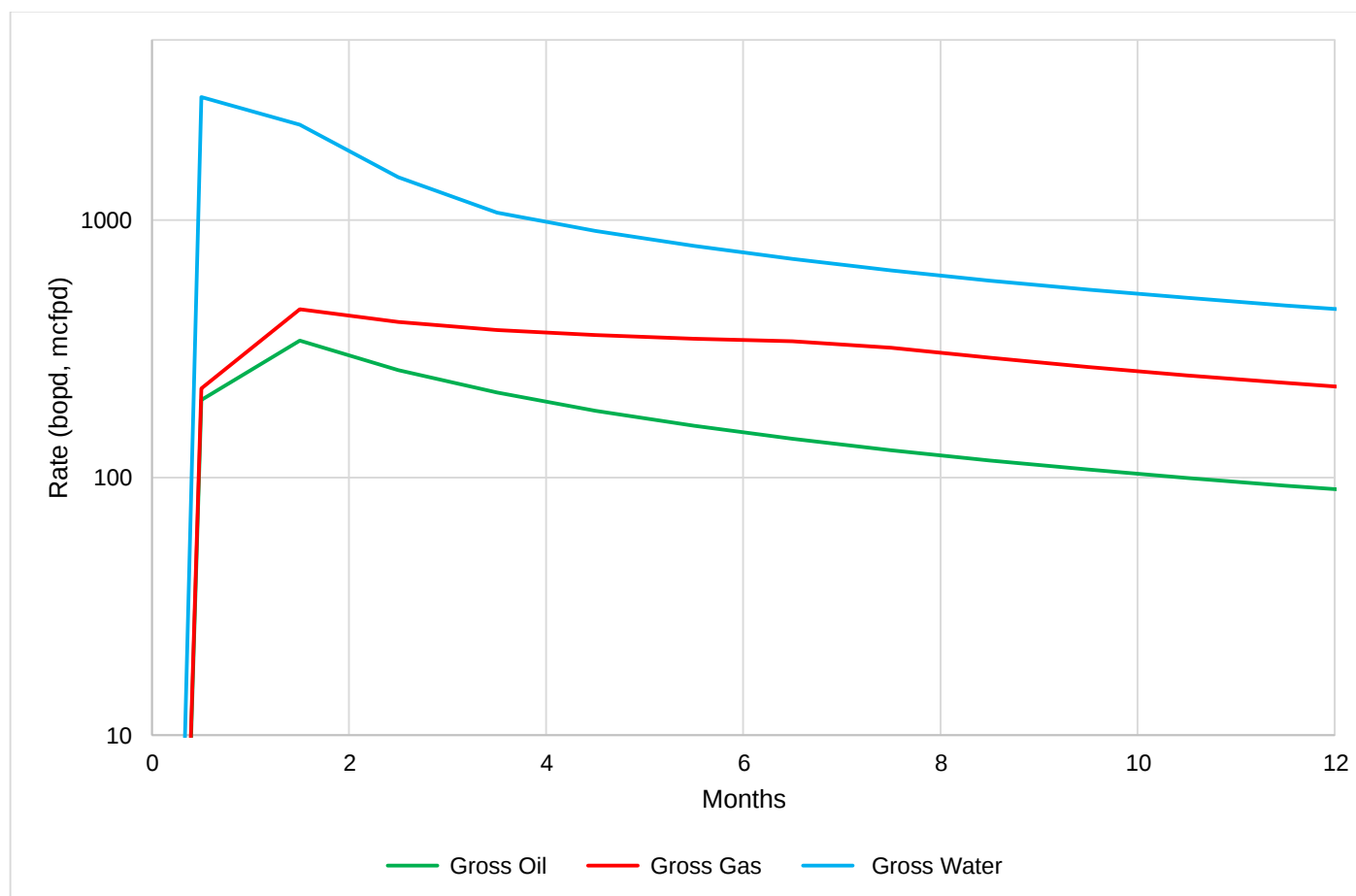
M: FOUND BRASS CAP "1916"
N: 659581.0 - E: 642902.6

N: FOUND BRASS CAP "1916"
N: 659574.2 - E: 640262.1

O: FOUND BRASS CAP "1990"
N: 662220.5 - E: 642893.7

P: FOUND ALUM CAP "1985"
N: 662228.3 - E: 645533.7

Maljamar Blinebry Type Curve



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:** 08 / 26 / 2024**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
TESORO 20 FEDERAL COM 70H	30-015-	D-20-17S-30E	690' FNL 65' FWL	335 BBL/D	365 MCF/D	1006 BBL/D
TESORO 20 FEDERAL COM 71H	30-015-	D-20-17S-30E	730' FNL 65' FWL	335 BBL/D	365 MCF/D	1006 BBL/D
TESORO 20 FEDERAL COM 90H	30-015-	D-20-17S-30E	710' FNL 65' FWL	304 BBL/D	334 MCF/D	1522 BBL/D

IV. Central Delivery Point Name: OCHO TESORO 20 FEDERAL COM TANK BATTERY [See 19.15.27.9(D)(1) NMAC]**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
TESORO 20 FEDERAL COM 70H	30-015-	09/28/2025	10/07/2025	11/03/2025	11/17/2025	11/29/2025
TESORO 20 FEDERAL COM 71H	30-015-	10/07/2025	10/16/2025	11/03/2025	11/17/2025	11/29/2025
TESORO 20 FEDERAL COM 90H	30-015-	10/16/2025	10/25/2025	11/03/2025	11/17/2025	11/29/2025

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.**VII. Operational Practices:** ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.**VIII. Best Management Practices:** ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan**EFFECTIVE APRIL 1, 2022**

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

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

Signature:	<i>Sarah Chapman</i>
Printed Name:	SARAH CHAPMAN
Title:	REGULATORY DIRECTOR
E-mail Address:	SCHAPMAN@SPUREENERGY.COM
Date:	08/26/2024
Phone:	832-930-8613
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)	
Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	



Natural Gas Management Plan – Attachment

VI. Separation equipment will be sized by construction engineering staff based on anticipated daily production to ensure adequate capacity.

VII. Spur Energy Partners LLC ("Spur") will take the following actions to comply with the regulations listed in 19.15.27.8:

- A. Spur will maximize the recovery of natural gas by minimizing waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. Spur will ensure that our wells will be connected to a natural gas gathering system with sufficient capacity to transport natural gas.
- B. All drilling operations will be equipped with a rig flare at least 100 feet from the nearest surface hole location. Rig flare will be utilized to combust any natural gas that is brought to surface during normal operations. In the case of emergency, flaring volumes will be reported appropriately.
- C. During completion operations any natural gas brought to surface will be flared. Immediately following completion operations, wells will flow to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. If natural gas does not meet gathering pipeline specifications, Spur will flare for 60 days or until natural gas meets the pipeline specifications. Spur will ensure flare is properly sized and is equipped with an automatic igniter or continuous pilot. Gas samples will be taken twice per week and natural gas will be routed into a gathering system as soon as the pipeline specifications are met.
- D. Natural gas will not be flared with the exception of 19.15.27.8(D)(1-4). If there is no adequate takeaway for the separator gas, wells will be shut-in until that natural gas gathering system is available with exception of emergency or malfunction situations. Volumes will be reported appropriately.
- E. Spur will comply with performance standards pursuant to 19.15.27.8(E)(1-8). All equipment will be designed and sized to handle maximum pressures to minimize waste. Storage tanks constructed after May 25, 2021 will be equipped with an automatic gauging system that reduces venting of natural gas. Flare stacks installed or replaced after May 25, 2021 will be equipped with an automatic igniter or continuous pilot. Spur will conduct AVO inspections as described in 19.15.27.8(E)(5)(a) with frequencies specified in 19.15.27.8(E)(5)(b) and (c). All emergencies or malfunctions will be resolved as quickly and safely as possible to minimize waste.
- F. The volume of natural gas that is vented or flared as the result of an emergency or malfunction during drilling and/or completion operations will be estimated and reported accordingly. The volume of natural gas that is vented, flared or beneficially used during production operations, will be measured and reported accordingly. Spur will install equipment to measure the volume of natural gas flared from existing piping or a flowline piped from equipment such as high-pressure separators, heater treaters, or VRUs associated with a well or facility associated with a well authorized by an APD after May 25, 2021 that has an average daily production of less than 60,000 cubic feet of natural gas. If metering is not practicable due to circumstances such as low flow rate or low pressure venting or flaring, Spur will estimate the volume of flared or vented natural gas. Measuring equipment will conform to industry standards and will not be equipped with a manifold



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

VIII. For maintenance activities involving production equipment and compression, venting be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production equipment, the associated producing wells will be shut-in to eliminate venting. For maintenance of VRUs, all natural gas normally routed to the VRU will be routed to flare.

Spur Energy Partners LLC – Tesoro 20 Federal Com #70H

1. Geologic Formations

TVD of Target	5,150'
MD at TD	10,893'

Formation	Depth	Lithology	Expected Fluids
Quaternary	0'	Dolomite, other: Caliche	Useable Water
Rustler	295'	Dolomite, Shale, Anhydrite	Other: Brackish Water
Top Salt	435'	Anhydrite	Other: Salt
Tansill	1005'	Sandstone, Dolomite	None
Yates	1115'	Dolomite, Limestone, Shale, Siltstone	None
Seven Rivers	1405'	Dolomite, Limestone	Natural Gas, Oil
Queen	2025'	Anhydrite, Dolomite, Sandstone	Natural Gas, Oil
Grayburg	2405'	Anhydrite	Natural Gas, Oil
San Andres	2760'	Dolomite	Natural Gas, Oil
Glorieta	4160'	Dolomite, Siltstone	Natural Gas, Oil
Paddock	4285'	Dolomite, Limestone	Natural Gas, Oil
Blinberry	4765'	Dolomite, Limestone	Natural Gas, Oil
Abo	6550'	Dolomite, Limestone	Will Not Penetrate

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

2. Casing Program

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

Casing Formation Set Interval	Hole Size (in)	Casing Interval		Csg. Size (in)	Weight (lbs)	Grade	Conn.	SF	SF Burst	Body SF	Joint SF
		From (ft)	To (ft)					Collapse		Tension	Tension
Rustler	17.5	0	345	13.375	54.5	J-55	BTC	1.125	1.2	1.4	1.4
Seven Rivers	12.25	0	1500	9.625	36	J-55	BTC	1.125	1.2	1.4	1.4
N/A	8.75	0	5500	7	32	L-80	BK-HT	1.125	1.2	1.4	1.4
Yeso	8.75	5500	10893	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 – Tesoro 20 Federal Com #70H

	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?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
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 Tail	0	345	165%
Intermediate (Lead)	0	345	100%
Intermediate (Tail)	345	1500	100%
Production (Lead)	0	4500	100%
Production (Tail)	4500	10893	25%

Casing String	# Sks	Wt. (lb/gal)	Yld (ft3/sack)	H2O (gal/sk)	500# Comp. Strength (hours)	Slurry Description
Surface Tail	326	13.2	1.87	9.92	6:59	Clas C Premium Plus Cement
Intermediate (Lead)	53	12	2.4	13.48	8:12	Clas C Premium Plus Cement
Intermediate (Tail)	397	13.2	1.87	9.92	6:59	Clas C Premium Plus Cement
Production (Lead)	746	11.4	2.42	15.29	N/A	Clas C Premium Plus Cement
Production (Tail)	1218	13.2	1.56	9.81	N/A	Clas C Premium Plus Cement

Spur Energy Partners LLC – Tesoro 20 Federal Com #70H**4. Pressure Control Equipment**

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	2384 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	122°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.
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Spur Energy Partners LLC – Tesoro 20 Federal Com #70H

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 per the verbal agreement reached over the phone between SPUR/BLM on September 7, 2020. A separate sundry will be sent prior to spud that reflects the pad-based break testing plan.

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	345	Water-Based Mud	8.6-8.9	32-36	N/C
345	1500	Brine	10.0-10.5	32-36	N/C
1500	10893	Brine	10.0-10.5	32-36	N/C

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

Spur Energy Partners LLC – Tesoro 20 Federal Com #70H

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	ICP - 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: 1072.6 bbls.

Spur Energy Partners LLC – Tesoro 20 Federal Com #70H**9. Other facets of operation**

	Yes/No
Will more than one drilling rig be used for drilling operations? If yes, describe. Spur Energy Partners LLC. requests the option to contract a Surface Rig to drill, set surface/intermediate casing and cement for this well. If the timing between rigs is such that Spur Energy Partners LLC. would not be able to preset surface/intermediate 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

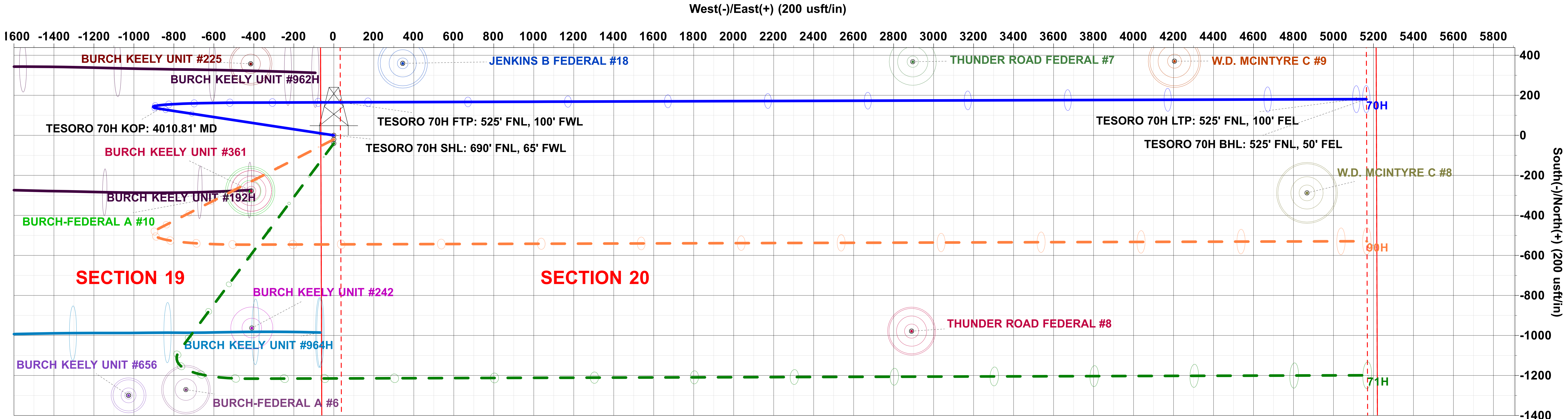
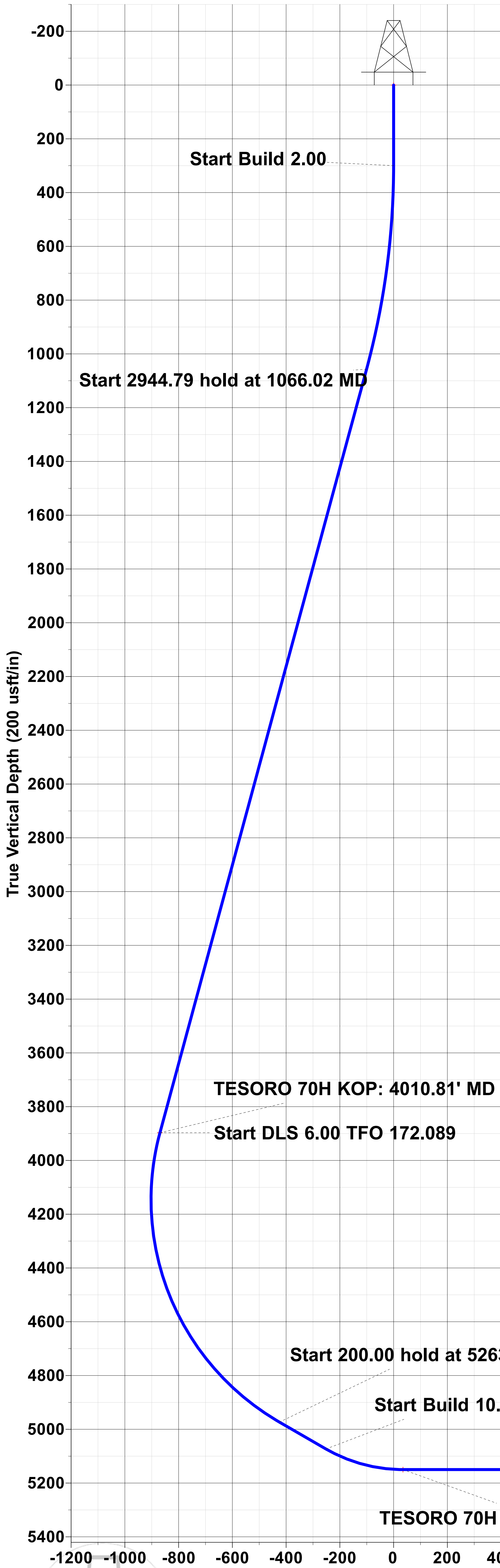
Attachments

- ☒ 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

Project: EDDY COUNTY, NM (NAD 83 - NME)
Site: TESORO 20 FEDERAL COM
Well: 70H
Wellbore: Wellbore #1
Design: PERMIT



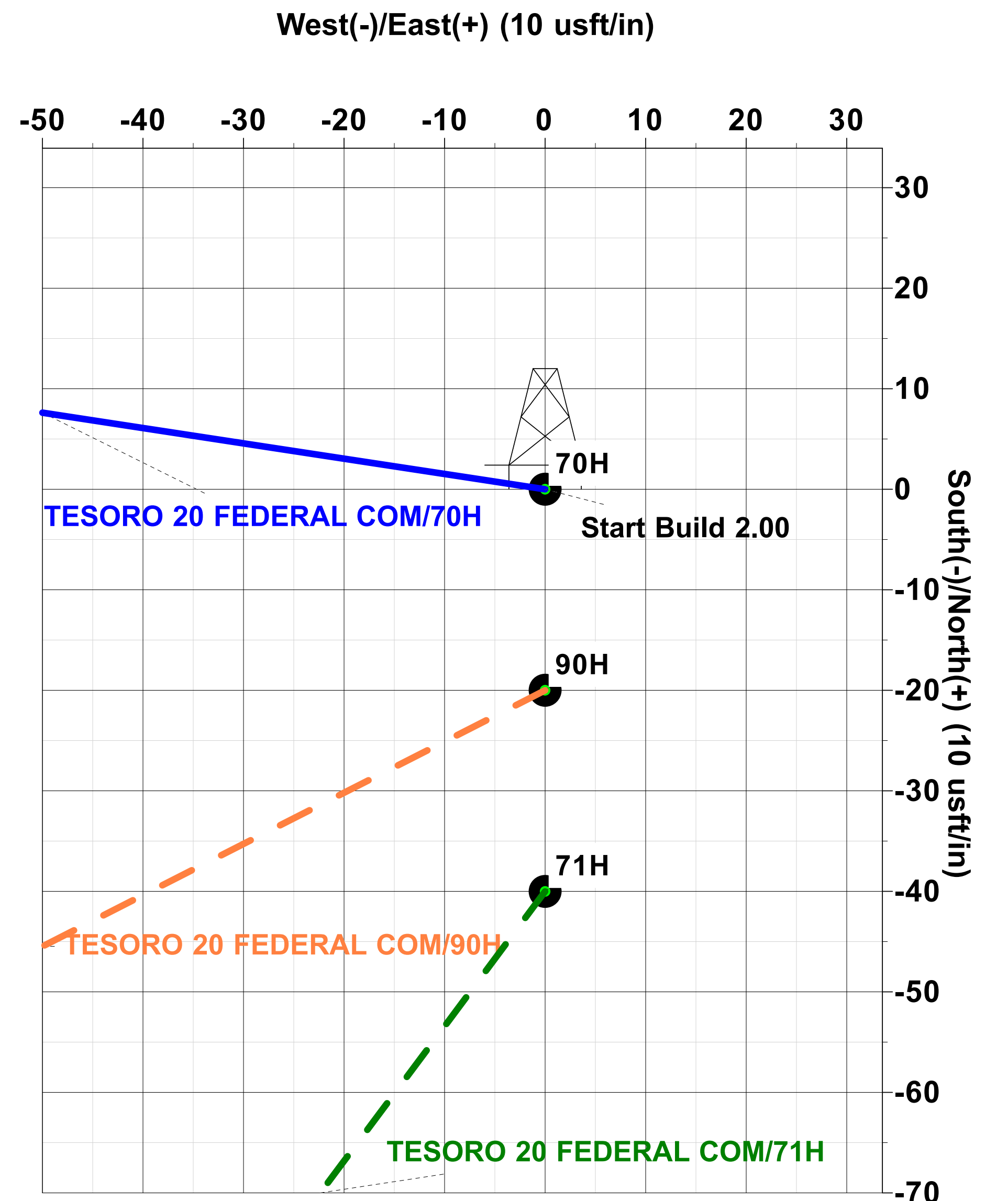
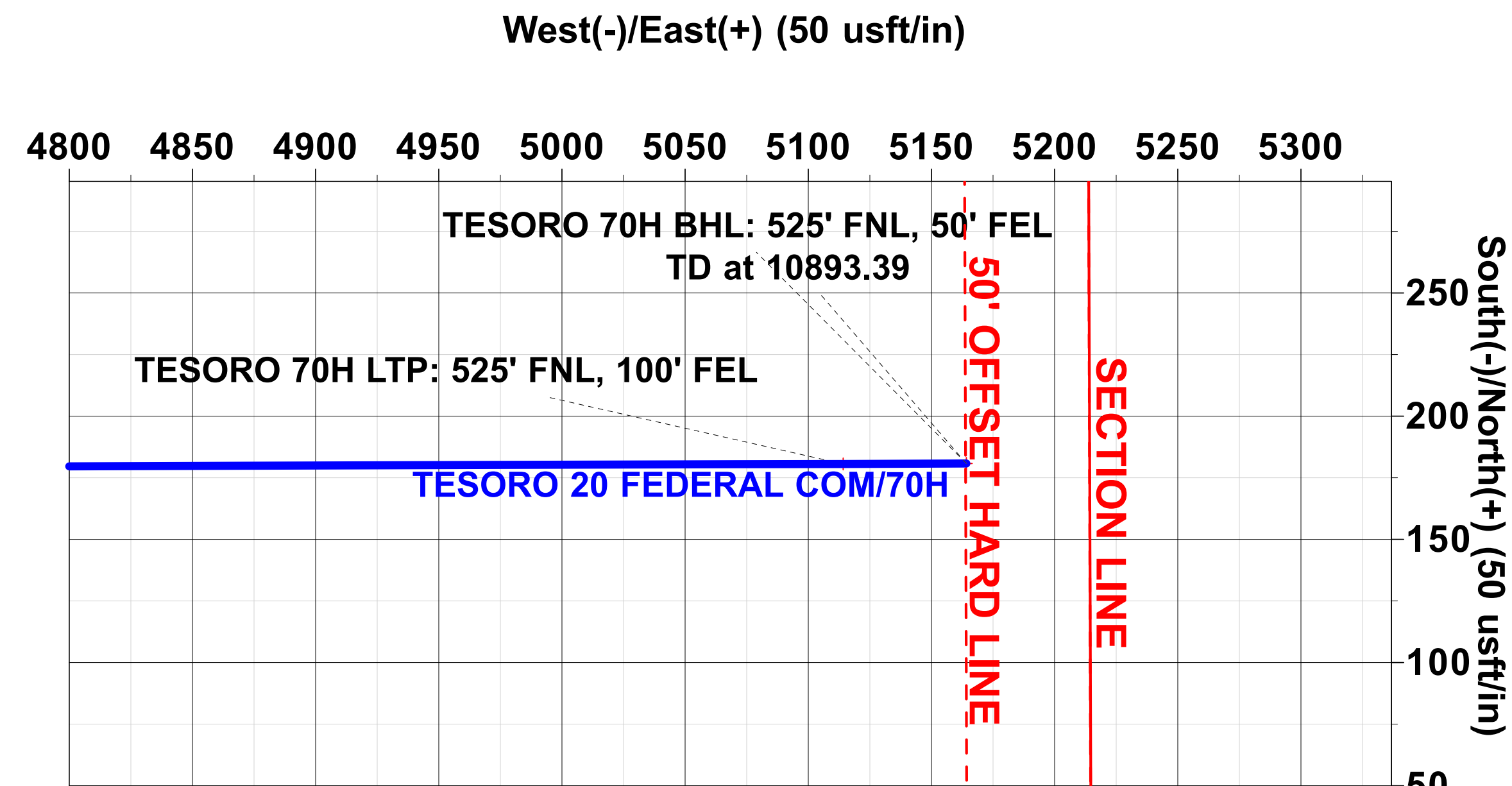
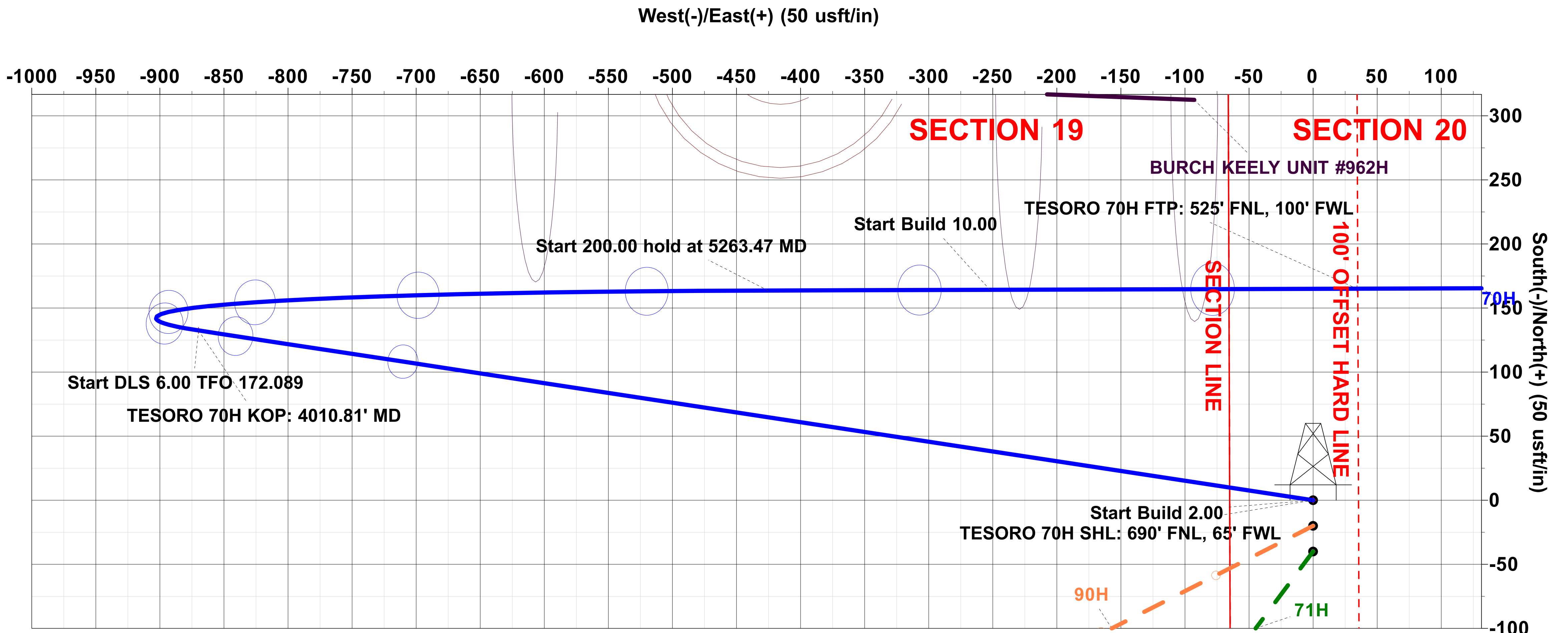
WELL DETAILS: 70H					
Rig Name:		AKITA 57		RKB = 20' @ 3658.00usft (AKITA 57)	
		Ground Level:		3638.00	
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	664170.30	642951.90	32.8253944	-104.0025354

SECTION DETAILS								
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00
3	1066.02	15.32	278.66	1056.93	15.33	-100.64	2.00	-100.60
4	4010.81	15.32	278.66	3897.07	132.51	-869.84	0.00	-869.42
5	5263.47	60.00	89.82	4973.24	163.69	-425.38	6.00	-424.87
6	5463.47	60.00	89.82	5073.24	164.22	-252.18	0.00	-251.66
7	5763.47	90.00	89.82	5150.00	165.10	34.30	10.00	34.82
8	10843.39	90.00	89.82	5150.00	180.65	5114.20	0.00	5114.74
9	10893.39	90.00	89.82	5150.00	180.80	5164.20	0.00	5164.74

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
TESORO 70H BHL: 525' FNL, 50' FEL	5150.00	180.80	5164.20	664351.10	648116.10
TESORO 70H FTP: 525' FNL, 100' FWL	5150.00	165.10	34.30	664335.40	642986.20
TESORO 70H KOP: 4010.81' MD	3897.07	132.51	-869.84	664302.81	642082.06
TESORO 70H LTP: 525' FNL, 100' FEL	5150.00	180.60	5114.20	664350.90	648066.10
TESORO 70H SHL: 690' FNL, 65' FWL	0.00	0.00	0.00	664170.30	642951.90

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



Vertical Section at 89.82° (200 usft/in)

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Plan: PERMIT (70H/Wellbore #1)

Created By: PROTOTYPE WELL PLANNING / Date: 9:28, July 29 2024



SPUR ENERGY PARTNERS, LLC

EDDY COUNTY, NM (NAD 83 - NME)

TESORO 20 FEDERAL COM

70H

Wellbore #1

Plan: PERMIT

Standard Planning Report

29 July, 2024



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 70H
Company:	SPUR ENERGY PARTNERS, LLC	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site:	TESORO 20 FEDERAL COM	North Reference:	Grid
Well:	70H	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		TESORO 20 FEDERAL COM			
Site Position:		Northing:	664,170.30 usft	Latitude:	32.8253944
From:	Map	Easting:	642,951.90 usft	Longitude:	-104.0025354
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.179

Well	70H					
Well Position	+N/-S	0.00 usft	Northing:	664,170.30 usft	Latitude:	32.8253944
	+E/-W	0.00 usft	Easting:	642,951.90 usft	Longitude:	-104.0025354
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,638.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	07/24/24	6.430	60.278	47,479

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	89.82	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,066.02	15.32	278.66	1,056.93	15.33	-100.64	2.00	2.00	0.00	278.661	
4,010.81	15.32	278.66	3,897.07	132.51	-869.84	0.00	0.00	0.00	0.000	
5,263.47	60.00	89.82	4,973.24	163.69	-425.38	6.00	3.57	13.66	172.089	
5,463.47	60.00	89.82	5,073.24	164.22	-252.18	0.00	0.00	0.00	0.000	
5,763.47	90.00	89.82	5,150.00	165.10	34.30	10.00	10.00	0.00	0.000	TESORO 70H FTP
10,843.39	90.00	89.82	5,150.00	180.65	5,114.20	0.00	0.00	0.00	0.000	TESORO 70H LTP:
10,893.39	90.00	89.82	5,150.00	180.80	5,164.20	0.00	0.00	0.00	0.000	TESORO 70H BHL



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 70H
Company:	SPUR ENERGY PARTNERS, LLC	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site:	TESORO 20 FEDERAL COM	North Reference:	Grid
Well:	70H	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
TESORO 70H SHL: 690' FNL, 65' 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	278.66	399.98	0.26	-1.73	-1.72	2.00	2.00	0.00
500.00	4.00	278.66	499.84	1.05	-6.90	-6.90	2.00	2.00	0.00
600.00	6.00	278.66	599.45	2.36	-15.51	-15.51	2.00	2.00	0.00
700.00	8.00	278.66	698.70	4.20	-27.56	-27.55	2.00	2.00	0.00
800.00	10.00	278.66	797.47	6.55	-43.03	-43.01	2.00	2.00	0.00
900.00	12.00	278.66	895.62	9.43	-61.89	-61.86	2.00	2.00	0.00
1,000.00	14.00	278.66	993.06	12.82	-84.13	-84.09	2.00	2.00	0.00
1,066.02	15.32	278.66	1,056.93	15.33	-100.64	-100.60	2.00	2.00	0.00
1,100.00	15.32	278.66	1,089.70	16.68	-109.52	-109.47	0.00	0.00	0.00
1,200.00	15.32	278.66	1,186.14	20.66	-135.64	-135.57	0.00	0.00	0.00
1,300.00	15.32	278.66	1,282.59	24.64	-161.76	-161.68	0.00	0.00	0.00
1,400.00	15.32	278.66	1,379.04	28.62	-187.88	-187.79	0.00	0.00	0.00
1,500.00	15.32	278.66	1,475.48	32.60	-214.00	-213.90	0.00	0.00	0.00
1,600.00	15.32	278.66	1,571.93	36.58	-240.12	-240.01	0.00	0.00	0.00
1,700.00	15.32	278.66	1,668.37	40.56	-266.24	-266.11	0.00	0.00	0.00
1,800.00	15.32	278.66	1,764.82	44.54	-292.36	-292.22	0.00	0.00	0.00
1,900.00	15.32	278.66	1,861.27	48.52	-318.48	-318.33	0.00	0.00	0.00
2,000.00	15.32	278.66	1,957.71	52.49	-344.60	-344.44	0.00	0.00	0.00
2,100.00	15.32	278.66	2,054.16	56.47	-370.72	-370.54	0.00	0.00	0.00
2,200.00	15.32	278.66	2,150.61	60.45	-396.84	-396.65	0.00	0.00	0.00
2,300.00	15.32	278.66	2,247.05	64.43	-422.96	-422.76	0.00	0.00	0.00
2,400.00	15.32	278.66	2,343.50	68.41	-449.09	-448.87	0.00	0.00	0.00
2,500.00	15.32	278.66	2,439.95	72.39	-475.21	-474.98	0.00	0.00	0.00
2,600.00	15.32	278.66	2,536.39	76.37	-501.33	-501.08	0.00	0.00	0.00
2,700.00	15.32	278.66	2,632.84	80.35	-527.45	-527.19	0.00	0.00	0.00
2,800.00	15.32	278.66	2,729.28	84.33	-553.57	-553.30	0.00	0.00	0.00
2,900.00	15.32	278.66	2,825.73	88.31	-579.69	-579.41	0.00	0.00	0.00
3,000.00	15.32	278.66	2,922.18	92.28	-605.81	-605.52	0.00	0.00	0.00
3,100.00	15.32	278.66	3,018.62	96.26	-631.93	-631.62	0.00	0.00	0.00
3,200.00	15.32	278.66	3,115.07	100.24	-658.05	-657.73	0.00	0.00	0.00
3,300.00	15.32	278.66	3,211.52	104.22	-684.17	-683.84	0.00	0.00	0.00
3,400.00	15.32	278.66	3,307.96	108.20	-710.29	-709.95	0.00	0.00	0.00
3,500.00	15.32	278.66	3,404.41	112.18	-736.41	-736.05	0.00	0.00	0.00
3,600.00	15.32	278.66	3,500.85	116.16	-762.53	-762.16	0.00	0.00	0.00
3,700.00	15.32	278.66	3,597.30	120.14	-788.65	-788.27	0.00	0.00	0.00
3,800.00	15.32	278.66	3,693.75	124.12	-814.77	-814.38	0.00	0.00	0.00
3,900.00	15.32	278.66	3,790.19	128.10	-840.89	-840.49	0.00	0.00	0.00
4,000.00	15.32	278.66	3,886.64	132.08	-867.01	-866.59	0.00	0.00	0.00
4,010.81	15.32	278.66	3,897.07	132.51	-869.84	-869.42	0.00	0.00	0.00
TESORO 70H KOP: 4010.81' MD									
4,050.00	13.00	280.10	3,935.06	134.06	-879.29	-878.87	6.00	-5.93	3.67
4,100.00	10.05	282.88	3,984.05	136.02	-889.08	-888.65	6.00	-5.90	5.56
4,150.00	7.14	287.92	4,033.48	137.95	-896.29	-895.85	6.00	-5.81	10.07
4,200.00	4.36	299.54	4,083.23	139.84	-900.90	-900.46	6.00	-5.56	23.24
4,250.00	2.24	339.30	4,133.15	141.69	-902.90	-902.45	6.00	-4.23	79.53
4,300.00	3.01	47.21	4,183.11	143.50	-902.29	-901.83	6.00	1.53	135.80
4,350.00	5.57	69.13	4,232.97	145.25	-899.05	-898.59	6.00	5.13	43.85
4,400.00	8.43	76.81	4,282.59	146.96	-893.21	-892.75	6.00	5.71	15.36
4,450.00	11.36	80.59	4,331.84	148.60	-884.79	-884.32	6.00	5.86	7.56



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 70H
Company:	SPUR ENERGY PARTNERS, LLC	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site:	TESORO 20 FEDERAL COM	North Reference:	Grid
Well:	70H	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)
4,500.00	14.32	82.83	4,380.59	150.17	-873.79	-873.31	6.00	5.92	4.48
4,550.00	17.29	84.32	4,428.69	151.68	-860.26	-859.78	6.00	5.95	2.97
4,600.00	20.27	85.37	4,476.02	153.12	-844.23	-843.74	6.00	5.96	2.12
4,650.00	23.26	86.17	4,522.45	154.47	-825.74	-825.25	6.00	5.97	1.59
4,700.00	26.25	86.80	4,567.85	155.75	-804.84	-804.35	6.00	5.98	1.25
4,750.00	29.24	87.30	4,612.10	156.94	-781.60	-781.11	6.00	5.98	1.01
4,800.00	32.23	87.72	4,655.07	158.05	-756.08	-755.58	6.00	5.98	0.84
4,850.00	35.22	88.07	4,696.65	159.07	-728.34	-727.83	6.00	5.99	0.71
4,900.00	38.22	88.38	4,736.73	159.99	-698.46	-697.95	6.00	5.99	0.61
4,950.00	41.21	88.65	4,775.18	160.81	-666.52	-666.02	6.00	5.99	0.54
5,000.00	44.21	88.88	4,811.92	161.54	-632.62	-632.11	6.00	5.99	0.47
5,050.00	47.21	89.10	4,846.83	162.17	-596.84	-596.33	6.00	5.99	0.43
5,100.00	50.20	89.29	4,879.83	162.70	-559.29	-558.77	6.00	5.99	0.39
5,150.00	53.20	89.47	4,910.81	163.12	-520.05	-519.54	6.00	5.99	0.35
5,200.00	56.20	89.63	4,939.70	163.44	-479.25	-478.74	6.00	5.99	0.33
5,250.00	59.19	89.79	4,966.42	163.65	-437.00	-436.48	6.00	5.99	0.31
5,263.47	60.00	89.82	4,973.24	163.69	-425.38	-424.87	6.00	5.99	0.29
5,300.00	60.00	89.82	4,991.50	163.79	-393.75	-393.23	0.00	0.00	0.00
5,400.00	60.00	89.82	5,041.50	164.06	-307.14	-306.63	0.00	0.00	0.00
5,463.47	60.00	89.82	5,073.24	164.22	-252.18	-251.66	0.00	0.00	0.00
5,500.00	63.65	89.82	5,090.48	164.32	-219.98	-219.46	10.00	10.00	0.00
5,550.00	68.65	89.82	5,110.69	164.46	-174.26	-173.75	10.00	10.00	0.00
5,600.00	73.65	89.82	5,126.84	164.61	-126.96	-126.44	10.00	10.00	0.00
5,650.00	78.65	89.82	5,138.80	164.75	-78.43	-77.91	10.00	10.00	0.00
5,700.00	83.65	89.82	5,146.49	164.91	-29.04	-28.52	10.00	10.00	0.00
5,750.00	88.65	89.82	5,149.84	165.06	20.83	21.35	10.00	10.00	0.00
5,763.47	90.00	89.82	5,150.00	165.10	34.30	34.82	10.00	10.00	0.00
TESORO 70H FTP: 525' FNL, 100' FWL									
5,800.00	90.00	89.82	5,150.00	165.21	70.83	71.35	0.00	0.00	0.00
5,900.00	90.00	89.82	5,150.00	165.52	170.83	171.35	0.00	0.00	0.00
6,000.00	90.00	89.82	5,150.00	165.82	270.83	271.35	0.00	0.00	0.00
6,100.00	90.00	89.82	5,150.00	166.13	370.83	371.35	0.00	0.00	0.00
6,200.00	90.00	89.82	5,150.00	166.44	470.83	471.35	0.00	0.00	0.00
6,300.00	90.00	89.82	5,150.00	166.74	570.83	571.35	0.00	0.00	0.00
6,400.00	90.00	89.82	5,150.00	167.05	670.83	671.35	0.00	0.00	0.00
6,500.00	90.00	89.82	5,150.00	167.35	770.83	771.35	0.00	0.00	0.00
6,600.00	90.00	89.82	5,150.00	167.66	870.83	871.35	0.00	0.00	0.00
6,700.00	90.00	89.82	5,150.00	167.97	970.83	971.35	0.00	0.00	0.00
6,800.00	90.00	89.82	5,150.00	168.27	1,070.83	1,071.35	0.00	0.00	0.00
6,900.00	90.00	89.82	5,150.00	168.58	1,170.83	1,171.35	0.00	0.00	0.00
7,000.00	90.00	89.82	5,150.00	168.88	1,270.82	1,271.35	0.00	0.00	0.00
7,100.00	90.00	89.82	5,150.00	169.19	1,370.82	1,371.35	0.00	0.00	0.00
7,200.00	90.00	89.82	5,150.00	169.50	1,470.82	1,471.35	0.00	0.00	0.00
7,300.00	90.00	89.82	5,150.00	169.80	1,570.82	1,571.35	0.00	0.00	0.00
7,400.00	90.00	89.82	5,150.00	170.11	1,670.82	1,671.35	0.00	0.00	0.00
7,500.00	90.00	89.82	5,150.00	170.41	1,770.82	1,771.35	0.00	0.00	0.00
7,600.00	90.00	89.82	5,150.00	170.72	1,870.82	1,871.35	0.00	0.00	0.00
7,700.00	90.00	89.82	5,150.00	171.03	1,970.82	1,971.35	0.00	0.00	0.00
7,800.00	90.00	89.82	5,150.00	171.33	2,070.82	2,071.35	0.00	0.00	0.00
7,900.00	90.00	89.82	5,150.00	171.64	2,170.82	2,171.35	0.00	0.00	0.00
8,000.00	90.00	89.82	5,150.00	171.94	2,270.82	2,271.35	0.00	0.00	0.00
8,100.00	90.00	89.82	5,150.00	172.25	2,370.82	2,371.35	0.00	0.00	0.00
8,200.00	90.00	89.82	5,150.00	172.56	2,470.82	2,471.35	0.00	0.00	0.00
8,300.00	90.00	89.82	5,150.00	172.86	2,570.82	2,571.35	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 70H
Company:	SPUR ENERGY PARTNERS, LLC	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site:	TESORO 20 FEDERAL COM	North Reference:	Grid
Well:	70H	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)
8,400.00	90.00	89.82	5,150.00	173.17	2,670.82	2,671.35	0.00	0.00	0.00
8,500.00	90.00	89.82	5,150.00	173.48	2,770.82	2,771.35	0.00	0.00	0.00
8,600.00	90.00	89.82	5,150.00	173.78	2,870.82	2,871.35	0.00	0.00	0.00
8,700.00	90.00	89.82	5,150.00	174.09	2,970.82	2,971.35	0.00	0.00	0.00
8,800.00	90.00	89.82	5,150.00	174.39	3,070.82	3,071.35	0.00	0.00	0.00
8,900.00	90.00	89.82	5,150.00	174.70	3,170.82	3,171.35	0.00	0.00	0.00
9,000.00	90.00	89.82	5,150.00	175.01	3,270.82	3,271.35	0.00	0.00	0.00
9,100.00	90.00	89.82	5,150.00	175.31	3,370.81	3,371.35	0.00	0.00	0.00
9,200.00	90.00	89.82	5,150.00	175.62	3,470.81	3,471.35	0.00	0.00	0.00
9,300.00	90.00	89.82	5,150.00	175.92	3,570.81	3,571.35	0.00	0.00	0.00
9,400.00	90.00	89.82	5,150.00	176.23	3,670.81	3,671.35	0.00	0.00	0.00
9,500.00	90.00	89.82	5,150.00	176.54	3,770.81	3,771.35	0.00	0.00	0.00
9,600.00	90.00	89.82	5,150.00	176.84	3,870.81	3,871.35	0.00	0.00	0.00
9,700.00	90.00	89.82	5,150.00	177.15	3,970.81	3,971.35	0.00	0.00	0.00
9,800.00	90.00	89.82	5,150.00	177.45	4,070.81	4,071.35	0.00	0.00	0.00
9,900.00	90.00	89.82	5,150.00	177.76	4,170.81	4,171.35	0.00	0.00	0.00
10,000.00	90.00	89.82	5,150.00	178.07	4,270.81	4,271.35	0.00	0.00	0.00
10,100.00	90.00	89.82	5,150.00	178.37	4,370.81	4,371.35	0.00	0.00	0.00
10,200.00	90.00	89.82	5,150.00	178.68	4,470.81	4,471.35	0.00	0.00	0.00
10,300.00	90.00	89.82	5,150.00	178.98	4,570.81	4,571.35	0.00	0.00	0.00
10,400.00	90.00	89.82	5,150.00	179.29	4,670.81	4,671.35	0.00	0.00	0.00
10,500.00	90.00	89.82	5,150.00	179.60	4,770.81	4,771.35	0.00	0.00	0.00
10,600.00	90.00	89.82	5,150.00	179.90	4,870.81	4,871.35	0.00	0.00	0.00
10,700.00	90.00	89.82	5,150.00	180.21	4,970.81	4,971.35	0.00	0.00	0.00
10,800.00	90.00	89.82	5,150.00	180.51	5,070.81	5,071.35	0.00	0.00	0.00
10,843.39	90.00	89.82	5,150.00	180.65	5,114.20	5,114.74	0.00	0.00	0.00
TESORO 70H LTP: 525' FNL, 100' FEL									
10,893.39	90.00	89.82	5,150.00	180.80	5,164.20	5,164.74	0.00	0.00	0.00
TESORO 70H BHL: 525' FNL, 50' FEL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TESORO 70H SHL: 6 - hit/miss target - Shape - Point	0.00	0.00	0.00	0.00	0.00	664,170.30	642,951.90	32.8253944	-104.0025354
TESORO 70H KOP: 4 - plan hits target center - Point	0.00	0.00	3,897.07	132.51	-869.84	664,302.81	642,082.07	32.8257660	-104.0053657
TESORO 70H FTP: 5 - plan hits target center - Point	0.00	0.00	5,150.00	165.10	34.30	664,335.40	642,986.20	32.8258479	-104.0024221
TESORO 70H BHL: 5 - plan hits target center - Point	0.00	0.00	5,150.00	180.80	5,164.20	664,351.10	648,116.10	32.8258458	-103.9857221
TESORO 70H LTP: 5; - plan misses target center by 0.05usft at 10843.39usft MD (5150.00 TVD, 180.65 N, 5114.20 E) - Point	0.00	0.00	5,150.00	180.60	5,114.20	664,350.90	648,066.10	32.8258457	-103.9858849



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 70H
Company:	SPUR ENERGY PARTNERS, LLC	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site:	TESORO 20 FEDERAL COM	North Reference:	Grid
Well:	70H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		



SPUR ENERGY PARTNERS, LLC

**EDDY COUNTY, NM (NAD 83 - NME)
TESORO 20 FEDERAL COM
70H**

**Wellbore #1
PERMIT**

Anticollision Report

29 July, 2024



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 Interval 50.00usft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 3,000.00 us
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	07/25/24		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	10,893.39	PERMIT (Wellbore #1)	MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + Sag + FDIR Correction	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
OCHO_TESORO OFFSETS						
BURCH A #31 - Wellbore #1 - Wellbore #1						Out of range
BURCH KEELY UNIT #192H - Wellbore #1 - Wellbore #1	5,149.72	9,024.95	441.63	286.08	2.839	CC
BURCH KEELY UNIT #192H - Wellbore #1 - Wellbore #1	5,150.00	9,025.18	441.63	286.07	2.839	ES
BURCH KEELY UNIT #192H - Wellbore #1 - Wellbore #1	5,200.00	9,065.58	442.50	286.45	2.836	SF
BURCH KEELY UNIT #225 - Wellbore #1 - Wellbore #1	5,275.53	4,968.67	193.70	70.94	1.578	CC, ES, SF
BURCH KEELY UNIT #242 - Wellbore #1 - Wellbore #1	1,667.46	1,621.09	1,013.62	974.14	25.671	CC
BURCH KEELY UNIT #242 - Wellbore #1 - Wellbore #1	1,950.00	1,901.00	1,016.39	969.29	21.578	ES
BURCH KEELY UNIT #242 - Wellbore #1 - Wellbore #1	5,200.00	4,820.00	1,133.13	1,009.71	9.181	SF
BURCH KEELY UNIT #270 - Wellbore #1 - Wellbore #1	300.00	274.00	2,943.68	2,940.00	799.614	CC
BURCH KEELY UNIT #270 - Wellbore #1 - Wellbore #1	1,450.00	1,456.00	2,954.03	2,919.78	86.268	ES
BURCH KEELY UNIT #270 - Wellbore #1 - Wellbore #1	2,700.00	2,607.02	2,998.97	2,931.19	44.244	SF
BURCH KEELY UNIT #361 - Wellbore #1 - Wellbore #1	2,068.25	2,010.77	336.72	281.60	6.109	CC
BURCH KEELY UNIT #361 - Wellbore #1 - Wellbore #1	2,200.00	2,137.84	338.52	279.94	5.780	ES
BURCH KEELY UNIT #361 - Wellbore #1 - Wellbore #1	5,188.47	4,815.00	459.77	342.66	3.926	SF
BURCH KEELY UNIT #656 - Wellbore #1 - Wellbore #1	3,778.54	3,666.16	1,439.12	1,355.15	17.139	CC
BURCH KEELY UNIT #656 - Wellbore #1 - Wellbore #1	4,100.00	3,977.16	1,441.92	1,350.94	15.850	ES
BURCH KEELY UNIT #656 - Wellbore #1 - Wellbore #1	4,800.00	4,648.20	1,482.28	1,377.81	14.189	SF
BURCH KEELY UNIT #788 - Wellbore #1 - Wellbore #1	1,193.32	1,191.05	2,393.02	2,384.85	293.166	CC
BURCH KEELY UNIT #788 - Wellbore #1 - Wellbore #1	1,700.00	1,704.16	2,394.36	2,382.35	199.385	ES
BURCH KEELY UNIT #788 - Wellbore #1 - Wellbore #1	6,450.00	4,768.00	2,751.09	2,709.83	66.679	SF
BURCH KEELY UNIT #962H - Wellbore #1 - Wellbore #1	5,144.85	9,862.37	162.20	-15.82	0.911	Level 1, CC, ES, SF
BURCH KEELY UNIT #964H - Wellbore #1 - Wellbore #1	5,137.45	9,898.93	1,146.37	966.90	6.388	CC
BURCH KEELY UNIT #964H - Wellbore #1 - Wellbore #1	5,250.00	9,987.87	1,147.94	965.63	6.297	ES
BURCH KEELY UNIT #964H - Wellbore #1 - Wellbore #1	5,700.00	10,347.00	1,177.14	985.58	6.145	SF
BURCH KEELY UNIT #965H - Wellbore #1 - Wellbore #1	2,198.91	2,140.06	1,717.68	1,702.16	110.666	CC
BURCH KEELY UNIT #965H - Wellbore #1 - Wellbore #1	2,250.00	2,182.95	1,717.82	1,701.95	108.196	ES
BURCH KEELY UNIT #965H - Wellbore #1 - Wellbore #1	5,050.00	4,882.73	1,782.15	1,746.25	49.633	SF
BURCH KEELY UNIT #966H - Wellbore #1 - Wellbore #1	5,088.13	9,313.10	2,470.00	2,308.64	15.308	CC
BURCH KEELY UNIT #966H - Wellbore #1 - Wellbore #1	5,400.00	9,575.68	2,474.41	2,304.02	14.522	ES
BURCH KEELY UNIT #966H - Wellbore #1 - Wellbore #1	5,450.00	9,581.00	2,476.22	2,305.47	14.502	SF
BURCH KEELY UNIT 19 FEDERAL #196H - Wellbore #1						Out of range
BURCH-FEDERAL A #10 - Wellbore #1 - Wellbore #1	2,087.39	2,018.00	338.39	256.04	4.109	CC
BURCH-FEDERAL A #10 - Wellbore #1 - Wellbore #1	2,300.00	2,223.05	343.02	251.67	3.755	ES
BURCH-FEDERAL A #10 - Wellbore #1 - Wellbore #1	2,900.00	2,801.73	400.76	284.90	3.459	SF
BURCH-FEDERAL A #11 - Wellbore #1 - Wellbore #1	876.53	843.64	2,287.39	2,256.72	74.565	CC
BURCH-FEDERAL A #11 - Wellbore #1 - Wellbore #1	2,300.00	2,218.05	2,317.13	2,225.87	25.392	ES
BURCH-FEDERAL A #11 - Wellbore #1 - Wellbore #1	3,400.00	3,262.00	2,380.95	2,243.72	17.350	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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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
OCHO_TESORO OFFSETS						
BURCH-FEDERAL A #6 - Wellbore #1 - Wellbore #1	2,725.11	2,633.05	1,367.46	1,257.92	12.483	CC
BURCH-FEDERAL A #6 - Wellbore #1 - Wellbore #1	3,300.00	3,187.52	1,375.87	1,241.84	10.265	ES
BURCH-FEDERAL A #6 - Wellbore #1 - Wellbore #1	3,350.00	3,195.00	1,378.00	1,243.46	10.243	SF
JENKINS B FEDERAL #18 - Wellbore #1 - Wellbore #1	6,074.27	5,146.18	193.88	72.31	1.595	CC, ES, SF
MCINTIRE A #8 - Wellbore #1 - Wellbore #1						Out of range
MCINTYRE A #17 - Wellbore #1 - Wellbore #1	9,301.98	5,052.00	2,982.89	2,799.52	16.267	CC
MCINTYRE A #17 - Wellbore #1 - Wellbore #1	9,350.00	5,052.00	2,983.27	2,799.41	16.225	ES
MCINTYRE A #17 - Wellbore #1 - Wellbore #1	9,600.00	5,052.00	2,997.74	2,811.25	16.075	SF
MCINTYRE A EAST FEDERAL #20 - Wellbore #1 - Wellbore #1						Out of range
MCINTYRE A FEDERAL #14 - Wellbore #1 - Wellbore #1	10,091.32	5,141.00	2,313.08	2,054.12	8.932	CC
MCINTYRE A FEDERAL #14 - Wellbore #1 - Wellbore #1	10,100.00	5,141.00	2,313.10	2,054.05	8.929	ES
MCINTYRE A FEDERAL #14 - Wellbore #1 - Wellbore #1	10,300.00	5,141.00	2,322.48	2,061.29	8.892	SF
MCINTYRE B #9 - Wellbore #1 - Wellbore #1						Out of range
MCINTYRE E #8 - Wellbore #1 - Wellbore #1						Out of range
MCINTYRE E FEDERAL #5 - Wellbore #1 - Wellbore #1						Out of range
MCINTYRE W D 'C' #7 - Wellbore #1 - Wellbore #1	10,599.55	5,037.00	1,776.66	1,696.59	22.189	CC
MCINTYRE W D 'C' #7 - Wellbore #1 - Wellbore #1	10,600.00	5,037.00	1,776.66	1,696.59	22.187	ES
MCINTYRE W D 'C' #7 - Wellbore #1 - Wellbore #1	10,893.39	5,037.00	1,800.80	1,717.57	21.637	SF
MCINTYRE-FEDERAL A #4 - Wellbore #1 - Wellbore #1						Out of range
THUNDER ROAD FEDERAL #7 - Wellbore #1 - Wellbore #1	8,625.44	5,160.15	194.11	50.04	1.347	Level 3, CC, ES, SF
THUNDER ROAD FEDERAL #8 - Wellbore #1 - Wellbore #1	8,615.37	5,151.20	1,152.07	1,003.12	7.734	CC, ES
THUNDER ROAD FEDERAL #8 - Wellbore #1 - Wellbore #1	8,700.00	5,151.20	1,155.18	1,005.37	7.711	SF
W D MCINTYRE A #7 - Wellbore #1 - Wellbore #1						Out of range
W.D. MCINTYRE C #8 - Wellbore #1 - Wellbore #1	10,595.25	5,166.60	467.44	273.31	2.408	CC
W.D. MCINTYRE C #8 - Wellbore #1 - Wellbore #1	10,600.00	5,166.60	467.46	273.28	2.407	ES, SF
W.D. MCINTYRE C #9 - Wellbore #1 - Wellbore #1	9,934.57	5,168.24	192.84	27.72	1.168	Level 2, CC, ES, SF
TESORO 20 FEDERAL COM						
71H - Wellbore #1 - PERMIT	300.00	300.00	40.00	38.28	23.247	CC, ES
71H - Wellbore #1 - PERMIT	10,893.39	11,164.99	1,394.23	1,260.43	10.420	SF
90H - Wellbore #1 - PERMIT	300.00	300.00	20.00	18.28	11.623	CC
90H - Wellbore #1 - PERMIT	350.00	349.84	20.26	18.19	9.788	ES
90H - Wellbore #1 - PERMIT	550.00	549.03	26.59	23.12	7.660	SF

Offset Design OCHO_TESORO OFFSETS - BURCH KEELY UNIT #192H - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 4262-MWD+IGRF												Offset Well Error:	0.00 usft
Reference	Vertical	Measured	Vertical	Semi Major Axis			Distance						
Measured	Depth	Depth	Depth	Reference	Offset	Highside	Offset	Between	Between	Minimum	Separation	Warning	
Depth	(usft)	(usft)	(usft)	(usft)	(usft)	Toolface	+N/-S	Centres	Ellipses	Separation	Factor		
(usft)						(°)	(usft)	(usft)	(usft)	(usft)			
1,950.00	1,909.49	9,103.00	4,884.46	7.18	139.72	-155.928	-273.41	-421.64	2,993.91	2,912.51	81.40	36.780	
2,000.00	1,957.71	9,103.00	4,884.46	7.38	139.72	-155.928	-273.41	-421.64	2,945.84	2,864.26	81.59	36.107	
2,050.00	2,005.94	9,103.00	4,884.46	7.59	139.72	-155.928	-273.41	-421.64	2,897.84	2,816.07	81.77	35.437	
2,100.00	2,054.16	9,103.00	4,884.46	7.79	139.72	-155.928	-273.41	-421.64	2,849.91	2,767.95	81.96	34.772	
2,150.00	2,102.38	9,103.00	4,884.46	7.99	139.72	-155.928	-273.41	-421.64	2,802.06	2,719.91	82.15	34.110	
2,200.00	2,150.61	9,103.00	4,884.46	8.19	139.72	-155.928	-273.41	-421.64	2,754.28	2,671.94	82.33	33.452	
2,250.00	2,198.83	9,103.00	4,884.46	8.40	139.72	-155.928	-273.41	-421.64	2,706.57	2,624.05	82.52	32.798	
2,300.00	2,247.05	9,103.00	4,884.46	8.60	139.72	-155.928	-273.41	-421.64	2,658.96	2,576.25	82.71	32.149	
2,350.00	2,295.28	9,103.00	4,884.46	8.80	139.72	-155.928	-273.41	-421.64	2,611.43	2,528.53	82.90	31.503	
2,400.00	2,343.50	9,103.00	4,884.46	9.01	139.72	-155.928	-273.41	-421.64	2,564.00	2,480.91	83.08	30.861	
2,450.00	2,391.72	9,103.00	4,884.46	9.21	139.72	-155.928	-273.41	-421.64	2,516.66	2,433.39	83.27	30.223	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 4262-MWD+IGRF												Offset Well Error:	0.00 usft
Reference				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
2,500.00	2,439.95	9,103.00	4,884.46	9.41	139.72	-155.928	-273.41	-421.64	2,469.43	2,385.98	83.46	29.589	
2,550.00	2,488.17	9,103.00	4,884.46	9.62	139.72	-155.928	-273.41	-421.64	2,422.31	2,338.67	83.65	28.959	
2,600.00	2,536.39	9,103.00	4,884.46	9.82	139.72	-155.928	-273.41	-421.64	2,375.31	2,291.48	83.83	28.334	
2,650.00	2,584.61	9,103.00	4,884.46	10.02	139.72	-155.928	-273.41	-421.64	2,328.44	2,244.42	84.02	27.713	
2,700.00	2,632.84	9,103.00	4,884.46	10.23	139.72	-155.928	-273.41	-421.64	2,281.70	2,197.49	84.21	27.096	
2,750.00	2,681.06	9,103.00	4,884.46	10.43	139.72	-155.928	-273.41	-421.64	2,235.10	2,150.70	84.40	26.483	
2,800.00	2,729.28	9,099.16	4,884.65	10.64	139.60	-155.776	-273.61	-425.47	2,188.64	2,103.82	84.82	25.802	
2,850.00	2,777.51	9,083.80	4,885.43	10.84	139.12	-155.157	-274.41	-440.79	2,142.27	2,056.28	85.99	24.914	
2,900.00	2,825.73	9,068.44	4,886.21	11.04	138.64	-154.519	-275.22	-456.11	2,095.95	2,008.78	87.17	24.044	
2,950.00	2,873.95	9,053.08	4,886.99	11.25	138.16	-153.862	-276.02	-471.43	2,049.68	1,961.31	88.37	23.193	
3,000.00	2,922.18	9,028.36	4,888.19	11.45	137.39	-152.765	-277.28	-496.09	2,003.46	1,913.21	90.24	22.201	
3,050.00	2,970.40	9,001.09	4,889.38	11.66	136.54	-151.496	-278.60	-523.30	1,957.20	1,864.87	92.34	21.196	
3,100.00	3,018.62	8,974.75	4,890.38	11.86	135.71	-150.208	-279.78	-549.60	1,910.93	1,816.51	94.42	20.238	
3,150.00	3,066.85	8,949.28	4,891.21	12.06	134.92	-148.900	-280.85	-575.03	1,864.65	1,768.15	96.50	19.323	
3,200.00	3,115.07	8,925.98	4,891.85	12.27	134.19	-147.645	-281.75	-598.31	1,818.36	1,719.90	98.46	18.468	
3,250.00	3,163.29	8,903.38	4,892.38	12.47	133.48	-146.375	-282.56	-620.88	1,772.10	1,671.70	100.40	17.650	
3,300.00	3,211.52	8,881.39	4,892.81	12.68	132.79	-145.084	-283.28	-642.86	1,725.87	1,623.53	102.33	16.865	
3,350.00	3,259.74	8,859.99	4,893.14	12.88	132.12	-143.774	-283.92	-664.25	1,679.67	1,575.42	104.24	16.113	
3,400.00	3,307.96	8,836.75	4,893.39	13.08	131.39	-142.287	-284.55	-687.47	1,633.51	1,527.18	106.33	15.362	
3,450.00	3,356.19	8,813.44	4,893.51	13.29	130.66	-140.727	-285.11	-710.77	1,587.39	1,478.94	108.45	14.637	
3,500.00	3,404.41	8,791.02	4,893.51	13.49	129.95	-139.157	-285.56	-733.19	1,541.31	1,430.80	110.51	13.947	
3,550.00	3,452.63	8,769.45	4,893.39	13.70	129.27	-137.580	-285.93	-754.76	1,495.29	1,382.78	112.51	13.290	
3,600.00	3,500.85	8,748.48	4,893.17	13.90	128.61	-135.982	-286.22	-775.73	1,449.36	1,334.90	114.46	12.663	
3,650.00	3,549.08	8,728.15	4,892.85	14.11	127.98	-134.369	-286.46	-796.06	1,403.52	1,287.17	116.35	12.063	
3,700.00	3,597.30	8,708.61	4,892.44	14.31	127.36	-132.759	-286.65	-815.58	1,357.79	1,239.64	118.15	11.492	
3,750.00	3,645.52	8,689.84	4,891.96	14.51	126.77	-131.152	-286.79	-834.36	1,312.20	1,192.32	119.88	10.946	
3,800.00	3,693.75	8,671.77	4,891.41	14.72	126.20	-129.553	-286.88	-852.41	1,266.78	1,145.26	121.51	10.425	
3,850.00	3,741.97	8,654.00	4,891.14	14.92	125.96	-128.848	-286.91	-860.18	1,221.57	1,099.25	122.32	9.987	
3,900.00	3,790.19	8,648.42	4,890.62	15.13	125.47	-127.407	-286.95	-875.75	1,176.61	1,052.90	123.71	9.511	
3,950.00	3,838.42	8,638.24	4,890.30	15.33	125.15	-126.444	-286.97	-885.93	1,131.99	1,007.33	124.67	9.080	
4,000.00	3,886.64	8,627.90	4,889.99	15.54	124.82	-125.450	-286.97	-896.26	1,087.73	962.11	125.62	8.659	
4,050.00	3,935.06	8,618.11	4,889.71	15.74	124.52	-121.904	-286.96	-906.04	1,043.71	913.46	130.25	8.013	
4,100.00	3,984.05	8,610.45	4,889.51	15.93	124.27	-118.534	-286.94	-913.70	999.68	864.86	134.81	7.415	
4,150.00	4,033.48	8,605.04	4,889.37	16.11	124.10	-117.547	-286.93	-919.11	955.81	817.84	137.98	6.927	
4,200.00	4,083.23	8,601.95	4,889.29	16.29	124.01	-123.487	-286.92	-922.20	912.31	772.55	139.76	6.528	
4,250.00	4,133.15	8,601.23	4,889.28	16.45	123.98	-158.090	-286.91	-922.92	869.39	729.02	140.37	6.194	
4,300.00	4,183.11	8,602.94	4,889.32	16.61	124.04	138.539	-286.92	-921.21	827.26	687.13	140.12	5.904	
4,350.00	4,232.97	8,607.15	4,889.42	16.75	124.17	120.452	-286.93	-917.00	786.16	646.78	139.38	5.640	
4,400.00	4,282.59	8,613.89	4,889.60	16.88	124.38	115.906	-286.95	-910.26	746.34	607.88	138.46	5.390	
4,450.00	4,331.84	8,623.21	4,889.86	17.02	124.68	114.579	-286.96	-900.94	708.06	570.46	137.61	5.145	
4,500.00	4,380.59	8,635.14	4,890.20	17.14	125.05	114.140	-286.97	-889.02	671.59	534.59	137.00	4.902	
4,550.00	4,428.69	8,649.71	4,890.66	17.27	125.51	113.844	-286.95	-874.46	637.19	500.44	136.75	4.660	
4,600.00	4,476.02	8,667.54	4,891.26	17.39	126.07	113.335	-286.90	-856.64	605.14	468.15	136.99	4.418	
4,650.00	4,522.45	8,690.97	4,891.99	17.51	126.81	112.243	-286.78	-833.22	575.60	437.63	137.97	4.172	
4,700.00	4,567.85	8,716.51	4,892.62	17.63	127.61	110.873	-286.58	-807.69	548.76	409.43	139.33	3.939	
4,750.00	4,612.10	8,744.04	4,893.11	17.74	128.48	109.202	-286.28	-780.17	524.80	383.79	141.01	3.722	
4,800.00	4,655.07	8,773.62	4,893.42	17.86	129.40	107.205	-285.86	-750.59	503.89	360.92	142.97	3.524	
4,850.00	4,696.65	8,805.21	4,893.53	17.98	130.40	104.885	-285.28	-719.00	486.10	340.99	145.11	3.350	
4,900.00	4,736.73	8,838.50	4,893.37	18.10	131.44	102.279	-284.51	-685.72	471.46	324.14	147.33	3.200	
4,950.00	4,775.18	8,873.09	4,892.95	18.22	132.53	99.440	-283.54	-651.15	459.95	310.47	149.48	3.077	
5,000.00	4,811.92	8,909.03	4,892.26	18.34	133.65	96.392	-282.36	-615.24	451.45	299.98	151.47	2.980	
5,050.00	4,846.83	8,946.48	4,891.29	18.47	134.83	93.156	-280.96	-577.82	445.76	292.55	153.21	2.909	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 4262-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	4,879.83	8,985.20	4,890.00	18.61	136.04	89.797	-279.32	-539.16	442.59	288.00	154.59	2.863	
5,149.72	4,910.64	9,024.95	4,888.35	18.75	137.28	86.385	-277.45	-499.49	441.63	286.08	155.55	2.839 CC	
5,150.00	4,910.81	9,025.18	4,888.34	18.75	137.29	86.365	-277.44	-499.27	441.63	286.07	155.55	2.839 ES	
5,200.00	4,939.70	9,065.58	4,886.35	18.90	138.55	82.980	-275.36	-458.96	442.50	286.45	156.06	2.836 SF	
5,250.00	4,966.42	9,103.00	4,884.46	19.05	139.72	79.956	-273.41	-421.64	444.95	288.80	156.15	2.849	
5,300.00	4,991.50	9,103.00	4,884.46	19.21	139.72	79.872	-273.41	-421.64	450.98	294.70	156.28	2.886	
5,350.00	5,016.50	9,103.00	4,884.46	19.39	139.72	79.872	-273.41	-421.64	462.35	305.89	156.46	2.955	
5,400.00	5,041.50	9,103.00	4,884.46	19.57	139.72	79.872	-273.41	-421.64	478.69	322.06	156.63	3.056	
5,450.00	5,066.50	9,103.00	4,884.46	19.76	139.72	79.872	-273.41	-421.64	499.53	342.71	156.82	3.185	
5,500.00	5,090.48	9,103.00	4,884.46	19.96	139.72	77.797	-273.41	-421.64	524.14	368.22	155.92	3.362	
5,550.00	5,110.69	9,103.00	4,884.46	20.17	139.72	74.628	-273.41	-421.64	551.46	397.38	154.08	3.579	
5,600.00	5,126.84	9,103.00	4,884.46	20.38	139.72	71.146	-273.41	-421.64	580.90	429.35	151.54	3.833	
5,650.00	5,138.80	9,103.00	4,884.46	20.59	139.72	67.442	-273.41	-421.64	611.94	463.67	148.27	4.127	
5,700.00	5,146.49	9,103.00	4,884.46	20.79	139.72	63.612	-273.41	-421.64	644.14	499.83	144.31	4.464	
5,750.00	5,149.84	9,103.00	4,884.46	21.00	139.72	59.754	-273.41	-421.64	677.10	537.36	139.74	4.846	
5,800.00	5,150.00	9,103.00	4,884.46	21.20	139.72	58.722	-273.41	-421.64	710.94	572.38	138.56	5.131	
5,850.00	5,150.00	9,103.00	4,884.46	21.42	139.72	58.722	-273.41	-421.64	746.53	607.78	138.76	5.380	
5,900.00	5,150.00	9,103.00	4,884.46	21.64	139.72	58.722	-273.41	-421.64	783.70	644.75	138.96	5.640	
5,950.00	5,150.00	9,103.00	4,884.46	21.88	139.72	58.722	-273.41	-421.64	822.24	683.06	139.18	5.908	
6,000.00	5,150.00	9,103.00	4,884.46	22.13	139.72	58.722	-273.41	-421.64	861.95	722.55	139.40	6.183	
6,050.00	5,150.00	9,103.00	4,884.46	22.40	139.72	58.722	-273.41	-421.64	902.68	763.04	139.64	6.464	
6,100.00	5,150.00	9,103.00	4,884.46	22.66	139.72	58.722	-273.41	-421.64	944.31	804.43	139.88	6.751	
6,150.00	5,150.00	9,103.00	4,884.46	22.95	139.72	58.722	-273.41	-421.64	986.71	846.57	140.14	7.041	
6,200.00	5,150.00	9,103.00	4,884.46	23.24	139.72	58.722	-273.41	-421.64	1,029.80	889.39	140.40	7.334	
6,250.00	5,150.00	9,103.00	4,884.46	23.55	139.72	58.722	-273.41	-421.64	1,073.48	932.80	140.68	7.631	
6,300.00	5,150.00	9,103.00	4,884.46	23.86	139.72	58.722	-273.41	-421.64	1,117.70	976.73	140.96	7.929	
6,350.00	5,150.00	9,103.00	4,884.46	24.19	139.72	58.722	-273.41	-421.64	1,162.38	1,021.12	141.26	8.229	
6,400.00	5,150.00	9,103.00	4,884.46	24.51	139.72	58.722	-273.41	-421.64	1,207.48	1,065.93	141.55	8.530	
6,450.00	5,150.00	9,103.00	4,884.46	24.86	139.72	58.722	-273.41	-421.64	1,252.95	1,111.09	141.86	8.832	
6,500.00	5,150.00	9,103.00	4,884.46	25.20	139.72	58.722	-273.41	-421.64	1,298.76	1,156.59	142.17	9.135	
6,550.00	5,150.00	9,103.00	4,884.46	25.56	139.72	58.722	-273.41	-421.64	1,344.86	1,202.37	142.49	9.438	
6,600.00	5,150.00	9,103.00	4,884.46	25.92	139.72	58.722	-273.41	-421.64	1,391.23	1,248.42	142.81	9.742	
6,650.00	5,150.00	9,103.00	4,884.46	26.29	139.72	58.722	-273.41	-421.64	1,437.85	1,294.71	143.14	10.045	
6,700.00	5,150.00	9,103.00	4,884.46	26.67	139.72	58.722	-273.41	-421.64	1,484.69	1,341.21	143.48	10.348	
6,750.00	5,150.00	9,103.00	4,884.46	27.05	139.72	58.722	-273.41	-421.64	1,531.72	1,387.90	143.82	10.650	
6,800.00	5,150.00	9,103.00	4,884.46	27.44	139.72	58.722	-273.41	-421.64	1,578.94	1,434.77	144.17	10.952	
6,850.00	5,150.00	9,103.00	4,884.46	27.84	139.72	58.722	-273.41	-421.64	1,626.33	1,481.80	144.53	11.253	
6,900.00	5,150.00	9,103.00	4,884.46	28.23	139.72	58.722	-273.41	-421.64	1,673.86	1,528.98	144.88	11.553	
6,950.00	5,150.00	9,103.00	4,884.46	28.64	139.72	58.722	-273.41	-421.64	1,721.54	1,576.29	145.25	11.852	
7,000.00	5,150.00	9,103.00	4,884.46	29.05	139.72	58.722	-273.41	-421.64	1,769.35	1,623.73	145.61	12.151	
7,050.00	5,150.00	9,103.00	4,884.46	29.47	139.72	58.722	-273.41	-421.64	1,817.27	1,671.28	145.99	12.448	
7,100.00	5,150.00	9,103.00	4,884.46	29.89	139.72	58.722	-273.41	-421.64	1,865.30	1,718.94	146.36	12.745	
7,150.00	5,150.00	9,103.00	4,884.46	30.32	139.72	58.722	-273.41	-421.64	1,913.43	1,766.69	146.74	13.039	
7,200.00	5,150.00	9,103.00	4,884.46	30.75	139.72	58.722	-273.41	-421.64	1,961.66	1,814.54	147.12	13.333	
7,250.00	5,150.00	9,103.00	4,884.46	31.19	139.72	58.722	-273.41	-421.64	2,009.97	1,862.46	147.51	13.626	
7,300.00	5,150.00	9,103.00	4,884.46	31.62	139.72	58.722	-273.41	-421.64	2,058.37	1,910.47	147.90	13.917	
7,350.00	5,150.00	9,103.00	4,884.46	32.07	139.72	58.722	-273.41	-421.64	2,106.84	1,958.54	148.30	14.207	
7,400.00	5,150.00	9,103.00	4,884.46	32.51	139.72	58.722	-273.41	-421.64	2,155.37	2,006.68	148.69	14.496	
7,450.00	5,150.00	9,103.00	4,884.46	32.96	139.72	58.722	-273.41	-421.64	2,203.98	2,054.88	149.09	14.783	
7,500.00	5,150.00	9,103.00	4,884.46	33.42	139.72	58.722	-273.41	-421.64	2,252.64	2,103.15	149.49	15.068	
7,550.00	5,150.00	9,103.00	4,884.46	33.88	139.72	58.722	-273.41	-421.64	2,301.36	2,151.46	149.90	15.353	
7,600.00	5,150.00	9,103.00	4,884.46	34.33	139.72	58.722	-273.41	-421.64	2,350.14	2,199.83	150.31	15.635	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 OCHO_TESORO OFFSETS - BURCH KEELY UNIT #192H - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 4262-MWD+IGRF												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	
7,650.00	5,150.00	9,103.00	4,884.46	34.80	139.72	58.722	-273.41	-421.64	2,398.97	2,248.25	150.72	15.917	
7,700.00	5,150.00	9,103.00	4,884.46	35.26	139.72	58.722	-273.41	-421.64	2,447.84	2,296.71	151.13	16.197	
7,750.00	5,150.00	9,103.00	4,884.46	35.73	139.72	58.722	-273.41	-421.64	2,496.76	2,345.21	151.55	16.475	
7,800.00	5,150.00	9,103.00	4,884.46	36.20	139.72	58.722	-273.41	-421.64	2,545.72	2,393.75	151.97	16.752	
7,850.00	5,150.00	9,103.00	4,884.46	36.68	139.72	58.722	-273.41	-421.64	2,594.72	2,442.33	152.39	17.027	
7,900.00	5,150.00	9,103.00	4,884.46	37.16	139.72	58.722	-273.41	-421.64	2,643.76	2,490.95	152.81	17.301	
7,950.00	5,150.00	9,103.00	4,884.46	37.64	139.72	58.722	-273.41	-421.64	2,692.83	2,539.60	153.23	17.573	
8,000.00	5,150.00	9,103.00	4,884.46	38.12	139.72	58.722	-273.41	-421.64	2,741.94	2,588.28	153.66	17.844	
8,050.00	5,150.00	9,103.00	4,884.46	38.60	139.72	58.722	-273.41	-421.64	2,791.07	2,636.99	154.09	18.113	
8,100.00	5,150.00	9,103.00	4,884.46	39.09	139.72	58.722	-273.41	-421.64	2,840.24	2,685.72	154.52	18.381	
8,150.00	5,150.00	9,103.00	4,884.46	39.57	139.72	58.722	-273.41	-421.64	2,889.44	2,734.49	154.95	18.648	
8,200.00	5,150.00	9,103.00	4,884.46	40.06	139.72	58.722	-273.41	-421.64	2,938.66	2,783.28	155.38	18.913	
8,250.00	5,150.00	9,103.00	4,884.46	40.56	139.72	58.722	-273.41	-421.64	2,987.91	2,832.09	155.82	19.176	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 432-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	
0.00	0.00	0.00	11.00	0.00	0.00	-49.309	357.43	-415.68	548.33				
50.00	50.00	39.00	50.00	0.05	0.48	-49.309	357.43	-415.68	548.22	547.68	0.54	1,019.478	
100.00	100.00	89.00	100.00	0.14	1.10	-49.309	357.43	-415.68	548.22	546.97	1.25	439.334	
150.00	150.00	139.00	150.00	0.32	1.73	-49.309	357.43	-415.68	548.22	546.17	2.05	267.743	
200.00	200.00	189.00	200.00	0.50	2.35	-49.309	357.43	-415.68	548.22	545.37	2.85	192.542	
250.00	250.00	239.00	250.00	0.68	2.97	-49.309	357.43	-415.68	548.22	544.57	3.65	150.321	
300.00	300.00	289.00	300.00	0.86	3.59	-49.309	357.43	-415.68	548.22	543.77	4.45	123.287	
350.00	350.00	339.00	350.00	1.04	4.21	32.058	357.43	-415.68	547.85	542.61	5.24	104.528	
400.00	399.98	388.98	399.98	1.21	4.83	32.142	357.43	-415.68	546.74	540.70	6.04	90.522	
450.00	449.93	432.00	443.00	1.39	5.36	32.264	357.43	-415.68	544.94	538.18	6.76	80.663	
500.00	499.84	488.84	499.84	1.57	6.68	32.484	357.43	-415.68	542.32	534.07	8.25	65.738	
550.00	549.68	538.68	549.68	1.75	7.83	32.744	357.43	-415.68	539.01	529.43	9.58	56.255	
600.00	599.45	588.45	599.45	1.93	8.98	33.065	357.43	-415.68	534.98	524.07	10.91	49.050	
650.00	649.13	638.13	649.13	2.11	10.13	33.450	357.43	-415.68	530.24	518.01	12.23	43.368	
700.00	698.70	687.70	698.70	2.29	11.27	33.903	357.43	-415.68	524.79	511.26	13.54	38.766	
750.00	748.15	737.15	748.15	2.47	12.42	34.427	357.43	-415.68	518.66	503.82	14.84	34.947	
800.00	797.47	786.47	797.47	2.65	13.56	35.026	357.43	-415.68	511.84	495.71	16.13	31.724	
850.00	846.63	835.63	846.63	2.84	14.69	35.704	357.43	-415.68	504.37	486.95	17.42	28.954	
900.00	895.62	884.62	895.62	3.02	15.83	36.469	357.43	-415.68	496.26	477.57	18.69	26.549	
950.00	944.44	933.49	944.44	3.21	16.92	37.326	357.43	-415.68	487.53	467.61	19.92	24.474	
1,000.00	993.06	982.11	993.06	3.40	17.95	38.282	357.43	-415.68	478.21	457.13	21.08	22.683	
1,050.00	1,041.46	1,030.52	1,041.46	3.59	18.97	39.347	357.43	-415.68	468.34	446.10	22.24	21.063	
1,100.00	1,089.70	1,078.75	1,089.70	3.78	19.99	40.419	357.43	-415.68	458.09	434.67	23.41	19.566	
1,150.00	1,137.92	1,126.98	1,137.92	3.98	21.01	41.498	357.43	-415.68	447.96	423.35	24.60	18.206	
1,200.00	1,186.14	1,175.20	1,186.14	4.18	22.03	42.624	357.43	-415.68	437.99	412.19	25.80	16.974	
1,250.00	1,234.37	1,223.42	1,234.37	4.37	23.05	43.801	357.43	-415.68	428.20	401.19	27.01	15.855	
1,300.00	1,282.59	1,271.64	1,282.59	4.57	24.07	45.031	357.43	-415.68	418.60	390.38	28.21	14.837	
1,350.00	1,330.81	1,319.87	1,330.81	4.77	25.09	46.316	357.43	-415.68	409.20	379.77	29.43	13.906	
1,400.00	1,379.04	1,368.09	1,379.04	4.97	26.11	47.658	357.43	-415.68	400.01	369.37	30.64	13.055	
1,450.00	1,427.26	1,416.00	1,427.26	5.17	27.13	49.050	357.43	-415.68	391.06	359.20	31.86	12.276	
1,500.00	1,475.48	1,464.56	1,475.48	5.37	28.16	50.524	357.43	-415.68	382.35	349.26	33.09	11.555	
1,550.00	1,523.71	1,512.79	1,523.71	5.57	29.18	52.053	357.43	-415.68	373.90	339.58	34.32	10.893	
1,600.00	1,571.93	1,561.01	1,571.93	5.77	30.21	53.648	357.43	-415.68	365.74	330.18	35.56	10.285	
1,650.00	1,620.15	1,609.23	1,620.15	5.97	31.23	55.310	357.43	-415.68	357.88	321.08	36.80	9.724	
1,700.00	1,668.37	1,657.46	1,668.37	6.17	32.25	57.043	357.43	-415.68	350.34	312.29	38.05	9.208	
1,750.00	1,716.60	1,705.68	1,716.60	6.37	33.28	58.846	357.43	-415.68	343.15	303.85	39.30	8.732	
1,800.00	1,764.82	1,753.90	1,764.82	6.57	34.30	60.721	357.43	-415.68	336.32	295.77	40.55	8.294	
1,850.00	1,813.04	1,802.12	1,813.04	6.78	35.33	62.667	357.43	-415.68	329.88	288.07	41.81	7.891	
1,900.00	1,861.27	1,850.35	1,861.27	6.98	36.35	64.683	357.43	-415.68	323.84	280.78	43.06	7.520	
1,950.00	1,909.49	1,898.57	1,909.49	7.18	37.37	66.770	357.43	-415.68	318.25	273.92	44.32	7.180	
2,000.00	1,957.71	1,946.82	1,957.71	7.38	38.40	68.923	357.43	-415.68	313.11	267.52	45.59	6.868	
2,050.00	2,005.94	1,995.04	2,005.94	7.59	39.42	71.141	357.43	-415.68	308.45	261.60	46.85	6.584	
2,100.00	2,054.16	2,043.27	2,054.16	7.79	40.45	73.418	357.43	-415.68	304.30	256.18	48.11	6.325	
2,150.00	2,102.38	2,091.49	2,102.38	7.99	41.47	75.751	357.43	-415.68	300.66	251.29	49.37	6.090	
2,200.00	2,150.61	2,139.71	2,150.61	8.19	42.50	78.134	357.43	-415.68	297.57	246.95	50.63	5.878	
2,250.00	2,198.83	2,187.94	2,198.83	8.40	43.52	80.558	357.43	-415.68	295.04	243.16	51.88	5.687	
2,300.00	2,247.05	2,236.16	2,247.05	8.60	44.55	83.017	357.43	-415.68	293.09	239.96	53.13	5.517	
2,350.00	2,295.28	2,284.38	2,295.28	8.80	45.57	85.503	357.43	-415.68	291.72	237.35	54.37	5.366	
2,400.00	2,343.50	2,332.60	2,343.50	9.01	46.60	88.005	357.43	-415.68	290.94	235.34	55.60	5.233	
2,439.74	2,381.83	2,370.94	2,381.83	9.17	47.41	90.000	357.43	-415.68	290.75	234.18	56.57	5.139	
2,450.00	2,391.72	2,380.83	2,391.72	9.21	47.62	90.515	357.43	-415.68	290.77	233.94	56.82	5.117	
2,500.00	2,439.95	2,429.08	2,439.95	9.41	48.66	93.023	357.43	-415.68	291.19	233.14	58.05	5.016	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 432-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
2,550.00	2,488.17	2,477.30	2,488.17	9.62	49.73	95.520	357.43	-415.68	292.21	232.91	59.30	4.927	
2,600.00	2,536.39	2,525.52	2,536.39	9.82	50.80	97.995	357.43	-415.68	293.82	233.28	60.54	4.853	
2,650.00	2,584.61	2,573.75	2,584.61	10.02	51.87	100.441	357.43	-415.68	296.01	234.24	61.78	4.792	
2,700.00	2,632.84	2,621.97	2,632.84	10.23	52.94	102.849	357.43	-415.68	298.77	235.78	63.00	4.743	
2,750.00	2,681.06	2,670.19	2,681.06	10.43	54.01	105.212	357.43	-415.68	302.09	237.88	64.21	4.705	
2,800.00	2,729.28	2,718.42	2,729.28	10.64	55.08	107.523	357.43	-415.68	305.94	240.52	65.42	4.677	
2,850.00	2,777.51	2,766.64	2,777.51	10.84	56.15	109.777	357.43	-415.68	310.30	243.69	66.61	4.658	
2,900.00	2,825.73	2,814.86	2,825.73	11.04	57.22	111.969	357.43	-415.68	315.16	247.36	67.80	4.648	
2,950.00	2,873.95	2,863.08	2,873.95	11.25	58.29	114.095	357.43	-415.68	320.49	251.50	68.99	4.646	
3,000.00	2,922.18	2,911.31	2,922.18	11.45	59.36	116.152	357.43	-415.68	326.27	256.10	70.16	4.650	
3,050.00	2,970.40	2,959.56	2,970.40	11.66	60.44	118.140	357.43	-415.68	332.47	261.13	71.34	4.660	
3,100.00	3,018.62	3,007.78	3,018.62	11.86	61.55	120.057	357.43	-415.68	339.07	266.52	72.56	4.673	
3,150.00	3,066.85	3,056.00	3,066.85	12.06	62.67	121.902	357.43	-415.68	346.06	272.29	73.77	4.691	
3,200.00	3,115.07	3,104.23	3,115.07	12.27	63.78	123.676	357.43	-415.68	353.39	278.42	74.98	4.713	
3,250.00	3,163.29	3,152.45	3,163.29	12.47	64.90	125.380	357.43	-415.68	361.07	284.88	76.18	4.739	
3,300.00	3,211.52	3,200.67	3,211.52	12.68	66.01	127.015	357.43	-415.68	369.05	291.67	77.39	4.769	
3,350.00	3,259.74	3,248.90	3,259.74	12.88	67.13	128.582	357.43	-415.68	377.33	298.74	78.59	4.801	
3,400.00	3,307.96	3,297.12	3,307.96	13.08	68.24	130.084	357.43	-415.68	385.89	306.09	79.80	4.836	
3,450.00	3,356.19	3,345.34	3,356.19	13.29	69.36	131.523	357.43	-415.68	394.70	313.70	81.00	4.873	
3,500.00	3,404.41	3,393.57	3,404.41	13.49	70.47	132.900	357.43	-415.68	403.75	321.54	82.21	4.911	
3,550.00	3,452.63	3,441.79	3,452.63	13.70	71.59	134.218	357.43	-415.68	413.03	329.62	83.41	4.952	
3,600.00	3,500.85	3,490.05	3,500.85	13.90	72.66	135.480	357.43	-415.68	422.51	338.04	84.47	5.002	
3,650.00	3,549.08	3,538.28	3,549.08	14.11	73.49	136.688	357.43	-415.68	432.19	346.69	85.51	5.055	
3,700.00	3,597.30	3,586.50	3,597.30	14.31	74.43	137.844	357.43	-415.68	442.06	355.52	86.54	5.108	
3,750.00	3,645.52	3,634.72	3,645.52	14.51	75.36	138.950	357.43	-415.68	452.09	364.52	87.57	5.162	
3,800.00	3,693.75	3,682.95	3,693.75	14.72	76.30	140.010	357.43	-415.68	462.29	373.68	88.61	5.217	
3,850.00	3,741.97	3,731.17	3,741.97	14.92	77.23	141.025	357.43	-415.68	472.63	382.98	89.65	5.272	
3,900.00	3,790.19	3,779.39	3,790.19	15.13	78.17	141.998	357.43	-415.68	483.11	392.43	90.69	5.327	
3,950.00	3,838.42	3,827.61	3,838.42	15.33	79.11	142.929	357.43	-415.68	493.73	402.00	91.73	5.383	
4,000.00	3,886.64	3,875.84	3,886.64	15.54	80.04	143.823	357.43	-415.68	504.47	411.69	92.77	5.438	
4,050.00	3,935.06	3,924.26	3,935.06	15.74	80.98	143.466	357.43	-415.68	514.62	420.23	94.39	5.452	
4,100.00	3,984.05	3,973.25	3,984.05	15.93	81.93	141.623	357.43	-415.68	522.62	426.56	96.06	5.441	
4,150.00	4,033.48	4,022.72	4,033.48	16.11	82.83	137.316	357.43	-415.68	528.36	430.86	97.49	5.419	
4,200.00	4,083.23	4,072.47	4,083.23	16.29	83.71	126.229	357.43	-415.68	531.78	433.06	98.72	5.387	
4,250.00	4,133.15	4,122.39	4,133.15	16.45	84.59	86.814	357.43	-415.68	532.85	433.11	99.74	5.342	
4,300.00	4,183.11	4,172.35	4,183.11	16.61	85.47	19.086	357.43	-415.68	531.56	431.02	100.53	5.287	
4,350.00	4,232.97	4,222.21	4,232.97	16.75	86.36	-2.845	357.43	-415.68	527.89	426.80	101.09	5.222	
4,400.00	4,282.59	4,271.83	4,282.59	16.88	87.23	-10.713	357.43	-415.68	521.86	420.45	101.41	5.146	
4,450.00	4,331.84	4,321.08	4,331.84	17.02	88.10	-14.870	357.43	-415.68	513.49	411.99	101.50	5.059	
4,500.00	4,380.59	4,369.83	4,380.59	17.14	88.97	-17.692	357.43	-415.68	502.81	401.44	101.37	4.960	
4,550.00	4,428.69	4,417.93	4,428.69	17.27	89.84	-19.987	357.43	-415.68	489.88	388.83	101.05	4.848	
4,600.00	4,476.02	4,465.26	4,476.02	17.39	90.97	-22.113	357.43	-415.68	474.76	373.93	100.83	4.708	
4,650.00	4,522.45	4,511.69	4,522.45	17.51	92.08	-24.273	357.43	-415.68	457.54	357.06	100.47	4.554	
4,700.00	4,567.85	4,557.09	4,567.85	17.63	93.17	-26.605	357.43	-415.68	438.32	338.26	100.06	4.381	
4,750.00	4,612.10	4,601.34	4,612.10	17.74	94.23	-29.223	357.43	-415.68	417.25	317.57	99.68	4.186	
4,800.00	4,655.07	4,644.32	4,655.07	17.86	95.26	-32.237	357.43	-415.68	394.49	295.00	99.49	3.965	
4,850.00	4,696.65	4,685.90	4,696.65	17.98	96.25	-35.758	357.43	-415.68	370.27	270.59	99.68	3.715	
4,900.00	4,736.73	4,725.97	4,736.73	18.10	97.21	-39.902	357.43	-415.68	344.89	244.42	100.47	3.433	
4,950.00	4,775.18	4,764.43	4,775.18	18.22	98.17	-44.775	357.43	-415.68	318.72	216.59	102.12	3.121	
5,000.00	4,811.92	4,801.17	4,811.92	18.34	99.16	-50.457	357.43	-415.68	292.29	187.48	104.81	2.789	
5,050.00	4,846.83	4,836.08	4,846.83	18.47	100.09	-56.955	357.43	-415.68	266.36	157.93	108.43	2.456	
5,100.00	4,879.83	4,869.08	4,879.83	18.61	100.97	-64.156	357.43	-415.68	241.96	129.32	112.63	2.148	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 432-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	4,910.81	4,900.06	4,910.81	18.75	101.80	-71.790	357.43	-415.68	220.57	103.79	116.78	1.889	
5,200.00	4,939.70	4,928.95	4,939.70	18.90	102.57	-79.447	357.43	-415.68	204.14	84.01	120.13	1.699	
5,250.00	4,966.42	4,955.67	4,966.42	19.05	103.28	-86.664	357.43	-415.68	194.95	72.73	122.22	1.595	
5,275.53	4,979.42	4,968.67	4,979.42	19.13	103.63	-90.000	357.43	-415.68	193.70	70.94	122.76	1.578 CC, ES, SF	
5,300.00	4,991.50	4,980.75	4,991.50	19.21	103.95	-93.153	357.43	-415.68	194.88	71.90	122.98	1.585	
5,350.00	5,016.50	5,005.75	5,016.50	19.39	104.62	-99.473	357.43	-415.68	204.21	81.61	122.60	1.666	
5,400.00	5,041.50	5,030.75	5,041.50	19.57	105.29	-105.569	357.43	-415.68	221.75	100.58	121.17	1.830	
5,450.00	5,066.50	5,055.82	5,066.50	19.76	105.95	-111.326	357.43	-415.68	245.76	126.85	118.91	2.067	
5,500.00	5,090.48	5,065.00	5,075.69	19.96	106.18	-110.735	357.43	-415.68	275.33	156.07	119.26	2.309	
5,550.00	5,110.69	5,065.00	5,075.69	20.17	106.18	-105.867	357.43	-415.68	311.04	189.10	121.94	2.551	
5,600.00	5,126.84	5,065.00	5,075.69	20.38	106.18	-99.383	357.43	-415.68	350.94	226.07	124.86	2.811	
5,650.00	5,138.80	5,065.00	5,075.69	20.59	106.18	-91.288	357.43	-415.68	393.50	266.79	126.72	3.105	
5,700.00	5,146.49	5,065.00	5,075.69	20.79	106.18	-81.865	357.43	-415.68	437.69	311.85	125.84	3.478	
5,750.00	5,149.84	5,065.00	5,075.69	21.00	106.18	-71.746	357.43	-415.68	482.75	361.64	121.11	3.986	
5,800.00	5,150.00	5,065.00	5,075.69	21.20	106.18	-69.011	357.43	-415.68	528.36	409.03	119.33	4.428	
5,850.00	5,150.00	5,065.00	5,075.69	21.42	106.18	-69.011	357.43	-415.68	574.68	455.13	119.54	4.807	
5,900.00	5,150.00	5,065.00	5,075.69	21.64	106.18	-69.011	357.43	-415.68	621.57	501.81	119.76	5.190	
5,950.00	5,150.00	5,065.00	5,075.69	21.88	106.18	-69.011	357.43	-415.68	668.91	548.91	119.99	5.575	
6,000.00	5,150.00	5,065.00	5,075.69	22.13	106.18	-69.011	357.43	-415.68	716.61	596.38	120.23	5.960	
6,050.00	5,150.00	5,065.00	5,075.69	22.40	106.18	-69.011	357.43	-415.68	764.61	644.12	120.49	6.346	
6,100.00	5,150.00	5,065.00	5,075.69	22.66	106.18	-69.011	357.43	-415.68	812.84	692.10	120.75	6.732	
6,150.00	5,150.00	5,065.00	5,075.69	22.95	106.18	-69.011	357.43	-415.68	861.28	740.26	121.02	7.117	
6,200.00	5,150.00	5,065.00	5,075.69	23.24	106.18	-69.011	357.43	-415.68	909.89	788.59	121.30	7.501	
6,250.00	5,150.00	5,065.00	5,075.69	23.55	106.18	-69.011	357.43	-415.68	958.64	837.04	121.60	7.884	
6,300.00	5,150.00	5,065.00	5,075.69	23.86	106.18	-69.011	357.43	-415.68	1,007.51	885.62	121.89	8.266	
6,350.00	5,150.00	5,065.00	5,075.69	24.19	106.18	-69.011	357.43	-415.68	1,056.49	934.29	122.20	8.645	
6,400.00	5,150.00	5,065.00	5,075.69	24.51	106.18	-69.011	357.43	-415.68	1,105.56	983.04	122.52	9.024	
6,450.00	5,150.00	5,065.00	5,075.69	24.86	106.18	-69.011	357.43	-415.68	1,154.71	1,031.87	122.85	9.400	
6,500.00	5,150.00	5,065.00	5,075.69	25.20	106.18	-69.011	357.43	-415.68	1,203.93	1,080.76	123.17	9.774	
6,550.00	5,150.00	5,065.00	5,075.69	25.56	106.18	-69.011	357.43	-415.68	1,253.21	1,129.70	123.52	10.146	
6,600.00	5,150.00	5,065.00	5,075.69	25.92	106.18	-69.011	357.43	-415.68	1,302.55	1,178.69	123.86	10.516	
6,650.00	5,150.00	5,065.00	5,075.69	26.29	106.18	-69.011	357.43	-415.68	1,351.93	1,227.72	124.22	10.884	
6,700.00	5,150.00	5,065.00	5,075.69	26.67	106.18	-69.011	357.43	-415.68	1,401.36	1,276.79	124.57	11.249	
6,750.00	5,150.00	5,065.00	5,075.69	27.05	106.18	-69.011	357.43	-415.68	1,450.83	1,325.89	124.94	11.612	
6,800.00	5,150.00	5,065.00	5,075.69	27.44	106.18	-69.011	357.43	-415.68	1,500.33	1,375.03	125.31	11.973	
6,850.00	5,150.00	5,065.00	5,075.69	27.84	106.18	-69.011	357.43	-415.68	1,549.87	1,424.18	125.69	12.331	
6,900.00	5,150.00	5,065.00	5,075.69	28.23	106.18	-69.011	357.43	-415.68	1,599.43	1,473.37	126.07	12.687	
6,950.00	5,150.00	5,065.00	5,075.69	28.64	106.18	-69.011	357.43	-415.68	1,649.02	1,522.57	126.46	13.040	
7,000.00	5,150.00	5,065.00	5,075.69	29.05	106.18	-69.011	357.43	-415.68	1,698.64	1,571.79	126.85	13.391	
7,050.00	5,150.00	5,065.00	5,075.69	29.47	106.18	-69.011	357.43	-415.68	1,748.27	1,621.03	127.24	13.740	
7,100.00	5,150.00	5,065.00	5,075.69	29.89	106.18	-69.011	357.43	-415.68	1,797.93	1,670.29	127.64	14.086	
7,150.00	5,150.00	5,065.00	5,075.69	30.32	106.18	-69.011	357.43	-415.68	1,847.61	1,719.55	128.05	14.429	
7,200.00	5,150.00	5,065.00	5,075.69	30.75	106.18	-69.011	357.43	-415.68	1,897.30	1,768.84	128.46	14.770	
7,250.00	5,150.00	5,065.00	5,075.69	31.19	106.18	-69.011	357.43	-415.68	1,947.01	1,818.13	128.87	15.108	
7,300.00	5,150.00	5,065.00	5,075.69	31.62	106.18	-69.011	357.43	-415.68	1,996.73	1,867.44	129.29	15.444	
7,350.00	5,150.00	5,065.00	5,075.69	32.07	106.18	-69.011	357.43	-415.68	2,046.46	1,916.75	129.71	15.777	
7,400.00	5,150.00	5,065.00	5,075.69	32.51	106.18	-69.011	357.43	-415.68	2,096.21	1,966.08	130.13	16.108	
7,450.00	5,150.00	5,065.00	5,075.69	32.96	106.18	-69.011	357.43	-415.68	2,145.97	2,015.41	130.56	16.436	
7,500.00	5,150.00	5,065.00	5,075.69	33.42	106.18	-69.011	357.43	-415.68	2,195.74	2,064.75	130.99	16.762	
7,550.00	5,150.00	5,065.00	5,075.69	33.88	106.18	-69.011	357.43	-415.68	2,245.52	2,114.10	131.43	17.085	
7,600.00	5,150.00	5,065.00	5,075.69	34.33	106.18	-69.011	357.43	-415.68	2,295.32	2,163.45	131.87	17.407	
7,650.00	5,150.00	5,065.00	5,075.69	34.80	106.18	-69.011	357.43	-415.68	2,345.12	2,212.81	132.31	17.725	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 OCHO_TESORO OFFSETS - BURCH KEELY UNIT #225 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 432-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
7,700.00	5,150.00	5,065.00	5,075.69	35.26	106.18	-69.011	357.43	-415.68	2,394.92	2,262.18	132.75	18.041	
7,750.00	5,150.00	5,065.00	5,075.69	35.73	106.18	-69.011	357.43	-415.68	2,444.74	2,311.54	133.19	18.355	
7,800.00	5,150.00	5,065.00	5,075.69	36.20	106.18	-69.011	357.43	-415.68	2,494.56	2,360.92	133.64	18.666	
7,850.00	5,150.00	5,065.00	5,075.69	36.68	106.18	-69.011	357.43	-415.68	2,544.39	2,410.30	134.09	18.975	
7,900.00	5,150.00	5,065.00	5,075.69	37.16	106.18	-69.011	357.43	-415.68	2,594.23	2,459.68	134.54	19.282	
7,950.00	5,150.00	5,065.00	5,075.69	37.64	106.18	-69.011	357.43	-415.68	2,644.07	2,509.07	135.00	19.586	
8,000.00	5,150.00	5,065.00	5,075.69	38.12	106.18	-69.011	357.43	-415.68	2,693.92	2,558.46	135.46	19.888	
8,050.00	5,150.00	5,065.00	5,075.69	38.60	106.18	-69.011	357.43	-415.68	2,743.78	2,607.86	135.92	20.187	
8,100.00	5,150.00	5,065.00	5,075.69	39.09	106.18	-69.011	357.43	-415.68	2,793.63	2,657.26	136.38	20.485	
8,150.00	5,150.00	5,065.00	5,075.69	39.57	106.18	-69.011	357.43	-415.68	2,843.50	2,706.66	136.84	20.780	
8,200.00	5,150.00	5,065.00	5,075.69	40.06	106.18	-69.011	357.43	-415.68	2,893.37	2,756.06	137.31	21.072	
8,250.00	5,150.00	5,065.00	5,075.69	40.56	106.18	-69.011	357.43	-415.68	2,943.24	2,805.47	137.77	21.363	
8,300.00	5,150.00	5,065.00	5,075.69	41.05	106.18	-69.011	357.43	-415.68	2,993.12	2,854.88	138.24	21.651	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 418-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	
0.00	0.00	0.00	16.00	0.00	0.00	-156.914	-962.80	-410.39	1,046.74				
50.00	50.00	34.00	50.00	0.05	0.29	-156.914	-962.80	-410.39	1,046.62	1,046.27	0.35	3,009.634	
100.00	100.00	84.00	100.00	0.14	0.73	-156.914	-962.80	-410.39	1,046.62	1,045.75	0.87	1,203.417	
150.00	150.00	134.00	150.00	0.32	1.16	-156.914	-962.80	-410.39	1,046.62	1,045.13	1.48	706.567	
200.00	200.00	184.00	200.00	0.50	1.59	-156.914	-962.80	-410.39	1,046.62	1,044.52	2.09	500.095	
250.00	250.00	234.00	250.00	0.68	2.02	-156.914	-962.80	-410.39	1,046.62	1,043.91	2.70	387.005	
300.00	300.00	284.00	300.00	0.86	2.46	-156.914	-962.80	-410.39	1,046.62	1,043.30	3.32	315.629	
350.00	350.00	334.00	350.00	1.04	2.89	-75.601	-962.80	-410.39	1,046.51	1,042.58	3.93	266.607	
400.00	399.98	383.98	399.98	1.21	3.32	-75.676	-962.80	-410.39	1,046.18	1,041.65	4.53	230.695	
450.00	449.93	433.93	449.93	1.39	3.96	-75.803	-962.80	-410.39	1,045.64	1,040.30	5.35	195.479	
500.00	499.84	483.84	499.84	1.57	5.03	-75.979	-962.80	-410.39	1,044.90	1,038.30	6.60	158.339	
550.00	549.68	533.68	549.68	1.75	6.10	-76.206	-962.80	-410.39	1,043.95	1,036.10	7.85	132.989	
600.00	599.45	583.45	599.45	1.93	7.18	-76.482	-962.80	-410.39	1,042.82	1,033.72	9.10	114.613	
650.00	649.13	633.13	649.13	2.11	8.24	-76.809	-962.80	-410.39	1,041.50	1,031.15	10.35	100.656	
700.00	698.70	682.70	698.70	2.29	9.31	-77.185	-962.80	-410.39	1,040.02	1,028.43	11.59	89.712	
750.00	748.15	732.15	748.15	2.47	10.38	-77.610	-962.80	-410.39	1,038.39	1,025.55	12.84	80.884	
800.00	797.47	781.47	797.47	2.65	11.44	-78.084	-962.80	-410.39	1,036.63	1,022.55	14.08	73.624	
850.00	846.63	830.63	846.63	2.84	12.49	-78.607	-962.80	-410.39	1,034.76	1,019.44	15.32	67.537	
900.00	895.62	909.00	925.00	3.02	14.18	-79.510	-962.80	-410.39	1,033.22	1,016.03	17.19	60.102	
950.00	944.44	928.44	944.44	3.21	14.74	-79.794	-962.80	-410.39	1,030.78	1,012.84	17.94	57.465	
1,000.00	993.06	977.06	993.06	3.40	16.14	-80.457	-962.80	-410.39	1,028.72	1,009.20	19.52	52.693	
1,050.00	1,041.46	1,025.46	1,041.46	3.59	17.53	-81.165	-962.80	-410.39	1,026.66	1,005.56	21.11	48.644	
1,100.00	1,089.70	1,073.70	1,089.70	3.78	18.92	-81.881	-962.80	-410.39	1,024.65	1,001.97	22.69	45.167	
1,150.00	1,137.92	1,121.92	1,137.92	3.98	20.31	-82.588	-962.80	-410.39	1,022.80	998.53	24.27	42.143	
1,200.00	1,186.14	1,170.14	1,186.14	4.18	21.69	-83.297	-962.80	-410.39	1,021.12	995.27	25.85	39.496	
1,250.00	1,234.37	1,218.37	1,234.37	4.37	23.08	-84.009	-962.80	-410.39	1,019.61	992.17	27.44	37.159	
1,300.00	1,282.59	1,266.59	1,282.59	4.57	24.47	-84.722	-962.80	-410.39	1,018.26	989.24	29.03	35.081	
1,350.00	1,330.81	1,314.81	1,330.81	4.77	25.86	-85.437	-962.80	-410.39	1,017.09	986.47	30.61	33.223	
1,400.00	1,379.04	1,363.04	1,379.04	4.97	27.24	-86.153	-962.80	-410.39	1,016.08	983.88	32.20	31.554	
1,450.00	1,427.26	1,411.36	1,427.26	5.17	28.59	-86.871	-962.80	-410.39	1,015.25	981.50	33.75	30.080	
1,500.00	1,475.48	1,459.58	1,475.48	5.37	29.71	-87.589	-962.80	-410.39	1,014.59	979.52	35.07	28.931	
1,550.00	1,523.71	1,507.81	1,523.71	5.57	30.83	-88.309	-962.80	-410.39	1,014.10	977.71	36.39	27.869	
1,600.00	1,571.93	1,556.03	1,571.93	5.77	31.94	-89.028	-962.80	-410.39	1,013.78	976.07	37.71	26.886	
1,650.00	1,620.15	1,604.25	1,620.15	5.97	33.06	-89.749	-962.80	-410.39	1,013.63	974.61	39.02	25.974	
1,667.46	1,636.99	1,621.09	1,636.99	6.04	33.45	-90.000	-962.80	-410.39	1,013.62	974.14	39.49	25.671 CC	
1,700.00	1,668.37	1,652.48	1,668.37	6.17	34.17	-90.469	-962.80	-410.39	1,013.66	973.32	40.34	25.126	
1,750.00	1,716.60	1,700.70	1,716.60	6.37	35.29	-91.189	-962.80	-410.39	1,013.86	972.20	41.66	24.336	
1,800.00	1,764.82	1,748.92	1,764.82	6.57	36.41	-91.908	-962.80	-410.39	1,014.23	971.25	42.98	23.598	
1,850.00	1,813.04	1,797.15	1,813.04	6.78	37.52	-92.628	-962.80	-410.39	1,014.77	970.47	44.30	22.908	
1,900.00	1,861.27	1,845.37	1,861.27	6.98	38.64	-93.346	-962.80	-410.39	1,015.48	969.87	45.61	22.262	
1,950.00	1,909.49	1,901.00	1,916.80	7.18	39.93	-94.172	-962.80	-410.39	1,016.39	969.29	47.10	21.578 ES	
2,000.00	1,957.71	1,941.92	1,957.71	7.38	40.67	-94.779	-962.80	-410.39	1,017.42	969.38	48.05	21.175	
2,050.00	2,005.94	1,990.14	2,005.94	7.59	41.55	-95.493	-962.80	-410.39	1,018.65	969.52	49.13	20.736	
2,100.00	2,054.16	2,038.36	2,054.16	7.79	42.43	-96.206	-962.80	-410.39	1,020.05	969.84	50.20	20.319	
2,150.00	2,102.38	2,086.59	2,102.38	7.99	43.31	-96.917	-962.80	-410.39	1,021.61	970.33	51.28	19.923	
2,200.00	2,150.61	2,134.81	2,150.61	8.19	44.18	-97.626	-962.80	-410.39	1,023.34	970.99	52.35	19.547	
2,250.00	2,198.83	2,183.03	2,198.83	8.40	45.06	-98.332	-962.80	-410.39	1,025.24	971.81	53.43	19.189	
2,300.00	2,247.05	2,231.26	2,247.05	8.60	45.94	-99.036	-962.80	-410.39	1,027.31	972.81	54.50	18.849	
2,350.00	2,295.28	2,279.48	2,295.28	8.80	46.82	-99.737	-962.80	-410.39	1,029.54	973.96	55.58	18.525	
2,400.00	2,343.50	2,327.70	2,343.50	9.01	47.70	-100.435	-962.80	-410.39	1,031.94	975.29	56.65	18.216	
2,450.00	2,391.72	2,375.93	2,391.72	9.21	48.57	-101.130	-962.80	-410.39	1,034.50	976.78	57.72	17.922	
2,500.00	2,439.95	2,424.15	2,439.95	9.41	49.48	-101.822	-962.80	-410.39	1,037.22	978.40	58.82	17.634	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 418-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	
2,550.00	2,488.17	2,472.38	2,488.17	9.62	50.41	-102.510	-962.80	-410.39	1,040.10	980.15	59.95	17.350	
2,600.00	2,536.39	2,520.60	2,536.39	9.82	51.35	-103.194	-962.80	-410.39	1,043.14	982.07	61.07	17.080	
2,650.00	2,584.61	2,568.82	2,584.61	10.02	52.28	-103.875	-962.80	-410.39	1,046.34	984.14	62.20	16.823	
2,700.00	2,632.84	2,617.05	2,632.84	10.23	53.22	-104.552	-962.80	-410.39	1,049.70	986.37	63.32	16.578	
2,750.00	2,681.06	2,665.27	2,681.06	10.43	54.15	-105.225	-962.80	-410.39	1,053.21	988.76	64.44	16.343	
2,800.00	2,729.28	2,713.49	2,729.28	10.64	55.09	-105.893	-962.80	-410.39	1,056.87	991.31	65.56	16.120	
2,850.00	2,777.51	2,761.72	2,777.51	10.84	56.02	-106.557	-962.80	-410.39	1,060.69	994.00	66.68	15.906	
2,900.00	2,825.73	2,809.94	2,825.73	11.04	56.96	-107.216	-962.80	-410.39	1,064.65	996.85	67.80	15.702	
2,950.00	2,873.95	2,858.16	2,873.95	11.25	57.89	-107.871	-962.80	-410.39	1,068.77	999.85	68.92	15.507	
3,000.00	2,922.18	2,906.40	2,922.18	11.45	58.83	-108.521	-962.80	-410.39	1,073.03	1,002.98	70.05	15.319	
3,050.00	2,970.40	2,954.62	2,970.40	11.66	59.86	-109.166	-962.80	-410.39	1,077.44	1,006.18	71.25	15.121	
3,100.00	3,018.62	3,002.85	3,018.62	11.86	60.89	-109.806	-962.80	-410.39	1,081.99	1,009.53	72.46	14.932	
3,150.00	3,066.85	3,051.07	3,066.85	12.06	61.91	-110.441	-962.80	-410.39	1,086.68	1,013.02	73.66	14.752	
3,200.00	3,115.07	3,099.29	3,115.07	12.27	62.94	-111.071	-962.80	-410.39	1,091.51	1,016.64	74.87	14.579	
3,250.00	3,163.29	3,147.52	3,163.29	12.47	63.96	-111.695	-962.80	-410.39	1,096.48	1,020.41	76.07	14.414	
3,300.00	3,211.52	3,195.74	3,211.52	12.68	64.99	-112.315	-962.80	-410.39	1,101.59	1,024.32	77.27	14.256	
3,350.00	3,259.74	3,243.96	3,259.74	12.88	66.01	-112.928	-962.80	-410.39	1,106.83	1,028.36	78.47	14.105	
3,400.00	3,307.96	3,292.19	3,307.96	13.08	67.04	-113.536	-962.80	-410.39	1,112.20	1,032.53	79.67	13.960	
3,450.00	3,356.19	3,340.41	3,356.19	13.29	68.07	-114.139	-962.80	-410.39	1,117.70	1,036.83	80.87	13.822	
3,500.00	3,404.41	3,403.00	3,418.76	13.49	69.40	-114.912	-962.80	-410.39	1,123.42	1,041.06	82.36	13.641	
3,550.00	3,452.63	3,436.87	3,452.63	13.70	70.21	-115.327	-962.80	-410.39	1,129.09	1,045.74	83.35	13.546	
3,600.00	3,500.85	3,485.09	3,500.85	13.90	71.37	-115.913	-962.80	-410.39	1,134.97	1,050.29	84.68	13.403	
3,650.00	3,549.08	3,533.32	3,549.08	14.11	72.53	-116.492	-962.80	-410.39	1,140.97	1,054.97	86.00	13.267	
3,700.00	3,597.30	3,581.54	3,597.30	14.31	73.69	-117.066	-962.80	-410.39	1,147.10	1,059.77	87.33	13.136	
3,750.00	3,645.52	3,629.76	3,645.52	14.51	74.85	-117.635	-962.80	-410.39	1,153.34	1,064.69	88.65	13.010	
3,800.00	3,693.75	3,677.99	3,693.75	14.72	76.01	-118.197	-962.80	-410.39	1,159.70	1,069.73	89.97	12.889	
3,850.00	3,741.97	3,726.21	3,741.97	14.92	77.16	-118.754	-962.80	-410.39	1,166.18	1,074.89	91.29	12.774	
3,900.00	3,790.19	3,774.43	3,790.19	15.13	78.32	-119.304	-962.80	-410.39	1,172.77	1,080.15	92.61	12.663	
3,950.00	3,838.42	3,822.65	3,838.42	15.33	79.48	-119.849	-962.80	-410.39	1,179.47	1,085.54	93.93	12.556	
4,000.00	3,886.64	3,870.88	3,886.64	15.54	80.64	-120.388	-962.80	-410.39	1,186.28	1,091.03	95.25	12.454	
4,050.00	3,935.06	3,919.34	3,935.06	15.74	81.81	-122.569	-962.80	-410.39	1,192.88	1,096.15	96.73	12.331	
4,100.00	3,984.05	3,968.33	3,984.05	15.93	83.04	-125.999	-962.80	-410.39	1,198.56	1,100.26	98.30	12.193	
4,150.00	4,033.48	4,017.76	4,033.48	16.11	84.28	-131.514	-962.80	-410.39	1,203.22	1,103.37	99.86	12.050	
4,200.00	4,083.23	4,067.51	4,083.23	16.29	85.52	-143.441	-962.80	-410.39	1,206.82	1,105.44	101.38	11.904	
4,250.00	4,133.15	4,117.43	4,133.15	16.45	86.77	176.660	-962.80	-410.39	1,209.33	1,106.46	102.86	11.757	
4,300.00	4,183.11	4,167.39	4,183.11	16.61	88.02	108.799	-962.80	-410.39	1,210.73	1,106.43	104.29	11.609	
4,350.00	4,232.97	4,217.24	4,232.97	16.75	89.27	87.083	-962.80	-410.39	1,211.02	1,105.36	105.67	11.461	
4,400.00	4,282.59	4,266.87	4,282.59	16.88	90.51	79.782	-962.80	-410.39	1,210.24	1,103.25	106.99	11.312	
4,450.00	4,331.84	4,316.12	4,331.84	17.02	91.74	76.550	-962.80	-410.39	1,208.41	1,100.15	108.26	11.162	
4,500.00	4,380.59	4,364.86	4,380.59	17.14	92.96	75.020	-962.80	-410.39	1,205.59	1,096.10	109.49	11.011	
4,550.00	4,428.69	4,412.97	4,428.69	17.27	94.17	74.402	-962.80	-410.39	1,201.85	1,091.16	110.69	10.858	
4,600.00	4,476.02	4,460.36	4,476.02	17.39	95.39	74.358	-962.80	-410.39	1,197.28	1,085.37	111.91	10.699	
4,650.00	4,522.45	4,506.79	4,522.45	17.51	96.64	74.716	-962.80	-410.39	1,191.98	1,078.80	113.18	10.532	
4,700.00	4,567.85	4,552.19	4,567.85	17.63	97.87	75.376	-962.80	-410.39	1,186.07	1,071.62	114.45	10.364	
4,750.00	4,612.10	4,596.44	4,612.10	17.74	99.07	76.270	-962.80	-410.39	1,179.67	1,063.95	115.73	10.194	
4,800.00	4,655.07	4,639.41	4,655.07	17.86	100.23	77.350	-962.80	-410.39	1,172.95	1,055.93	117.02	10.024	
4,850.00	4,696.65	4,680.99	4,696.65	17.98	101.35	78.573	-962.80	-410.39	1,166.05	1,047.73	118.32	9.855	
4,900.00	4,736.73	4,721.07	4,736.73	18.10	102.43	79.904	-962.80	-410.39	1,159.15	1,039.52	119.63	9.689	
4,950.00	4,775.18	4,759.52	4,775.18	18.22	103.47	81.307	-962.80	-410.39	1,152.44	1,031.50	120.94	9.529	
5,000.00	4,811.92	4,796.26	4,811.92	18.34	104.47	82.749	-962.80	-410.39	1,146.09	1,023.88	122.22	9.378	
5,050.00	4,846.83	4,820.00	4,835.62	18.47	105.11	83.783	-962.80	-410.39	1,140.37	1,017.28	123.09	9.264	
5,100.00	4,879.83	4,820.00	4,835.62	18.61	105.11	83.906	-962.80	-410.39	1,136.16	1,012.95	123.21	9.221	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 418-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	4,910.81	4,820.00	4,835.62	18.75	105.11	83.940	-962.80	-410.39	1,133.74	1,010.42	123.32	9.193	
5,191.86	4,935.14	4,820.00	4,835.62	18.87	105.11	83.897	-962.80	-410.39	1,133.11	1,009.70	123.41	9.182	
5,200.00	4,939.70	4,820.00	4,835.62	18.90	105.11	83.881	-962.80	-410.39	1,133.13	1,009.71	123.43	9.181 SF	
5,250.00	4,966.42	4,820.00	4,835.62	19.05	105.11	83.728	-962.80	-410.39	1,134.33	1,010.82	123.52	9.183	
5,300.00	4,991.50	4,820.00	4,835.62	19.21	105.11	83.671	-962.80	-410.39	1,137.45	1,013.79	123.66	9.198	
5,350.00	5,016.50	4,820.00	4,835.62	19.39	105.11	83.671	-962.80	-410.39	1,142.72	1,018.89	123.84	9.228	
5,400.00	5,041.50	4,820.00	4,835.62	19.57	105.11	83.671	-962.80	-410.39	1,150.15	1,026.14	124.01	9.274	
5,450.00	5,066.50	4,820.00	4,835.62	19.76	105.11	83.671	-962.80	-410.39	1,159.69	1,035.48	124.21	9.337	
5,500.00	5,090.48	4,820.00	4,835.62	19.96	105.11	82.798	-962.80	-410.39	1,171.16	1,046.99	124.17	9.432	
5,550.00	5,110.69	4,820.00	4,835.62	20.17	105.11	81.469	-962.80	-410.39	1,184.12	1,060.17	123.95	9.553	
5,600.00	5,126.84	4,820.00	4,835.62	20.38	105.11	79.997	-962.80	-410.39	1,198.41	1,074.82	123.59	9.697	
5,650.00	5,138.80	4,820.00	4,835.62	20.59	105.11	78.399	-962.80	-410.39	1,213.88	1,090.81	123.07	9.863	
5,700.00	5,146.49	4,820.00	4,835.62	20.79	105.11	76.694	-962.80	-410.39	1,230.36	1,107.96	122.40	10.052	
5,750.00	5,149.84	4,820.00	4,835.62	21.00	105.11	74.902	-962.80	-410.39	1,247.70	1,126.12	121.58	10.262	
5,800.00	5,150.00	4,820.00	4,835.62	21.20	105.11	74.407	-962.80	-410.39	1,266.03	1,144.54	121.48	10.421	
5,850.00	5,150.00	4,820.00	4,835.62	21.42	105.11	74.407	-962.80	-410.39	1,286.00	1,164.30	121.70	10.567	
5,900.00	5,150.00	4,820.00	4,835.62	21.64	105.11	74.407	-962.80	-410.39	1,307.58	1,185.66	121.91	10.725	
5,950.00	5,150.00	4,820.00	4,835.62	21.88	105.11	74.407	-962.80	-410.39	1,330.68	1,208.53	122.15	10.894	
6,000.00	5,150.00	4,820.00	4,835.62	22.13	105.11	74.407	-962.80	-410.39	1,355.24	1,232.85	122.39	11.073	
6,050.00	5,150.00	4,820.00	4,835.62	22.40	105.11	74.407	-962.80	-410.39	1,381.18	1,258.53	122.65	11.261	
6,100.00	5,150.00	4,820.00	4,835.62	22.66	105.11	74.407	-962.80	-410.39	1,408.41	1,285.50	122.91	11.459	
6,150.00	5,150.00	4,820.00	4,835.62	22.95	105.11	74.407	-962.80	-410.39	1,436.87	1,313.67	123.19	11.664	
6,200.00	5,150.00	4,820.00	4,835.62	23.24	105.11	74.407	-962.80	-410.39	1,466.48	1,343.00	123.47	11.877	
6,250.00	5,150.00	4,820.00	4,835.62	23.55	105.11	74.407	-962.80	-410.39	1,497.17	1,373.40	123.77	12.096	
6,300.00	5,150.00	4,820.00	4,835.62	23.86	105.11	74.407	-962.80	-410.39	1,528.89	1,404.81	124.07	12.322	
6,350.00	5,150.00	4,820.00	4,835.62	24.19	105.11	74.407	-962.80	-410.39	1,561.56	1,437.16	124.39	12.553	
6,400.00	5,150.00	4,820.00	4,835.62	24.51	105.11	74.407	-962.80	-410.39	1,595.13	1,470.41	124.71	12.791	
6,450.00	5,150.00	4,820.00	4,835.62	24.86	105.11	74.407	-962.80	-410.39	1,629.54	1,504.49	125.05	13.032	
6,500.00	5,150.00	4,820.00	4,835.62	25.20	105.11	74.407	-962.80	-410.39	1,664.74	1,539.36	125.38	13.278	
6,550.00	5,150.00	4,820.00	4,835.62	25.56	105.11	74.407	-962.80	-410.39	1,700.68	1,574.95	125.73	13.527	
6,600.00	5,150.00	4,820.00	4,835.62	25.92	105.11	74.407	-962.80	-410.39	1,737.32	1,611.25	126.08	13.780	
6,650.00	5,150.00	4,820.00	4,835.62	26.29	105.11	74.407	-962.80	-410.39	1,774.62	1,648.17	126.44	14.035	
6,700.00	5,150.00	4,820.00	4,835.62	26.67	105.11	74.407	-962.80	-410.39	1,812.52	1,685.72	126.80	14.294	
6,750.00	5,150.00	4,820.00	4,835.62	27.05	105.11	74.407	-962.80	-410.39	1,851.00	1,723.82	127.18	14.554	
6,800.00	5,150.00	4,820.00	4,835.62	27.44	105.11	74.407	-962.80	-410.39	1,890.02	1,762.46	127.56	14.817	
6,850.00	5,150.00	4,820.00	4,835.62	27.84	105.11	74.407	-962.80	-410.39	1,929.54	1,801.60	127.94	15.081	
6,900.00	5,150.00	4,820.00	4,835.62	28.23	105.11	74.407	-962.80	-410.39	1,969.54	1,841.21	128.33	15.348	
6,950.00	5,150.00	4,820.00	4,835.62	28.64	105.11	74.407	-962.80	-410.39	2,009.99	1,881.26	128.73	15.614	
7,000.00	5,150.00	4,820.00	4,835.62	29.05	105.11	74.407	-962.80	-410.39	2,050.86	1,921.74	129.12	15.883	
7,050.00	5,150.00	4,820.00	4,835.62	29.47	105.11	74.407	-962.80	-410.39	2,092.13	1,962.59	129.53	16.151	
7,100.00	5,150.00	4,820.00	4,835.62	29.89	105.11	74.407	-962.80	-410.39	2,133.77	2,003.83	129.94	16.421	
7,150.00	5,150.00	4,820.00	4,835.62	30.32	105.11	74.407	-962.80	-410.39	2,175.76	2,045.40	130.36	16.691	
7,200.00	5,150.00	4,820.00	4,835.62	30.75	105.11	74.407	-962.80	-410.39	2,218.08	2,087.31	130.77	16.961	
7,250.00	5,150.00	4,820.00	4,835.62	31.19	105.11	74.407	-962.80	-410.39	2,260.72	2,129.53	131.20	17.232	
7,300.00	5,150.00	4,820.00	4,835.62	31.62	105.11	74.407	-962.80	-410.39	2,303.66	2,172.04	131.62	17.502	
7,350.00	5,150.00	4,820.00	4,835.62	32.07	105.11	74.407	-962.80	-410.39	2,346.87	2,214.82	132.05	17.772	
7,400.00	5,150.00	4,820.00	4,835.62	32.51	105.11	74.407	-962.80	-410.39	2,390.35	2,257.86	132.48	18.042	
7,450.00	5,150.00	4,820.00	4,835.62	32.96	105.11	74.407	-962.80	-410.39	2,434.08	2,301.15	132.92	18.312	
7,500.00	5,150.00	4,820.00	4,835.62	33.42	105.11	74.407	-962.80	-410.39	2,478.04	2,344.68	133.36	18.581	
7,550.00	5,150.00	4,820.00	4,835.62	33.88	105.11	74.407	-962.80	-410.39	2,522.23	2,388.43	133.81	18.850	
7,600.00	5,150.00	4,820.00	4,835.62	34.33	105.11	74.407	-962.80	-410.39	2,566.64	2,432.39	134.25	19.118	
7,650.00	5,150.00	4,820.00	4,835.62	34.80	105.11	74.407	-962.80	-410.39	2,611.24	2,476.54	134.70	19.385	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 OCHO_TESORO OFFSETS - BURCH KEELY UNIT #242 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 418-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
7,700.00	5,150.00	4,820.00	4,835.62	35.26	105.11	74.407	-962.80	-410.39	2,656.04	2,520.89	135.15	19.652	
7,750.00	5,150.00	4,820.00	4,835.62	35.73	105.11	74.407	-962.80	-410.39	2,701.02	2,565.41	135.61	19.917	
7,800.00	5,150.00	4,820.00	4,835.62	36.20	105.11	74.407	-962.80	-410.39	2,746.18	2,610.11	136.07	20.183	
7,850.00	5,150.00	4,820.00	4,835.62	36.68	105.11	74.407	-962.80	-410.39	2,791.50	2,654.97	136.53	20.446	
7,900.00	5,150.00	4,820.00	4,835.62	37.16	105.11	74.407	-962.80	-410.39	2,836.98	2,699.99	136.99	20.709	
7,950.00	5,150.00	4,820.00	4,835.62	37.64	105.11	74.407	-962.80	-410.39	2,882.60	2,745.15	137.46	20.971	
8,000.00	5,150.00	4,820.00	4,835.62	38.12	105.11	74.407	-962.80	-410.39	2,928.37	2,790.45	137.92	21.232	
8,050.00	5,150.00	4,820.00	4,835.62	38.60	105.11	74.407	-962.80	-410.39	2,974.28	2,835.89	138.39	21.492	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 400-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	
0.00	0.00	0.00	26.00	0.00	0.00	-172.140	-2,916.02	-402.57	2,943.79				
50.00	50.00	24.00	50.00	0.05	0.25	-172.140	-2,916.02	-402.57	2,943.68	2,943.38	0.30	9,783.905	
100.00	100.00	74.00	100.00	0.14	0.76	-172.140	-2,916.02	-402.57	2,943.68	2,942.77	0.91	3,251.690	
150.00	150.00	124.00	150.00	0.32	1.28	-172.140	-2,916.02	-402.57	2,943.68	2,942.08	1.60	1,840.603	
200.00	200.00	174.00	200.00	0.50	1.79	-172.140	-2,916.02	-402.57	2,943.68	2,941.38	2.29	1,283.585	
250.00	250.00	224.00	250.00	0.68	2.31	-172.140	-2,916.02	-402.57	2,943.68	2,940.69	2.99	985.381	
300.00	300.00	274.00	300.00	0.86	2.82	-172.140	-2,916.02	-402.57	2,943.68	2,940.00	3.68	799.614 CC	
350.00	350.00	324.00	350.00	1.04	3.34	-90.810	-2,916.02	-402.57	2,943.68	2,939.31	4.38	672.828	
400.00	399.98	400.00	426.00	1.21	4.12	-90.852	-2,916.02	-402.57	2,943.82	2,938.48	5.33	551.871	
424.14	424.10	400.00	426.00	1.30	4.12	-90.854	-2,916.02	-402.57	2,943.72	2,938.30	5.42	543.224	
450.00	449.93	423.93	449.93	1.39	4.68	-90.876	-2,916.02	-402.57	2,943.73	2,937.67	6.06	485.517	
500.00	499.84	473.84	499.84	1.57	5.83	-90.935	-2,916.02	-402.57	2,943.78	2,936.39	7.39	398.213	
550.00	549.68	523.68	549.68	1.75	6.98	-91.010	-2,916.02	-402.57	2,943.85	2,935.13	8.72	337.479	
600.00	599.45	573.45	599.45	1.93	8.13	-91.101	-2,916.02	-402.57	2,943.94	2,933.89	10.05	292.875	
650.00	649.13	623.13	649.13	2.11	9.28	-91.208	-2,916.02	-402.57	2,944.05	2,932.67	11.38	258.685	
700.00	698.70	672.70	698.70	2.29	10.43	-91.331	-2,916.02	-402.57	2,944.20	2,931.49	12.71	231.693	
750.00	748.15	722.15	748.15	2.47	11.57	-91.469	-2,916.02	-402.57	2,944.38	2,930.35	14.03	209.811	
800.00	797.47	771.47	797.47	2.65	12.71	-91.623	-2,916.02	-402.57	2,944.61	2,929.25	15.36	191.749	
850.00	846.63	820.63	846.63	2.84	13.85	-91.792	-2,916.02	-402.57	2,944.88	2,928.20	16.68	176.562	
900.00	895.62	928.00	953.97	3.02	16.33	-92.211	-2,916.02	-402.57	2,945.80	2,926.45	19.35	152.259	
934.14	928.98	928.00	953.97	3.15	16.33	-92.215	-2,916.02	-402.57	2,945.59	2,926.11	19.48	151.238	
950.00	944.44	928.00	953.97	3.21	16.33	-92.214	-2,916.02	-402.57	2,945.63	2,926.10	19.54	150.776	
1,000.00	993.06	967.08	993.06	3.40	17.27	-92.383	-2,916.02	-402.57	2,946.10	2,925.43	20.67	142.533	
1,050.00	1,041.46	1,015.49	1,041.46	3.59	18.44	-92.608	-2,916.02	-402.57	2,946.66	2,924.63	22.03	133.753	
1,100.00	1,089.70	1,063.72	1,089.70	3.78	19.61	-92.850	-2,916.02	-402.57	2,947.31	2,923.92	23.39	126.015	
1,150.00	1,137.92	1,111.95	1,137.92	3.98	20.77	-93.098	-2,916.02	-402.57	2,948.02	2,923.27	24.75	119.117	
1,200.00	1,186.14	1,160.17	1,186.14	4.18	21.94	-93.345	-2,916.02	-402.57	2,948.79	2,922.68	26.11	112.941	
1,250.00	1,234.37	1,208.39	1,234.37	4.37	23.10	-93.592	-2,916.02	-402.57	2,949.62	2,922.15	27.47	107.373	
1,300.00	1,282.59	1,256.62	1,282.59	4.57	24.27	-93.839	-2,916.02	-402.57	2,950.51	2,921.67	28.83	102.331	
1,350.00	1,330.81	1,304.84	1,330.81	4.77	25.43	-94.086	-2,916.02	-402.57	2,951.45	2,921.26	30.20	97.744	
1,400.00	1,379.04	1,353.06	1,379.04	4.97	26.59	-94.333	-2,916.02	-402.57	2,952.46	2,920.90	31.56	93.555	
1,450.00	1,427.26	1,456.00	1,481.91	5.17	29.08	-94.858	-2,916.02	-402.57	2,954.03	2,919.78	34.24	86.268 ES	
1,500.00	1,475.48	1,456.00	1,481.91	5.37	29.08	-94.858	-2,916.02	-402.57	2,954.65	2,920.21	34.44	85.785	
1,550.00	1,523.71	1,497.79	1,523.71	5.57	30.09	-95.072	-2,916.02	-402.57	2,955.82	2,920.17	35.65	82.907	
1,600.00	1,571.93	1,546.02	1,571.93	5.77	31.26	-95.318	-2,916.02	-402.57	2,957.06	2,920.05	37.02	79.883	
1,650.00	1,620.15	1,594.24	1,620.15	5.97	32.42	-95.563	-2,916.02	-402.57	2,958.36	2,919.98	38.38	77.074	
1,700.00	1,668.37	1,642.46	1,668.37	6.17	33.59	-95.809	-2,916.02	-402.57	2,959.72	2,919.97	39.75	74.460	
1,750.00	1,716.60	1,690.68	1,716.60	6.37	34.75	-96.054	-2,916.02	-402.57	2,961.13	2,920.02	41.11	72.021	
1,800.00	1,764.82	1,738.91	1,764.82	6.57	35.92	-96.299	-2,916.02	-402.57	2,962.61	2,920.13	42.48	69.740	
1,850.00	1,813.04	1,787.13	1,813.04	6.78	37.09	-96.544	-2,916.02	-402.57	2,964.14	2,920.29	43.85	67.602	
1,900.00	1,861.27	1,835.35	1,861.27	6.98	38.25	-96.789	-2,916.02	-402.57	2,965.73	2,920.52	45.21	65.595	
1,950.00	1,909.49	1,920.00	1,945.88	7.18	40.30	-97.218	-2,916.02	-402.57	2,967.60	2,920.14	47.46	62.531	
2,000.00	1,957.71	1,931.84	1,957.71	7.38	40.60	-97.278	-2,916.02	-402.57	2,969.08	2,921.12	47.96	61.910	
2,050.00	2,005.94	1,980.06	2,005.94	7.59	41.81	-97.522	-2,916.02	-402.57	2,970.84	2,921.47	49.37	60.170	
2,100.00	2,054.16	2,028.28	2,054.16	7.79	43.03	-97.765	-2,916.02	-402.57	2,972.66	2,921.87	50.79	58.529	
2,150.00	2,102.38	2,114.00	2,139.85	7.99	45.19	-98.197	-2,916.02	-402.57	2,974.78	2,921.63	53.15	55.972	
2,200.00	2,150.61	2,124.75	2,150.61	8.19	45.46	-98.252	-2,916.02	-402.57	2,976.48	2,922.86	53.62	55.509	
2,250.00	2,198.83	2,172.98	2,198.83	8.40	46.67	-98.494	-2,916.02	-402.57	2,978.47	2,923.43	55.04	54.117	
2,300.00	2,247.05	2,221.20	2,247.05	8.60	47.89	-98.737	-2,916.02	-402.57	2,980.52	2,924.07	56.45	52.796	
2,350.00	2,295.28	2,269.42	2,295.28	8.80	49.11	-98.979	-2,916.02	-402.57	2,982.63	2,924.76	57.87	51.540	
2,400.00	2,343.50	2,317.64	2,343.50	9.01	50.32	-99.221	-2,916.02	-402.57	2,984.79	2,925.51	59.29	50.346	
2,450.00	2,391.72	2,414.00	2,439.82	9.21	52.75	-99.703	-2,916.02	-402.57	2,987.40	2,925.49	61.91	48.253	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 OCHO_TESORO OFFSETS - BURCH KEELY UNIT #270 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 400-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	
2,500.00	2,439.95	2,414.13	2,439.95	9.41	52.76	-99.703	-2,916.02	-402.57	2,989.29	2,927.17	62.12	48.123	
2,550.00	2,488.17	2,462.35	2,488.17	9.62	53.97	-99.944	-2,916.02	-402.57	2,991.63	2,928.09	63.53	47.087	
2,600.00	2,536.39	2,510.57	2,536.39	9.82	55.19	-100.185	-2,916.02	-402.57	2,994.02	2,929.07	64.95	46.097	
2,650.00	2,584.61	2,558.79	2,584.61	10.02	56.41	-100.425	-2,916.02	-402.57	2,996.47	2,930.10	66.37	45.150	
2,700.00	2,632.84	2,607.02	2,632.84	10.23	57.62	-100.665	-2,916.02	-402.57	2,998.97	2,931.19	67.78	44.244 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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 327-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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	13.00	0.00	0.00	-123.905	-277.67	-413.14	497.95				
50.00	50.00	37.00	50.00	0.05	0.32	-123.905	-277.67	-413.14	497.78	497.41	0.37	1,347.069	
100.00	100.00	87.00	100.00	0.14	0.74	-123.905	-277.67	-413.14	497.78	496.89	0.89	561.926	
150.00	150.00	137.00	150.00	0.32	1.17	-123.905	-277.67	-413.14	497.78	496.29	1.49	333.682	
200.00	200.00	187.00	200.00	0.50	1.60	-123.905	-277.67	-413.14	497.78	495.68	2.10	237.296	
250.00	250.00	237.00	250.00	0.68	2.02	-123.905	-277.67	-413.14	497.78	495.08	2.70	184.114	
300.00	300.00	287.00	300.00	0.86	2.45	-123.905	-277.67	-413.14	497.78	494.47	3.31	150.406	
350.00	350.00	337.00	350.00	1.04	3.01	-42.605	-277.67	-413.14	497.46	493.41	4.05	122.877	
400.00	399.98	386.98	399.98	1.21	4.09	-42.720	-277.67	-413.14	496.50	491.18	5.31	93.448	
450.00	449.93	436.93	449.93	1.39	5.17	-42.913	-277.67	-413.14	494.90	488.32	6.58	75.253	
500.00	499.84	486.84	499.84	1.57	6.25	-43.185	-277.67	-413.14	492.66	484.83	7.84	62.871	
550.00	549.68	536.68	549.68	1.75	7.33	-43.538	-277.67	-413.14	489.81	480.71	9.09	53.860	
600.00	599.45	586.45	599.45	1.93	8.41	-43.974	-277.67	-413.14	486.34	475.99	10.35	47.005	
650.00	649.13	636.13	649.13	2.11	9.48	-44.497	-277.67	-413.14	482.27	470.67	11.60	41.593	
700.00	698.70	685.70	698.70	2.29	10.55	-45.110	-277.67	-413.14	477.62	464.78	12.84	37.208	
750.00	748.15	735.15	748.15	2.47	11.62	-45.816	-277.67	-413.14	472.41	458.33	14.07	33.568	
800.00	797.47	784.47	797.47	2.65	12.69	-46.622	-277.67	-413.14	466.66	451.35	15.30	30.497	
850.00	846.63	833.63	846.63	2.84	13.93	-47.531	-277.67	-413.14	460.39	443.70	16.70	27.571	
900.00	895.62	882.62	895.62	3.02	15.50	-48.551	-277.67	-413.14	453.65	435.23	18.42	24.625	
950.00	944.44	931.44	944.44	3.21	17.07	-49.689	-277.67	-413.14	446.47	426.34	20.14	22.169	
1,000.00	993.06	980.09	993.06	3.40	18.69	-50.950	-277.67	-413.14	438.90	417.00	21.90	20.040	
1,050.00	1,041.46	1,028.52	1,041.46	3.59	20.39	-52.344	-277.67	-413.14	430.98	407.23	23.74	18.153	
1,100.00	1,089.70	1,076.76	1,089.70	3.78	21.91	-53.767	-277.67	-413.14	422.88	397.45	25.43	16.629	
1,150.00	1,137.92	1,125.01	1,137.92	3.98	23.42	-55.203	-277.67	-413.14	415.02	387.90	27.12	15.301	
1,200.00	1,186.14	1,173.23	1,186.14	4.18	24.84	-56.692	-277.67	-413.14	407.44	378.70	28.74	14.177	
1,250.00	1,234.37	1,221.47	1,234.37	4.37	26.27	-58.232	-277.67	-413.14	400.15	369.79	30.36	13.180	
1,300.00	1,282.59	1,269.70	1,282.59	4.57	27.70	-59.826	-277.67	-413.14	393.17	361.18	31.99	12.290	
1,350.00	1,330.81	1,317.92	1,330.81	4.77	29.13	-61.473	-277.67	-413.14	386.52	352.89	33.63	11.495	
1,400.00	1,379.04	1,366.17	1,379.04	4.97	30.53	-63.173	-277.67	-413.14	380.20	344.97	35.23	10.791	
1,450.00	1,427.26	1,414.39	1,427.26	5.17	31.91	-64.926	-277.67	-413.14	374.25	337.42	36.83	10.162	
1,500.00	1,475.48	1,462.61	1,475.48	5.37	33.36	-66.819	-277.67	-413.14	368.69	330.19	38.49	9.578	
1,550.00	1,523.71	1,510.87	1,523.71	5.57	34.62	-68.584	-277.67	-413.14	363.50	323.52	39.98	9.093	
1,600.00	1,571.93	1,559.09	1,571.93	5.77	35.94	-70.487	-277.67	-413.14	358.73	317.21	41.53	8.639	
1,650.00	1,620.15	1,607.31	1,620.15	5.97	37.27	-72.436	-277.67	-413.14	354.39	311.31	43.08	8.227	
1,700.00	1,668.37	1,655.53	1,668.37	6.17	38.60	-74.427	-277.67	-413.14	350.50	305.87	44.63	7.853	
1,750.00	1,716.60	1,703.79	1,716.60	6.37	39.89	-76.458	-277.67	-413.14	347.06	300.92	46.14	7.521	
1,800.00	1,764.82	1,752.02	1,764.82	6.57	41.10	-78.524	-277.67	-413.14	344.10	296.51	47.59	7.231	
1,850.00	1,813.04	1,800.24	1,813.04	6.78	42.32	-80.621	-277.67	-413.14	341.62	292.59	49.03	6.967	
1,900.00	1,861.27	1,848.46	1,861.27	6.98	43.54	-82.743	-277.67	-413.14	339.64	289.17	50.47	6.729	
1,950.00	1,909.49	1,896.68	1,909.49	7.18	44.76	-84.886	-277.67	-413.14	338.17	286.26	51.91	6.515	
2,000.00	1,957.71	1,944.95	1,957.71	7.38	45.95	-87.043	-277.67	-413.14	337.20	283.89	53.32	6.324	
2,050.00	2,005.94	1,993.17	2,005.94	7.59	47.06	-89.209	-277.67	-413.14	336.76	282.12	54.64	6.163	
2,068.25	2,023.54	2,010.77	2,023.54	7.66	47.47	-90.000	-277.67	-413.14	336.72	281.60	55.12	6.109 CC	
2,100.00	2,054.16	2,041.39	2,054.16	7.79	48.17	-91.376	-277.67	-413.14	336.83	280.87	55.96	6.020	
2,150.00	2,102.38	2,089.62	2,102.38	7.99	49.28	-93.540	-277.67	-413.14	337.41	280.15	57.27	5.892	
2,200.00	2,150.61	2,137.84	2,150.61	8.19	50.39	-95.694	-277.67	-413.14	338.52	279.94	58.57	5.780 ES	
2,250.00	2,198.83	2,186.08	2,198.83	8.40	51.50	-97.832	-277.67	-413.14	340.13	280.26	59.86	5.682	
2,300.00	2,247.05	2,234.30	2,247.05	8.60	52.56	-99.948	-277.67	-413.14	342.24	281.14	61.10	5.601	
2,350.00	2,295.28	2,282.53	2,295.28	8.80	53.61	-102.037	-277.67	-413.14	344.85	282.52	62.34	5.532	
2,400.00	2,343.50	2,330.75	2,343.50	9.01	54.67	-104.094	-277.67	-413.14	347.94	284.38	63.56	5.474	
2,450.00	2,391.72	2,378.97	2,391.72	9.21	55.73	-106.114	-277.67	-413.14	351.50	286.72	64.78	5.426	
2,500.00	2,439.95	2,427.22	2,439.95	9.41	56.79	-108.095	-277.67	-413.14	355.52	289.53	65.99	5.387	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 327-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	
2,550.00	2,488.17	2,475.44	2,488.17	9.62	57.80	-110.031	-277.67	-413.14	359.98	292.83	67.15	5.361	
2,600.00	2,536.39	2,523.66	2,536.39	9.82	58.81	-111.921	-277.67	-413.14	364.86	296.56	68.30	5.342	
2,650.00	2,584.61	2,571.89	2,584.61	10.02	59.82	-113.762	-277.67	-413.14	370.14	300.70	69.45	5.330	
2,700.00	2,632.84	2,620.11	2,632.84	10.23	60.82	-115.553	-277.67	-413.14	375.82	305.24	70.59	5.324	
2,750.00	2,681.06	2,671.00	2,683.72	10.43	61.89	-117.385	-277.67	-413.14	381.88	310.11	71.78	5.321	
2,800.00	2,729.28	2,716.57	2,729.28	10.64	62.84	-118.977	-277.67	-413.14	388.28	315.42	72.86	5.329	
2,850.00	2,777.51	2,764.79	2,777.51	10.84	63.86	-120.610	-277.67	-413.14	395.02	321.03	73.99	5.339	
2,900.00	2,825.73	2,813.01	2,825.73	11.04	64.87	-122.189	-277.67	-413.14	402.09	326.97	75.12	5.353	
2,950.00	2,873.95	2,861.24	2,873.95	11.25	65.88	-123.715	-277.67	-413.14	409.46	333.21	76.25	5.370	
3,000.00	2,922.18	2,909.47	2,922.18	11.45	66.85	-125.189	-277.67	-413.14	417.12	339.78	77.34	5.394	
3,050.00	2,970.40	2,957.70	2,970.40	11.66	67.77	-126.612	-277.67	-413.14	425.05	346.69	78.36	5.424	
3,100.00	3,018.62	3,005.92	3,018.62	11.86	68.68	-127.983	-277.67	-413.14	433.24	353.85	79.39	5.457	
3,150.00	3,066.85	3,054.14	3,066.85	12.06	69.59	-129.306	-277.67	-413.14	441.67	361.26	80.41	5.492	
3,200.00	3,115.07	3,102.36	3,115.07	12.27	70.51	-130.580	-277.67	-413.14	450.33	368.89	81.44	5.530	
3,250.00	3,163.29	3,150.59	3,163.29	12.47	71.42	-131.808	-277.67	-413.14	459.21	376.75	82.46	5.569	
3,300.00	3,211.52	3,198.81	3,211.52	12.68	72.33	-132.990	-277.67	-413.14	468.29	384.81	83.49	5.609	
3,350.00	3,259.74	3,247.03	3,259.74	12.88	73.25	-134.128	-277.67	-413.14	477.57	393.06	84.51	5.651	
3,400.00	3,307.96	3,295.28	3,307.96	13.08	74.13	-135.224	-277.67	-413.14	487.03	401.51	85.51	5.695	
3,450.00	3,356.19	3,343.50	3,356.19	13.29	75.01	-136.280	-277.67	-413.14	496.65	410.16	86.50	5.742	
3,500.00	3,404.41	3,391.72	3,404.41	13.49	75.88	-137.296	-277.67	-413.14	506.45	418.97	87.48	5.789	
3,550.00	3,452.63	3,439.95	3,452.63	13.70	76.75	-138.275	-277.67	-413.14	516.39	427.92	88.46	5.837	
3,600.00	3,500.85	3,488.17	3,500.85	13.90	77.62	-139.217	-277.67	-413.14	526.47	437.02	89.45	5.886	
3,650.00	3,549.08	3,536.39	3,549.08	14.11	78.49	-140.125	-277.67	-413.14	536.70	446.26	90.44	5.934	
3,700.00	3,597.30	3,584.62	3,597.30	14.31	79.36	-141.000	-277.67	-413.14	547.05	455.62	91.42	5.984	
3,750.00	3,645.52	3,632.84	3,645.52	14.51	80.23	-141.843	-277.67	-413.14	557.52	465.10	92.41	6.033	
3,800.00	3,693.75	3,681.07	3,693.75	14.72	81.11	-142.656	-277.67	-413.14	568.10	474.69	93.41	6.082	
3,850.00	3,741.97	3,729.29	3,741.97	14.92	81.99	-143.439	-277.67	-413.14	578.80	484.39	94.41	6.131	
3,900.00	3,790.19	3,777.51	3,790.19	15.13	82.87	-144.195	-277.67	-413.14	589.59	494.19	95.40	6.180	
3,950.00	3,838.42	3,825.74	3,838.42	15.33	83.75	-144.923	-277.67	-413.14	600.48	504.08	96.40	6.229	
4,000.00	3,886.64	3,873.96	3,886.64	15.54	84.63	-145.627	-277.67	-413.14	611.47	514.06	97.40	6.278	
4,050.00	3,935.06	3,922.38	3,935.06	15.74	85.51	-147.984	-277.67	-413.14	621.95	523.02	98.93	6.287	
4,100.00	3,984.05	3,971.37	3,984.05	15.93	86.41	-151.515	-277.67	-413.14	630.60	530.07	100.53	6.273	
4,150.00	4,033.48	4,020.80	4,033.48	16.11	87.31	-157.055	-277.67	-413.14	637.32	535.30	102.02	6.247	
4,200.00	4,083.23	4,070.56	4,083.23	16.29	88.19	-168.945	-277.67	-413.14	642.05	538.71	103.34	6.213	
4,250.00	4,133.15	4,120.48	4,133.15	16.45	89.06	151.248	-277.67	-413.14	644.77	540.28	104.49	6.171	
4,300.00	4,183.11	4,170.44	4,183.11	16.61	89.93	83.532	-277.67	-413.14	645.48	540.00	105.48	6.120	
4,350.00	4,232.97	4,220.30	4,232.97	16.75	90.80	62.016	-277.67	-413.14	644.19	537.90	106.29	6.061	
4,400.00	4,282.59	4,269.92	4,282.59	16.88	91.67	54.971	-277.67	-413.14	640.92	533.97	106.95	5.993	
4,450.00	4,331.84	4,319.17	4,331.84	17.02	92.52	52.064	-277.67	-413.14	635.73	528.26	107.47	5.915	
4,500.00	4,380.59	4,367.92	4,380.59	17.14	93.37	50.940	-277.67	-413.14	628.69	520.81	107.87	5.828	
4,550.00	4,428.69	4,416.02	4,428.69	17.27	94.21	50.826	-277.67	-413.14	619.89	511.68	108.20	5.729	
4,600.00	4,476.02	4,463.35	4,476.02	17.39	95.04	51.403	-277.67	-413.14	609.44	500.94	108.49	5.617	
4,650.00	4,522.45	4,509.78	4,522.45	17.51	95.85	52.522	-277.67	-413.14	597.48	488.68	108.80	5.491	
4,700.00	4,567.85	4,555.19	4,567.85	17.63	96.67	54.105	-277.67	-413.14	584.20	474.97	109.23	5.348	
4,750.00	4,612.10	4,599.44	4,612.10	17.74	97.53	56.107	-277.67	-413.14	569.78	459.93	109.85	5.187	
4,800.00	4,655.07	4,642.41	4,655.07	17.86	98.37	58.496	-277.67	-413.14	554.49	443.82	110.67	5.010	
4,850.00	4,696.65	4,683.99	4,696.65	17.98	99.17	61.243	-277.67	-413.14	538.60	426.86	111.73	4.820	
4,900.00	4,736.73	4,724.06	4,736.73	18.10	99.95	64.308	-277.67	-413.14	522.45	409.40	113.04	4.622	
4,950.00	4,775.18	4,762.52	4,775.18	18.22	100.70	67.641	-277.67	-413.14	506.43	391.85	114.58	4.420	
5,000.00	4,811.92	4,799.26	4,811.92	18.34	101.44	71.174	-277.67	-413.14	491.00	374.70	116.30	4.222	
5,050.00	4,846.83	4,815.00	4,827.66	18.47	101.77	73.141	-277.67	-413.14	477.05	359.90	117.15	4.072	
5,100.00	4,879.83	4,815.00	4,827.66	18.61	101.77	73.600	-277.67	-413.14	466.91	349.71	117.20	3.984	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 327-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	4,910.81	4,815.00	4,827.66	18.75	101.77	73.820	-277.67	-413.14	461.13	343.95	117.18	3.935	
5,188.47	4,933.23	4,815.00	4,827.66	18.86	101.77	73.823	-277.67	-413.14	459.77	342.66	117.12	3.926 SF	
5,200.00	4,939.70	4,815.00	4,827.66	18.90	101.77	73.796	-277.67	-413.14	459.89	342.81	117.09	3.928	
5,250.00	4,966.42	4,815.00	4,827.66	19.05	101.77	73.524	-277.67	-413.14	463.24	346.35	116.89	3.963	
5,300.00	4,991.50	4,815.00	4,827.66	19.21	101.77	73.408	-277.67	-413.14	471.28	354.35	116.94	4.030	
5,350.00	5,016.50	4,815.00	4,827.66	19.39	101.77	73.408	-277.67	-413.14	484.35	367.24	117.11	4.136	
5,400.00	5,041.50	4,815.00	4,827.66	19.57	101.77	73.408	-277.67	-413.14	502.08	384.80	117.28	4.281	
5,450.00	5,066.50	4,815.00	4,827.66	19.76	101.77	73.408	-277.67	-413.14	524.00	406.53	117.47	4.461	
5,500.00	5,090.48	4,815.00	4,827.66	19.96	101.77	71.324	-277.67	-413.14	549.31	433.02	116.30	4.723	
5,550.00	5,110.69	4,815.00	4,827.66	20.17	101.77	68.242	-277.67	-413.14	576.76	462.66	114.09	5.055	
5,600.00	5,126.84	4,815.00	4,827.66	20.38	101.77	64.965	-277.67	-413.14	605.82	494.55	111.27	5.445	
5,650.00	5,138.80	4,815.00	4,827.66	20.59	101.77	61.572	-277.67	-413.14	636.07	528.19	107.87	5.896	
5,700.00	5,146.49	4,815.00	4,827.66	20.79	101.77	58.145	-277.67	-413.14	667.13	563.06	104.06	6.411	
5,750.00	5,149.84	4,815.00	4,827.66	21.00	101.77	54.758	-277.67	-413.14	698.67	598.60	100.07	6.982	
5,800.00	5,150.00	4,815.00	4,827.66	21.20	101.77	53.860	-277.67	-413.14	730.94	631.81	99.13	7.373	
5,850.00	5,150.00	4,815.00	4,827.66	21.42	101.77	53.860	-277.67	-413.14	765.05	665.73	99.33	7.702	
5,900.00	5,150.00	4,815.00	4,827.66	21.64	101.77	53.860	-277.67	-413.14	800.84	701.31	99.52	8.047	
5,950.00	5,150.00	4,815.00	4,827.66	21.88	101.77	53.860	-277.67	-413.14	838.08	738.34	99.74	8.403	
6,000.00	5,150.00	4,815.00	4,827.66	22.13	101.77	53.860	-277.67	-413.14	876.59	776.63	99.95	8.770	
6,050.00	5,150.00	4,815.00	4,827.66	22.40	101.77	53.860	-277.67	-413.14	916.21	816.02	100.19	9.145	
6,100.00	5,150.00	4,815.00	4,827.66	22.66	101.77	53.860	-277.67	-413.14	956.80	856.38	100.42	9.528	
6,150.00	5,150.00	4,815.00	4,827.66	22.95	101.77	53.860	-277.67	-413.14	998.25	897.58	100.67	9.916	
6,200.00	5,150.00	4,815.00	4,827.66	23.24	101.77	53.860	-277.67	-413.14	1,040.45	939.52	100.93	10.309	
6,250.00	5,150.00	4,815.00	4,827.66	23.55	101.77	53.860	-277.67	-413.14	1,083.31	982.12	101.20	10.705	
6,300.00	5,150.00	4,815.00	4,827.66	23.86	101.77	53.860	-277.67	-413.14	1,126.76	1,025.30	101.46	11.105	
6,350.00	5,150.00	4,815.00	4,827.66	24.19	101.77	53.860	-277.67	-413.14	1,170.74	1,068.99	101.75	11.506	
6,400.00	5,150.00	4,815.00	4,827.66	24.51	101.77	53.860	-277.67	-413.14	1,215.18	1,113.15	102.03	11.910	
6,450.00	5,150.00	4,815.00	4,827.66	24.86	101.77	53.860	-277.67	-413.14	1,260.04	1,157.71	102.33	12.313	
6,500.00	5,150.00	4,815.00	4,827.66	25.20	101.77	53.860	-277.67	-413.14	1,305.27	1,202.64	102.63	12.718	
6,550.00	5,150.00	4,815.00	4,827.66	25.56	101.77	53.860	-277.67	-413.14	1,350.84	1,247.90	102.94	13.123	
6,600.00	5,150.00	4,815.00	4,827.66	25.92	101.77	53.860	-277.67	-413.14	1,396.71	1,293.46	103.25	13.527	
6,650.00	5,150.00	4,815.00	4,827.66	26.29	101.77	53.860	-277.67	-413.14	1,442.85	1,339.28	103.57	13.931	
6,700.00	5,150.00	4,815.00	4,827.66	26.67	101.77	53.860	-277.67	-413.14	1,489.25	1,385.35	103.90	14.334	
6,750.00	5,150.00	4,815.00	4,827.66	27.05	101.77	53.860	-277.67	-413.14	1,535.87	1,431.64	104.23	14.736	
6,800.00	5,150.00	4,815.00	4,827.66	27.44	101.77	53.860	-277.67	-413.14	1,582.69	1,478.13	104.56	15.136	
6,850.00	5,150.00	4,815.00	4,827.66	27.84	101.77	53.860	-277.67	-413.14	1,629.71	1,524.81	104.90	15.535	
6,900.00	5,150.00	4,815.00	4,827.66	28.23	101.77	53.860	-277.67	-413.14	1,676.90	1,571.65	105.25	15.933	
6,950.00	5,150.00	4,815.00	4,827.66	28.64	101.77	53.860	-277.67	-413.14	1,724.24	1,618.65	105.60	16.328	
7,000.00	5,150.00	4,815.00	4,827.66	29.05	101.77	53.860	-277.67	-413.14	1,771.74	1,665.79	105.95	16.722	
7,050.00	5,150.00	4,815.00	4,827.66	29.47	101.77	53.860	-277.67	-413.14	1,819.36	1,713.05	106.31	17.114	
7,100.00	5,150.00	4,815.00	4,827.66	29.89	101.77	53.860	-277.67	-413.14	1,867.11	1,760.44	106.67	17.504	
7,150.00	5,150.00	4,815.00	4,827.66	30.32	101.77	53.860	-277.67	-413.14	1,914.98	1,807.94	107.04	17.891	
7,200.00	5,150.00	4,815.00	4,827.66	30.75	101.77	53.860	-277.67	-413.14	1,962.95	1,855.55	107.40	18.276	
7,250.00	5,150.00	4,815.00	4,827.66	31.19	101.77	53.860	-277.67	-413.14	2,011.02	1,903.25	107.78	18.659	
7,300.00	5,150.00	4,815.00	4,827.66	31.62	101.77	53.860	-277.67	-413.14	2,059.19	1,951.03	108.15	19.040	
7,350.00	5,150.00	4,815.00	4,827.66	32.07	101.77	53.860	-277.67	-413.14	2,107.43	1,998.90	108.53	19.418	
7,400.00	5,150.00	4,815.00	4,827.66	32.51	101.77	53.860	-277.67	-413.14	2,155.76	2,046.85	108.91	19.794	
7,450.00	5,150.00	4,815.00	4,827.66	32.96	101.77	53.860	-277.67	-413.14	2,204.16	2,094.87	109.30	20.167	
7,500.00	5,150.00	4,815.00	4,827.66	33.42	101.77	53.860	-277.67	-413.14	2,252.64	2,142.95	109.68	20.538	
7,550.00	5,150.00	4,815.00	4,827.66	33.88	101.77	53.860	-277.67	-413.14	2,301.18	2,191.10	110.07	20.906	
7,600.00	5,150.00	4,815.00	4,827.66	34.33	101.77	53.860	-277.67	-413.14	2,349.77	2,239.31	110.47	21.272	
7,650.00	5,150.00	4,815.00	4,827.66	34.80	101.77	53.860	-277.67	-413.14	2,398.43	2,287.57	110.86	21.635	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 OCHO_TESORO OFFSETS - BURCH KEELY UNIT #361 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 327-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
7,700.00	5,150.00	4,815.00	4,827.66	35.26	101.77	53.860	-277.67	-413.14	2,447.14	2,335.89	111.26	21.995	
7,750.00	5,150.00	4,815.00	4,827.66	35.73	101.77	53.860	-277.67	-413.14	2,495.90	2,384.25	111.66	22.353	
7,800.00	5,150.00	4,815.00	4,827.66	36.20	101.77	53.860	-277.67	-413.14	2,544.71	2,432.66	112.06	22.709	
7,850.00	5,150.00	4,815.00	4,827.66	36.68	101.77	53.860	-277.67	-413.14	2,593.57	2,481.11	112.46	23.062	
7,900.00	5,150.00	4,815.00	4,827.66	37.16	101.77	53.860	-277.67	-413.14	2,642.47	2,529.60	112.87	23.412	
7,950.00	5,150.00	4,815.00	4,827.66	37.64	101.77	53.860	-277.67	-413.14	2,691.41	2,578.13	113.27	23.760	
8,000.00	5,150.00	4,815.00	4,827.66	38.12	101.77	53.860	-277.67	-413.14	2,740.38	2,626.70	113.68	24.106	
8,050.00	5,150.00	4,815.00	4,827.66	38.60	101.77	53.860	-277.67	-413.14	2,789.40	2,675.30	114.09	24.448	
8,100.00	5,150.00	4,815.00	4,827.66	39.09	101.77	53.860	-277.67	-413.14	2,838.44	2,723.94	114.51	24.789	
8,150.00	5,150.00	4,815.00	4,827.66	39.57	101.77	53.860	-277.67	-413.14	2,887.52	2,772.60	114.92	25.126	
8,200.00	5,150.00	4,815.00	4,827.66	40.06	101.77	53.860	-277.67	-413.14	2,936.64	2,821.30	115.33	25.462	
8,250.00	5,150.00	4,815.00	4,827.66	40.56	101.77	53.860	-277.67	-413.14	2,985.78	2,870.02	115.75	25.795	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 167-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	
0.00	0.00	0.00	7.00	0.00	0.00	-141.685	-1,299.32	-1,026.69	1,656.01				
50.00	50.00	43.00	50.00	0.05	0.34	-141.685	-1,299.32	-1,026.69	1,656.00	1,655.60	0.40	4,158.701	
100.00	100.00	93.00	100.00	0.14	0.75	-141.685	-1,299.32	-1,026.69	1,656.00	1,655.11	0.89	1,864.193	
150.00	150.00	143.00	150.00	0.32	1.15	-141.685	-1,299.32	-1,026.69	1,656.00	1,654.53	1.47	1,128.022	
200.00	200.00	193.00	200.00	0.50	1.80	-141.685	-1,299.32	-1,026.69	1,656.00	1,653.69	2.30	719.027	
250.00	250.00	243.00	250.00	0.68	2.69	-141.685	-1,299.32	-1,026.69	1,656.00	1,652.62	3.37	490.834	
300.00	300.00	293.00	300.00	0.86	3.60	-141.685	-1,299.32	-1,026.69	1,656.00	1,651.54	4.46	371.362	
350.00	350.00	343.00	350.00	1.04	4.51	-60.363	-1,299.32	-1,026.69	1,655.78	1,650.23	5.55	298.303	
400.00	399.98	392.98	399.98	1.21	5.42	-60.414	-1,299.32	-1,026.69	1,655.13	1,648.49	6.64	249.182	
450.00	449.93	442.93	449.93	1.39	6.34	-60.498	-1,299.32	-1,026.69	1,654.06	1,646.32	7.73	213.902	
500.00	499.84	492.84	499.84	1.57	7.25	-60.617	-1,299.32	-1,026.69	1,652.56	1,643.73	8.82	187.337	
550.00	549.68	542.68	549.68	1.75	8.16	-60.769	-1,299.32	-1,026.69	1,650.63	1,640.72	9.91	166.517	
600.00	599.45	592.45	599.45	1.93	9.26	-60.954	-1,299.32	-1,026.69	1,648.29	1,637.10	11.19	147.329	
650.00	649.13	642.13	649.13	2.11	10.36	-61.174	-1,299.32	-1,026.69	1,645.54	1,633.08	12.46	132.055	
700.00	698.70	691.70	698.70	2.29	11.45	-61.428	-1,299.32	-1,026.69	1,642.38	1,628.65	13.73	119.622	
750.00	748.15	741.15	748.15	2.47	12.54	-61.715	-1,299.32	-1,026.69	1,638.83	1,623.84	15.00	109.287	
800.00	797.47	790.47	797.47	2.65	13.63	-62.037	-1,299.32	-1,026.69	1,634.90	1,618.64	16.26	100.569	
850.00	846.63	839.63	846.63	2.84	14.72	-62.393	-1,299.32	-1,026.69	1,630.60	1,613.08	17.51	93.102	
900.00	895.62	888.62	895.62	3.02	15.80	-62.782	-1,299.32	-1,026.69	1,625.93	1,607.17	18.77	86.643	
950.00	944.44	947.00	953.99	3.21	17.09	-63.274	-1,299.32	-1,026.69	1,620.95	1,600.73	20.22	80.146	
1,000.00	993.06	1,010.00	1,016.98	3.40	18.77	-63.849	-1,299.32	-1,026.69	1,615.77	1,593.69	22.08	73.193	
1,050.00	1,041.46	1,034.48	1,041.46	3.59	19.42	-64.155	-1,299.32	-1,026.69	1,609.94	1,587.04	22.90	70.317	
1,100.00	1,089.70	1,082.73	1,089.70	3.78	20.68	-64.600	-1,299.32	-1,026.69	1,604.08	1,579.75	24.33	65.930	
1,150.00	1,137.92	1,130.95	1,137.92	3.98	21.84	-65.015	-1,299.32	-1,026.69	1,598.29	1,572.61	25.67	62.257	
1,200.00	1,186.14	1,179.19	1,186.14	4.18	22.98	-65.433	-1,299.32	-1,026.69	1,592.58	1,565.58	27.00	58.985	
1,250.00	1,234.37	1,227.41	1,234.37	4.37	24.05	-65.854	-1,299.32	-1,026.69	1,586.97	1,558.71	28.26	56.147	
1,300.00	1,282.59	1,298.00	1,304.95	4.57	25.63	-66.476	-1,299.32	-1,026.69	1,581.61	1,551.58	30.03	52.667	
1,350.00	1,330.81	1,323.87	1,330.81	4.77	26.17	-66.705	-1,299.32	-1,026.69	1,576.02	1,545.25	30.77	51.227	
1,400.00	1,379.04	1,372.09	1,379.04	4.97	27.18	-67.134	-1,299.32	-1,026.69	1,570.68	1,538.71	31.97	49.132	
1,450.00	1,427.26	1,420.31	1,427.26	5.17	28.19	-67.566	-1,299.32	-1,026.69	1,565.43	1,532.26	33.17	47.190	
1,500.00	1,475.48	1,483.00	1,489.93	5.37	29.50	-68.132	-1,299.32	-1,026.69	1,560.35	1,525.67	34.68	44.991	
1,550.00	1,523.71	1,516.77	1,523.71	5.57	30.09	-68.438	-1,299.32	-1,026.69	1,555.22	1,519.76	35.46	43.854	
1,600.00	1,571.93	1,565.00	1,571.93	5.77	30.92	-68.878	-1,299.32	-1,026.69	1,550.26	1,513.77	36.50	42.476	
1,650.00	1,620.15	1,613.22	1,620.15	5.97	31.76	-69.321	-1,299.32	-1,026.69	1,545.40	1,507.87	37.53	41.176	
1,700.00	1,668.37	1,661.44	1,668.37	6.17	32.59	-69.766	-1,299.32	-1,026.69	1,540.63	1,502.07	38.57	39.947	
1,750.00	1,716.60	1,709.67	1,716.60	6.37	33.43	-70.214	-1,299.32	-1,026.69	1,535.97	1,496.36	39.60	38.784	
1,800.00	1,764.82	1,757.89	1,764.82	6.57	34.26	-70.665	-1,299.32	-1,026.69	1,531.40	1,490.76	40.64	37.682	
1,850.00	1,813.04	1,806.11	1,813.04	6.78	35.09	-71.118	-1,299.32	-1,026.69	1,526.93	1,485.26	41.68	36.637	
1,900.00	1,861.27	1,854.34	1,861.27	6.98	35.93	-71.573	-1,299.32	-1,026.69	1,522.57	1,479.85	42.72	35.645	
1,950.00	1,909.49	1,902.56	1,909.49	7.18	36.76	-72.031	-1,299.32	-1,026.69	1,518.31	1,474.55	43.75	34.701	
2,000.00	1,957.71	1,950.79	1,957.71	7.38	37.61	-72.491	-1,299.32	-1,026.69	1,514.15	1,469.34	44.81	33.791	
2,050.00	2,005.94	1,999.02	2,005.94	7.59	38.49	-72.954	-1,299.32	-1,026.69	1,510.09	1,464.20	45.89	32.907	
2,100.00	2,054.16	2,047.24	2,054.16	7.79	39.37	-73.418	-1,299.32	-1,026.69	1,506.14	1,459.17	46.97	32.065	
2,150.00	2,102.38	2,095.46	2,102.38	7.99	40.24	-73.885	-1,299.32	-1,026.69	1,502.30	1,454.25	48.05	31.263	
2,200.00	2,150.61	2,143.69	2,150.61	8.19	41.12	-74.355	-1,299.32	-1,026.69	1,498.56	1,449.43	49.14	30.498	
2,250.00	2,198.83	2,191.91	2,198.83	8.40	41.99	-74.826	-1,299.32	-1,026.69	1,494.93	1,444.71	50.22	29.768	
2,300.00	2,247.05	2,240.13	2,247.05	8.60	42.87	-75.300	-1,299.32	-1,026.69	1,491.41	1,440.11	51.30	29.071	
2,350.00	2,295.28	2,288.35	2,295.28	8.80	43.75	-75.775	-1,299.32	-1,026.69	1,488.00	1,435.61	52.39	28.404	
2,400.00	2,343.50	2,336.58	2,343.50	9.01	44.62	-76.253	-1,299.32	-1,026.69	1,484.69	1,431.22	53.47	27.767	
2,450.00	2,391.72	2,384.80	2,391.72	9.21	45.51	-76.733	-1,299.32	-1,026.69	1,481.50	1,426.94	54.56	27.152	
2,500.00	2,439.95	2,433.02	2,439.95	9.41	46.48	-77.214	-1,299.32	-1,026.69	1,478.42	1,422.67	55.75	26.519	
2,550.00	2,488.17	2,481.25	2,488.17	9.62	47.46	-77.697	-1,299.32	-1,026.69	1,475.45	1,418.51	56.94	25.914	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 167-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	
2,600.00	2,536.39	2,529.47	2,536.39	9.82	48.44	-78.183	-1,299.32	-1,026.69	1,472.59	1,414.47	58.12	25.336	
2,650.00	2,584.61	2,577.69	2,584.61	10.02	49.42	-78.669	-1,299.32	-1,026.69	1,469.85	1,410.54	59.31	24.782	
2,700.00	2,632.84	2,625.92	2,632.84	10.23	50.40	-79.158	-1,299.32	-1,026.69	1,467.22	1,406.72	60.50	24.252	
2,750.00	2,681.06	2,674.14	2,681.06	10.43	51.37	-79.648	-1,299.32	-1,026.69	1,464.70	1,403.02	61.69	23.744	
2,800.00	2,729.28	2,722.36	2,729.28	10.64	52.35	-80.140	-1,299.32	-1,026.69	1,462.30	1,399.43	62.87	23.257	
2,850.00	2,777.51	2,770.60	2,777.51	10.84	53.30	-80.633	-1,299.32	-1,026.69	1,460.02	1,395.98	64.04	22.800	
2,900.00	2,825.73	2,818.83	2,825.73	11.04	54.18	-81.127	-1,299.32	-1,026.69	1,457.85	1,392.72	65.13	22.385	
2,950.00	2,873.95	2,867.05	2,873.95	11.25	55.06	-81.623	-1,299.32	-1,026.69	1,455.79	1,389.58	66.22	21.985	
3,000.00	2,922.18	2,915.27	2,922.18	11.45	55.94	-82.120	-1,299.32	-1,026.69	1,453.86	1,386.55	67.31	21.600	
3,050.00	2,970.40	2,963.49	2,970.40	11.66	56.83	-82.619	-1,299.32	-1,026.69	1,452.04	1,383.64	68.40	21.229	
3,100.00	3,018.62	3,011.72	3,018.62	11.86	57.71	-83.118	-1,299.32	-1,026.69	1,450.34	1,380.85	69.49	20.871	
3,150.00	3,066.85	3,059.94	3,066.85	12.06	58.59	-83.619	-1,299.32	-1,026.69	1,448.76	1,378.18	70.58	20.526	
3,200.00	3,115.07	3,108.16	3,115.07	12.27	59.47	-84.120	-1,299.32	-1,026.69	1,447.30	1,375.62	71.67	20.193	
3,250.00	3,163.29	3,156.39	3,163.29	12.47	60.35	-84.623	-1,299.32	-1,026.69	1,445.96	1,373.19	72.76	19.872	
3,300.00	3,211.52	3,204.61	3,211.52	12.68	61.23	-85.126	-1,299.32	-1,026.69	1,444.73	1,370.88	73.86	19.562	
3,350.00	3,259.74	3,252.85	3,259.74	12.88	62.10	-85.630	-1,299.32	-1,026.69	1,443.63	1,368.70	74.93	19.266	
3,400.00	3,307.96	3,301.07	3,307.96	13.08	62.94	-86.134	-1,299.32	-1,026.69	1,442.64	1,366.66	75.99	18.986	
3,450.00	3,356.19	3,349.30	3,356.19	13.29	63.79	-86.640	-1,299.32	-1,026.69	1,441.78	1,364.74	77.04	18.715	
3,500.00	3,404.41	3,397.52	3,404.41	13.49	64.63	-87.145	-1,299.32	-1,026.69	1,441.04	1,362.95	78.09	18.453	
3,550.00	3,452.63	3,445.74	3,452.63	13.70	65.48	-87.652	-1,299.32	-1,026.69	1,440.42	1,361.27	79.15	18.199	
3,600.00	3,500.85	3,493.96	3,500.85	13.90	66.32	-88.158	-1,299.32	-1,026.69	1,439.92	1,359.72	80.20	17.954	
3,650.00	3,549.08	3,542.19	3,549.08	14.11	67.16	-88.665	-1,299.32	-1,026.69	1,439.54	1,358.29	81.25	17.717	
3,700.00	3,597.30	3,590.41	3,597.30	14.31	68.01	-89.172	-1,299.32	-1,026.69	1,439.28	1,356.98	82.30	17.488	
3,750.00	3,645.52	3,640.00	3,655.89	14.51	69.03	-89.788	-1,299.32	-1,026.69	1,439.18	1,355.64	83.54	17.228	
3,778.54	3,673.05	3,666.16	3,673.05	14.63	69.35	-89.969	-1,299.32	-1,026.69	1,439.12	1,355.15	83.97	17.139 CC	
3,800.00	3,693.75	3,686.86	3,693.75	14.72	69.73	-90.187	-1,299.32	-1,026.69	1,439.13	1,354.69	84.44	17.044	
3,850.00	3,741.97	3,735.08	3,741.97	14.92	70.62	-90.694	-1,299.32	-1,026.69	1,439.23	1,353.70	85.53	16.827	
3,900.00	3,790.19	3,783.30	3,790.19	15.13	71.50	-91.201	-1,299.32	-1,026.69	1,439.46	1,352.84	86.62	16.618	
3,950.00	3,838.42	3,831.53	3,838.42	15.33	72.39	-91.708	-1,299.32	-1,026.69	1,439.81	1,352.09	87.71	16.415	
4,000.00	3,886.64	3,879.75	3,886.64	15.54	73.27	-92.215	-1,299.32	-1,026.69	1,440.27	1,351.47	88.80	16.219	
4,050.00	3,935.06	3,928.17	3,935.06	15.74	74.16	-94.121	-1,299.32	-1,026.69	1,440.94	1,351.05	89.89	16.030	
4,100.00	3,984.05	3,977.16	3,984.05	15.93	75.06	-97.293	-1,299.32	-1,026.69	1,441.92	1,350.94	90.97	15.850 ES	
4,150.00	4,033.48	4,026.60	4,033.48	16.11	75.97	-102.637	-1,299.32	-1,026.69	1,443.17	1,351.11	92.06	15.677	
4,200.00	4,083.23	4,076.34	4,083.23	16.29	76.89	-114.481	-1,299.32	-1,026.69	1,444.65	1,351.51	93.14	15.511	
4,250.00	4,133.15	4,127.00	4,133.88	16.45	77.82	-154.378	-1,299.32	-1,026.69	1,446.32	1,352.10	94.22	15.350	
4,300.00	4,183.11	4,176.22	4,183.11	16.61	78.70	137.683	-1,299.32	-1,026.69	1,448.17	1,352.93	95.24	15.205	
4,350.00	4,232.97	4,226.08	4,232.97	16.75	79.59	115.810	-1,299.32	-1,026.69	1,450.20	1,353.94	96.27	15.065	
4,400.00	4,282.59	4,275.71	4,282.59	16.88	80.48	108.272	-1,299.32	-1,026.69	1,452.42	1,355.15	97.27	14.931	
4,450.00	4,331.84	4,324.96	4,331.84	17.02	81.36	104.723	-1,299.32	-1,026.69	1,454.85	1,356.59	98.27	14.805	
4,500.00	4,380.59	4,373.70	4,380.59	17.14	82.23	102.793	-1,299.32	-1,026.69	1,457.54	1,358.29	99.24	14.687	
4,550.00	4,428.69	4,421.81	4,428.69	17.27	83.09	101.690	-1,299.32	-1,026.69	1,460.52	1,360.32	100.20	14.577	
4,600.00	4,476.02	4,469.14	4,476.02	17.39	83.94	101.074	-1,299.32	-1,026.69	1,463.85	1,362.73	101.12	14.476	
4,650.00	4,522.45	4,515.57	4,522.45	17.51	84.77	100.771	-1,299.32	-1,026.69	1,467.62	1,365.60	102.02	14.386	
4,700.00	4,567.85	4,560.97	4,567.85	17.63	85.58	100.678	-1,299.32	-1,026.69	1,471.89	1,369.00	102.88	14.306	
4,750.00	4,612.10	4,605.22	4,612.10	17.74	86.36	100.730	-1,299.32	-1,026.69	1,476.74	1,373.04	103.70	14.240	
4,800.00	4,655.07	4,648.20	4,655.07	17.86	87.11	100.878	-1,299.32	-1,026.69	1,482.28	1,377.81	104.47	14.189 SF	
4,850.00	4,696.65	4,690.00	4,662.88	17.98	87.25	100.341	-1,299.32	-1,026.69	1,488.97	1,384.28	104.69	14.222	
4,900.00	4,736.73	4,696.00	4,662.88	18.10	87.25	99.575	-1,299.32	-1,026.69	1,497.59	1,392.76	104.83	14.286	
4,950.00	4,775.18	4,656.00	4,662.88	18.22	87.25	98.728	-1,299.32	-1,026.69	1,508.09	1,403.10	104.98	14.365	
5,000.00	4,811.92	4,656.00	4,662.88	18.34	87.25	97.794	-1,299.32	-1,026.69	1,520.40	1,415.23	105.17	14.457	
5,050.00	4,846.83	4,656.00	4,662.88	18.47	87.25	96.769	-1,299.32	-1,026.69	1,534.46	1,429.08	105.37	14.562	
5,100.00	4,879.83	4,656.00	4,662.88	18.61	87.25	95.650	-1,299.32	-1,026.69	1,550.17	1,444.57	105.60	14.680	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 167-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	4,910.81	4,656.00	4,662.88	18.75	87.25	94.436	-1,299.32	-1,026.69	1,567.45	1,461.61	105.83	14.810	
5,200.00	4,939.70	4,656.00	4,662.88	18.90	87.25	93.129	-1,299.32	-1,026.69	1,586.19	1,480.12	106.07	14.955	
5,250.00	4,966.42	4,656.00	4,662.88	19.05	87.25	91.730	-1,299.32	-1,026.69	1,606.29	1,500.01	106.28	15.114	
5,300.00	4,991.50	4,656.00	4,662.88	19.21	87.25	91.337	-1,299.32	-1,026.69	1,627.67	1,521.22	106.45	15.290	
5,350.00	5,016.50	4,656.00	4,662.88	19.39	87.25	91.337	-1,299.32	-1,026.69	1,650.28	1,543.65	106.63	15.477	
5,400.00	5,041.50	4,656.00	4,662.88	19.57	87.25	91.337	-1,299.32	-1,026.69	1,674.09	1,567.28	106.81	15.674	
5,450.00	5,066.50	4,656.00	4,662.88	19.76	87.25	91.337	-1,299.32	-1,026.69	1,699.03	1,592.03	107.00	15.878	
5,500.00	5,090.48	4,656.00	4,662.88	19.96	87.25	89.091	-1,299.32	-1,026.69	1,725.07	1,617.89	107.19	16.094	
5,550.00	5,110.69	4,656.00	4,662.88	20.17	87.25	85.883	-1,299.32	-1,026.69	1,752.09	1,644.97	107.12	16.357	
5,600.00	5,126.84	4,656.00	4,662.88	20.38	87.25	82.564	-1,299.32	-1,026.69	1,779.85	1,673.16	106.69	16.683	
5,650.00	5,138.80	4,656.00	4,662.88	20.59	87.25	79.183	-1,299.32	-1,026.69	1,808.10	1,702.25	105.85	17.082	
5,700.00	5,146.49	4,656.00	4,662.88	20.79	87.25	75.795	-1,299.32	-1,026.69	1,836.61	1,732.01	104.60	17.558	
5,750.00	5,149.84	4,656.00	4,662.88	21.00	87.25	72.450	-1,299.32	-1,026.69	1,865.17	1,762.15	103.02	18.105	
5,800.00	5,150.00	4,656.00	4,662.88	21.20	87.25	71.563	-1,299.32	-1,026.69	1,893.86	1,791.17	102.69	18.443	
5,850.00	5,150.00	4,656.00	4,662.88	21.42	87.25	71.563	-1,299.32	-1,026.69	1,923.38	1,820.48	102.90	18.692	
5,900.00	5,150.00	4,656.00	4,662.88	21.64	87.25	71.563	-1,299.32	-1,026.69	1,953.74	1,850.63	103.11	18.948	
5,950.00	5,150.00	4,656.00	4,662.88	21.88	87.25	71.563	-1,299.32	-1,026.69	1,984.89	1,881.54	103.35	19.206	
6,000.00	5,150.00	4,656.00	4,662.88	22.13	87.25	71.563	-1,299.32	-1,026.69	2,016.80	1,913.22	103.58	19.470	
6,050.00	5,150.00	4,656.00	4,662.88	22.40	87.25	71.563	-1,299.32	-1,026.69	2,049.44	1,945.60	103.84	19.736	
6,100.00	5,150.00	4,656.00	4,662.88	22.66	87.25	71.563	-1,299.32	-1,026.69	2,082.76	1,978.66	104.10	20.007	
6,150.00	5,150.00	4,656.00	4,662.88	22.95	87.25	71.563	-1,299.32	-1,026.69	2,116.74	2,012.36	104.38	20.280	
6,200.00	5,150.00	4,656.00	4,662.88	23.24	87.25	71.563	-1,299.32	-1,026.69	2,151.35	2,046.69	104.66	20.556	
6,250.00	5,150.00	4,656.00	4,662.88	23.55	87.25	71.563	-1,299.32	-1,026.69	2,186.55	2,081.59	104.95	20.833	
6,300.00	5,150.00	4,656.00	4,662.88	23.86	87.25	71.563	-1,299.32	-1,026.69	2,222.32	2,117.07	105.25	21.114	
6,350.00	5,150.00	4,656.00	4,662.88	24.19	87.25	71.563	-1,299.32	-1,026.69	2,258.63	2,153.06	105.57	21.395	
6,400.00	5,150.00	4,656.00	4,662.88	24.51	87.25	71.563	-1,299.32	-1,026.69	2,295.45	2,189.57	105.88	21.680	
6,450.00	5,150.00	4,656.00	4,662.88	24.86	87.25	71.563	-1,299.32	-1,026.69	2,332.76	2,226.55	106.21	21.963	
6,500.00	5,150.00	4,656.00	4,662.88	25.20	87.25	71.563	-1,299.32	-1,026.69	2,370.55	2,264.00	106.54	22.250	
6,550.00	5,150.00	4,656.00	4,662.88	25.56	87.25	71.563	-1,299.32	-1,026.69	2,408.77	2,301.89	106.89	22.536	
6,600.00	5,150.00	4,656.00	4,662.88	25.92	87.25	71.563	-1,299.32	-1,026.69	2,447.43	2,340.19	107.23	22.823	
6,650.00	5,150.00	4,656.00	4,662.88	26.29	87.25	71.563	-1,299.32	-1,026.69	2,486.48	2,378.89	107.59	23.110	
6,700.00	5,150.00	4,656.00	4,662.88	26.67	87.25	71.563	-1,299.32	-1,026.69	2,525.92	2,417.97	107.95	23.399	
6,750.00	5,150.00	4,656.00	4,662.88	27.05	87.25	71.563	-1,299.32	-1,026.69	2,565.73	2,457.41	108.32	23.686	
6,800.00	5,150.00	4,656.00	4,662.88	27.44	87.25	71.563	-1,299.32	-1,026.69	2,605.89	2,497.20	108.69	23.975	
6,850.00	5,150.00	4,656.00	4,662.88	27.84	87.25	71.563	-1,299.32	-1,026.69	2,646.39	2,537.31	109.08	24.262	
6,900.00	5,150.00	4,656.00	4,662.88	28.23	87.25	71.563	-1,299.32	-1,026.69	2,687.21	2,577.75	109.46	24.550	
6,950.00	5,150.00	4,656.00	4,662.88	28.64	87.25	71.563	-1,299.32	-1,026.69	2,728.33	2,618.48	109.85	24.836	
7,000.00	5,150.00	4,656.00	4,662.88	29.05	87.25	71.563	-1,299.32	-1,026.69	2,769.74	2,659.50	110.25	25.123	
7,050.00	5,150.00	4,656.00	4,662.88	29.47	87.25	71.563	-1,299.32	-1,026.69	2,811.44	2,700.79	110.65	25.409	
7,100.00	5,150.00	4,656.00	4,662.88	29.89	87.25	71.563	-1,299.32	-1,026.69	2,853.40	2,742.35	111.05	25.694	
7,150.00	5,150.00	4,656.00	4,662.88	30.32	87.25	71.563	-1,299.32	-1,026.69	2,895.62	2,784.15	111.46	25.978	
7,200.00	5,150.00	4,656.00	4,662.88	30.75	87.25	71.563	-1,299.32	-1,026.69	2,938.08	2,826.20	111.87	26.262	
7,250.00	5,150.00	4,656.00	4,662.88	31.19	87.25	71.563	-1,299.32	-1,026.69	2,980.77	2,868.48	112.29	26.544	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 100-MWD+IGRF												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	
0.00	0.00	0.00	30.00	0.00	0.00	-171.537	-2,370.76	-352.75	2,397.05				
50.00	50.00	20.70	50.70	0.05	0.04	-171.537	-2,370.76	-352.74	2,396.86	2,396.77	0.09	N/A	
100.00	100.00	72.44	102.44	0.14	0.13	-171.538	-2,370.73	-352.69	2,396.82	2,396.55	0.27	8,768.914	
150.00	150.00	122.39	152.39	0.32	0.26	-171.540	-2,370.69	-352.59	2,396.76	2,396.18	0.58	4,135.961	
200.00	200.00	170.29	200.29	0.50	0.42	-171.540	-2,370.66	-352.59	2,396.74	2,395.81	0.92	2,591.916	
206.93	206.93	176.93	206.93	0.53	0.45	-171.540	-2,370.66	-352.60	2,396.74	2,395.76	0.97	2,464.324	
250.00	250.00	217.67	247.66	0.68	0.59	-171.537	-2,370.66	-352.71	2,396.75	2,395.49	1.27	1,889.677	
300.00	300.00	264.18	294.17	0.86	0.75	-171.534	-2,370.71	-352.88	2,396.84	2,395.23	1.61	1,489.239	
350.00	350.00	313.02	343.02	1.04	0.92	-90.198	-2,370.83	-353.08	2,396.99	2,395.04	1.96	1,225.347	
400.00	399.98	369.67	399.66	1.21	1.12	-90.227	-2,370.89	-353.32	2,397.07	2,394.74	2.33	1,027.758	
450.00	449.93	423.75	453.75	1.39	1.31	-90.278	-2,370.80	-353.54	2,397.03	2,394.33	2.70	888.042	
500.00	499.84	474.85	504.85	1.57	1.49	-90.350	-2,370.68	-353.69	2,396.96	2,393.90	3.06	784.356	
550.00	549.68	528.15	558.15	1.75	1.68	-90.449	-2,370.53	-353.80	2,396.85	2,393.43	3.42	700.268	
600.00	599.45	583.56	613.55	1.93	1.88	-90.578	-2,370.25	-353.87	2,396.66	2,392.86	3.80	631.234	
650.00	649.13	634.87	664.87	2.11	2.06	-90.719	-2,369.91	-353.92	2,396.40	2,392.24	4.16	576.223	
700.00	698.70	684.40	714.40	2.29	2.23	-90.876	-2,369.57	-353.98	2,396.16	2,391.65	4.51	530.762	
750.00	748.15	732.88	762.88	2.47	2.40	-91.050	-2,369.26	-354.00	2,395.96	2,391.10	4.87	492.211	
800.00	797.47	780.74	810.73	2.65	2.57	-91.244	-2,369.00	-353.82	2,395.83	2,390.62	5.22	459.137	
850.00	846.63	843.45	873.44	2.84	2.79	-91.535	-2,368.61	-353.22	2,395.70	2,390.07	5.62	426.091	
900.00	895.62	911.52	941.49	3.02	3.03	-91.895	-2,367.69	-351.96	2,395.19	2,389.14	6.05	396.193	
950.00	944.44	963.76	993.71	3.21	3.21	-92.202	-2,366.78	-350.80	2,394.57	2,388.15	6.42	373.078	
1,000.00	993.06	1,012.90	1,042.83	3.40	3.38	-92.511	-2,365.87	-349.70	2,393.98	2,387.20	6.78	353.044	
1,050.00	1,041.46	1,059.11	1,089.02	3.59	3.55	-92.818	-2,365.04	-348.66	2,393.54	2,386.40	7.14	335.386	
1,100.00	1,089.70	1,105.14	1,135.03	3.78	3.71	-93.133	-2,364.25	-347.61	2,393.24	2,385.75	7.49	319.414	
1,150.00	1,137.92	1,151.14	1,181.02	3.98	3.87	-93.446	-2,363.50	-346.56	2,393.07	2,385.22	7.85	304.794	
1,193.32	1,179.70	1,191.05	1,220.90	4.15	4.01	-93.717	-2,362.88	-345.67	2,393.02	2,384.85	8.16	293.166 CC	
1,200.00	1,186.14	1,194.00	1,223.86	4.18	4.02	-93.737	-2,362.83	-345.61	2,393.02	2,384.82	8.20	291.855	
1,250.00	1,234.37	1,234.74	1,264.59	4.37	4.17	-94.012	-2,362.29	-344.78	2,393.18	2,384.64	8.54	280.190	
1,300.00	1,282.59	1,281.74	1,311.57	4.57	4.34	-94.327	-2,361.81	-343.93	2,393.57	2,384.67	8.91	268.762	
1,350.00	1,330.81	1,338.47	1,368.29	4.77	4.54	-94.703	-2,361.11	-343.08	2,393.95	2,384.65	9.31	257.233	
1,400.00	1,379.04	1,395.95	1,425.76	4.97	4.74	-95.077	-2,360.11	-342.48	2,394.18	2,384.47	9.71	246.556	
1,450.00	1,427.26	1,447.01	1,476.81	5.17	4.93	-95.407	-2,359.11	-342.09	2,394.40	2,384.31	10.09	237.242	
1,500.00	1,475.48	1,507.24	1,537.03	5.37	5.14	-95.794	-2,357.74	-341.65	2,394.53	2,384.02	10.51	227.885	
1,550.00	1,523.71	1,564.94	1,594.70	5.57	5.35	-96.151	-2,356.13	-341.82	2,394.52	2,383.61	10.91	219.413	
1,600.00	1,571.93	1,619.27	1,649.00	5.77	5.54	-96.473	-2,354.41	-342.58	2,394.43	2,383.12	11.31	211.779	
1,646.40	1,616.68	1,661.00	1,690.70	5.96	5.69	-96.719	-2,353.00	-343.23	2,394.30	2,382.66	11.64	205.686	
1,650.00	1,620.15	1,661.00	1,690.70	5.97	5.69	-96.719	-2,353.00	-343.23	2,394.30	2,382.65	11.66	205.430	
1,700.00	1,668.37	1,704.16	1,733.83	6.17	5.84	-96.972	-2,351.65	-343.98	2,394.36	2,382.35	12.01	199.385 ES	
1,750.00	1,716.60	1,744.97	1,774.62	6.37	5.98	-97.209	-2,350.61	-344.78	2,394.75	2,382.40	12.35	193.837	
1,800.00	1,764.82	1,794.20	1,823.82	6.57	6.16	-97.492	-2,349.38	-345.84	2,395.24	2,382.51	12.73	188.162	
1,850.00	1,813.04	1,845.39	1,874.99	6.78	6.34	-97.785	-2,348.07	-347.01	2,395.76	2,382.65	13.11	182.707	
1,900.00	1,861.27	1,898.43	1,927.99	6.98	6.53	-98.095	-2,346.63	-347.97	2,396.26	2,382.76	13.50	177.469	
1,950.00	1,909.49	1,949.58	1,979.12	7.18	6.71	-98.398	-2,345.17	-348.65	2,396.74	2,382.86	13.89	172.596	
2,000.00	1,957.71	2,000.00	2,029.51	7.38	6.89	-98.697	-2,343.68	-349.34	2,397.25	2,382.98	14.27	168.016	
2,050.00	2,005.94	2,042.90	2,072.39	7.59	7.04	-98.950	-2,342.43	-350.01	2,397.84	2,383.22	14.62	163.980	
2,100.00	2,054.16	2,084.27	2,113.73	7.79	7.19	-99.188	-2,341.34	-350.87	2,398.64	2,383.67	14.97	160.209	
2,150.00	2,102.38	2,135.62	2,165.05	7.99	7.37	-99.478	-2,340.10	-352.16	2,399.59	2,384.23	15.36	156.257	
2,200.00	2,150.61	2,196.82	2,226.21	8.19	7.59	-99.826	-2,338.36	-353.60	2,400.39	2,384.62	15.78	152.152	
2,250.00	2,198.83	2,240.16	2,269.52	8.40	7.75	-100.075	-2,337.05	-354.53	2,401.17	2,385.04	16.13	148.834	
2,300.00	2,247.05	2,282.48	2,311.82	8.60	7.90	-100.319	-2,335.88	-355.35	2,402.13	2,385.65	16.49	145.703	
2,350.00	2,295.28	2,333.45	2,362.77	8.80	8.08	-100.616	-2,334.53	-356.24	2,403.22	2,386.35	16.87	142.448	
2,400.00	2,343.50	2,388.01	2,417.29	9.01	8.28	-100.936	-2,332.95	-357.05	2,404.26	2,386.99	17.27	139.232	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 100-MWD+IGRF													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
2,450.00	2,391.72	2,435.40	2,464.66	9.21	8.45	-101.216	-2,331.53	-357.67	2,405.30	2,387.66	17.64	136.355			
2,500.00	2,439.95	2,482.50	2,511.74	9.41	8.62	-101.496	-2,330.13	-358.23	2,406.44	2,388.43	18.01	133.611			
2,550.00	2,488.17	2,530.57	2,559.78	9.62	8.79	-101.781	-2,328.73	-358.79	2,407.66	2,389.27	18.39	130.956			
2,600.00	2,536.39	2,578.70	2,607.89	9.82	8.96	-102.066	-2,327.33	-359.36	2,408.95	2,390.19	18.76	128.410			
2,650.00	2,584.61	2,630.19	2,659.35	10.02	9.15	-102.371	-2,325.80	-359.95	2,410.27	2,391.13	19.15	125.887			
2,700.00	2,632.84	2,674.00	2,703.14	10.23	9.31	-102.631	-2,324.45	-360.42	2,411.61	2,392.11	19.51	123.637			
2,750.00	2,681.06	2,724.90	2,754.01	10.43	9.49	-102.933	-2,322.89	-360.95	2,413.03	2,393.14	19.89	121.319			
2,800.00	2,729.28	2,769.20	2,798.29	10.64	9.65	-103.196	-2,321.62	-361.40	2,414.60	2,394.35	20.25	119.235			
2,850.00	2,777.51	2,813.49	2,842.56	10.84	9.81	-103.458	-2,320.42	-361.84	2,416.31	2,395.70	20.61	117.231			
2,900.00	2,825.73	2,864.00	2,893.05	11.04	9.99	-103.757	-2,319.15	-362.35	2,418.19	2,397.19	20.99	115.183			
2,950.00	2,873.95	2,907.25	2,936.29	11.25	10.15	-104.012	-2,318.09	-362.79	2,420.14	2,398.79	21.35	113.349			
3,000.00	2,922.18	2,957.59	2,986.61	11.45	10.33	-104.308	-2,316.82	-363.33	2,422.13	2,400.40	21.73	111.448			
3,050.00	2,970.40	3,007.73	3,036.73	11.66	10.51	-104.602	-2,315.52	-363.90	2,424.15	2,402.04	22.11	109.618			
3,100.00	3,018.62	3,057.83	3,086.81	11.86	10.69	-104.894	-2,314.19	-364.51	2,426.20	2,403.70	22.50	107.853			
3,150.00	3,066.85	3,107.27	3,136.22	12.06	10.87	-105.181	-2,312.85	-365.18	2,428.28	2,405.40	22.87	106.159			
3,200.00	3,115.07	3,156.04	3,184.97	12.27	11.04	-105.461	-2,311.53	-365.91	2,430.40	2,407.15	23.25	104.534			
3,250.00	3,163.29	3,201.07	3,229.98	12.47	11.21	-105.720	-2,310.33	-366.58	2,432.62	2,409.01	23.61	103.022			
3,300.00	3,211.52	3,246.68	3,275.57	12.68	11.37	-105.983	-2,309.18	-367.20	2,434.97	2,411.00	23.98	101.553			
3,350.00	3,259.74	3,300.63	3,329.50	12.88	11.57	-106.293	-2,307.78	-367.90	2,437.35	2,412.98	24.37	100.009			
3,400.00	3,307.96	3,352.01	3,380.85	13.08	11.75	-106.590	-2,306.34	-368.55	2,439.69	2,414.94	24.76	98.549			
3,450.00	3,356.19	3,397.61	3,426.43	13.29	11.91	-106.851	-2,305.07	-369.16	2,442.11	2,416.99	25.12	97.215			
3,500.00	3,404.41	3,433.00	3,461.81	13.49	12.04	-107.054	-2,304.13	-369.65	2,444.66	2,419.22	25.45	96.061			
3,550.00	3,452.63	3,477.46	3,506.25	13.70	12.20	-107.308	-2,303.10	-370.20	2,447.43	2,421.62	25.81	94.828			
3,600.00	3,500.85	3,513.71	3,542.49	13.90	12.33	-107.517	-2,302.44	-370.54	2,450.51	2,424.37	26.14	93.745			
3,650.00	3,549.08	3,557.72	3,586.50	14.11	12.49	-107.772	-2,301.80	-370.86	2,453.85	2,427.35	26.50	92.605			
3,700.00	3,597.30	3,606.86	3,635.63	14.31	12.67	-108.054	-2,301.11	-371.29	2,457.25	2,430.38	26.87	91.436			
3,750.00	3,645.52	3,667.01	3,695.77	14.51	12.88	-108.397	-2,300.15	-371.88	2,460.63	2,433.34	27.29	90.172			
3,800.00	3,693.75	3,728.54	3,757.28	14.72	13.10	-108.751	-2,298.76	-372.39	2,463.75	2,436.05	27.71	88.921			
3,850.00	3,741.97	3,774.88	3,803.61	14.92	13.27	-109.017	-2,297.63	-372.74	2,466.86	2,438.79	28.07	87.873			
3,900.00	3,790.19	3,821.81	3,850.52	15.13	13.44	-109.287	-2,296.52	-373.09	2,470.07	2,441.63	28.44	86.850			
3,950.00	3,838.42	3,871.90	3,900.59	15.33	13.62	-109.554	-2,295.50	-374.31	2,473.33	2,444.51	28.82	85.825			
4,000.00	3,886.64	3,933.76	3,962.35	15.54	13.84	-109.843	-2,294.48	-377.59	2,476.57	2,447.34	29.24	84.706			
4,050.00	3,935.06	4,110.91	4,138.20	15.74	14.48	-111.836	-2,288.78	-397.46	2,478.62	2,448.55	30.07	82.424			
4,100.00	3,984.05	4,161.69	4,188.23	15.93	14.67	-114.589	-2,286.23	-405.80	2,478.41	2,447.96	30.46	81.371			
4,150.00	4,033.48	4,210.28	4,236.01	16.11	14.86	-119.492	-2,283.90	-414.32	2,477.63	2,446.81	30.83	80.372			
4,200.00	4,083.23	4,255.47	4,280.43	16.29	15.03	-130.898	-2,281.83	-422.34	2,476.36	2,445.19	31.17	79.436			
4,250.00	4,133.15	4,302.95	4,327.11	16.45	15.22	-170.361	-2,279.73	-430.76	2,474.63	2,443.12	31.52	78.511			
4,300.00	4,183.11	4,355.89	4,379.11	16.61	15.42	122.161	-2,277.41	-440.46	2,472.35	2,440.47	31.87	77.566			
4,350.00	4,232.97	4,407.63	4,429.85	16.75	15.63	100.754	-2,275.15	-450.32	2,469.51	2,437.29	32.21	76.658			
4,400.00	4,282.59	4,458.05	4,479.24	16.88	15.83	93.677	-2,272.93	-460.18	2,466.18	2,433.63	32.55	75.774			
4,450.00	4,331.84	4,507.53	4,527.68	17.02	16.03	90.585	-2,270.73	-470.04	2,462.42	2,429.54	32.87	74.904			
4,500.00	4,380.59	4,556.02	4,575.15	17.14	16.23	89.103	-2,268.51	-479.71	2,458.29	2,425.09	33.20	74.049			
4,550.00	4,428.69	4,599.53	4,617.74	17.27	16.41	88.395	-2,266.50	-488.38	2,453.90	2,420.40	33.50	73.245			
4,600.00	4,476.02	4,639.91	4,657.25	17.39	16.58	88.133	-2,264.67	-496.47	2,449.39	2,415.59	33.80	72.476			
4,650.00	4,522.45	4,678.60	4,695.11	17.51	16.74	88.159	-2,262.98	-504.26	2,444.84	2,410.76	34.08	71.732			
4,700.00	4,567.85	4,715.08	4,730.80	17.63	16.89	88.366	-2,261.44	-511.66	2,440.36	2,405.99	34.36	71.015			
4,750.00	4,612.10	4,753.37	4,768.26	17.74	17.05	88.751	-2,259.87	-519.47	2,436.00	2,401.34	34.66	70.291			
4,800.00	4,655.07	4,768.00	4,782.57	17.86	17.11	88.863	-2,259.27	-522.45	2,431.93	2,397.08	34.84	69.799			
4,850.00	4,696.65	4,768.00	4,782.57	17.98	17.11	88.767	-2,259.27	-522.45	2,428.60	2,393.64	34.96	69.465			
4,900.00	4,736.73	4,768.00	4,782.57	18.10	17.11	88.673	-2,259.27	-522.45	2,426.08	2,391.00	35.08	69.155			
4,950.00	4,775.18	4,768.00	4,782.57	18.22	17.11	88.569	-2,259.27	-522.45	2,424.38	2,389.17	35.20	68.867			
5,000.00	4,811.92	4,768.00	4,782.57	18.34	17.11	88.448	-2,259.27	-522.45	2,423.49	2,388.16	35.33	68.599			

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 100-MWD+IGRF												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,028.67	4,832.16	4,768.00	4,782.57	18.42	17.11	88.368	-2,259.27	-522.45	2,423.36	2,387.96	35.40	68.454	
5,050.00	4,846.83	4,768.00	4,782.57	18.47	17.11	88.302	-2,259.27	-522.45	2,423.43	2,387.98	35.46	68.352	
5,100.00	4,879.83	4,768.00	4,782.57	18.61	17.11	88.129	-2,259.27	-522.45	2,424.20	2,388.61	35.59	68.123	
5,150.00	4,910.81	4,768.00	4,782.57	18.75	17.11	87.924	-2,259.27	-522.45	2,425.78	2,390.06	35.72	67.912	
5,200.00	4,939.70	4,768.00	4,782.57	18.90	17.11	87.686	-2,259.27	-522.45	2,428.18	2,392.32	35.86	67.718	
5,250.00	4,966.42	4,768.00	4,782.57	19.05	17.11	87.412	-2,259.27	-522.45	2,431.39	2,395.39	36.00	67.541	
5,300.00	4,991.50	4,768.00	4,782.57	19.21	17.11	87.332	-2,259.27	-522.45	2,435.45	2,399.30	36.16	67.360	
5,350.00	5,016.50	4,768.00	4,782.57	19.39	17.11	87.332	-2,259.27	-522.45	2,440.52	2,404.19	36.33	67.168	
5,400.00	5,041.50	4,768.00	4,782.57	19.57	17.11	87.332	-2,259.27	-522.45	2,446.61	2,410.10	36.51	67.006	
5,450.00	5,066.50	4,768.00	4,782.57	19.76	17.11	87.332	-2,259.27	-522.45	2,453.70	2,416.99	36.71	66.844	
5,500.00	5,090.48	4,768.00	4,782.57	19.96	17.11	86.730	-2,259.27	-522.45	2,461.72	2,424.85	36.87	66.759	
5,550.00	5,110.69	4,768.00	4,782.57	20.17	17.11	85.841	-2,259.27	-522.45	2,470.50	2,433.47	37.02	66.726	
5,600.00	5,126.84	4,768.00	4,782.57	20.38	17.11	84.883	-2,259.27	-522.45	2,479.94	2,442.78	37.16	66.736	
5,650.00	5,138.80	4,768.00	4,782.57	20.59	17.11	83.864	-2,259.27	-522.45	2,489.97	2,452.69	37.28	66.789	
5,700.00	5,146.49	4,768.00	4,782.57	20.79	17.11	82.794	-2,259.27	-522.45	2,500.50	2,463.12	37.38	66.888	
5,750.00	5,149.84	4,768.00	4,782.57	21.00	17.11	81.681	-2,259.27	-522.45	2,511.45	2,473.99	37.47	67.031	
5,800.00	5,150.00	4,768.00	4,782.57	21.20	17.11	81.376	-2,259.27	-522.45	2,522.91	2,485.28	37.63	67.042	
5,850.00	5,150.00	4,768.00	4,782.57	21.42	17.11	81.376	-2,259.27	-522.45	2,535.28	2,497.43	37.85	66.982	
5,900.00	5,150.00	4,768.00	4,782.57	21.64	17.11	81.376	-2,259.27	-522.45	2,548.57	2,510.50	38.07	66.947	
5,950.00	5,150.00	4,768.00	4,782.57	21.88	17.11	81.376	-2,259.27	-522.45	2,562.77	2,524.46	38.31	66.893	
6,000.00	5,150.00	4,768.00	4,782.57	22.13	17.11	81.376	-2,259.27	-522.45	2,577.86	2,539.31	38.55	66.863	
6,050.00	5,150.00	4,768.00	4,782.57	22.40	17.11	81.376	-2,259.27	-522.45	2,593.83	2,555.01	38.82	66.817	
6,100.00	5,150.00	4,768.00	4,782.57	22.66	17.11	81.376	-2,259.27	-522.45	2,610.65	2,571.57	39.09	66.794	
6,150.00	5,150.00	4,768.00	4,782.57	22.95	17.11	81.376	-2,259.27	-522.45	2,628.32	2,588.95	39.37	66.757	
6,200.00	5,150.00	4,768.00	4,782.57	23.24	17.11	81.376	-2,259.27	-522.45	2,646.82	2,607.16	39.66	66.741	
6,250.00	5,150.00	4,768.00	4,782.57	23.55	17.11	81.376	-2,259.27	-522.45	2,666.12	2,626.16	39.96	66.713	
6,300.00	5,150.00	4,768.00	4,782.57	23.86	17.11	81.376	-2,259.27	-522.45	2,686.22	2,645.95	40.27	66.705	
6,350.00	5,150.00	4,768.00	4,782.57	24.19	17.11	81.376	-2,259.27	-522.45	2,707.09	2,666.50	40.59	66.687	
6,400.00	5,150.00	4,768.00	4,782.57	24.51	17.11	81.376	-2,259.27	-522.45	2,728.72	2,687.80	40.92	66.687	
6,450.00	5,150.00	4,768.00	4,782.57	24.86	17.11	81.376	-2,259.27	-522.45	2,751.09	2,709.83	41.26	66.679 SF	
6,500.00	5,150.00	4,768.00	4,782.57	25.20	17.11	81.376	-2,259.27	-522.45	2,774.18	2,732.58	41.60	66.688	
6,550.00	5,150.00	4,768.00	4,782.57	25.56	17.11	81.376	-2,259.27	-522.45	2,797.97	2,756.01	41.96	66.689	
6,600.00	5,150.00	4,768.00	4,782.57	25.92	17.11	81.376	-2,259.27	-522.45	2,822.44	2,780.13	42.31	66.706	
6,650.00	5,150.00	4,768.00	4,782.57	26.29	17.11	81.376	-2,259.27	-522.45	2,847.59	2,804.91	42.68	66.717	
6,700.00	5,150.00	4,768.00	4,782.57	26.67	17.11	81.376	-2,259.27	-522.45	2,873.38	2,830.33	43.05	66.743	
6,750.00	5,150.00	4,768.00	4,782.57	27.05	17.11	81.376	-2,259.27	-522.45	2,899.81	2,856.38	43.43	66.763	
6,800.00	5,150.00	4,768.00	4,782.57	27.44	17.11	81.376	-2,259.27	-522.45	2,926.85	2,883.04	43.82	66.797	
6,850.00	5,150.00	4,768.00	4,782.57	27.84	17.11	81.376	-2,259.27	-522.45	2,954.50	2,910.28	44.21	66.826	
6,900.00	5,150.00	4,768.00	4,782.57	28.23	17.11	81.376	-2,259.27	-522.45	2,982.72	2,938.11	44.61	66.867	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 100-MWD+IGRF												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,000.00	1,957.71	10,089.14	4,897.32	7.38	166.62	160.942	319.60	-293.40	2,952.16	2,908.60	43.56	67.778	
2,050.00	2,005.94	10,071.17	4,897.57	7.59	166.06	160.696	320.11	-311.36	2,904.18	2,859.98	44.20	65.708	
2,100.00	2,054.16	10,054.11	4,897.79	7.79	165.52	160.454	320.56	-328.41	2,856.18	2,811.35	44.84	63.704	
2,150.00	2,102.38	10,039.27	4,897.97	7.99	165.06	160.237	320.93	-343.25	2,808.18	2,762.75	45.43	61.811	
2,200.00	2,150.61	10,024.46	4,898.15	8.19	164.59	160.013	321.30	-358.06	2,760.17	2,714.13	46.04	59.949	
2,250.00	2,198.83	10,009.68	4,898.32	8.40	164.13	159.782	321.65	-372.82	2,712.16	2,665.50	46.67	58.116	
2,300.00	2,247.05	9,994.95	4,898.49	8.60	163.67	159.544	321.98	-387.56	2,664.15	2,616.84	47.31	56.313	
2,350.00	2,295.28	9,980.24	4,898.65	8.80	163.20	159.299	322.31	-402.26	2,616.14	2,568.17	47.97	54.537	
2,400.00	2,343.50	9,965.57	4,898.81	9.01	162.74	159.046	322.62	-416.93	2,568.13	2,519.48	48.65	52.790	
2,450.00	2,391.72	9,953.83	4,898.94	9.21	162.37	158.836	322.87	-428.66	2,520.12	2,470.87	49.24	51.178	
2,500.00	2,439.95	9,942.38	4,899.07	9.41	162.01	158.625	323.12	-440.11	2,472.12	2,422.28	49.84	49.599	
2,550.00	2,488.17	9,930.86	4,899.21	9.62	161.65	158.405	323.37	-451.62	2,424.14	2,373.68	50.46	48.040	
2,600.00	2,536.39	9,919.27	4,899.37	9.82	161.29	158.176	323.64	-463.21	2,376.18	2,325.08	51.10	46.501	
2,650.00	2,584.61	9,907.61	4,899.53	10.02	160.92	157.938	323.92	-474.86	2,328.24	2,276.48	51.76	44.982	
2,700.00	2,632.84	9,895.88	4,899.71	10.23	160.55	157.689	324.20	-486.59	2,280.31	2,227.87	52.44	43.483	
2,750.00	2,681.06	9,884.08	4,899.89	10.43	160.18	157.430	324.50	-498.38	2,232.40	2,179.26	53.15	42.005	
2,800.00	2,729.28	9,869.00	4,900.14	10.64	159.71	157.085	324.89	-513.46	2,184.52	2,130.49	54.03	40.433	
2,850.00	2,777.51	9,859.80	4,900.31	10.84	159.42	156.867	325.13	-522.65	2,136.64	2,081.99	54.66	39.093	
2,900.00	2,825.73	9,847.15	4,900.54	11.04	159.02	156.557	325.45	-535.29	2,088.79	2,033.32	55.47	37.657	
2,950.00	2,873.95	9,834.45	4,900.78	11.25	158.63	156.235	325.77	-547.99	2,040.95	1,984.63	56.31	36.244	
3,000.00	2,922.18	9,821.68	4,901.02	11.45	158.23	155.899	326.08	-560.75	1,993.12	1,935.94	57.18	34.855	
3,050.00	2,970.40	9,808.85	4,901.28	11.66	157.82	155.548	326.39	-573.57	1,945.31	1,887.23	58.09	33.490	
3,100.00	3,018.62	9,795.97	4,901.56	11.86	157.42	155.182	326.69	-586.46	1,897.52	1,838.50	59.02	32.148	
3,150.00	3,066.85	9,783.02	4,901.84	12.06	157.01	154.799	326.98	-599.40	1,849.75	1,789.75	60.00	30.830	
3,200.00	3,115.07	9,764.80	4,902.23	12.27	156.44	154.233	327.37	-617.61	1,801.99	1,740.64	61.35	29.370	
3,250.00	3,163.29	9,738.98	4,902.67	12.47	155.63	153.373	327.85	-643.42	1,754.17	1,690.84	63.33	27.701	
3,300.00	3,211.52	9,714.27	4,902.93	12.68	154.85	152.479	328.23	-668.12	1,706.26	1,640.89	65.37	26.102	
3,350.00	3,259.74	9,690.61	4,903.04	12.88	154.11	151.548	328.52	-691.78	1,658.28	1,590.79	67.49	24.570	
3,400.00	3,307.96	9,680.00	4,903.05	13.08	153.78	151.105	328.62	-702.39	1,610.27	1,541.66	68.60	23.472	
3,450.00	3,356.19	9,664.33	4,903.06	13.29	153.29	150.414	328.77	-718.06	1,562.25	1,492.03	70.23	22.246	
3,500.00	3,404.41	9,653.96	4,903.09	13.49	152.96	149.932	328.88	-728.43	1,514.29	1,442.87	71.42	21.203	
3,550.00	3,452.63	9,643.46	4,903.14	13.70	152.63	149.421	329.00	-738.93	1,466.37	1,393.70	72.67	20.179	
3,600.00	3,500.85	9,632.82	4,903.21	13.90	152.30	148.879	329.13	-749.57	1,418.49	1,344.51	73.98	19.173	
3,650.00	3,549.08	9,622.04	4,903.30	14.11	151.96	148.302	329.26	-760.35	1,370.66	1,295.30	75.37	18.187	
3,700.00	3,597.30	9,611.11	4,903.41	14.31	151.62	147.689	329.41	-771.28	1,322.88	1,246.06	76.82	17.220	
3,750.00	3,645.52	9,600.03	4,903.54	14.51	151.27	147.036	329.57	-782.36	1,275.15	1,196.79	78.36	16.272	
3,800.00	3,693.75	9,585.00	4,903.76	14.72	150.80	146.093	329.80	-797.38	1,227.49	1,146.99	80.49	15.249	
3,850.00	3,741.97	9,577.03	4,903.88	14.92	150.55	145.566	329.92	-805.34	1,179.87	1,098.10	81.76	14.430	
3,900.00	3,790.19	9,564.95	4,904.09	15.13	150.17	144.726	330.12	-817.43	1,132.31	1,048.64	83.67	13.533	
3,950.00	3,838.42	9,552.73	4,904.32	15.33	149.79	143.825	330.32	-829.65	1,084.82	999.13	85.69	12.660	
4,000.00	3,886.64	9,540.37	4,904.58	15.54	149.40	142.857	330.54	-841.99	1,037.40	949.57	87.84	11.810	
4,050.00	3,935.06	9,528.57	4,904.83	15.74	149.03	136.523	330.74	-853.79	989.84	891.62	98.23	10.077	
4,100.00	3,984.05	9,518.85	4,905.06	15.93	148.73	126.048	330.92	-863.51	941.75	828.12	113.63	8.288	
4,150.00	4,033.48	9,511.31	4,905.24	16.11	148.49	110.928	331.05	-871.04	893.25	761.80	131.45	6.795	
4,200.00	4,083.23	9,506.02	4,905.38	16.29	148.32	86.719	331.15	-876.33	844.47	695.54	148.93	5.670	
4,250.00	4,133.15	9,503.03	4,905.46	16.45	148.23	32.715	331.21	-879.32	795.57	634.39	161.18	4.936	
4,300.00	4,183.11	9,502.38	4,905.47	16.61	148.21	-49.205	331.22	-879.97	746.69	582.03	164.66	4.535	
4,350.00	4,232.97	9,504.12	4,905.43	16.75	148.26	-83.152	331.19	-878.23	698.00	537.31	160.69	4.344	
4,400.00	4,282.59	9,508.29	4,905.32	16.88	148.39	-100.144	331.11	-874.07	649.67	496.33	153.34	4.237	
4,450.00	4,331.84	9,514.91	4,905.16	17.02	148.60	-110.703	330.99	-867.45	601.88	456.08	145.80	4.128	
4,500.00	4,380.59	9,524.02	4,904.94	17.14	148.89	-117.676	330.82	-858.35	554.82	415.24	139.58	3.975	
4,550.00	4,428.69	9,535.62	4,904.68	17.27	149.25	-122.302	330.62	-846.75	508.69	373.57	135.12	3.765	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 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 Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,600.00	4,476.02	9,549.73	4,904.38	17.39	149.69	-125.245	330.37	-832.64	463.73	331.28	132.45	3.501	
4,650.00	4,522.45	9,566.35	4,904.07	17.51	150.21	-126.887	330.10	-816.03	420.20	288.73	131.47	3.196	
4,700.00	4,567.85	9,585.00	4,903.76	17.63	150.80	-127.525	329.80	-797.38	378.39	246.47	131.92	2.868	
4,750.00	4,612.10	9,606.68	4,903.46	17.74	151.48	-127.090	329.47	-775.71	338.66	204.59	134.07	2.526	
4,800.00	4,655.07	9,630.39	4,903.23	17.86	152.22	-125.789	329.16	-752.00	301.45	163.91	137.55	2.192	
4,850.00	4,696.65	9,656.56	4,903.08	17.98	153.04	-123.523	328.85	-725.84	267.30	124.86	142.44	1.877	
4,900.00	4,736.73	9,685.71	4,903.05	18.10	153.96	-120.127	328.57	-696.68	236.82	88.04	148.78	1.592	
4,950.00	4,775.18	9,719.41	4,902.89	18.22	155.02	-115.149	328.16	-662.98	210.54	53.79	156.75	1.343 Level 3	
5,000.00	4,811.92	9,754.53	4,902.42	18.34	156.12	-109.080	327.57	-627.87	189.16	24.40	164.75	1.148 Level 2	
5,050.00	4,846.83	9,790.48	4,901.67	18.47	157.25	-102.059	326.81	-591.94	173.60	1.91	171.69	1.011 Level 2	
5,100.00	4,879.83	9,827.54	4,900.91	18.61	158.41	-94.240	325.94	-554.90	164.66	-11.79	176.44	0.933 Level 1	
5,144.85	4,907.71	9,862.37	4,900.26	18.74	159.50	-86.697	325.06	-520.08	162.20	-15.82	178.02	0.911 Level 1, CC, ES, SF	
5,150.00	4,910.81	9,866.46	4,900.19	18.75	159.63	-85.816	324.96	-515.99	162.24	-15.78	178.02	0.911 Level 1	
5,200.00	4,939.70	9,906.51	4,899.55	18.90	160.89	-77.434	323.94	-475.96	165.48	-10.45	175.94	0.941 Level 1	
5,250.00	4,966.42	9,948.17	4,899.00	19.05	162.20	-69.496	322.99	-434.32	173.03	2.32	170.71	1.014 Level 2	
5,300.00	4,991.50	9,991.24	4,898.53	19.21	163.55	-62.611	322.07	-391.26	183.58	19.72	163.86	1.120 Level 2	
5,350.00	5,016.50	10,034.52	4,898.03	19.39	164.91	-56.483	321.05	-347.99	196.80	40.79	156.01	1.261 Level 3	
5,400.00	5,041.50	10,077.70	4,897.48	19.57	166.27	-51.021	319.93	-304.83	212.24	64.56	147.68	1.437 Level 3	
5,450.00	5,066.50	10,120.69	4,896.81	19.76	167.62	-46.189	318.65	-261.87	229.47	90.12	139.35	1.647	
5,500.00	5,090.48	10,164.18	4,896.01	19.96	168.98	-41.110	317.20	-218.41	247.38	117.87	129.51	1.910	
5,550.00	5,110.69	10,209.81	4,895.12	20.17	170.42	-36.864	315.55	-172.82	263.25	142.48	120.77	2.180	
5,600.00	5,126.84	10,256.90	4,894.19	20.38	171.90	-33.687	313.73	-125.77	276.34	162.19	114.16	2.421	
5,650.00	5,138.80	10,290.00	4,893.54	20.59	172.94	-31.857	312.45	-92.70	286.66	176.23	110.42	2.596	
5,700.00	5,146.49	10,290.00	4,893.54	20.79	172.94	-31.152	312.45	-92.70	299.68	190.78	108.90	2.752	
5,750.00	5,149.84	10,290.00	4,893.54	21.00	172.94	-30.226	312.45	-92.70	316.71	209.86	106.85	2.964	
5,800.00	5,150.00	10,290.00	4,893.54	21.20	172.94	-29.945	312.45	-92.70	337.93	231.59	106.34	3.178	
5,850.00	5,150.00	10,290.00	4,893.54	21.42	172.94	-29.945	312.45	-92.70	364.70	258.19	106.51	3.424	
5,900.00	5,150.00	10,290.00	4,893.54	21.64	172.94	-29.945	312.45	-92.70	396.00	289.31	106.68	3.712	
5,950.00	5,150.00	10,290.00	4,893.54	21.88	172.94	-29.945	312.45	-92.70	430.84	323.97	106.87	4.032	
6,000.00	5,150.00	10,290.00	4,893.54	22.13	172.94	-29.945	312.45	-92.70	468.43	361.38	107.05	4.376	
6,050.00	5,150.00	10,290.00	4,893.54	22.40	172.94	-29.945	312.45	-92.70	508.19	400.92	107.25	4.738	
6,100.00	5,150.00	10,290.00	4,893.54	22.66	172.94	-29.945	312.45	-92.70	549.59	442.14	107.45	5.115	
6,150.00	5,150.00	10,290.00	4,893.54	22.95	172.94	-29.945	312.45	-92.70	592.33	484.68	107.65	5.502	
6,200.00	5,150.00	10,290.00	4,893.54	23.24	172.94	-29.945	312.45	-92.70	636.13	528.27	107.86	5.898	
6,250.00	5,150.00	10,290.00	4,893.54	23.55	172.94	-29.945	312.45	-92.70	680.79	572.70	108.08	6.299	
6,300.00	5,150.00	10,290.00	4,893.54	23.86	172.94	-29.945	312.45	-92.70	726.14	617.84	108.30	6.705	
6,350.00	5,150.00	10,290.00	4,893.54	24.19	172.94	-29.945	312.45	-92.70	772.07	663.53	108.53	7.114	
6,400.00	5,150.00	10,290.00	4,893.54	24.51	172.94	-29.945	312.45	-92.70	818.47	709.71	108.76	7.525	
6,450.00	5,150.00	10,290.00	4,893.54	24.86	172.94	-29.945	312.45	-92.70	865.28	756.28	109.00	7.938	
6,500.00	5,150.00	10,290.00	4,893.54	25.20	172.94	-29.945	312.45	-92.70	912.42	803.18	109.24	8.352	
6,550.00	5,150.00	10,290.00	4,893.54	25.56	172.94	-29.945	312.45	-92.70	959.85	850.37	109.49	8.767	
6,600.00	5,150.00	10,290.00	4,893.54	25.92	172.94	-29.945	312.45	-92.70	1,007.54	897.80	109.73	9.182	
6,650.00	5,150.00	10,290.00	4,893.54	26.29	172.94	-29.945	312.45	-92.70	1,055.43	945.44	109.99	9.596	
6,700.00	5,150.00	10,290.00	4,893.54	26.67	172.94	-29.945	312.45	-92.70	1,103.52	993.27	110.24	10.010	
6,750.00	5,150.00	10,290.00	4,893.54	27.05	172.94	-29.945	312.45	-92.70	1,151.76	1,041.26	110.50	10.423	
6,800.00	5,150.00	10,290.00	4,893.54	27.44	172.94	-29.945	312.45	-92.70	1,200.15	1,089.39	110.77	10.835	
6,850.00	5,150.00	10,290.00	4,893.54	27.84	172.94	-29.945	312.45	-92.70	1,248.67	1,137.64	111.03	11.246	
6,900.00	5,150.00	10,290.00	4,893.54	28.23	172.94	-29.945	312.45	-92.70	1,297.30	1,186.00	111.30	11.656	
6,950.00	5,150.00	10,290.00	4,893.54	28.64	172.94	-29.945	312.45	-92.70	1,346.03	1,234.45	111.57	12.064	
7,000.00	5,150.00	10,290.00	4,893.54	29.05	172.94	-29.945	312.45	-92.70	1,394.85	1,283.00	111.84	12.471	
7,050.00	5,150.00	10,290.00	4,893.54	29.47	172.94	-29.945	312.45	-92.70	1,443.75	1,331.62	112.12	12.877	
7,100.00	5,150.00	10,290.00	4,893.54	29.89	172.94	-29.945	312.45	-92.70	1,492.72	1,380.32	112.40	13.280	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 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
7,150.00	5,150.00	10,290.00	4,893.54	30.32	172.94	-29.945	312.45	-92.70	1,541.76	1,429.08	112.68	13.682	
7,200.00	5,150.00	10,290.00	4,893.54	30.75	172.94	-29.945	312.45	-92.70	1,590.86	1,477.89	112.97	14.083	
7,250.00	5,150.00	10,290.00	4,893.54	31.19	172.94	-29.945	312.45	-92.70	1,640.01	1,526.76	113.25	14.481	
7,300.00	5,150.00	10,290.00	4,893.54	31.62	172.94	-29.945	312.45	-92.70	1,689.21	1,575.68	113.54	14.878	
7,350.00	5,150.00	10,290.00	4,893.54	32.07	172.94	-29.945	312.45	-92.70	1,738.46	1,624.63	113.83	15.273	
7,400.00	5,150.00	10,290.00	4,893.54	32.51	172.94	-29.945	312.45	-92.70	1,787.75	1,673.63	114.12	15.666	
7,450.00	5,150.00	10,290.00	4,893.54	32.96	172.94	-29.945	312.45	-92.70	1,837.08	1,722.67	114.41	16.057	
7,500.00	5,150.00	10,290.00	4,893.54	33.42	172.94	-29.945	312.45	-92.70	1,886.45	1,771.74	114.71	16.446	
7,550.00	5,150.00	10,290.00	4,893.54	33.88	172.94	-29.945	312.45	-92.70	1,935.84	1,820.84	115.00	16.833	
7,600.00	5,150.00	10,290.00	4,893.54	34.33	172.94	-29.945	312.45	-92.70	1,985.27	1,869.97	115.30	17.218	
7,650.00	5,150.00	10,290.00	4,893.54	34.80	172.94	-29.945	312.45	-92.70	2,034.72	1,919.12	115.60	17.601	
7,700.00	5,150.00	10,290.00	4,893.54	35.26	172.94	-29.945	312.45	-92.70	2,084.21	1,968.30	115.90	17.983	
7,750.00	5,150.00	10,290.00	4,893.54	35.73	172.94	-29.945	312.45	-92.70	2,133.71	2,017.51	116.20	18.362	
7,800.00	5,150.00	10,290.00	4,893.54	36.20	172.94	-29.945	312.45	-92.70	2,183.24	2,066.73	116.51	18.739	
7,850.00	5,150.00	10,290.00	4,893.54	36.68	172.94	-29.945	312.45	-92.70	2,232.79	2,115.97	116.81	19.114	
7,900.00	5,150.00	10,290.00	4,893.54	37.16	172.94	-29.945	312.45	-92.70	2,282.36	2,165.24	117.12	19.488	
7,950.00	5,150.00	10,290.00	4,893.54	37.64	172.94	-29.945	312.45	-92.70	2,331.94	2,214.52	117.43	19.859	
8,000.00	5,150.00	10,290.00	4,893.54	38.12	172.94	-29.945	312.45	-92.70	2,381.55	2,263.81	117.73	20.228	
8,050.00	5,150.00	10,290.00	4,893.54	38.60	172.94	-29.945	312.45	-92.70	2,431.17	2,313.12	118.04	20.596	
8,100.00	5,150.00	10,290.00	4,893.54	39.09	172.94	-29.945	312.45	-92.70	2,480.80	2,362.45	118.35	20.961	
8,150.00	5,150.00	10,290.00	4,893.54	39.57	172.94	-29.945	312.45	-92.70	2,530.45	2,411.79	118.66	21.324	
8,200.00	5,150.00	10,290.00	4,893.54	40.06	172.94	-29.945	312.45	-92.70	2,580.12	2,461.14	118.98	21.686	
8,250.00	5,150.00	10,290.00	4,893.54	40.56	172.94	-29.945	312.45	-92.70	2,629.79	2,510.50	119.29	22.045	
8,300.00	5,150.00	10,290.00	4,893.54	41.05	172.94	-29.945	312.45	-92.70	2,679.48	2,559.88	119.60	22.403	
8,350.00	5,150.00	10,290.00	4,893.54	41.55	172.94	-29.945	312.45	-92.70	2,729.18	2,609.26	119.92	22.759	
8,400.00	5,150.00	10,290.00	4,893.54	42.04	172.94	-29.945	312.45	-92.70	2,778.89	2,658.66	120.23	23.112	
8,450.00	5,150.00	10,290.00	4,893.54	42.54	172.94	-29.945	312.45	-92.70	2,828.61	2,708.06	120.55	23.464	
8,500.00	5,150.00	10,290.00	4,893.54	43.04	172.94	-29.945	312.45	-92.70	2,878.34	2,757.47	120.87	23.814	
8,550.00	5,150.00	10,290.00	4,893.54	43.54	172.94	-29.945	312.45	-92.70	2,928.08	2,806.89	121.19	24.162	
8,600.00	5,150.00	10,290.00	4,893.54	44.05	172.94	-29.945	312.45	-92.70	2,977.83	2,856.32	121.50	24.508	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 100-MWD+IGRF												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,150.00	2,102.38	10,041.66	4,899.10	7.99	165.26	-131.266	-981.80	-372.41	2,983.95	2,837.38	146.57	20.358	
2,200.00	2,150.61	10,027.22	4,899.12	8.19	164.81	-130.766	-981.92	-386.85	2,939.55	2,792.40	147.15	19.976	
2,250.00	2,198.83	10,012.89	4,899.12	8.40	164.36	-130.265	-982.03	-401.18	2,895.27	2,747.54	147.73	19.599	
2,300.00	2,247.05	9,998.65	4,899.12	8.60	163.91	-129.762	-982.16	-415.42	2,851.11	2,702.82	148.29	19.226	
2,350.00	2,295.28	9,984.48	4,899.10	8.80	163.47	-129.256	-982.29	-429.58	2,807.09	2,658.24	148.85	18.858	
2,400.00	2,343.50	9,970.39	4,899.08	9.01	163.03	-128.747	-982.43	-443.68	2,763.20	2,613.80	149.40	18.495	
2,450.00	2,391.72	9,956.12	4,899.05	9.21	162.58	-128.226	-982.57	-457.95	2,719.46	2,569.51	149.95	18.136	
2,500.00	2,439.95	9,941.29	4,899.00	9.41	162.11	-127.679	-982.73	-472.78	2,675.86	2,525.36	150.50	17.780	
2,550.00	2,488.17	9,926.58	4,898.93	9.62	161.65	-127.130	-982.90	-487.48	2,632.42	2,481.38	151.04	17.428	
2,600.00	2,536.39	9,911.99	4,898.86	9.82	161.20	-126.581	-983.08	-502.07	2,589.14	2,437.57	151.57	17.082	
2,650.00	2,584.61	9,897.52	4,898.76	10.02	160.74	-126.029	-983.26	-516.55	2,546.04	2,393.95	152.09	16.740	
2,700.00	2,632.84	9,883.16	4,898.66	10.23	160.29	-125.477	-983.45	-530.90	2,503.12	2,350.52	152.60	16.403	
2,750.00	2,681.06	9,868.92	4,898.54	10.43	159.85	-124.924	-983.65	-545.14	2,460.40	2,307.30	153.09	16.071	
2,800.00	2,729.28	9,856.98	4,898.43	10.64	159.47	-124.456	-983.83	-557.07	2,417.88	2,264.35	153.53	15.748	
2,850.00	2,777.51	9,845.90	4,898.32	10.84	159.12	-124.019	-984.01	-568.15	2,375.60	2,221.65	153.95	15.431	
2,900.00	2,825.73	9,834.83	4,898.22	11.04	158.78	-123.578	-984.20	-579.22	2,333.56	2,179.20	154.36	15.118	
2,950.00	2,873.95	9,823.76	4,898.12	11.25	158.43	-123.134	-984.41	-590.29	2,291.78	2,137.02	154.76	14.809	
3,000.00	2,922.18	9,812.70	4,898.02	11.45	158.08	-122.687	-984.64	-601.35	2,250.27	2,095.12	155.16	14.503	
3,050.00	2,970.40	9,801.65	4,897.91	11.66	157.74	-122.238	-984.88	-612.40	2,209.06	2,053.51	155.55	14.202	
3,100.00	3,018.62	9,790.59	4,897.81	11.86	157.39	-121.785	-985.14	-623.45	2,168.14	2,012.22	155.93	13.905	
3,150.00	3,066.85	9,779.55	4,897.71	12.06	157.05	-121.329	-985.41	-634.49	2,127.56	1,971.26	156.30	13.612	
3,200.00	3,115.07	9,770.00	4,897.62	12.27	156.75	-120.933	-985.66	-644.03	2,087.31	1,930.67	156.65	13.325	
3,250.00	3,163.29	9,757.26	4,897.53	12.47	156.35	-120.402	-985.96	-656.77	2,047.43	1,890.40	157.03	13.038	
3,300.00	3,211.52	9,745.69	4,897.49	12.68	155.99	-119.918	-986.19	-668.34	2,007.92	1,850.54	157.39	12.758	
3,350.00	3,259.74	9,733.78	4,897.49	12.88	155.61	-119.418	-986.36	-680.24	1,968.82	1,811.08	157.74	12.482	
3,400.00	3,307.96	9,721.52	4,897.54	13.08	155.23	-118.901	-986.49	-692.51	1,930.13	1,772.05	158.08	12.210	
3,450.00	3,356.19	9,708.89	4,897.64	13.29	154.83	-118.366	-986.55	-705.13	1,891.89	1,733.48	158.41	11.943	
3,500.00	3,404.41	9,695.88	4,897.79	13.49	154.42	-117.814	-986.56	-718.15	1,854.12	1,695.38	158.74	11.680	
3,550.00	3,452.63	9,682.46	4,898.01	13.70	154.00	-117.242	-986.49	-731.56	1,816.83	1,657.78	159.05	11.423	
3,600.00	3,500.85	9,668.51	4,898.28	13.90	153.57	-116.645	-986.36	-745.51	1,780.07	1,620.71	159.36	11.170	
3,650.00	3,549.08	9,654.44	4,898.54	14.11	153.13	-116.038	-986.24	-759.58	1,743.85	1,584.20	159.65	10.923	
3,700.00	3,597.30	9,640.49	4,898.79	14.31	152.69	-115.432	-986.14	-773.53	1,708.21	1,548.28	159.92	10.681	
3,750.00	3,645.52	9,626.65	4,899.02	14.51	152.25	-114.827	-986.06	-787.36	1,673.18	1,513.00	160.18	10.446	
3,800.00	3,693.75	9,612.93	4,899.23	14.72	151.82	-114.222	-986.00	-801.08	1,638.82	1,478.40	160.42	10.216	
3,850.00	3,741.97	9,599.32	4,899.42	14.92	151.40	-113.619	-985.96	-814.69	1,605.17	1,444.52	160.65	9.992	
3,900.00	3,790.19	9,585.83	4,899.60	15.13	150.97	-113.017	-985.94	-828.18	1,572.27	1,411.40	160.86	9.774	
3,950.00	3,838.42	9,573.24	4,899.75	15.33	150.58	-112.452	-985.93	-840.77	1,540.17	1,379.10	161.06	9.563	
4,000.00	3,886.64	9,561.01	4,899.90	15.54	150.20	-111.900	-985.95	-852.99	1,508.93	1,347.68	161.25	9.358	
4,050.00	3,935.06	9,549.51	4,900.03	15.74	149.84	-111.014	-985.98	-864.50	1,478.47	1,316.01	162.45	9.101	
4,100.00	3,984.05	9,540.25	4,900.14	15.93	149.55	-111.104	-986.01	-873.75	1,448.59	1,284.97	163.62	8.853	
4,150.00	4,033.48	9,533.32	4,900.22	16.11	149.33	-113.619	-986.05	-880.68	1,419.45	1,254.98	164.47	8.631	
4,200.00	4,083.23	9,528.72	4,900.27	16.29	149.18	-122.917	-986.07	-885.28	1,391.21	1,226.17	165.04	8.430	
4,250.00	4,133.15	9,526.46	4,900.29	16.45	149.11	-160.579	-986.09	-887.55	1,364.05	1,198.64	165.41	8.247	
4,300.00	4,183.11	9,526.53	4,900.29	16.61	149.12	133.392	-986.09	-887.48	1,338.11	1,172.48	165.62	8.079	
4,350.00	4,232.97	9,528.92	4,900.27	16.75	149.19	113.094	-986.07	-885.08	1,313.54	1,147.78	165.76	7.924	
4,400.00	4,282.59	9,533.63	4,900.21	16.88	149.34	106.794	-986.05	-880.37	1,290.47	1,124.60	165.87	7.780	
4,450.00	4,331.84	9,540.63	4,900.13	17.02	149.56	104.152	-986.01	-873.38	1,269.03	1,103.01	166.01	7.644	
4,500.00	4,380.59	9,549.89	4,900.03	17.14	149.85	102.807	-985.98	-864.11	1,249.30	1,083.09	166.21	7.516	
4,550.00	4,428.69	9,561.38	4,899.90	17.27	150.21	101.981	-985.95	-852.62	1,231.38	1,064.87	166.51	7.395	
4,600.00	4,476.02	9,575.07	4,899.73	17.39	150.64	101.352	-985.93	-838.94	1,215.32	1,048.39	166.92	7.281	
4,650.00	4,522.45	9,591.33	4,899.53	17.51	151.15	100.749	-985.95	-822.68	1,201.15	1,033.67	167.48	7.172	
4,700.00	4,567.85	9,610.04	4,899.27	17.63	151.73	100.097	-985.99	-803.97	1,188.87	1,020.69	168.19	7.069	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 100-MWD+IGRF												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,750.00	4,612.10	9,630.80	4,898.95	17.74	152.38	99.374	-986.09	-783.21	1,178.48	1,009.46	169.02	6.973	
4,800.00	4,655.07	9,653.52	4,898.56	17.86	153.10	98.562	-986.24	-760.50	1,169.91	999.95	169.96	6.883	
4,850.00	4,696.65	9,679.77	4,898.06	17.98	153.92	97.586	-986.47	-734.25	1,163.12	992.04	171.08	6.799	
4,900.00	4,736.73	9,727.86	4,897.51	18.10	155.43	95.743	-986.43	-686.16	1,157.70	984.63	173.07	6.689	
4,950.00	4,775.18	9,770.00	4,897.62	18.22	156.75	94.195	-985.66	-644.03	1,153.21	978.47	174.74	6.600	
5,000.00	4,811.92	9,805.84	4,897.95	18.34	157.87	92.920	-984.79	-608.21	1,149.81	973.70	176.11	6.529	
5,050.00	4,846.83	9,837.36	4,898.24	18.47	158.86	91.814	-984.16	-576.69	1,147.66	970.36	177.29	6.473	
5,100.00	4,879.83	9,870.92	4,898.55	18.61	159.91	90.656	-983.62	-543.14	1,146.59	968.08	178.50	6.423	
5,137.45	4,903.23	9,898.93	4,898.77	18.71	160.79	89.719	-983.24	-515.13	1,146.37	966.90	179.47	6.388 CC	
5,150.00	4,910.81	9,908.49	4,898.84	18.75	161.09	89.406	-983.12	-505.57	1,146.39	966.61	179.79	6.376	
5,200.00	4,939.70	9,947.39	4,899.02	18.90	162.30	88.166	-982.66	-466.68	1,146.89	965.84	181.05	6.335	
5,250.00	4,966.42	9,987.87	4,899.11	19.05	163.57	86.946	-982.26	-426.20	1,147.94	965.63	182.31	6.297 ES	
5,300.00	4,991.50	10,029.35	4,899.12	19.21	164.88	85.868	-981.90	-384.72	1,149.44	965.89	183.55	6.262	
5,350.00	5,016.50	10,068.59	4,899.05	19.39	166.11	84.889	-981.63	-345.48	1,151.57	966.87	184.70	6.235	
5,400.00	5,041.50	10,104.31	4,898.83	19.57	167.23	83.996	-981.57	-309.77	1,154.47	968.77	185.71	6.217	
5,450.00	5,066.50	10,139.83	4,898.46	19.76	168.34	83.104	-981.72	-274.25	1,158.21	971.52	186.68	6.204	
5,500.00	5,090.48	10,178.94	4,898.00	19.96	169.57	81.849	-982.10	-235.14	1,162.57	974.99	187.57	6.198	
5,550.00	5,110.69	10,221.38	4,897.85	20.17	170.91	80.583	-982.70	-192.70	1,166.88	978.40	188.48	6.191	
5,600.00	5,126.84	10,265.48	4,898.06	20.38	172.29	79.516	-983.51	-148.61	1,170.88	981.42	189.46	6.180	
5,650.00	5,138.80	10,313.28	4,898.39	20.59	173.79	78.653	-984.50	-100.82	1,174.35	983.71	190.63	6.160	
5,700.00	5,146.49	10,347.00	4,898.63	20.79	174.85	78.129	-985.21	-67.11	1,177.14	985.58	191.55	6.145 SF	
5,750.00	5,149.84	10,347.00	4,898.63	21.00	174.85	77.783	-985.21	-67.11	1,180.66	989.11	191.55	6.164	
5,800.00	5,150.00	10,347.00	4,898.63	21.20	174.85	77.670	-985.21	-67.11	1,185.62	993.94	191.67	6.186	
5,850.00	5,150.00	10,347.00	4,898.63	21.42	174.85	77.670	-985.21	-67.11	1,192.61	1,000.73	191.89	6.215	
5,900.00	5,150.00	10,347.00	4,898.63	21.64	174.85	77.670	-985.21	-67.11	1,201.66	1,009.55	192.11	6.255	
5,950.00	5,150.00	10,347.00	4,898.63	21.88	174.85	77.670	-985.21	-67.11	1,212.69	1,020.35	192.35	6.305	
6,000.00	5,150.00	10,347.00	4,898.63	22.13	174.85	77.670	-985.21	-67.11	1,225.67	1,033.08	192.59	6.364	
6,050.00	5,150.00	10,347.00	4,898.63	22.40	174.85	77.670	-985.21	-67.11	1,240.53	1,047.68	192.85	6.433	
6,100.00	5,150.00	10,347.00	4,898.63	22.66	174.85	77.670	-985.21	-67.11	1,257.20	1,064.09	193.11	6.510	
6,150.00	5,150.00	10,347.00	4,898.63	22.95	174.85	77.670	-985.21	-67.11	1,275.62	1,082.22	193.40	6.596	
6,200.00	5,150.00	10,347.00	4,898.63	23.24	174.85	77.670	-985.21	-67.11	1,295.71	1,102.02	193.68	6.690	
6,250.00	5,150.00	10,347.00	4,898.63	23.55	174.85	77.670	-985.21	-67.11	1,317.38	1,123.40	193.99	6.791	
6,300.00	5,150.00	10,347.00	4,898.63	23.86	174.85	77.670	-985.21	-67.11	1,340.58	1,146.29	194.29	6.900	
6,350.00	5,150.00	10,347.00	4,898.63	24.19	174.85	77.670	-985.21	-67.11	1,365.21	1,170.60	194.61	7.015	
6,400.00	5,150.00	10,347.00	4,898.63	24.51	174.85	77.670	-985.21	-67.11	1,391.20	1,196.27	194.93	7.137	
6,450.00	5,150.00	10,347.00	4,898.63	24.86	174.85	77.670	-985.21	-67.11	1,418.48	1,223.21	195.27	7.264	
6,500.00	5,150.00	10,347.00	4,898.63	25.20	174.85	77.670	-985.21	-67.11	1,446.97	1,251.37	195.61	7.397	
6,550.00	5,150.00	10,347.00	4,898.63	25.56	174.85	77.670	-985.21	-67.11	1,476.61	1,280.65	195.96	7.535	
6,600.00	5,150.00	10,347.00	4,898.63	25.92	174.85	77.670	-985.21	-67.11	1,507.32	1,311.01	196.31	7.678	
6,650.00	5,150.00	10,347.00	4,898.63	26.29	174.85	77.670	-985.21	-67.11	1,539.05	1,342.37	196.68	7.825	
6,700.00	5,150.00	10,347.00	4,898.63	26.67	174.85	77.670	-985.21	-67.11	1,571.72	1,374.68	197.05	7.976	
6,750.00	5,150.00	10,347.00	4,898.63	27.05	174.85	77.670	-985.21	-67.11	1,605.29	1,407.87	197.43	8.131	
6,800.00	5,150.00	10,347.00	4,898.63	27.44	174.85	77.670	-985.21	-67.11	1,639.70	1,441.89	197.81	8.289	
6,850.00	5,150.00	10,347.00	4,898.63	27.84	174.85	77.670	-985.21	-67.11	1,674.89	1,476.69	198.20	8.451	
6,900.00	5,150.00	10,347.00	4,898.63	28.23	174.85	77.670	-985.21	-67.11	1,710.82	1,512.23	198.59	8.615	
6,950.00	5,150.00	10,347.00	4,898.63	28.64	174.85	77.670	-985.21	-67.11	1,747.44	1,548.45	198.99	8.782	
7,000.00	5,150.00	10,347.00	4,898.63	29.05	174.85	77.670	-985.21	-67.11	1,784.71	1,585.32	199.39	8.951	
7,050.00	5,150.00	10,347.00	4,898.63	29.47	174.85	77.670	-985.21	-67.11	1,822.59	1,622.79	199.80	9.122	
7,100.00	5,150.00	10,347.00	4,898.63	29.89	174.85	77.670	-985.21	-67.11	1,861.04	1,660.83	200.21	9.295	
7,150.00	5,150.00	10,347.00	4,898.63	30.32	174.85	77.670	-985.21	-67.11	1,900.03	1,699.40	200.64	9.470	
7,200.00	5,150.00	10,347.00	4,898.63	30.75	174.85	77.670	-985.21	-67.11	1,939.53	1,738.47	201.06	9.647	
7,250.00	5,150.00	10,347.00	4,898.63	31.19	174.85	77.670	-985.21	-67.11	1,979.50	1,778.02	201.49	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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 100-MWD+IGRF												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	
7,300.00	5,150.00	10,347.00	4,898.63	31.62	174.85	77.670	-985.21	-67.11	2,019.92	1,818.00	201.91	10.004	
7,350.00	5,150.00	10,347.00	4,898.63	32.07	174.85	77.670	-985.21	-67.11	2,060.76	1,858.41	202.35	10.184	
7,400.00	5,150.00	10,347.00	4,898.63	32.51	174.85	77.670	-985.21	-67.11	2,101.99	1,899.20	202.79	10.365	
7,450.00	5,150.00	10,347.00	4,898.63	32.96	174.85	77.670	-985.21	-67.11	2,143.60	1,940.37	203.23	10.548	
7,500.00	5,150.00	10,347.00	4,898.63	33.42	174.85	77.670	-985.21	-67.11	2,185.56	1,981.88	203.68	10.731	
7,550.00	5,150.00	10,347.00	4,898.63	33.88	174.85	77.670	-985.21	-67.11	2,227.85	2,023.72	204.13	10.914	
7,600.00	5,150.00	10,347.00	4,898.63	34.33	174.85	77.670	-985.21	-67.11	2,270.45	2,065.88	204.58	11.098	
7,650.00	5,150.00	10,347.00	4,898.63	34.80	174.85	77.670	-985.21	-67.11	2,313.35	2,108.32	205.03	11.283	
7,700.00	5,150.00	10,347.00	4,898.63	35.26	174.85	77.670	-985.21	-67.11	2,356.53	2,151.04	205.49	11.468	
7,750.00	5,150.00	10,347.00	4,898.63	35.73	174.85	77.670	-985.21	-67.11	2,399.98	2,194.03	205.95	11.653	
7,800.00	5,150.00	10,347.00	4,898.63	36.20	174.85	77.670	-985.21	-67.11	2,443.67	2,237.26	206.41	11.839	
7,850.00	5,150.00	10,347.00	4,898.63	36.68	174.85	77.670	-985.21	-67.11	2,487.61	2,280.73	206.88	12.025	
7,900.00	5,150.00	10,347.00	4,898.63	37.16	174.85	77.670	-985.21	-67.11	2,531.76	2,324.42	207.34	12.210	
7,950.00	5,150.00	10,347.00	4,898.63	37.64	174.85	77.670	-985.21	-67.11	2,576.14	2,368.32	207.81	12.396	
8,000.00	5,150.00	10,347.00	4,898.63	38.12	174.85	77.670	-985.21	-67.11	2,620.71	2,412.42	208.29	12.582	
8,050.00	5,150.00	10,347.00	4,898.63	38.60	174.85	77.670	-985.21	-67.11	2,665.48	2,456.72	208.76	12.768	
8,100.00	5,150.00	10,347.00	4,898.63	39.09	174.85	77.670	-985.21	-67.11	2,710.43	2,501.19	209.24	12.954	
8,150.00	5,150.00	10,347.00	4,898.63	39.57	174.85	77.670	-985.21	-67.11	2,755.55	2,545.83	209.72	13.139	
8,200.00	5,150.00	10,347.00	4,898.63	40.06	174.85	77.670	-985.21	-67.11	2,800.84	2,590.64	210.20	13.325	
8,250.00	5,150.00	10,347.00	4,898.63	40.56	174.85	77.670	-985.21	-67.11	2,846.29	2,635.61	210.68	13.510	
8,300.00	5,150.00	10,347.00	4,898.63	41.05	174.85	77.670	-985.21	-67.11	2,891.88	2,680.72	211.16	13.695	
8,350.00	5,150.00	10,347.00	4,898.63	41.55	174.85	77.670	-985.21	-67.11	2,937.63	2,725.98	211.65	13.880	
8,400.00	5,150.00	10,347.00	4,898.63	42.04	174.85	77.670	-985.21	-67.11	2,983.50	2,771.37	212.14	14.064	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 100-MWD+IGRF												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	
0.00	0.00	0.00	36.00	0.00	0.00	-160.834	-1,639.45	-569.83	1,736.03				
50.00	50.00	12.39	48.39	0.05	0.02	-160.834	-1,639.46	-569.83	1,735.66	1,735.59	0.08	N/A	
100.00	100.00	56.63	92.63	0.14	0.10	-160.834	-1,639.57	-569.86	1,735.79	1,735.55	0.25	7,081.211	
150.00	150.00	100.00	136.00	0.32	0.18	-160.834	-1,639.81	-569.94	1,736.09	1,735.59	0.50	3,457.484	
200.00	200.00	149.20	185.20	0.50	0.36	-160.835	-1,640.19	-570.05	1,736.49	1,735.63	0.86	2,023.704	
250.00	250.00	197.46	233.45	0.68	0.53	-160.836	-1,640.61	-570.17	1,736.94	1,735.73	1.21	1,434.824	
300.00	300.00	238.75	274.74	0.86	0.68	-160.838	-1,641.09	-570.27	1,737.54	1,736.00	1.54	1,129.452	
350.00	350.00	279.64	315.63	1.04	0.82	-79.500	-1,641.79	-570.39	1,738.31	1,736.45	1.86	934.344	
400.00	399.98	321.71	357.68	1.21	0.98	-79.525	-1,642.75	-570.50	1,739.19	1,737.00	2.19	795.001	
450.00	449.93	364.92	400.88	1.39	1.13	-79.579	-1,643.93	-570.55	1,740.11	1,737.59	2.52	690.878	
500.00	499.84	410.96	446.90	1.57	1.30	-79.669	-1,645.40	-570.53	1,741.06	1,738.20	2.86	608.828	
550.00	549.68	469.51	505.42	1.75	1.51	-79.830	-1,647.20	-570.31	1,741.76	1,738.51	3.25	536.321	
600.00	599.45	524.18	560.07	1.93	1.71	-80.020	-1,648.69	-569.92	1,742.09	1,738.47	3.62	481.021	
650.00	649.13	574.64	610.51	2.11	1.89	-80.227	-1,650.01	-569.54	1,742.24	1,738.26	3.98	437.445	
700.00	698.70	629.50	665.35	2.29	2.09	-80.489	-1,651.38	-569.09	1,742.21	1,737.85	4.36	399.667	
750.00	748.15	688.75	724.58	2.47	2.30	-80.814	-1,652.62	-568.41	1,741.82	1,737.07	4.75	366.443	
800.00	797.47	748.22	784.04	2.65	2.51	-81.181	-1,653.53	-567.64	1,741.05	1,735.91	5.15	338.287	
850.00	846.63	806.80	842.62	2.84	2.72	-81.572	-1,653.99	-567.09	1,739.91	1,734.37	5.54	314.087	
900.00	895.62	859.14	894.96	3.02	2.90	-81.956	-1,654.21	-566.64	1,738.52	1,732.61	5.91	294.241	
950.00	944.44	910.35	946.16	3.21	3.08	-82.365	-1,654.33	-566.15	1,736.98	1,730.71	6.28	276.729	
1,000.00	993.06	958.02	993.83	3.40	3.25	-82.777	-1,654.44	-565.64	1,735.40	1,728.76	6.63	261.651	
1,050.00	1,041.46	1,005.53	1,041.33	3.59	3.42	-83.217	-1,654.59	-565.10	1,733.81	1,726.82	6.99	248.017	
1,100.00	1,089.70	1,053.48	1,089.28	3.78	3.58	-83.661	-1,654.75	-564.52	1,732.26	1,724.91	7.35	235.607	
1,150.00	1,137.92	1,101.49	1,137.29	3.98	3.75	-84.099	-1,654.93	-563.92	1,730.82	1,723.10	7.72	224.277	
1,200.00	1,186.14	1,152.29	1,188.08	4.18	3.93	-84.562	-1,655.08	-563.27	1,729.45	1,721.35	8.09	213.733	
1,250.00	1,234.37	1,202.90	1,238.69	4.37	4.11	-85.023	-1,655.14	-562.66	1,728.11	1,719.64	8.47	204.105	
1,300.00	1,282.59	1,250.55	1,286.33	4.57	4.28	-85.457	-1,655.15	-562.12	1,726.85	1,718.02	8.83	195.516	
1,350.00	1,330.81	1,298.23	1,334.01	4.77	4.45	-85.889	-1,655.17	-561.63	1,725.71	1,716.51	9.20	187.604	
1,400.00	1,379.04	1,348.05	1,383.83	4.97	4.62	-86.340	-1,655.16	-561.16	1,724.67	1,715.09	9.57	180.164	
1,450.00	1,427.26	1,397.94	1,433.72	5.17	4.80	-86.792	-1,655.10	-560.66	1,723.68	1,713.73	9.95	173.268	
1,500.00	1,475.48	1,446.92	1,482.70	5.37	4.97	-87.235	-1,654.99	-560.22	1,722.76	1,712.44	10.32	166.958	
1,550.00	1,523.71	1,495.94	1,531.71	5.57	5.14	-87.674	-1,654.83	-559.91	1,721.92	1,711.23	10.69	161.080	
1,600.00	1,571.93	1,542.41	1,578.18	5.77	5.30	-88.088	-1,654.67	-559.71	1,721.20	1,710.14	11.05	155.742	
1,650.00	1,620.15	1,588.67	1,624.45	5.97	5.46	-88.499	-1,654.56	-559.57	1,720.63	1,709.22	11.41	150.759	
1,700.00	1,668.37	1,639.55	1,675.32	6.17	5.63	-88.950	-1,654.43	-559.44	1,720.17	1,708.38	11.79	145.898	
1,750.00	1,716.60	1,691.92	1,727.69	6.37	5.81	-89.414	-1,654.17	-559.29	1,719.70	1,707.53	12.17	141.273	
1,800.00	1,764.82	1,742.28	1,778.05	6.57	5.98	-89.860	-1,653.83	-559.14	1,719.24	1,706.70	12.55	137.019	
1,850.00	1,813.04	1,792.30	1,828.06	6.78	6.16	-90.302	-1,653.43	-559.04	1,718.84	1,705.92	12.92	133.026	
1,900.00	1,861.27	1,840.69	1,876.46	6.98	6.32	-90.727	-1,653.00	-559.01	1,718.50	1,705.21	13.29	129.327	
1,950.00	1,909.49	1,888.84	1,924.61	7.18	6.48	-91.147	-1,652.56	-559.08	1,718.27	1,704.62	13.65	125.839	
2,000.00	1,957.71	1,937.85	1,973.62	7.38	6.65	-91.572	-1,652.10	-559.26	1,718.13	1,704.11	14.02	122.519	
2,050.00	2,005.94	1,987.16	2,022.92	7.59	6.82	-91.996	-1,651.59	-559.51	1,718.06	1,703.67	14.39	119.364	
2,100.00	2,054.16	2,041.95	2,077.71	7.79	7.00	-92.466	-1,650.93	-559.82	1,718.00	1,703.22	14.78	116.213	
2,150.00	2,102.38	2,098.62	2,134.37	7.99	7.19	-92.955	-1,649.99	-560.01	1,717.81	1,702.63	15.18	113.164	
2,198.91	2,149.55	2,140.06	2,175.80	8.19	7.34	-93.315	-1,649.27	-560.09	1,717.68	1,702.16	15.52	110.666 CC	
2,200.00	2,150.61	2,140.98	2,176.72	8.19	7.34	-93.323	-1,649.25	-560.09	1,717.68	1,702.15	15.53	110.612	
2,250.00	2,198.83	2,182.95	2,218.68	8.40	7.49	-93.690	-1,648.69	-560.13	1,717.82	1,701.95	15.88	108.196 ES	
2,300.00	2,247.05	2,230.35	2,266.08	8.60	7.65	-94.103	-1,648.17	-560.18	1,718.20	1,701.96	16.24	105.778	
2,350.00	2,295.28	2,281.57	2,317.30	8.80	7.82	-94.544	-1,647.54	-560.42	1,718.61	1,701.99	16.62	103.385	
2,400.00	2,343.50	2,327.35	2,363.07	9.01	7.98	-94.933	-1,646.93	-560.78	1,719.09	1,702.10	16.98	101.217	
2,450.00	2,391.72	2,369.98	2,405.70	9.21	8.13	-95.297	-1,646.50	-561.07	1,719.80	1,702.47	17.33	99.216	
2,500.00	2,439.95	2,414.81	2,450.53	9.41	8.28	-95.681	-1,646.19	-561.32	1,720.77	1,703.07	17.69	97.265	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 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 Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,550.00	2,488.17	2,464.94	2,500.65	9.62	8.45	-96.111	-1,645.84	-561.58	1,721.83	1,703.76	18.07	95.298	
2,600.00	2,536.39	2,514.19	2,549.91	9.82	8.63	-96.533	-1,645.45	-561.82	1,722.93	1,704.49	18.44	93.429	
2,650.00	2,584.61	2,561.39	2,597.10	10.02	8.79	-96.939	-1,645.09	-561.98	1,724.15	1,705.34	18.81	91.669	
2,700.00	2,632.84	2,608.39	2,644.10	10.23	8.95	-97.346	-1,644.76	-562.06	1,725.49	1,706.32	19.17	89.988	
2,750.00	2,681.06	2,654.79	2,690.50	10.43	9.11	-97.747	-1,644.48	-562.15	1,726.98	1,707.44	19.54	88.385	
2,800.00	2,729.28	2,701.29	2,737.00	10.64	9.28	-98.145	-1,644.25	-562.31	1,728.62	1,708.71	19.90	86.848	
2,850.00	2,777.51	2,750.45	2,786.15	10.84	9.45	-98.562	-1,644.02	-562.59	1,730.36	1,710.08	20.28	85.337	
2,900.00	2,825.73	2,799.68	2,835.38	11.04	9.62	-98.975	-1,643.76	-563.00	1,732.17	1,711.52	20.65	83.882	
2,950.00	2,873.95	2,851.87	2,887.58	11.25	9.80	-99.409	-1,643.42	-563.52	1,734.01	1,712.98	21.03	82.440	
3,000.00	2,922.18	2,900.00	2,935.70	11.45	9.96	-99.809	-1,643.00	-563.98	1,735.84	1,714.44	21.40	81.102	
3,050.00	2,970.40	2,947.47	2,983.16	11.66	10.13	-100.206	-1,642.59	-564.33	1,737.77	1,716.00	21.77	79.818	
3,100.00	3,018.62	2,991.38	3,027.07	11.86	10.28	-100.578	-1,642.33	-564.46	1,739.92	1,717.80	22.13	78.631	
3,150.00	3,066.85	3,037.01	3,072.70	12.06	10.44	-100.968	-1,642.15	-564.49	1,742.27	1,719.78	22.49	77.471	
3,200.00	3,115.07	3,083.08	3,118.77	12.27	10.60	-101.359	-1,642.03	-564.56	1,744.78	1,721.93	22.85	76.349	
3,250.00	3,163.29	3,130.12	3,165.81	12.47	10.77	-101.755	-1,641.95	-564.66	1,747.43	1,724.21	23.22	75.261	
3,300.00	3,211.52	3,177.71	3,213.40	12.68	10.93	-102.156	-1,641.90	-564.77	1,750.20	1,726.62	23.59	74.206	
3,350.00	3,259.74	3,226.04	3,261.73	12.88	11.10	-102.562	-1,641.86	-564.86	1,753.08	1,729.12	23.96	73.181	
3,400.00	3,307.96	3,275.05	3,310.74	13.08	11.27	-102.971	-1,641.80	-564.98	1,756.03	1,731.70	24.33	72.183	
3,450.00	3,356.19	3,323.52	3,359.21	13.29	11.44	-103.375	-1,641.73	-565.10	1,759.05	1,734.36	24.70	71.223	
3,500.00	3,404.41	3,371.39	3,407.08	13.49	11.61	-103.774	-1,641.66	-565.18	1,762.18	1,737.11	25.07	70.300	
3,550.00	3,452.63	3,419.88	3,455.58	13.70	11.78	-104.178	-1,641.59	-565.20	1,765.40	1,739.96	25.44	69.402	
3,600.00	3,500.85	3,469.34	3,505.03	13.90	11.96	-104.589	-1,641.49	-565.22	1,768.69	1,742.88	25.81	68.522	
3,650.00	3,549.08	3,517.93	3,553.62	14.11	12.13	-104.991	-1,641.36	-565.24	1,772.05	1,745.86	26.18	67.679	
3,700.00	3,597.30	3,565.10	3,600.79	14.31	12.29	-105.381	-1,641.26	-565.26	1,775.51	1,748.96	26.55	66.875	
3,750.00	3,645.52	3,612.48	3,648.17	14.51	12.46	-105.770	-1,641.18	-565.29	1,779.09	1,752.17	26.92	66.097	
3,800.00	3,693.75	3,660.45	3,696.14	14.72	12.63	-106.163	-1,641.12	-565.31	1,782.77	1,755.49	27.29	65.339	
3,850.00	3,741.97	3,708.65	3,744.34	14.92	12.80	-106.556	-1,641.05	-565.32	1,786.55	1,758.90	27.65	64.603	
3,900.00	3,790.19	3,757.96	3,793.65	15.13	12.97	-106.958	-1,640.97	-565.31	1,790.41	1,762.38	28.03	63.881	
3,950.00	3,838.42	3,806.82	3,842.51	15.33	13.15	-107.355	-1,640.86	-565.27	1,794.32	1,765.92	28.40	63.184	
4,000.00	3,886.64	3,853.20	3,888.89	15.54	13.31	-107.731	-1,640.77	-565.23	1,798.35	1,769.58	28.76	62.529	
4,050.00	3,935.06	3,900.00	3,935.69	15.74	13.48	-109.666	-1,640.72	-565.17	1,802.36	1,773.24	29.13	61.880	
4,100.00	3,984.05	3,953.71	3,989.40	15.93	13.67	-112.923	-1,640.63	-565.13	1,805.95	1,776.43	29.51	61.197	
4,150.00	4,033.48	4,006.75	4,042.44	16.11	13.85	-118.311	-1,640.40	-565.12	1,808.94	1,779.05	29.88	60.534	
4,200.00	4,083.23	4,051.86	4,087.55	16.29	14.01	-130.148	-1,640.22	-565.10	1,811.46	1,781.25	30.22	59.946	
4,250.00	4,133.15	4,100.00	4,135.69	16.45	14.18	-170.035	-1,640.16	-565.04	1,813.60	1,783.05	30.55	59.360	
4,300.00	4,183.11	4,157.22	4,192.91	16.61	14.38	122.065	-1,640.02	-565.06	1,815.14	1,784.24	30.90	58.734	
4,350.00	4,232.97	4,213.02	4,248.71	16.75	14.58	100.276	-1,639.61	-565.30	1,815.87	1,784.63	31.24	58.127	
4,400.00	4,282.59	4,256.44	4,292.13	16.88	14.73	92.800	-1,639.33	-565.41	1,816.14	1,784.61	31.52	57.610	
4,450.00	4,331.84	4,308.69	4,344.37	17.02	14.92	89.370	-1,639.04	-565.45	1,815.97	1,784.14	31.84	57.040	
4,500.00	4,380.59	4,358.43	4,394.11	17.14	15.09	87.582	-1,638.75	-565.69	1,815.31	1,783.17	32.14	56.488	
4,550.00	4,428.69	4,429.44	4,465.56	17.27	16.05	90.292	-1,627.68	-621.50	1,809.71	1,776.43	33.28	54.385	
4,600.00	4,476.02	4,735.36	4,746.39	17.39	16.51	92.298	-1,621.57	-676.97	1,802.94	1,769.06	33.88	53.216	
4,650.00	4,522.45	4,830.51	4,817.05	17.51	17.07	94.726	-1,614.81	-740.17	1,795.69	1,761.12	34.56	51.952	
4,700.00	4,567.85	4,864.00	4,839.24	17.63	17.31	95.592	-1,612.12	-765.10	1,789.02	1,754.09	34.92	51.226	
4,750.00	4,612.10	4,880.31	4,849.55	17.74	17.44	95.986	-1,610.78	-777.67	1,783.61	1,748.45	35.16	50.726	
4,800.00	4,655.07	4,891.49	4,856.42	17.86	17.54	96.225	-1,609.86	-786.44	1,779.60	1,744.23	35.37	50.316	
4,850.00	4,696.65	4,896.19	4,859.25	17.98	17.58	96.233	-1,609.48	-790.17	1,777.08	1,741.56	35.52	50.029	
4,900.00	4,736.73	4,896.58	4,859.49	18.10	17.58	96.061	-1,609.44	-790.48	1,776.07	1,740.43	35.64	49.833	
4,907.91	4,742.92	4,896.34	4,859.34	18.12	17.58	96.019	-1,609.46	-790.29	1,776.05	1,740.39	35.66	49.809	
4,950.00	4,775.18	4,893.96	4,857.91	18.22	17.56	95.739	-1,609.66	-788.40	1,776.59	1,740.85	35.74	49.710	
5,000.00	4,811.92	4,889.16	4,855.00	18.34	17.52	95.288	-1,610.06	-784.60	1,778.63	1,742.80	35.83	49.646	
5,050.00	4,846.83	4,882.73	4,851.05	18.47	17.46	94.722	-1,610.59	-779.55	1,782.15	1,746.25	35.91	49.633 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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 100-MWD+IGRF												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	
5,100.00	4,879.83	4,875.28	4,846.41	18.61	17.40	94.058	-1,611.20	-773.76	1,787.12	1,751.13	35.99	49.656	
5,150.00	4,910.81	4,866.89	4,841.09	18.75	17.34	93.298	-1,611.88	-767.30	1,793.49	1,757.42	36.07	49.717	
5,200.00	4,939.70	4,857.58	4,835.09	18.90	17.26	92.444	-1,612.64	-760.22	1,801.20	1,765.05	36.16	49.818	
5,250.00	4,966.42	4,848.00	4,828.81	19.05	17.19	91.519	-1,613.42	-753.03	1,810.19	1,773.95	36.24	49.954	
5,300.00	4,991.50	4,836.34	4,821.02	19.21	17.11	90.980	-1,614.35	-744.42	1,820.39	1,784.07	36.32	50.126	
5,350.00	5,016.50	4,826.40	4,814.23	19.39	17.04	90.674	-1,615.14	-737.20	1,831.81	1,795.39	36.42	50.291	
5,400.00	5,041.50	4,816.00	4,806.99	19.57	16.97	90.353	-1,615.94	-729.77	1,844.45	1,807.92	36.53	50.493	
5,450.00	5,066.50	4,809.13	4,802.14	19.76	16.92	90.139	-1,616.47	-724.94	1,858.29	1,821.61	36.68	50.664	
5,500.00	5,090.48	4,800.89	4,796.23	19.96	16.87	88.722	-1,617.08	-719.22	1,873.29	1,836.49	36.80	50.905	
5,550.00	5,110.69	4,785.00	4,784.60	20.17	16.77	86.553	-1,618.22	-708.46	1,889.35	1,852.53	36.82	51.308	
5,600.00	5,126.84	4,785.00	4,784.60	20.38	16.77	84.764	-1,618.22	-708.46	1,906.24	1,869.32	36.92	51.632	
5,650.00	5,138.80	4,769.22	4,772.75	20.59	16.69	82.460	-1,619.31	-698.10	1,923.77	1,886.93	36.84	52.214	
5,700.00	5,146.49	4,753.00	4,760.27	20.79	16.60	80.125	-1,620.41	-687.79	1,941.77	1,905.07	36.70	52.910	
5,750.00	5,149.84	4,743.03	4,752.46	21.00	16.55	77.956	-1,621.07	-681.63	1,960.00	1,923.45	36.56	53.614	
5,800.00	5,150.00	4,721.00	4,734.87	21.20	16.44	76.911	-1,622.48	-668.45	1,978.56	1,942.07	36.49	54.219	
5,850.00	5,150.00	4,721.00	4,734.87	21.42	16.44	76.911	-1,622.48	-668.45	1,997.92	1,961.21	36.71	54.427	
5,900.00	5,150.00	4,703.26	4,720.35	21.64	16.36	76.477	-1,623.56	-658.31	2,018.14	1,981.36	36.78	54.873	
5,950.00	5,150.00	4,690.00	4,709.28	21.88	16.30	76.148	-1,624.34	-651.06	2,039.25	2,002.35	36.91	55.255	
6,000.00	5,150.00	4,690.00	4,709.28	22.13	16.30	76.148	-1,624.34	-651.06	2,061.26	2,024.11	37.15	55.490	
6,050.00	5,150.00	4,672.72	4,694.59	22.40	16.23	75.713	-1,625.31	-642.02	2,084.03	2,046.76	37.27	55.924	
6,100.00	5,150.00	4,658.00	4,681.84	22.66	16.16	75.336	-1,626.11	-634.70	2,107.70	2,070.29	37.40	56.351	
6,150.00	5,150.00	4,658.00	4,681.84	22.95	16.16	75.336	-1,626.11	-634.70	2,132.13	2,094.45	37.69	56.577	
6,200.00	5,150.00	4,658.00	4,681.84	23.24	16.16	75.336	-1,626.11	-634.70	2,157.45	2,119.48	37.97	56.824	
6,250.00	5,150.00	4,641.67	4,667.47	23.55	16.10	74.914	-1,627.00	-626.99	2,183.41	2,145.28	38.13	57.260	
6,300.00	5,150.00	4,626.00	4,653.47	23.86	16.04	74.504	-1,627.87	-620.01	2,210.26	2,171.96	38.30	57.711	
6,350.00	5,150.00	4,626.00	4,653.47	24.19	16.04	74.504	-1,627.87	-620.01	2,237.72	2,199.10	38.62	57.947	
6,400.00	5,150.00	4,626.00	4,653.47	24.51	16.04	74.504	-1,627.87	-620.01	2,265.95	2,227.01	38.93	58.198	
6,450.00	5,150.00	4,626.00	4,653.47	24.86	16.04	74.504	-1,627.87	-620.01	2,294.92	2,255.65	39.27	58.440	
6,500.00	5,150.00	4,613.35	4,642.03	25.20	15.99	74.171	-1,628.60	-614.67	2,324.45	2,284.96	39.49	58.855	
6,550.00	5,150.00	4,608.71	4,637.80	25.56	15.97	74.049	-1,628.88	-612.78	2,354.70	2,314.89	39.80	59.159	
6,600.00	5,150.00	4,595.00	4,625.20	25.92	15.92	73.684	-1,629.73	-607.44	2,385.64	2,345.61	40.03	59.596	
6,650.00	5,150.00	4,595.00	4,625.20	26.29	15.92	73.684	-1,629.73	-607.44	2,417.06	2,376.67	40.39	59.840	
6,700.00	5,150.00	4,595.00	4,625.20	26.67	15.92	73.684	-1,629.73	-607.44	2,449.09	2,408.34	40.75	60.094	
6,750.00	5,150.00	4,595.00	4,625.20	27.05	15.92	73.684	-1,629.73	-607.44	2,481.72	2,440.59	41.13	60.340	
6,800.00	5,150.00	4,595.00	4,625.20	27.44	15.92	73.684	-1,629.73	-607.44	2,514.92	2,473.41	41.50	60.595	
6,850.00	5,150.00	4,582.00	4,613.13	27.84	15.88	73.337	-1,630.55	-602.68	2,548.53	2,506.76	41.77	61.011	
6,900.00	5,150.00	4,577.69	4,609.11	28.23	15.86	73.222	-1,630.81	-601.17	2,582.70	2,540.58	42.12	61.321	
6,950.00	5,150.00	4,563.00	4,595.29	28.64	15.81	72.826	-1,631.69	-596.25	2,617.44	2,575.06	42.38	61.766	
7,000.00	5,150.00	4,563.00	4,595.29	29.05	15.81	72.826	-1,631.69	-596.25	2,652.49	2,609.72	42.77	62.015	
7,050.00	5,150.00	4,563.00	4,595.29	29.47	15.81	72.826	-1,631.69	-596.25	2,688.03	2,644.85	43.18	62.257	
7,100.00	5,150.00	4,563.00	4,595.29	29.89	15.81	72.826	-1,631.69	-596.25	2,724.01	2,680.43	43.58	62.504	
7,150.00	5,150.00	4,563.00	4,595.29	30.32	15.81	72.826	-1,631.69	-596.25	2,760.43	2,716.44	44.00	62.744	
7,200.00	5,150.00	4,563.00	4,595.29	30.75	15.81	72.826	-1,631.69	-596.25	2,797.28	2,752.87	44.41	62.989	
7,250.00	5,150.00	4,563.00	4,595.29	31.19	15.81	72.826	-1,631.69	-596.25	2,834.52	2,789.69	44.83	63.227	
7,300.00	5,150.00	4,549.72	4,582.69	31.62	15.76	72.467	-1,632.45	-592.14	2,872.00	2,826.87	45.12	63.647	
7,350.00	5,150.00	4,546.88	4,579.98	32.07	15.75	72.389	-1,632.61	-591.30	2,909.93	2,864.40	45.52	63.920	
7,400.00	5,150.00	4,544.14	4,577.36	32.51	15.74	72.315	-1,632.77	-590.51	2,948.20	2,902.28	45.93	64.195	
7,450.00	5,150.00	4,531.00	4,564.74	32.96	15.69	71.957	-1,633.49	-586.90	2,986.91	2,940.68	46.23	64.612	

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



Anticollision Report

Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 25-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 Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,250.00	3,163.29	9,241.19	4,905.47	12.47	140.56	-109.541	-2,307.47	-636.13	2,973.73	2,822.82	150.91	19.705	
3,300.00	3,211.52	9,232.86	4,905.57	12.68	140.30	-109.362	-2,307.53	-644.46	2,947.53	2,796.60	150.93	19.529	
3,350.00	3,259.74	9,224.42	4,905.68	12.88	140.03	-109.180	-2,307.60	-652.90	2,921.91	2,770.96	150.95	19.357	
3,400.00	3,307.96	9,204.00	4,906.02	13.08	139.39	-108.740	-2,307.79	-673.32	2,896.93	2,746.23	150.69	19.224	
3,450.00	3,356.19	9,204.00	4,906.02	13.29	139.39	-108.740	-2,307.79	-673.32	2,872.48	2,721.58	150.90	19.036	
3,500.00	3,404.41	9,190.46	4,906.26	13.49	138.97	-108.447	-2,307.94	-686.86	2,848.68	2,697.89	150.79	18.891	
3,550.00	3,452.63	9,169.89	4,906.53	13.70	138.33	-108.001	-2,308.16	-707.43	2,825.47	2,674.95	150.52	18.772	
3,600.00	3,500.85	9,150.06	4,906.68	13.90	137.71	-107.569	-2,308.39	-727.25	2,802.86	2,652.61	150.25	18.654	
3,650.00	3,549.08	9,130.95	4,906.74	14.11	137.11	-107.152	-2,308.61	-746.36	2,780.87	2,630.87	150.00	18.540	
3,700.00	3,597.30	9,112.50	4,906.70	14.31	136.53	-106.747	-2,308.83	-764.81	2,759.53	2,609.78	149.75	18.428	
3,750.00	3,645.52	9,097.43	4,906.63	14.51	136.06	-106.416	-2,309.01	-779.87	2,738.85	2,589.27	149.58	18.310	
3,800.00	3,693.75	9,083.00	4,906.57	14.72	135.61	-106.099	-2,309.16	-794.30	2,718.86	2,569.44	149.42	18.196	
3,850.00	3,741.97	9,068.48	4,906.52	14.92	135.16	-105.779	-2,309.31	-808.83	2,699.59	2,550.33	149.25	18.087	
3,900.00	3,790.19	9,053.87	4,906.48	15.13	134.70	-105.457	-2,309.43	-823.44	2,681.04	2,531.95	149.08	17.984	
3,950.00	3,838.42	9,039.16	4,906.46	15.33	134.24	-105.133	-2,309.55	-838.15	2,663.22	2,514.32	148.90	17.886	
4,000.00	3,886.64	9,024.35	4,906.44	15.54	133.78	-104.806	-2,309.64	-852.95	2,646.16	2,497.45	148.71	17.794	
4,050.00	3,935.06	9,014.00	4,906.44	15.74	133.45	-105.166	-2,309.70	-863.31	2,629.79	2,480.99	148.80	17.673	
4,100.00	3,984.05	9,014.00	4,906.44	15.93	133.45	-106.898	-2,309.70	-863.31	2,614.00	2,464.85	149.15	17.526	
4,150.00	4,033.48	8,999.57	4,906.45	16.11	133.00	-110.598	-2,309.79	-877.73	2,598.81	2,449.80	149.01	17.441	
4,200.00	4,083.23	8,996.19	4,906.46	16.29	132.90	-121.183	-2,309.81	-881.11	2,584.35	2,435.23	149.12	17.330	
4,250.00	4,133.15	8,994.66	4,906.47	16.45	132.85	-160.006	-2,309.82	-882.64	2,570.67	2,421.43	149.24	17.225	
4,300.00	4,183.11	8,995.02	4,906.46	16.61	132.86	132.937	-2,309.82	-882.29	2,557.81	2,408.44	149.38	17.123	
4,350.00	4,232.97	8,997.28	4,906.46	16.75	132.93	111.753	-2,309.80	-880.02	2,545.83	2,396.29	149.54	17.025	
4,400.00	4,282.59	9,014.00	4,906.44	16.88	133.45	104.424	-2,309.70	-863.31	2,534.81	2,384.64	150.17	16.880	
4,450.00	4,331.84	9,014.00	4,906.44	17.02	133.45	101.322	-2,309.70	-863.31	2,524.65	2,374.43	150.22	16.806	
4,500.00	4,380.59	9,016.82	4,906.44	17.14	133.54	99.636	-2,309.69	-860.48	2,515.47	2,365.11	150.36	16.730	
4,550.00	4,428.69	9,032.85	4,906.45	17.27	134.04	98.351	-2,309.59	-844.46	2,507.26	2,356.30	150.96	16.609	
4,600.00	4,476.02	9,051.94	4,906.48	17.39	134.64	97.372	-2,309.45	-825.37	2,499.97	2,348.30	151.67	16.483	
4,650.00	4,522.45	9,074.07	4,906.54	17.51	135.33	96.544	-2,309.25	-803.23	2,493.59	2,341.09	152.49	16.352	
4,700.00	4,567.85	9,099.21	4,906.64	17.63	136.12	95.784	-2,308.99	-778.09	2,488.06	2,334.63	153.43	16.217	
4,750.00	4,612.10	9,124.77	4,906.74	17.74	136.92	95.099	-2,308.68	-752.54	2,483.34	2,328.96	154.38	16.086	
4,800.00	4,655.07	9,150.86	4,906.68	17.86	137.73	94.456	-2,308.38	-726.45	2,479.40	2,324.05	155.35	15.960	
4,850.00	4,696.65	9,178.62	4,906.43	17.98	138.60	93.816	-2,308.07	-698.69	2,476.21	2,319.82	156.39	15.834	
4,900.00	4,736.73	9,204.00	4,906.02	18.10	139.39	93.243	-2,307.79	-673.32	2,473.71	2,316.37	157.34	15.722	
4,950.00	4,775.18	9,231.95	4,905.58	18.22	140.27	92.641	-2,307.54	-645.38	2,471.88	2,313.51	158.38	15.608	
5,000.00	4,811.92	9,258.72	4,905.33	18.34	141.11	92.077	-2,307.36	-618.61	2,470.71	2,311.33	159.37	15.502	
5,050.00	4,846.83	9,287.39	4,905.25	18.47	142.00	91.499	-2,307.24	-589.94	2,470.11	2,309.68	160.43	15.397	
5,088.13	4,872.17	9,313.10	4,905.34	18.58	142.81	91.012	-2,307.19	-564.23	2,470.00	2,308.64	161.36	15.308 CC	
5,100.00	4,879.83	9,322.18	4,905.40	18.61	143.09	90.848	-2,307.17	-555.15	2,470.01	2,308.33	161.68	15.278	
5,150.00	4,910.81	9,361.65	4,905.78	18.75	144.33	90.164	-2,307.10	-515.68	2,470.23	2,307.17	163.06	15.149	
5,200.00	4,939.70	9,402.72	4,906.23	18.90	145.61	89.500	-2,307.03	-474.62	2,470.70	2,306.22	164.48	15.021	
5,250.00	4,966.42	9,445.09	4,906.60	19.05	146.94	88.862	-2,306.96	-432.24	2,471.34	2,305.41	165.93	14.894	
5,300.00	4,991.50	9,488.64	4,906.94	19.21	148.30	88.331	-2,306.88	-388.70	2,472.12	2,304.71	167.42	14.766	
5,350.00	5,016.50	9,532.16	4,907.32	19.39	149.67	87.835	-2,306.81	-345.18	2,473.15	2,304.23	168.91	14.642	
5,400.00	5,041.50	9,575.68	4,907.69	19.57	151.03	87.339	-2,306.73	-301.66	2,474.41	2,304.02	170.40	14.522 ES	
5,450.00	5,066.50	9,581.00	4,907.74	19.76	151.20	87.278	-2,306.72	-296.34	2,476.22	2,305.47	170.75	14.502 SF	
5,500.00	5,090.48	9,581.00	4,907.74	19.96	151.20	87.069	-2,306.72	-296.34	2,478.97	2,308.06	170.91	14.505	
5,550.00	5,110.69	9,581.00	4,907.74	20.17	151.20	86.715	-2,306.72	-296.34	2,482.51	2,311.46	171.04	14.514	
5,600.00	5,126.84	9,581.00	4,907.74	20.38	151.20	86.285	-2,306.72	-296.34	2,486.80	2,315.64	171.15	14.530	
5,650.00	5,138.80	9,581.00	4,907.74	20.59	151.20	85.783	-2,306.72	-296.34	2,491.80	2,320.56	171.24	14.552	
5,700.00	5,146.49	9,581.00	4,907.74	20.79	151.20	85.213	-2,306.72	-296.34	2,497.48	2,326.19	171.28	14.581	
5,750.00	5,149.84	9,581.00	4,907.74	21.00	151.20	84.581	-2,306.72	-296.34	2,503.78	2,332.49	171.28	14.618	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 25-MWD+IGRF												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	
5,800.00	5,150.00	9,581.00	4,907.74	21.20	151.20	84.400	-2,306.72	-296.34	2,510.77	2,339.35	171.42	14.647	
5,850.00	5,150.00	9,581.00	4,907.74	21.42	151.20	84.400	-2,306.72	-296.34	2,518.72	2,347.07	171.64	14.674	
5,900.00	5,150.00	9,581.00	4,907.74	21.64	151.20	84.400	-2,306.72	-296.34	2,527.63	2,355.77	171.86	14.707	
5,950.00	5,150.00	9,581.00	4,907.74	21.88	151.20	84.400	-2,306.72	-296.34	2,537.49	2,365.39	172.11	14.744	
6,000.00	5,150.00	9,581.00	4,907.74	22.13	151.20	84.400	-2,306.72	-296.34	2,548.30	2,375.95	172.35	14.786	
6,050.00	5,150.00	9,581.00	4,907.74	22.40	151.20	84.400	-2,306.72	-296.34	2,560.04	2,387.43	172.62	14.831	
6,100.00	5,150.00	9,581.00	4,907.74	22.66	151.20	84.400	-2,306.72	-296.34	2,572.70	2,399.82	172.88	14.881	
6,150.00	5,150.00	9,581.00	4,907.74	22.95	151.20	84.400	-2,306.72	-296.34	2,586.27	2,413.09	173.17	14.935	
6,200.00	5,150.00	9,581.00	4,907.74	23.24	151.20	84.400	-2,306.72	-296.34	2,600.72	2,427.26	173.46	14.993	
6,250.00	5,150.00	9,581.00	4,907.74	23.55	151.20	84.400	-2,306.72	-296.34	2,616.05	2,442.28	173.77	15.055	
6,300.00	5,150.00	9,581.00	4,907.74	23.86	151.20	84.400	-2,306.72	-296.34	2,632.24	2,458.17	174.07	15.121	
6,350.00	5,150.00	9,581.00	4,907.74	24.19	151.20	84.400	-2,306.72	-296.34	2,649.28	2,474.88	174.40	15.191	
6,400.00	5,150.00	9,581.00	4,907.74	24.51	151.20	84.400	-2,306.72	-296.34	2,667.14	2,492.41	174.73	15.265	
6,450.00	5,150.00	9,581.00	4,907.74	24.86	151.20	84.400	-2,306.72	-296.34	2,685.82	2,510.75	175.07	15.342	
6,500.00	5,150.00	9,581.00	4,907.74	25.20	151.20	84.400	-2,306.72	-296.34	2,705.29	2,529.88	175.41	15.423	
6,550.00	5,150.00	9,581.00	4,907.74	25.56	151.20	84.400	-2,306.72	-296.34	2,725.54	2,549.77	175.77	15.506	
6,600.00	5,150.00	9,581.00	4,907.74	25.92	151.20	84.400	-2,306.72	-296.34	2,746.55	2,570.42	176.13	15.594	
6,650.00	5,150.00	9,581.00	4,907.74	26.29	151.20	84.400	-2,306.72	-296.34	2,768.30	2,591.81	176.50	15.685	
6,700.00	5,150.00	9,581.00	4,907.74	26.67	151.20	84.400	-2,306.72	-296.34	2,790.78	2,613.91	176.87	15.779	
6,750.00	5,150.00	9,581.00	4,907.74	27.05	151.20	84.400	-2,306.72	-296.34	2,813.97	2,636.72	177.25	15.875	
6,800.00	5,150.00	9,581.00	4,907.74	27.44	151.20	84.400	-2,306.72	-296.34	2,837.85	2,660.22	177.64	15.975	
6,850.00	5,150.00	9,581.00	4,907.74	27.84	151.20	84.400	-2,306.72	-296.34	2,862.41	2,684.37	178.04	16.078	
6,900.00	5,150.00	9,581.00	4,907.74	28.23	151.20	84.400	-2,306.72	-296.34	2,887.62	2,709.19	178.43	16.183	
6,950.00	5,150.00	9,581.00	4,907.74	28.64	151.20	84.400	-2,306.72	-296.34	2,913.48	2,734.64	178.84	16.291	
7,000.00	5,150.00	9,581.00	4,907.74	29.05	151.20	84.400	-2,306.72	-296.34	2,939.95	2,760.70	179.25	16.402	
7,050.00	5,150.00	9,581.00	4,907.74	29.47	151.20	84.400	-2,306.72	-296.34	2,967.03	2,787.37	179.67	16.514	
7,100.00	5,150.00	9,581.00	4,907.74	29.89	151.20	84.400	-2,306.72	-296.34	2,994.71	2,814.62	180.08	16.630	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 300-UNKNOWN												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 Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	24.00	0.00	0.00	-123.655	-278.56	-418.39	503.21				
50.00	50.00	26.00	50.00	0.05	0.51	-123.655	-278.56	-418.39	502.64	502.07	0.57	889.462	
100.00	100.00	76.00	100.00	0.14	1.49	-123.655	-278.56	-418.39	502.64	501.00	1.64	306.851	
150.00	150.00	126.00	150.00	0.32	2.48	-123.655	-278.56	-418.39	502.64	499.84	2.80	179.474	
200.00	200.00	176.00	200.00	0.50	3.46	-123.655	-278.56	-418.39	502.64	498.68	3.96	126.827	
250.00	250.00	226.00	250.00	0.68	4.44	-123.655	-278.56	-418.39	502.64	497.51	5.13	98.061	
300.00	300.00	276.00	300.00	0.86	5.43	-123.655	-278.56	-418.39	502.64	496.35	6.29	79.932	
350.00	350.00	326.00	350.00	1.04	6.94	-42.355	-278.56	-418.39	502.32	494.34	7.98	62.967	
400.00	399.98	375.98	399.98	1.21	8.94	-42.468	-278.56	-418.39	501.35	491.20	10.15	49.379	
450.00	449.93	425.93	449.93	1.39	10.94	-42.659	-278.56	-418.39	499.74	487.42	12.33	40.546	
500.00	499.84	475.84	499.84	1.57	12.93	-42.928	-278.56	-418.39	497.50	483.01	14.49	34.330	
550.00	549.68	525.68	549.68	1.75	14.93	-43.276	-278.56	-418.39	494.63	477.98	16.65	29.702	
600.00	599.45	575.45	599.45	1.93	16.92	-43.707	-278.56	-418.39	491.15	472.34	18.81	26.117	
650.00	649.13	625.13	649.13	2.11	18.91	-44.222	-278.56	-418.39	487.06	466.11	20.95	23.248	
700.00	698.70	674.70	698.70	2.29	20.89	-44.827	-278.56	-418.39	482.39	459.30	23.08	20.897	
750.00	748.15	724.15	748.15	2.47	22.87	-45.524	-278.56	-418.39	477.15	451.94	25.21	18.929	
800.00	797.47	773.47	797.47	2.65	24.84	-46.319	-278.56	-418.39	471.37	444.05	27.32	17.254	
850.00	846.63	822.63	846.63	2.84	26.81	-47.217	-278.56	-418.39	465.07	435.65	29.42	15.807	
900.00	895.62	871.62	895.62	3.02	28.76	-48.223	-278.56	-418.39	458.29	426.78	31.51	14.544	
950.00	944.44	920.44	944.44	3.21	30.72	-49.345	-278.56	-418.39	451.06	417.47	33.59	13.427	
1,000.00	993.06	969.06	993.06	3.40	32.66	-50.590	-278.56	-418.39	443.43	407.77	35.66	12.433	
1,050.00	1,041.46	1,017.46	1,041.46	3.59	34.60	-51.965	-278.56	-418.39	435.45	397.72	37.73	11.541	
1,100.00	1,089.70	1,065.70	1,089.70	3.78	36.53	-53.367	-278.56	-418.39	427.28	387.45	39.83	10.728	
1,150.00	1,137.92	1,113.92	1,137.92	3.98	38.46	-54.781	-278.56	-418.39	419.35	377.39	41.95	9.995	
1,200.00	1,186.14	1,162.14	1,186.14	4.18	40.39	-56.247	-278.56	-418.39	411.68	367.60	44.08	9.339	
1,250.00	1,234.37	1,210.37	1,234.37	4.37	42.31	-57.764	-278.56	-418.39	404.30	358.09	46.22	8.748	
1,300.00	1,282.59	1,258.59	1,282.59	4.57	44.24	-59.334	-278.56	-418.39	397.23	348.87	48.36	8.214	
1,350.00	1,330.81	1,306.81	1,330.81	4.77	46.17	-60.957	-278.56	-418.39	390.47	339.97	50.51	7.731	
1,400.00	1,379.04	1,355.04	1,379.04	4.97	48.10	-62.632	-278.56	-418.39	384.05	331.39	52.66	7.293	
1,450.00	1,427.26	1,403.26	1,427.26	5.17	50.03	-64.359	-278.56	-418.39	377.98	323.17	54.81	6.896	
1,500.00	1,475.48	1,451.48	1,475.48	5.37	51.96	-66.138	-278.56	-418.39	372.28	315.31	56.97	6.535	
1,550.00	1,523.71	1,499.71	1,523.71	5.57	53.89	-67.968	-278.56	-418.39	366.97	307.84	59.13	6.206	
1,600.00	1,571.93	1,547.93	1,571.93	5.77	55.82	-69.845	-278.56	-418.39	362.07	300.77	61.30	5.906	
1,650.00	1,620.15	1,596.15	1,620.15	5.97	57.75	-71.769	-278.56	-418.39	357.58	294.11	63.47	5.634	
1,700.00	1,668.37	1,644.37	1,668.37	6.17	59.67	-73.737	-278.56	-418.39	353.53	287.90	65.64	5.386	
1,750.00	1,716.60	1,692.60	1,716.60	6.37	61.60	-75.744	-278.56	-418.39	349.94	282.13	67.80	5.161	
1,800.00	1,764.82	1,740.82	1,764.82	6.57	63.53	-77.788	-278.56	-418.39	346.81	276.83	69.97	4.956	
1,850.00	1,813.04	1,789.04	1,813.04	6.78	65.46	-79.864	-278.56	-418.39	344.15	272.02	72.14	4.771	
1,900.00	1,861.27	1,837.27	1,861.27	6.98	67.39	-81.968	-278.56	-418.39	341.99	267.70	74.30	4.603	
1,950.00	1,909.49	1,885.49	1,909.49	7.18	69.32	-84.093	-278.56	-418.39	340.33	263.88	76.46	4.451	
2,000.00	1,957.71	1,933.71	1,957.71	7.38	71.25	-86.235	-278.56	-418.39	339.18	260.57	78.61	4.315	
2,050.00	2,005.94	1,981.94	2,005.94	7.59	73.18	-88.387	-278.56	-418.39	338.54	257.78	80.75	4.192	
2,087.39	2,042.00	2,018.00	2,042.00	7.74	74.62	-90.000	-278.56	-418.39	338.39	256.04	82.35	4.109 CC	
2,100.00	2,054.16	2,030.16	2,054.16	7.79	75.11	-90.544	-278.56	-418.39	338.41	255.52	82.89	4.083	
2,150.00	2,102.38	2,078.38	2,102.38	7.99	77.04	-92.700	-278.56	-418.39	338.80	253.78	85.02	3.985	
2,200.00	2,150.61	2,126.61	2,150.61	8.19	78.96	-94.847	-278.56	-418.39	339.70	252.56	87.14	3.898	
2,250.00	2,198.83	2,174.83	2,198.83	8.40	80.89	-96.981	-278.56	-418.39	341.11	251.86	89.25	3.822	
2,300.00	2,247.05	2,223.05	2,247.05	8.60	82.82	-99.096	-278.56	-418.39	343.02	251.67	91.35	3.755 ES	
2,350.00	2,295.28	2,271.28	2,295.28	8.80	84.75	-101.187	-278.56	-418.39	345.43	251.99	93.44	3.697	
2,400.00	2,343.50	2,319.50	2,343.50	9.01	86.68	-103.247	-278.56	-418.39	348.33	252.80	95.52	3.647	
2,450.00	2,391.72	2,367.72	2,391.72	9.21	88.61	-105.273	-278.56	-418.39	351.69	254.10	97.59	3.604	
2,500.00	2,439.95	2,415.95	2,439.95	9.41	90.54	-107.261	-278.56	-418.39	355.52	255.86	99.65	3.568	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 300-UNKNOWN												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
2,550.00	2,488.17	2,464.17	2,488.17	9.62	92.47	-109.207	-278.56	-418.39	359.79	258.08	101.71	3.538	
2,600.00	2,536.39	2,512.39	2,536.39	9.82	94.40	-111.108	-278.56	-418.39	364.49	260.74	103.75	3.513	
2,650.00	2,584.61	2,560.61	2,584.61	10.02	96.32	-112.961	-278.56	-418.39	369.60	263.82	105.79	3.494	
2,700.00	2,632.84	2,608.84	2,632.84	10.23	98.25	-114.765	-278.56	-418.39	375.11	267.30	107.81	3.479	
2,750.00	2,681.06	2,657.06	2,681.06	10.43	100.18	-116.519	-278.56	-418.39	381.00	271.16	109.83	3.469	
2,800.00	2,729.28	2,705.28	2,729.28	10.64	102.11	-118.220	-278.56	-418.39	387.25	275.40	111.85	3.462	
2,850.00	2,777.51	2,753.51	2,777.51	10.84	104.04	-119.868	-278.56	-418.39	393.84	279.98	113.86	3.459	
2,900.00	2,825.73	2,801.73	2,825.73	11.04	105.97	-121.464	-278.56	-418.39	400.76	284.90	115.86	3.459 SF	
2,950.00	2,873.95	2,849.95	2,873.95	11.25	107.90	-123.008	-278.56	-418.39	407.99	290.13	117.86	3.462	
3,000.00	2,922.18	2,898.18	2,922.18	11.45	109.83	-124.499	-278.56	-418.39	415.51	295.65	119.86	3.467	
3,050.00	2,970.40	2,946.40	2,970.40	11.66	111.76	-125.938	-278.56	-418.39	423.32	301.46	121.86	3.474	
3,100.00	3,018.62	2,994.62	3,018.62	11.86	113.68	-127.328	-278.56	-418.39	431.38	307.53	123.85	3.483	
3,150.00	3,066.85	3,042.85	3,066.85	12.06	115.61	-128.667	-278.56	-418.39	439.70	313.86	125.84	3.494	
3,200.00	3,115.07	3,091.07	3,115.07	12.27	117.54	-129.958	-278.56	-418.39	448.25	320.42	127.83	3.507	
3,250.00	3,163.29	3,139.29	3,163.29	12.47	119.47	-131.203	-278.56	-418.39	457.02	327.21	129.82	3.521	
3,300.00	3,211.52	3,187.52	3,211.52	12.68	121.40	-132.401	-278.56	-418.39	466.01	334.20	131.81	3.536	
3,350.00	3,259.74	3,235.74	3,259.74	12.88	123.33	-133.556	-278.56	-418.39	475.18	341.39	133.79	3.552	
3,400.00	3,307.96	3,283.96	3,307.96	13.08	125.25	-134.703	-278.56	-418.39	484.36	348.58	135.76	3.568	
3,450.00	3,356.19	3,332.19	3,356.19	13.29	127.18	-135.850	-278.56	-418.39	493.53	355.77	137.73	3.584	
3,500.00	3,404.41	3,380.41	3,404.41	13.49	129.10	-136.997	-278.56	-418.39	502.70	362.98	139.69	3.600	
3,550.00	3,452.63	3,428.63	3,452.63	13.70	131.03	-138.144	-278.56	-418.39	511.87	370.19	141.66	3.616	
3,600.00	3,500.85	3,476.85	3,500.85	13.90	132.95	-139.291	-278.56	-418.39	521.04	377.40	143.63	3.632	
3,650.00	3,549.08	3,525.08	3,549.08	14.11	134.88	-140.438	-278.56	-418.39	530.21	384.61	145.60	3.648	
3,700.00	3,597.30	3,573.30	3,597.30	14.31	136.80	-141.585	-278.56	-418.39	539.38	391.69	147.57	3.664	
3,750.00	3,645.52	3,621.52	3,645.52	14.51	138.73	-142.732	-278.56	-418.39	548.55	400.00	150.00	3.680	
3,800.00	3,693.75	3,669.75	3,693.75	14.72	140.65	-143.879	-278.56	-418.39	557.72	408.31	152.00	3.696	
3,850.00	3,741.97	3,717.97	3,741.97	14.92	142.58	-145.026	-278.56	-418.39	566.89	416.62	154.00	3.712	
3,900.00	3,790.19	3,766.19	3,790.19	15.13	144.50	-146.173	-278.56	-418.39	576.06	424.93	156.00	3.728	
3,950.00	3,838.42	3,814.42	3,838.42	15.33	146.43	-147.320	-278.56	-418.39	585.23	433.24	158.00	3.744	
4,000.00	3,886.64	3,862.64	3,886.64	15.54	148.35	-148.467	-278.56	-418.39	594.40	441.55	160.00	3.760	
4,050.00	3,935.06	3,911.06	3,935.06	15.74	150.28	-149.614	-278.56	-418.39	603.57	449.86	162.00	3.776	
4,100.00	3,984.05	3,960.05	3,984.05	15.93	152.20	-150.761	-278.56	-418.39	612.74	458.17	164.00	3.792	
4,150.00	4,033.48	3,999.48	4,033.48	16.11	154.13	-151.908	-278.56	-418.39	621.91	466.48	166.00	3.808	
4,200.00	4,083.23	4,049.23	4,083.23	16.29	156.05	-153.055	-278.56	-418.39	631.08	474.79	168.00	3.824	
4,250.00	4,133.15	4,099.15	4,133.15	16.45	157.98	-154.202	-278.56	-418.39	640.25	483.10	170.00	3.840	
4,300.00	4,183.11	4,149.11	4,183.11	16.61	159.90	-155.349	-278.56	-418.39	649.42	491.41	172.00	3.856	
4,350.00	4,232.97	4,198.97	4,232.97	16.75	161.83	-156.496	-278.56	-418.39	658.59	500.00	174.00	3.872	
4,400.00	4,282.59	4,248.59	4,282.59	16.88	163.75	-157.643	-278.56	-418.39	667.76	508.31	176.00	3.888	
4,450.00	4,331.84	4,297.84	4,331.84	17.02	165.68	-158.790	-278.56	-418.39	676.93	516.62	178.00	3.904	
4,500.00	4,380.59	4,346.59	4,380.59	17.14	167.60	-159.937	-278.56	-418.39	686.10	524.93	180.00	3.920	
4,550.00	4,428.69	4,394.69	4,428.69	17.27	169.53	-161.084	-278.56	-418.39	695.27	533.24	182.00	3.936	
4,600.00	4,476.02	4,442.02	4,476.02	17.39	171.45	-162.231	-278.56	-418.39	704.44	541.55	184.00	3.952	
4,650.00	4,522.45	4,488.45	4,522.45	17.51	173.38	-163.378	-278.56	-418.39	713.61	549.86	186.00	3.968	
4,700.00	4,567.85	4,533.85	4,567.85	17.63	175.30	-164.525	-278.56	-418.39	722.78	558.17	188.00	3.984	
4,750.00	4,612.10	4,578.10	4,612.10	17.74	177.23	-165.672	-278.56	-418.39	731.95	566.48	190.00	3.999	
4,800.00	4,655.07	4,621.07	4,655.07	17.86	179.15	-166.819	-278.56	-418.39	741.12	574.79	192.00	4.015	
4,850.00	4,696.65	4,662.65	4,696.65	17.98	181.08	-167.966	-278.56	-418.39	750.29	583.10	194.00	4.031	
4,900.00	4,736.73	4,702.73	4,736.73	18.10	183.00	-169.113	-278.56	-418.39	759.46	591.41	196.00	4.047	
4,950.00	4,775.18	4,741.18	4,775.18	18.22	184.93	-170.260	-278.56	-418.39	768.63	600.00	198.00	4.063	
5,000.00	4,811.92	4,777.92	4,811.92	18.34	186.85	-171.407	-278.56	-418.39	777.80	608.31	200.00	4.079	
5,050.00	4,846.83	4,812.83	4,846.83	18.47	188.78	-172.554	-278.56	-418.39	786.97	616.62	202.00	4.095	
5,100.00	4,879.83	4,845.83	4,879.83	18.61	190.70	-173.701	-278.56	-418.39	796.14	624.93	204.00	4.111	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 300-UNKNOWN												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	4,910.81	3,242.00	3,266.00	18.75	123.58	17.837	-278.56	-418.39	1,706.11	1,616.64	89.47	19.069	
5,200.00	4,939.70	3,242.00	3,266.00	18.90	123.58	17.269	-278.56	-418.39	1,732.15	1,648.03	84.12	20.590	
5,250.00	4,966.42	3,242.00	3,266.00	19.05	123.58	16.754	-278.56	-418.39	1,757.08	1,678.42	78.66	22.337	
5,300.00	4,991.50	3,242.00	3,266.00	19.21	123.58	16.624	-278.56	-418.39	1,781.47	1,704.22	77.26	23.059	
5,350.00	5,016.50	3,242.00	3,266.00	19.39	123.58	16.624	-278.56	-418.39	1,806.84	1,729.47	77.37	23.352	
5,400.00	5,041.50	3,242.00	3,266.00	19.57	123.58	16.624	-278.56	-418.39	1,833.22	1,755.73	77.49	23.657	
5,450.00	5,066.50	3,242.00	3,266.00	19.76	123.58	16.624	-278.56	-418.39	1,860.57	1,782.95	77.62	23.971	
5,500.00	5,090.48	3,242.00	3,266.00	19.96	123.58	15.962	-278.56	-418.39	1,887.92	1,817.17	70.75	26.685	
5,550.00	5,110.69	3,242.00	3,266.00	20.17	123.58	15.192	-278.56	-418.39	1,912.79	1,851.45	61.34	31.184	
5,600.00	5,126.84	3,242.00	3,266.00	20.38	123.58	14.557	-278.56	-418.39	1,934.95	1,882.63	52.32	36.983	
5,650.00	5,138.80	3,242.00	3,266.00	20.59	123.58	14.037	-278.56	-418.39	1,954.35	1,910.09	44.26	44.160	
5,700.00	5,146.49	3,242.00	3,266.00	20.79	123.58	13.617	-278.56	-418.39	1,970.91	1,932.88	38.03	51.828	
5,750.00	5,149.84	3,242.00	3,266.00	21.00	123.58	13.286	-278.56	-418.39	1,984.58	1,949.71	34.87	56.910	
5,800.00	5,150.00	3,242.00	3,266.00	21.20	123.58	13.211	-278.56	-418.39	1,996.43	1,961.60	34.83	57.319	
5,850.00	5,150.00	3,242.00	3,266.00	21.42	123.58	13.211	-278.56	-418.39	2,009.30	1,974.29	35.01	57.394	
5,900.00	5,150.00	3,242.00	3,266.00	21.64	123.58	13.211	-278.56	-418.39	2,023.32	1,988.14	35.19	57.499	
5,950.00	5,150.00	3,242.00	3,266.00	21.88	123.58	13.211	-278.56	-418.39	2,038.48	2,003.10	35.38	57.623	
6,000.00	5,150.00	3,242.00	3,266.00	22.13	123.58	13.211	-278.56	-418.39	2,054.74	2,019.18	35.56	57.774	
6,050.00	5,150.00	3,242.00	3,266.00	22.40	123.58	13.211	-278.56	-418.39	2,072.08	2,036.32	35.76	57.944	
6,100.00	5,150.00	3,242.00	3,266.00	22.66	123.58	13.211	-278.56	-418.39	2,090.47	2,054.52	35.96	58.139	
6,150.00	5,150.00	3,242.00	3,266.00	22.95	123.58	13.211	-278.56	-418.39	2,109.89	2,073.73	36.16	58.352	
6,200.00	5,150.00	3,242.00	3,266.00	23.24	123.58	13.211	-278.56	-418.39	2,130.30	2,093.94	36.36	58.588	
6,250.00	5,150.00	3,242.00	3,266.00	23.55	123.58	13.211	-278.56	-418.39	2,151.68	2,115.12	36.57	58.841	
6,300.00	5,150.00	3,242.00	3,266.00	23.86	123.58	13.211	-278.56	-418.39	2,174.01	2,137.23	36.78	59.115	
6,350.00	5,150.00	3,242.00	3,266.00	24.19	123.58	13.211	-278.56	-418.39	2,197.24	2,160.25	36.99	59.404	
6,400.00	5,150.00	3,242.00	3,266.00	24.51	123.58	13.211	-278.56	-418.39	2,221.35	2,184.15	37.20	59.713	
6,450.00	5,150.00	3,242.00	3,266.00	24.86	123.58	13.211	-278.56	-418.39	2,246.32	2,208.91	37.42	60.034	
6,500.00	5,150.00	3,242.00	3,266.00	25.20	123.58	13.211	-278.56	-418.39	2,272.12	2,234.49	37.63	60.374	
6,550.00	5,150.00	3,242.00	3,266.00	25.56	123.58	13.211	-278.56	-418.39	2,298.71	2,260.86	37.85	60.726	
6,600.00	5,150.00	3,242.00	3,266.00	25.92	123.58	13.211	-278.56	-418.39	2,326.08	2,288.01	38.07	61.093	
6,650.00	5,150.00	3,242.00	3,266.00	26.29	123.58	13.211	-278.56	-418.39	2,354.19	2,315.89	38.30	61.471	
6,700.00	5,150.00	3,242.00	3,266.00	26.67	123.58	13.211	-278.56	-418.39	2,383.02	2,344.49	38.52	61.863	
6,750.00	5,150.00	3,242.00	3,266.00	27.05	123.58	13.211	-278.56	-418.39	2,412.53	2,373.79	38.75	62.264	
6,800.00	5,150.00	3,242.00	3,266.00	27.44	123.58	13.211	-278.56	-418.39	2,442.72	2,403.75	38.97	62.678	
6,850.00	5,150.00	3,242.00	3,266.00	27.84	123.58	13.211	-278.56	-418.39	2,473.55	2,434.35	39.20	63.099	
6,900.00	5,150.00	3,242.00	3,266.00	28.23	123.58	13.211	-278.56	-418.39	2,504.99	2,465.56	39.43	63.531	
6,950.00	5,150.00	3,242.00	3,266.00	28.64	123.58	13.211	-278.56	-418.39	2,537.04	2,497.38	39.66	63.970	
7,000.00	5,150.00	3,242.00	3,266.00	29.05	123.58	13.211	-278.56	-418.39	2,569.65	2,529.76	39.89	64.418	
7,050.00	5,150.00	3,242.00	3,266.00	29.47	123.58	13.211	-278.56	-418.39	2,602.82	2,562.70	40.12	64.872	
7,100.00	5,150.00	3,242.00	3,266.00	29.89	123.58	13.211	-278.56	-418.39	2,636.52	2,596.16	40.35	65.334	
7,150.00	5,150.00	3,242.00	3,266.00	30.32	123.58	13.211	-278.56	-418.39	2,670.73	2,630.14	40.59	65.800	
7,200.00	5,150.00	3,242.00	3,266.00	30.75	123.58	13.211	-278.56	-418.39	2,705.43	2,664.61	40.82	66.273	
7,250.00	5,150.00	3,242.00	3,266.00	31.19	123.58	13.211	-278.56	-418.39	2,740.60	2,699.54	41.06	66.750	
7,300.00	5,150.00	3,242.00	3,266.00	31.62	123.58	13.211	-278.56	-418.39	2,776.23	2,734.94	41.29	67.232	
7,350.00	5,150.00	3,242.00	3,266.00	32.07	123.58	13.211	-278.56	-418.39	2,812.30	2,770.77	41.53	67.717	
7,400.00	5,150.00	3,242.00	3,266.00	32.51	123.58	13.211	-278.56	-418.39	2,848.78	2,807.02	41.77	68.207	
7,450.00	5,150.00	3,242.00	3,266.00	32.96	123.58	13.211	-278.56	-418.39	2,885.68	2,843.67	42.00	68.699	
7,500.00	5,150.00	3,242.00	3,266.00	33.42	123.58	13.211	-278.56	-418.39	2,922.96	2,880.72	42.24	69.195	
7,550.00	5,150.00	3,242.00	3,266.00	33.88	123.58	13.211	-278.56	-418.39	2,960.62	2,918.13	42.48	69.692	
7,600.00	5,150.00	3,242.00	3,266.00	34.33	123.58	13.211	-278.56	-418.39	2,998.63	2,955.91	42.72	70.192	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 300-UNKNOWN												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	
0.00	0.00	0.00	29.00	0.00	0.00	-169.891	-2,252.60	-401.63	2,288.31				
50.00	50.00	21.00	50.00	0.05	0.42	-169.891	-2,252.60	-401.63	2,288.12	2,287.65	0.47	4,827.707	
100.00	100.00	71.00	100.00	0.14	1.42	-169.891	-2,252.60	-401.63	2,288.12	2,286.56	1.56	1,463.424	
150.00	150.00	121.00	150.00	0.32	2.42	-169.891	-2,252.60	-401.63	2,288.12	2,285.38	2.74	834.246	
200.00	200.00	171.00	200.00	0.50	3.42	-169.891	-2,252.60	-401.63	2,288.12	2,284.20	3.92	583.416	
250.00	250.00	221.00	250.00	0.68	4.42	-169.891	-2,252.60	-401.63	2,288.12	2,283.02	5.10	448.551	
300.00	300.00	271.00	300.00	0.86	5.42	-169.891	-2,252.60	-401.63	2,288.12	2,281.84	6.28	364.331	
350.00	350.00	321.00	350.00	1.04	6.84	-88.563	-2,252.60	-401.63	2,288.11	2,280.24	7.88	290.504	
400.00	399.98	370.98	399.98	1.21	8.84	-88.597	-2,252.60	-401.63	2,288.08	2,278.03	10.05	227.631	
450.00	449.93	420.93	449.93	1.39	10.84	-88.652	-2,252.60	-401.63	2,288.03	2,275.80	12.23	187.154	
500.00	499.84	470.84	499.84	1.57	12.83	-88.730	-2,252.60	-401.63	2,287.96	2,273.56	14.40	158.917	
550.00	549.68	520.68	549.68	1.75	14.83	-88.829	-2,252.60	-401.63	2,287.87	2,271.31	16.57	138.081	
600.00	599.45	570.45	599.45	1.93	16.82	-88.951	-2,252.60	-401.63	2,287.78	2,269.04	18.74	122.094	
650.00	649.13	620.13	649.13	2.11	18.81	-89.094	-2,252.60	-401.63	2,287.68	2,266.78	20.91	109.430	
700.00	698.70	669.70	698.70	2.29	20.79	-89.257	-2,252.60	-401.63	2,287.59	2,264.52	23.07	99.165	
750.00	748.15	719.15	748.15	2.47	22.77	-89.442	-2,252.60	-401.63	2,287.51	2,262.28	25.23	90.668	
800.00	797.47	768.47	797.47	2.65	24.74	-89.647	-2,252.60	-401.63	2,287.44	2,260.05	27.38	83.529	
850.00	846.63	817.63	846.63	2.84	26.71	-89.873	-2,252.60	-401.63	2,287.40	2,257.86	29.54	77.441	
876.53	872.64	843.64	872.64	2.93	27.75	-90.000	-2,252.60	-401.63	2,287.39	2,256.72	30.68	74.565 CC	
900.00	895.62	866.62	895.62	3.02	28.66	-90.117	-2,252.60	-401.63	2,287.40	2,255.72	31.68	72.197	
950.00	944.44	915.44	944.44	3.21	30.62	-90.381	-2,252.60	-401.63	2,287.45	2,253.62	33.82	67.626	
1,000.00	993.06	964.06	993.06	3.40	32.56	-90.663	-2,252.60	-401.63	2,287.56	2,251.60	35.96	63.616	
1,050.00	1,041.46	1,012.46	1,041.46	3.59	34.50	-90.963	-2,252.60	-401.63	2,287.74	2,249.65	38.09	60.066	
1,100.00	1,089.70	1,060.70	1,089.70	3.78	36.43	-91.279	-2,252.60	-401.63	2,288.01	2,247.80	40.21	56.902	
1,150.00	1,137.92	1,108.92	1,137.92	3.98	38.36	-91.598	-2,252.60	-401.63	2,288.35	2,246.02	42.33	54.054	
1,200.00	1,186.14	1,157.14	1,186.14	4.18	40.29	-91.917	-2,252.60	-401.63	2,288.77	2,244.31	44.46	51.480	
1,250.00	1,234.37	1,205.37	1,234.37	4.37	42.21	-92.236	-2,252.60	-401.63	2,289.27	2,242.68	46.58	49.142	
1,300.00	1,282.59	1,253.59	1,282.59	4.57	44.14	-92.555	-2,252.60	-401.63	2,289.84	2,241.13	48.71	47.009	
1,350.00	1,330.81	1,301.81	1,330.81	4.77	46.07	-92.873	-2,252.60	-401.63	2,290.49	2,239.65	50.84	45.055	
1,400.00	1,379.04	1,350.04	1,379.04	4.97	48.00	-93.191	-2,252.60	-401.63	2,291.21	2,238.25	52.96	43.259	
1,450.00	1,427.26	1,398.26	1,427.26	5.17	49.93	-93.509	-2,252.60	-401.63	2,292.01	2,236.92	55.09	41.603	
1,500.00	1,475.48	1,446.48	1,475.48	5.37	51.86	-93.827	-2,252.60	-401.63	2,292.89	2,235.67	57.22	40.072	
1,550.00	1,523.71	1,494.71	1,523.71	5.57	53.79	-94.145	-2,252.60	-401.63	2,293.84	2,234.49	59.35	38.651	
1,600.00	1,571.93	1,542.93	1,571.93	5.77	55.72	-94.462	-2,252.60	-401.63	2,294.87	2,233.39	61.48	37.330	
1,650.00	1,620.15	1,591.15	1,620.15	5.97	57.65	-94.779	-2,252.60	-401.63	2,295.97	2,232.37	63.60	36.098	
1,700.00	1,668.37	1,639.37	1,668.37	6.17	59.57	-95.096	-2,252.60	-401.63	2,297.15	2,231.42	65.73	34.948	
1,750.00	1,716.60	1,687.60	1,716.60	6.37	61.50	-95.412	-2,252.60	-401.63	2,298.40	2,230.55	67.86	33.870	
1,800.00	1,764.82	1,735.82	1,764.82	6.57	63.43	-95.729	-2,252.60	-401.63	2,299.73	2,229.75	69.99	32.859	
1,850.00	1,813.04	1,784.04	1,813.04	6.78	65.36	-96.044	-2,252.60	-401.63	2,301.14	2,229.02	72.11	31.909	
1,900.00	1,861.27	1,832.27	1,861.27	6.98	67.29	-96.360	-2,252.60	-401.63	2,302.62	2,228.38	74.24	31.015	
1,950.00	1,909.49	1,880.49	1,909.49	7.18	69.22	-96.675	-2,252.60	-401.63	2,304.17	2,227.80	76.37	30.171	
2,000.00	1,957.71	1,928.71	1,957.71	7.38	71.15	-96.989	-2,252.60	-401.63	2,305.80	2,227.30	78.50	29.374	
2,050.00	2,005.94	1,976.94	2,005.94	7.59	73.08	-97.304	-2,252.60	-401.63	2,307.50	2,226.88	80.62	28.620	
2,100.00	2,054.16	2,025.16	2,054.16	7.79	75.01	-97.617	-2,252.60	-401.63	2,309.28	2,226.53	82.75	27.906	
2,150.00	2,102.38	2,073.38	2,102.38	7.99	76.94	-97.931	-2,252.60	-401.63	2,311.13	2,226.25	84.88	27.229	
2,200.00	2,150.61	2,121.61	2,150.61	8.19	78.86	-98.244	-2,252.60	-401.63	2,313.06	2,226.05	87.00	26.586	
2,250.00	2,198.83	2,169.83	2,198.83	8.40	80.79	-98.556	-2,252.60	-401.63	2,315.06	2,225.93	89.13	25.974	
2,300.00	2,247.05	2,218.05	2,247.05	8.60	82.72	-98.868	-2,252.60	-401.63	2,317.13	2,225.87	91.26	25.392 ES	
2,350.00	2,295.28	2,266.28	2,295.28	8.80	84.65	-99.179	-2,252.60	-401.63	2,319.28	2,225.90	93.38	24.837	
2,400.00	2,343.50	2,314.50	2,343.50	9.01	86.58	-99.490	-2,252.60	-401.63	2,321.50	2,225.99	95.51	24.307	
2,450.00	2,391.72	2,362.72	2,391.72	9.21	88.51	-99.800	-2,252.60	-401.63	2,323.79	2,226.16	97.63	23.802	
2,500.00	2,439.95	2,410.95	2,439.95	9.41	90.44	-100.110	-2,252.60	-401.63	2,326.15	2,226.40	99.75	23.319	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 300-UNKNOWN												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,550.00	2,488.17	2,459.17	2,488.17	9.62	92.37	-100.419	-2,252.60	-401.63	2,328.59	2,226.71	101.88	22.857	
2,600.00	2,536.39	2,507.39	2,536.39	9.82	94.30	-100.727	-2,252.60	-401.63	2,331.10	2,227.10	104.00	22.414	
2,650.00	2,584.61	2,555.61	2,584.61	10.02	96.22	-101.035	-2,252.60	-401.63	2,333.68	2,227.56	106.12	21.990	
2,700.00	2,632.84	2,603.84	2,632.84	10.23	98.15	-101.342	-2,252.60	-401.63	2,336.34	2,228.09	108.25	21.583	
2,750.00	2,681.06	2,652.06	2,681.06	10.43	100.08	-101.648	-2,252.60	-401.63	2,339.06	2,228.69	110.37	21.193	
2,800.00	2,729.28	2,700.28	2,729.28	10.64	102.01	-101.954	-2,252.60	-401.63	2,341.86	2,229.37	112.49	20.818	
2,850.00	2,777.51	2,748.51	2,777.51	10.84	103.94	-102.259	-2,252.60	-401.63	2,344.73	2,230.12	114.61	20.458	
2,900.00	2,825.73	2,796.73	2,825.73	11.04	105.87	-102.564	-2,252.60	-401.63	2,347.67	2,230.94	116.73	20.112	
2,950.00	2,873.95	2,844.95	2,873.95	11.25	107.80	-102.867	-2,252.60	-401.63	2,350.68	2,231.83	118.85	19.778	
3,000.00	2,922.18	2,893.18	2,922.18	11.45	109.73	-103.170	-2,252.60	-401.63	2,353.76	2,232.79	120.97	19.457	
3,050.00	2,970.40	2,941.40	2,970.40	11.66	111.66	-103.473	-2,252.60	-401.63	2,356.91	2,233.82	123.09	19.148	
3,100.00	3,018.62	2,989.62	3,018.62	11.86	113.58	-103.774	-2,252.60	-401.63	2,360.13	2,234.92	125.21	18.850	
3,150.00	3,066.85	3,037.85	3,066.85	12.06	115.51	-104.075	-2,252.60	-401.63	2,363.42	2,236.09	127.33	18.562	
3,200.00	3,115.07	3,086.07	3,115.07	12.27	117.44	-104.375	-2,252.60	-401.63	2,366.77	2,237.33	129.44	18.284	
3,250.00	3,163.29	3,134.29	3,163.29	12.47	119.37	-104.674	-2,252.60	-401.63	2,370.20	2,238.64	131.56	18.016	
3,300.00	3,211.52	3,182.52	3,211.52	12.68	121.30	-104.972	-2,252.60	-401.63	2,373.70	2,240.02	133.68	17.757	
3,350.00	3,259.74	3,230.74	3,259.74	12.88	123.23	-105.269	-2,252.60	-401.63	2,377.26	2,241.47	135.79	17.507	
3,400.00	3,307.96	3,262.00	3,291.00	13.08	124.48	-105.462	-2,252.60	-401.63	2,380.95	2,243.72	137.23	17.350 SF	
3,450.00	3,356.19	3,262.00	3,291.00	13.29	124.48	-105.462	-2,252.60	-401.63	2,385.48	2,248.05	137.44	17.357	
3,500.00	3,404.41	3,262.00	3,291.00	13.49	124.48	-105.462	-2,252.60	-401.63	2,391.05	2,253.41	137.64	17.372	
3,550.00	3,452.63	3,262.00	3,291.00	13.70	124.48	-105.462	-2,252.60	-401.63	2,397.65	2,259.80	137.85	17.394	
3,600.00	3,500.85	3,262.00	3,291.00	13.90	124.48	-105.462	-2,252.60	-401.63	2,405.27	2,267.22	138.05	17.423	
3,650.00	3,549.08	3,262.00	3,291.00	14.11	124.48	-105.462	-2,252.60	-401.63	2,413.90	2,275.64	138.25	17.460	
3,700.00	3,597.30	3,262.00	3,291.00	14.31	124.48	-105.462	-2,252.60	-401.63	2,423.53	2,285.07	138.46	17.504	
3,750.00	3,645.52	3,262.00	3,291.00	14.51	124.48	-105.462	-2,252.60	-401.63	2,434.15	2,295.49	138.66	17.555	
3,800.00	3,693.75	3,262.00	3,291.00	14.72	124.48	-105.462	-2,252.60	-401.63	2,445.75	2,306.88	138.86	17.612	
3,850.00	3,741.97	3,262.00	3,291.00	14.92	124.48	-105.462	-2,252.60	-401.63	2,458.31	2,319.24	139.07	17.677	
3,900.00	3,790.19	3,262.00	3,291.00	15.13	124.48	-105.462	-2,252.60	-401.63	2,471.81	2,332.54	139.27	17.748	
3,950.00	3,838.42	3,262.00	3,291.00	15.33	124.48	-105.462	-2,252.60	-401.63	2,486.25	2,346.78	139.48	17.826	
4,000.00	3,886.64	3,262.00	3,291.00	15.54	124.48	-105.462	-2,252.60	-401.63	2,501.61	2,361.93	139.68	17.909	
4,050.00	3,935.06	3,262.00	3,291.00	15.74	124.48	-107.656	-2,252.60	-401.63	2,517.76	2,377.86	139.90	17.997	
4,100.00	3,984.05	3,262.00	3,291.00	15.93	124.48	-111.431	-2,252.60	-401.63	2,534.45	2,394.33	140.12	18.088	
4,150.00	4,033.48	3,262.00	3,291.00	16.11	124.48	-117.492	-2,252.60	-401.63	2,551.60	2,411.26	140.34	18.182	
4,200.00	4,083.23	3,262.00	3,291.00	16.29	124.48	-130.164	-2,252.60	-401.63	2,569.18	2,428.62	140.55	18.279	
4,250.00	4,133.15	3,262.00	3,291.00	16.45	124.48	-171.002	-2,252.60	-401.63	2,587.11	2,446.35	140.76	18.380	
4,300.00	4,183.11	3,262.00	3,291.00	16.61	124.48	120.008	-2,252.60	-401.63	2,605.34	2,464.40	140.94	18.486	
4,350.00	4,232.97	3,262.00	3,291.00	16.75	124.48	96.980	-2,252.60	-401.63	2,623.82	2,482.73	141.09	18.597	
4,400.00	4,282.59	3,262.00	3,291.00	16.88	124.48	88.190	-2,252.60	-401.63	2,642.49	2,501.30	141.19	18.716	
4,450.00	4,331.84	3,262.00	3,291.00	17.02	124.48	83.299	-2,252.60	-401.63	2,661.30	2,520.06	141.25	18.842	
4,500.00	4,380.59	3,262.00	3,291.00	17.14	124.48	79.951	-2,252.60	-401.63	2,680.20	2,538.96	141.23	18.977	
4,550.00	4,428.69	3,262.00	3,291.00	17.27	124.48	77.364	-2,252.60	-401.63	2,699.12	2,557.97	141.14	19.123	
4,600.00	4,476.02	3,262.00	3,291.00	17.39	124.48	75.212	-2,252.60	-401.63	2,718.02	2,577.06	140.96	19.282	
4,650.00	4,522.45	3,262.00	3,291.00	17.51	124.48	73.336	-2,252.60	-401.63	2,736.85	2,596.17	140.68	19.455	
4,700.00	4,567.85	3,262.00	3,291.00	17.63	124.48	71.650	-2,252.60	-401.63	2,755.56	2,615.28	140.28	19.644	
4,750.00	4,612.10	3,262.00	3,291.00	17.74	124.48	70.106	-2,252.60	-401.63	2,774.09	2,634.34	139.75	19.850	
4,800.00	4,655.07	3,262.00	3,291.00	17.86	124.48	68.673	-2,252.60	-401.63	2,792.41	2,653.31	139.10	20.075	
4,850.00	4,696.65	3,262.00	3,291.00	17.98	124.48	67.332	-2,252.60	-401.63	2,810.47	2,672.15	138.31	20.319	
4,900.00	4,736.73	3,262.00	3,291.00	18.10	124.48	66.070	-2,252.60	-401.63	2,828.22	2,690.82	137.40	20.584	
4,950.00	4,775.18	3,262.00	3,291.00	18.22	124.48	64.879	-2,252.60	-401.63	2,845.62	2,709.26	136.35	20.869	
5,000.00	4,811.92	3,262.00	3,291.00	18.34	124.48	63.753	-2,252.60	-401.63	2,862.63	2,727.44	135.19	21.175	
5,050.00	4,846.83	3,262.00	3,291.00	18.47	124.48	62.688	-2,252.60	-401.63	2,879.21	2,745.30	133.91	21.501	
5,100.00	4,879.83	3,262.00	3,291.00	18.61	124.48	61.681	-2,252.60	-401.63	2,895.32	2,762.78	132.54	21.845	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 OCHO_TESORO OFFSETS - BURCH-FEDERAL A #11 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 300-UNKNOWN												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
5,150.00	4,910.81	3,262.00	3,291.00	18.75	124.48	60.730	-2,252.60	-401.63	2,910.93	2,779.85	131.08	22.207	
5,200.00	4,939.70	3,262.00	3,291.00	18.90	124.48	59.834	-2,252.60	-401.63	2,926.00	2,796.44	129.57	22.583	
5,250.00	4,966.42	3,262.00	3,291.00	19.05	124.48	58.990	-2,252.60	-401.63	2,940.51	2,812.49	128.01	22.970	
5,300.00	4,991.50	3,262.00	3,291.00	19.21	124.48	58.772	-2,252.60	-401.63	2,954.78	2,827.08	127.70	23.139	
5,350.00	5,016.50	3,262.00	3,291.00	19.39	124.48	58.772	-2,252.60	-401.63	2,969.77	2,841.92	127.86	23.227	
5,400.00	5,041.50	3,262.00	3,291.00	19.57	124.48	58.772	-2,252.60	-401.63	2,985.53	2,857.52	128.02	23.321	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 300-UNKNOWN												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	
0.00	0.00	0.00	24.00	0.00	0.00	-149.784	-1,270.52	-739.94	1,470.48				
50.00	50.00	26.00	50.00	0.05	0.51	-149.784	-1,270.52	-739.94	1,470.28	1,469.72	0.57	2,601.791	
100.00	100.00	76.00	100.00	0.14	1.49	-149.784	-1,270.52	-739.94	1,470.28	1,468.65	1.64	897.578	
150.00	150.00	126.00	150.00	0.32	2.48	-149.784	-1,270.52	-739.94	1,470.28	1,467.48	2.80	524.984	
200.00	200.00	176.00	200.00	0.50	3.46	-149.784	-1,270.52	-739.94	1,470.28	1,466.32	3.96	370.984	
250.00	250.00	226.00	250.00	0.68	4.44	-149.784	-1,270.52	-739.94	1,470.28	1,465.16	5.13	286.842	
300.00	300.00	276.00	300.00	0.86	5.43	-149.784	-1,270.52	-739.94	1,470.28	1,463.99	6.29	233.811	
350.00	350.00	326.00	350.00	1.04	6.94	-68.464	-1,270.52	-739.94	1,470.12	1,462.15	7.98	184.304	
400.00	399.98	375.98	399.98	1.21	8.94	-68.521	-1,270.52	-739.94	1,469.64	1,459.49	10.15	144.763	
450.00	449.93	425.93	449.93	1.39	10.94	-68.614	-1,270.52	-739.94	1,468.85	1,456.52	12.33	119.173	
500.00	499.84	475.84	499.84	1.57	12.93	-68.746	-1,270.52	-739.94	1,467.73	1,453.24	14.50	101.254	
550.00	549.68	525.68	549.68	1.75	14.93	-68.915	-1,270.52	-739.94	1,466.31	1,449.65	16.66	87.989	
600.00	599.45	575.45	599.45	1.93	16.92	-69.121	-1,270.52	-739.94	1,464.59	1,445.76	18.83	77.782	
650.00	649.13	625.13	649.13	2.11	18.91	-69.365	-1,270.52	-739.94	1,462.57	1,441.58	20.99	69.675	
700.00	698.70	674.70	698.70	2.29	20.89	-69.646	-1,270.52	-739.94	1,460.27	1,437.12	23.15	63.086	
750.00	748.15	724.15	748.15	2.47	22.87	-69.964	-1,270.52	-739.94	1,457.69	1,432.40	25.30	57.619	
800.00	797.47	773.47	797.47	2.65	24.84	-70.319	-1,270.52	-739.94	1,454.86	1,427.41	27.44	53.012	
850.00	846.63	822.63	846.63	2.84	26.81	-70.711	-1,270.52	-739.94	1,451.77	1,422.19	29.58	49.073	
900.00	895.62	871.62	895.62	3.02	28.76	-71.140	-1,270.52	-739.94	1,448.45	1,416.74	31.72	45.669	
950.00	944.44	920.44	944.44	3.21	30.72	-71.604	-1,270.52	-739.94	1,444.92	1,411.08	33.84	42.694	
1,000.00	993.06	969.06	993.06	3.40	32.66	-72.105	-1,270.52	-739.94	1,441.19	1,405.23	35.96	40.075	
1,050.00	1,041.46	1,017.46	1,041.46	3.59	34.60	-72.641	-1,270.52	-739.94	1,437.29	1,399.21	38.08	37.748	
1,100.00	1,089.70	1,065.70	1,089.70	3.78	36.53	-73.152	-1,270.52	-739.94	1,433.29	1,393.10	40.19	35.661	
1,150.00	1,137.92	1,113.92	1,137.92	3.98	38.46	-73.642	-1,270.52	-739.94	1,429.39	1,387.07	42.32	33.779	
1,200.00	1,186.14	1,162.14	1,186.14	4.18	40.39	-74.135	-1,270.52	-739.94	1,425.60	1,381.16	44.44	32.080	
1,250.00	1,234.37	1,210.37	1,234.37	4.37	42.31	-74.630	-1,270.52	-739.94	1,421.92	1,375.36	46.56	30.537	
1,300.00	1,282.59	1,258.59	1,282.59	4.57	44.24	-75.127	-1,270.52	-739.94	1,418.36	1,369.66	48.69	29.129	
1,350.00	1,330.81	1,306.81	1,330.81	4.77	46.17	-75.627	-1,270.52	-739.94	1,414.91	1,364.09	50.82	27.841	
1,400.00	1,379.04	1,355.04	1,379.04	4.97	48.10	-76.129	-1,270.52	-739.94	1,411.57	1,358.62	52.95	26.659	
1,450.00	1,427.26	1,403.26	1,427.26	5.17	50.03	-76.633	-1,270.52	-739.94	1,408.35	1,353.27	55.08	25.569	
1,500.00	1,475.48	1,451.48	1,475.48	5.37	51.96	-77.140	-1,270.52	-739.94	1,405.25	1,348.04	57.21	24.562	
1,550.00	1,523.71	1,499.71	1,523.71	5.57	53.89	-77.648	-1,270.52	-739.94	1,402.27	1,342.92	59.34	23.630	
1,600.00	1,571.93	1,547.93	1,571.93	5.77	55.82	-78.159	-1,270.52	-739.94	1,399.40	1,337.92	61.48	22.763	
1,650.00	1,620.15	1,596.15	1,620.15	5.97	57.75	-78.671	-1,270.52	-739.94	1,396.65	1,333.04	63.61	21.956	
1,700.00	1,668.37	1,644.37	1,668.37	6.17	59.67	-79.185	-1,270.52	-739.94	1,394.03	1,328.28	65.74	21.204	
1,750.00	1,716.60	1,692.60	1,716.60	6.37	61.60	-79.701	-1,270.52	-739.94	1,391.52	1,323.64	67.88	20.500	
1,800.00	1,764.82	1,740.82	1,764.82	6.57	63.53	-80.219	-1,270.52	-739.94	1,389.14	1,319.12	70.02	19.840	
1,850.00	1,813.04	1,789.04	1,813.04	6.78	65.46	-80.738	-1,270.52	-739.94	1,386.87	1,314.72	72.15	19.222	
1,900.00	1,861.27	1,837.27	1,861.27	6.98	67.39	-81.259	-1,270.52	-739.94	1,384.73	1,310.44	74.29	18.640	
1,950.00	1,909.49	1,885.49	1,909.49	7.18	69.32	-81.781	-1,270.52	-739.94	1,382.71	1,306.29	76.42	18.093	
2,000.00	1,957.71	1,933.71	1,957.71	7.38	71.25	-82.305	-1,270.52	-739.94	1,380.82	1,302.26	78.56	17.576	
2,050.00	2,005.94	1,981.94	2,005.94	7.59	73.18	-82.829	-1,270.52	-739.94	1,379.05	1,298.35	80.70	17.089	
2,100.00	2,054.16	2,030.16	2,054.16	7.79	75.11	-83.356	-1,270.52	-739.94	1,377.40	1,294.57	82.84	16.628	
2,150.00	2,102.38	2,078.38	2,102.38	7.99	77.04	-83.883	-1,270.52	-739.94	1,375.88	1,290.91	84.97	16.192	
2,200.00	2,150.61	2,126.61	2,150.61	8.19	78.96	-84.411	-1,270.52	-739.94	1,374.48	1,287.37	87.11	15.779	
2,250.00	2,198.83	2,174.83	2,198.83	8.40	80.89	-84.940	-1,270.52	-739.94	1,373.21	1,283.96	89.25	15.387	
2,300.00	2,247.05	2,223.05	2,247.05	8.60	82.82	-85.471	-1,270.52	-739.94	1,372.07	1,280.68	91.39	15.014	
2,350.00	2,295.28	2,271.28	2,295.28	8.80	84.75	-86.001	-1,270.52	-739.94	1,371.05	1,277.53	93.52	14.660	
2,400.00	2,343.50	2,319.50	2,343.50	9.01	86.68	-86.533	-1,270.52	-739.94	1,370.16	1,274.50	95.66	14.323	
2,450.00	2,391.72	2,367.72	2,391.72	9.21	88.61	-87.065	-1,270.52	-739.94	1,369.39	1,271.60	97.80	14.003	
2,500.00	2,439.95	2,415.95	2,439.95	9.41	90.54	-87.598	-1,270.52	-739.94	1,368.76	1,268.82	99.93	13.697	
2,550.00	2,488.17	2,464.17	2,488.17	9.62	92.47	-88.131	-1,270.52	-739.94	1,368.24	1,266.18	102.07	13.405	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 300-UNKNOWN												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.00	2,536.39	2,512.39	2,536.39	9.82	94.40	-88.664	-1,270.52	-739.94	1,367.86	1,263.66	104.20	13.127	
2,650.00	2,584.61	2,560.61	2,584.61	10.02	96.32	-89.198	-1,270.52	-739.94	1,367.61	1,261.27	106.34	12.861	
2,700.00	2,632.84	2,608.84	2,632.84	10.23	98.25	-89.732	-1,270.52	-739.94	1,367.48	1,259.01	108.47	12.607	
2,725.11	2,657.05	2,633.05	2,657.05	10.33	99.22	-90.000	-1,270.52	-739.94	1,367.46	1,257.92	109.55	12.483 CC	
2,750.00	2,681.06	2,657.06	2,681.06	10.43	100.18	-90.266	-1,270.52	-739.94	1,367.48	1,256.87	110.61	12.363	
2,800.00	2,729.28	2,705.28	2,729.28	10.64	102.11	-90.800	-1,270.52	-739.94	1,367.61	1,254.86	112.74	12.131	
2,850.00	2,777.51	2,753.51	2,777.51	10.84	104.04	-91.333	-1,270.52	-739.94	1,367.86	1,252.99	114.87	11.908	
2,900.00	2,825.73	2,801.73	2,825.73	11.04	105.97	-91.867	-1,270.52	-739.94	1,368.24	1,251.24	117.01	11.694	
2,950.00	2,873.95	2,849.95	2,873.95	11.25	107.90	-92.400	-1,270.52	-739.94	1,368.75	1,249.62	119.14	11.489	
3,000.00	2,922.18	2,898.18	2,922.18	11.45	109.83	-92.932	-1,270.52	-739.94	1,369.39	1,248.12	121.27	11.292	
3,050.00	2,970.40	2,946.40	2,970.40	11.66	111.76	-93.465	-1,270.52	-739.94	1,370.15	1,246.76	123.40	11.104	
3,100.00	3,018.62	2,994.62	3,018.62	11.86	113.68	-93.996	-1,270.52	-739.94	1,371.05	1,245.52	125.53	10.922	
3,150.00	3,066.85	3,042.85	3,066.85	12.06	115.61	-94.527	-1,270.52	-739.94	1,372.06	1,244.41	127.65	10.748	
3,200.00	3,115.07	3,091.07	3,115.07	12.27	117.54	-95.057	-1,270.52	-739.94	1,373.21	1,243.43	129.78	10.581	
3,250.00	3,163.29	3,139.29	3,163.29	12.47	119.47	-95.587	-1,270.52	-739.94	1,374.48	1,242.57	131.91	10.420	
3,300.00	3,211.52	3,187.52	3,211.52	12.68	121.40	-96.115	-1,270.52	-739.94	1,375.87	1,241.84	134.03	10.265 ES	
3,350.00	3,259.74	3,195.00	3,219.00	12.88	121.70	-96.197	-1,270.52	-739.94	1,378.00	1,243.46	134.53	10.243 SF	
3,400.00	3,307.96	3,195.00	3,219.00	13.08	121.70	-96.197	-1,270.52	-739.94	1,381.91	1,247.17	134.74	10.256	
3,450.00	3,356.19	3,195.00	3,219.00	13.29	121.70	-96.197	-1,270.52	-739.94	1,387.61	1,252.67	134.94	10.283	
3,500.00	3,404.41	3,195.00	3,219.00	13.49	121.70	-96.197	-1,270.52	-739.94	1,395.08	1,259.93	135.15	10.323	
3,550.00	3,452.63	3,195.00	3,219.00	13.70	121.70	-96.197	-1,270.52	-739.94	1,404.29	1,268.94	135.35	10.375	
3,600.00	3,500.85	3,195.00	3,219.00	13.90	121.70	-96.197	-1,270.52	-739.94	1,415.21	1,279.66	135.56	10.440	
3,650.00	3,549.08	3,195.00	3,219.00	14.11	121.70	-96.197	-1,270.52	-739.94	1,427.80	1,292.04	135.76	10.517	
3,700.00	3,597.30	3,195.00	3,219.00	14.31	121.70	-96.197	-1,270.52	-739.94	1,442.02	1,306.05	135.96	10.606	
3,750.00	3,645.52	3,195.00	3,219.00	14.51	121.70	-96.197	-1,270.52	-739.94	1,457.81	1,321.64	136.17	10.706	
3,800.00	3,693.75	3,195.00	3,219.00	14.72	121.70	-96.197	-1,270.52	-739.94	1,475.13	1,338.75	136.37	10.817	
3,850.00	3,741.97	3,195.00	3,219.00	14.92	121.70	-96.197	-1,270.52	-739.94	1,493.92	1,357.34	136.58	10.938	
3,900.00	3,790.19	3,195.00	3,219.00	15.13	121.70	-96.197	-1,270.52	-739.94	1,514.13	1,377.35	136.78	11.070	
3,950.00	3,838.42	3,195.00	3,219.00	15.33	121.70	-96.197	-1,270.52	-739.94	1,535.70	1,398.71	136.99	11.211	
4,000.00	3,886.64	3,195.00	3,219.00	15.54	121.70	-96.197	-1,270.52	-739.94	1,558.58	1,421.39	137.19	11.361	
4,050.00	3,935.06	3,195.00	3,219.00	15.74	121.70	-98.898	-1,270.52	-739.94	1,582.72	1,445.35	137.37	11.522	
4,100.00	3,984.05	3,195.00	3,219.00	15.93	121.70	-103.389	-1,270.52	-739.94	1,608.07	1,470.54	137.53	11.692	
4,150.00	4,033.48	3,195.00	3,219.00	16.11	121.70	-110.237	-1,270.52	-739.94	1,634.50	1,496.81	137.70	11.870	
4,200.00	4,083.23	3,195.00	3,219.00	16.29	121.70	-123.763	-1,270.52	-739.94	1,661.90	1,524.03	137.87	12.054	
4,250.00	4,133.15	3,195.00	3,219.00	16.45	121.70	-165.516	-1,270.52	-739.94	1,690.14	1,552.10	138.04	12.244	
4,300.00	4,183.11	3,195.00	3,219.00	16.61	121.70	124.528	-1,270.52	-739.94	1,719.10	1,580.90	138.20	12.439	
4,350.00	4,232.97	3,195.00	3,219.00	16.75	121.70	100.492	-1,270.52	-739.94	1,748.67	1,610.32	138.35	12.639	
4,400.00	4,282.59	3,195.00	3,219.00	16.88	121.70	90.660	-1,270.52	-739.94	1,778.75	1,640.29	138.46	12.847	
4,450.00	4,331.84	3,195.00	3,219.00	17.02	121.70	84.706	-1,270.52	-739.94	1,809.22	1,670.71	138.51	13.062	
4,500.00	4,380.59	3,195.00	3,219.00	17.14	121.70	80.284	-1,270.52	-739.94	1,839.99	1,701.52	138.47	13.288	
4,550.00	4,428.69	3,195.00	3,219.00	17.27	121.70	76.622	-1,270.52	-739.94	1,870.96	1,732.64	138.31	13.527	
4,600.00	4,476.02	3,195.00	3,219.00	17.39	121.70	73.406	-1,270.52	-739.94	1,902.03	1,764.03	138.00	13.783	
4,650.00	4,522.45	3,195.00	3,219.00	17.51	121.70	70.485	-1,270.52	-739.94	1,933.12	1,795.62	137.50	14.059	
4,700.00	4,567.85	3,195.00	3,219.00	17.63	121.70	67.782	-1,270.52	-739.94	1,964.15	1,827.37	136.78	14.360	
4,750.00	4,612.10	3,195.00	3,219.00	17.74	121.70	65.255	-1,270.52	-739.94	1,995.02	1,859.20	135.82	14.688	
4,800.00	4,655.07	3,195.00	3,219.00	17.86	121.70	62.879	-1,270.52	-739.94	2,025.68	1,891.07	134.61	15.049	
4,850.00	4,696.65	3,195.00	3,219.00	17.98	121.70	60.640	-1,270.52	-739.94	2,056.04	1,922.92	133.13	15.444	
4,900.00	4,736.73	3,195.00	3,219.00	18.10	121.70	58.528	-1,270.52	-739.94	2,086.04	1,954.67	131.38	15.878	
4,950.00	4,775.18	3,195.00	3,219.00	18.22	121.70	56.536	-1,270.52	-739.94	2,115.61	1,986.25	129.36	16.355	
5,000.00	4,811.92	3,195.00	3,219.00	18.34	121.70	54.659	-1,270.52	-739.94	2,144.69	2,017.60	127.09	16.876	
5,050.00	4,846.83	3,195.00	3,219.00	18.47	121.70	52.893	-1,270.52	-739.94	2,173.23	2,048.64	124.58	17.444	
5,100.00	4,879.83	3,195.00	3,219.00	18.61	121.70	51.234	-1,270.52	-739.94	2,201.16	2,079.29	121.87	18.062	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 300-UNKNOWN												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	4,910.81	3,195.00	3,219.00	18.75	121.70	49.678	-1,270.52	-739.94	2,228.43	2,109.46	118.97	18.731	
5,200.00	4,939.70	3,195.00	3,219.00	18.90	121.70	48.221	-1,270.52	-739.94	2,255.00	2,139.07	115.93	19.452	
5,250.00	4,966.42	3,195.00	3,219.00	19.05	121.70	46.859	-1,270.52	-739.94	2,280.81	2,168.03	112.78	20.224	
5,300.00	4,991.50	3,195.00	3,219.00	19.21	121.70	46.507	-1,270.52	-739.94	2,306.27	2,194.25	112.02	20.589	
5,350.00	5,016.50	3,195.00	3,219.00	19.39	121.70	46.507	-1,270.52	-739.94	2,332.46	2,220.29	112.16	20.795	
5,400.00	5,041.50	3,195.00	3,219.00	19.57	121.70	46.507	-1,270.52	-739.94	2,359.41	2,247.11	112.31	21.008	
5,450.00	5,066.50	3,195.00	3,219.00	19.76	121.70	46.507	-1,270.52	-739.94	2,387.12	2,274.65	112.47	21.225	
5,500.00	5,090.48	3,195.00	3,219.00	19.96	121.70	44.778	-1,270.52	-739.94	2,414.87	2,306.62	108.25	22.309	
5,550.00	5,110.69	3,195.00	3,219.00	20.17	121.70	42.678	-1,270.52	-739.94	2,440.83	2,338.37	102.46	23.821	
5,600.00	5,126.84	3,195.00	3,219.00	20.38	121.70	40.859	-1,270.52	-739.94	2,464.79	2,367.78	97.00	25.409	
5,650.00	5,138.80	3,195.00	3,219.00	20.59	121.70	39.297	-1,270.52	-739.94	2,486.61	2,394.44	92.17	26.978	
5,700.00	5,146.49	3,195.00	3,219.00	20.79	121.70	37.968	-1,270.52	-739.94	2,506.20	2,417.92	88.28	28.390	
5,750.00	5,149.84	3,195.00	3,219.00	21.00	121.70	36.851	-1,270.52	-739.94	2,523.45	2,437.86	85.59	29.481	
5,800.00	5,150.00	3,195.00	3,219.00	21.20	121.70	36.584	-1,270.52	-739.94	2,539.18	2,453.95	85.23	29.794	
5,850.00	5,150.00	3,195.00	3,219.00	21.42	121.70	36.584	-1,270.52	-739.94	2,555.67	2,470.27	85.40	29.926	
5,900.00	5,150.00	3,195.00	3,219.00	21.64	121.70	36.584	-1,270.52	-739.94	2,573.03	2,487.45	85.57	30.068	
5,950.00	5,150.00	3,195.00	3,219.00	21.88	121.70	36.584	-1,270.52	-739.94	2,591.23	2,505.47	85.76	30.214	
6,000.00	5,150.00	3,195.00	3,219.00	22.13	121.70	36.584	-1,270.52	-739.94	2,610.27	2,524.31	85.96	30.368	
6,050.00	5,150.00	3,195.00	3,219.00	22.40	121.70	36.584	-1,270.52	-739.94	2,630.12	2,543.96	86.16	30.526	
6,100.00	5,150.00	3,195.00	3,219.00	22.66	121.70	36.584	-1,270.52	-739.94	2,650.76	2,564.39	86.37	30.692	
6,150.00	5,150.00	3,195.00	3,219.00	22.95	121.70	36.584	-1,270.52	-739.94	2,672.18	2,585.59	86.59	30.861	
6,200.00	5,150.00	3,195.00	3,219.00	23.24	121.70	36.584	-1,270.52	-739.94	2,694.36	2,607.55	86.81	31.038	
6,250.00	5,150.00	3,195.00	3,219.00	23.55	121.70	36.584	-1,270.52	-739.94	2,717.27	2,630.23	87.04	31.218	
6,300.00	5,150.00	3,195.00	3,219.00	23.86	121.70	36.584	-1,270.52	-739.94	2,740.91	2,653.64	87.28	31.405	
6,350.00	5,150.00	3,195.00	3,219.00	24.19	121.70	36.584	-1,270.52	-739.94	2,765.25	2,677.73	87.52	31.596	
6,400.00	5,150.00	3,195.00	3,219.00	24.51	121.70	36.584	-1,270.52	-739.94	2,790.27	2,702.51	87.77	31.792	
6,450.00	5,150.00	3,195.00	3,219.00	24.86	121.70	36.584	-1,270.52	-739.94	2,815.96	2,727.94	88.02	31.992	
6,500.00	5,150.00	3,195.00	3,219.00	25.20	121.70	36.584	-1,270.52	-739.94	2,842.30	2,754.02	88.28	32.198	
6,550.00	5,150.00	3,195.00	3,219.00	25.56	121.70	36.584	-1,270.52	-739.94	2,869.26	2,780.72	88.54	32.406	
6,600.00	5,150.00	3,195.00	3,219.00	25.92	121.70	36.584	-1,270.52	-739.94	2,896.84	2,808.03	88.81	32.619	
6,650.00	5,150.00	3,195.00	3,219.00	26.29	121.70	36.584	-1,270.52	-739.94	2,925.01	2,835.93	89.08	32.835	
6,700.00	5,150.00	3,195.00	3,219.00	26.67	121.70	36.584	-1,270.52	-739.94	2,953.76	2,864.41	89.36	33.056	
6,750.00	5,150.00	3,195.00	3,219.00	27.05	121.70	36.584	-1,270.52	-739.94	2,983.08	2,893.44	89.64	33.280	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 200-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	
0.00	0.00	0.00	4.00	0.00	0.00	43.746	359.93	344.51	498.25				
50.00	50.00	46.00	50.00	0.05	0.38	43.746	359.93	344.51	498.23	497.80	0.43	1,145.830	
100.00	100.00	96.00	100.00	0.14	0.80	43.746	359.93	344.51	498.23	497.30	0.94	530.810	
150.00	150.00	146.00	150.00	0.32	1.21	43.746	359.93	344.51	498.23	496.70	1.53	325.207	
200.00	200.00	196.00	200.00	0.50	1.62	43.746	359.93	344.51	498.23	496.11	2.13	234.410	
250.00	250.00	246.00	250.00	0.68	2.55	43.746	359.93	344.51	498.23	495.00	3.23	154.201	
300.00	300.00	296.00	300.00	0.86	3.52	43.746	359.93	344.51	498.23	493.85	4.38	113.722	
350.00	350.00	346.00	350.00	1.04	4.49	125.121	359.93	344.51	498.48	492.95	5.53	90.130	
400.00	399.98	395.98	399.98	1.21	5.46	125.232	359.93	344.51	499.24	492.56	6.68	74.727	
450.00	449.93	445.93	449.93	1.39	6.55	125.415	359.93	344.51	500.50	492.55	7.95	62.988	
500.00	499.84	495.84	499.84	1.57	7.64	125.670	359.93	344.51	502.28	493.06	9.21	54.516	
550.00	549.68	545.68	549.68	1.75	8.73	125.994	359.93	344.51	504.58	494.10	10.48	48.146	
600.00	599.45	595.45	599.45	1.93	9.81	126.384	359.93	344.51	507.42	495.67	11.74	43.211	
650.00	649.13	645.13	649.13	2.11	10.90	126.839	359.93	344.51	510.81	497.80	13.00	39.286	
700.00	698.70	694.70	698.70	2.29	11.98	127.354	359.93	344.51	514.76	500.51	14.26	36.109	
750.00	748.15	744.15	748.15	2.47	13.06	127.926	359.93	344.51	519.31	503.81	15.50	33.495	
800.00	797.47	793.49	797.47	2.65	14.11	128.550	359.93	344.51	524.46	507.74	16.72	31.369	
850.00	846.63	842.66	846.63	2.84	15.16	129.222	359.93	344.51	530.24	512.32	17.92	29.584	
900.00	895.62	891.65	895.62	3.02	16.20	129.938	359.93	344.51	536.67	517.55	19.12	28.073	
950.00	944.44	940.47	944.44	3.21	17.24	130.692	359.93	344.51	543.77	523.47	20.30	26.785	
1,000.00	993.06	989.08	993.06	3.40	18.27	131.479	359.93	344.51	551.56	530.09	21.47	25.689	
1,050.00	1,041.46	1,037.49	1,041.46	3.59	19.30	132.294	359.93	344.51	560.07	537.44	22.63	24.751	
1,100.00	1,089.70	1,085.74	1,089.70	3.78	20.24	133.214	359.93	344.51	569.18	545.47	23.71	24.009	
1,150.00	1,137.92	1,133.96	1,137.92	3.98	21.15	134.150	359.93	344.51	578.47	553.70	24.77	23.354	
1,200.00	1,186.14	1,182.19	1,186.14	4.18	22.06	135.058	359.93	344.51	587.92	562.09	25.83	22.759	
1,250.00	1,234.37	1,230.41	1,234.37	4.37	22.97	135.937	359.93	344.51	597.51	570.61	26.89	22.218	
1,300.00	1,282.59	1,278.63	1,282.59	4.57	23.88	136.790	359.93	344.51	607.23	579.27	27.96	21.721	
1,350.00	1,330.81	1,326.86	1,330.81	4.77	24.79	137.616	359.93	344.51	617.08	588.07	29.02	21.267	
1,400.00	1,379.04	1,375.08	1,379.04	4.97	25.70	138.418	359.93	344.51	627.06	596.98	30.08	20.848	
1,450.00	1,427.26	1,423.30	1,427.26	5.17	26.61	139.194	359.93	344.51	637.16	606.02	31.14	20.463	
1,500.00	1,475.48	1,471.55	1,475.48	5.37	27.54	139.947	359.93	344.51	647.36	615.14	32.22	20.089	
1,550.00	1,523.71	1,519.77	1,523.71	5.57	28.49	140.677	359.93	344.51	657.68	624.36	33.32	19.737	
1,600.00	1,571.93	1,567.99	1,571.93	5.77	29.44	141.385	359.93	344.51	668.09	633.67	34.42	19.410	
1,650.00	1,620.15	1,616.22	1,620.15	5.97	30.39	142.072	359.93	344.51	678.61	643.09	35.52	19.106	
1,700.00	1,668.37	1,664.44	1,668.37	6.17	31.34	142.739	359.93	344.51	689.21	652.60	36.61	18.824	
1,750.00	1,716.60	1,712.66	1,716.60	6.37	32.29	143.385	359.93	344.51	699.91	662.20	37.71	18.560	
1,800.00	1,764.82	1,760.88	1,764.82	6.57	33.24	144.013	359.93	344.51	710.69	671.88	38.81	18.313	
1,850.00	1,813.04	1,809.11	1,813.04	6.78	34.19	144.622	359.93	344.51	721.55	681.65	39.90	18.083	
1,900.00	1,861.27	1,857.33	1,861.27	6.98	35.18	145.213	359.93	344.51	732.49	691.45	41.04	17.847	
1,950.00	1,909.49	1,905.56	1,909.49	7.18	36.24	145.788	359.93	344.51	743.50	701.25	42.25	17.599	
2,000.00	1,957.71	1,953.78	1,957.71	7.38	37.30	146.346	359.93	344.51	754.58	711.13	43.45	17.366	
2,050.00	2,005.94	2,002.00	2,005.94	7.59	38.36	146.888	359.93	344.51	765.73	721.08	44.66	17.148	
2,100.00	2,054.16	2,050.22	2,054.16	7.79	39.43	147.415	359.93	344.51	776.95	731.09	45.86	16.942	
2,150.00	2,102.38	2,098.45	2,102.38	7.99	40.49	147.927	359.93	344.51	788.22	741.16	47.06	16.748	
2,200.00	2,150.61	2,146.67	2,150.61	8.19	41.55	148.425	359.93	344.51	799.56	751.29	48.27	16.566	
2,250.00	2,198.83	2,194.89	2,198.83	8.40	42.61	148.909	359.93	344.51	810.95	761.48	49.47	16.393	
2,300.00	2,247.05	2,243.12	2,247.05	8.60	43.67	149.380	359.93	344.51	822.40	771.72	50.67	16.230	
2,350.00	2,295.28	2,291.34	2,295.28	8.80	44.73	149.838	359.93	344.51	833.90	782.02	51.88	16.075	
2,400.00	2,343.50	2,339.60	2,343.50	9.01	45.72	150.284	359.93	344.51	845.44	792.44	53.00	15.951	
2,450.00	2,391.72	2,387.82	2,391.72	9.21	46.63	150.718	359.93	344.51	857.04	802.98	54.06	15.853	
2,500.00	2,439.95	2,436.05	2,439.95	9.41	47.54	151.141	359.93	344.51	868.68	813.57	55.12	15.761	
2,550.00	2,488.17	2,484.27	2,488.17	9.62	48.45	151.553	359.93	344.51	880.37	824.20	56.17	15.672	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 200-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	
2,600.00	2,536.39	2,532.49	2,536.39	9.82	49.36	151.954	359.93	344.51	892.10	834.87	57.23	15.588	
2,650.00	2,584.61	2,580.72	2,584.61	10.02	50.27	152.344	359.93	344.51	903.87	845.59	58.29	15.507	
2,700.00	2,632.84	2,628.94	2,632.84	10.23	51.18	152.725	359.93	344.51	915.68	856.34	59.34	15.430	
2,750.00	2,681.06	2,677.16	2,681.06	10.43	52.09	153.096	359.93	344.51	927.53	867.13	60.40	15.357	
2,800.00	2,729.28	2,725.39	2,729.28	10.64	53.00	153.459	359.93	344.51	939.41	877.96	61.46	15.286	
2,850.00	2,777.51	2,773.63	2,777.51	10.84	53.87	153.812	359.93	344.51	951.33	888.86	62.47	15.229	
2,900.00	2,825.73	2,821.86	2,825.73	11.04	54.67	154.156	359.93	344.51	963.29	899.86	63.43	15.188	
2,950.00	2,873.95	2,870.08	2,873.95	11.25	55.48	154.492	359.93	344.51	975.27	910.89	64.38	15.148	
3,000.00	2,922.18	2,918.30	2,922.18	11.45	56.29	154.820	359.93	344.51	987.29	921.95	65.34	15.111	
3,050.00	2,970.40	2,966.52	2,970.40	11.66	57.09	155.141	359.93	344.51	999.34	933.04	66.29	15.075	
3,100.00	3,018.62	3,014.75	3,018.62	11.86	57.90	155.453	359.93	344.51	1,011.41	944.16	67.25	15.040	
3,150.00	3,066.85	3,062.97	3,066.85	12.06	58.71	155.759	359.93	344.51	1,023.51	955.31	68.21	15.006	
3,200.00	3,115.07	3,111.19	3,115.07	12.27	59.51	156.057	359.93	344.51	1,035.65	966.48	69.16	14.974	
3,250.00	3,163.29	3,159.42	3,163.29	12.47	60.32	156.349	359.93	344.51	1,047.80	977.69	70.12	14.944	
3,300.00	3,211.52	3,207.64	3,211.52	12.68	61.23	156.633	359.93	344.51	1,059.98	988.81	71.18	14.892	
3,350.00	3,259.74	3,255.86	3,259.74	12.88	62.15	156.912	359.93	344.51	1,072.19	999.95	72.24	14.842	
3,400.00	3,307.96	3,304.09	3,307.96	13.08	63.06	157.184	359.93	344.51	1,084.42	1,011.12	73.30	14.794	
3,450.00	3,356.19	3,352.31	3,356.19	13.29	63.98	157.451	359.93	344.51	1,096.67	1,022.31	74.36	14.748	
3,500.00	3,404.41	3,400.53	3,404.41	13.49	64.90	157.711	359.93	344.51	1,108.95	1,033.52	75.42	14.703	
3,550.00	3,452.63	3,448.76	3,452.63	13.70	65.81	157.966	359.93	344.51	1,121.25	1,044.76	76.49	14.659	
3,600.00	3,500.85	3,496.98	3,500.85	13.90	66.73	158.215	359.93	344.51	1,133.56	1,056.01	77.55	14.617	
3,650.00	3,549.08	3,545.20	3,549.08	14.11	67.64	158.459	359.93	344.51	1,145.90	1,067.29	78.61	14.577	
3,700.00	3,597.30	3,593.43	3,597.30	14.31	68.56	158.698	359.93	344.51	1,158.25	1,078.58	79.67	14.537	
3,750.00	3,645.52	3,641.65	3,645.52	14.51	69.48	158.932	359.93	344.51	1,170.63	1,089.89	80.74	14.499	
3,800.00	3,693.75	3,689.87	3,693.75	14.72	70.39	159.161	359.93	344.51	1,183.02	1,101.22	81.80	14.462	
3,850.00	3,741.97	3,738.10	3,741.97	14.92	71.31	159.385	359.93	344.51	1,195.43	1,112.57	82.86	14.426	
3,900.00	3,790.19	3,786.32	3,790.19	15.13	72.23	159.605	359.93	344.51	1,207.86	1,123.93	83.93	14.392	
3,950.00	3,838.42	3,834.54	3,838.42	15.33	73.14	159.820	359.93	344.51	1,220.30	1,135.31	84.99	14.358	
4,000.00	3,886.64	3,882.77	3,886.64	15.54	74.06	160.031	359.93	344.51	1,232.76	1,146.71	86.05	14.325	
4,050.00	3,935.06	3,931.19	3,935.06	15.74	74.98	158.949	359.93	344.51	1,244.47	1,156.66	87.82	14.171	
4,100.00	3,984.05	3,980.18	3,984.05	15.93	75.91	156.509	359.93	344.51	1,253.75	1,164.15	89.60	13.993	
4,150.00	4,033.48	4,029.61	4,033.48	16.11	76.85	151.754	359.93	344.51	1,260.50	1,169.33	91.17	13.826	
4,200.00	4,083.23	4,079.38	4,083.23	16.29	77.79	140.358	359.93	344.51	1,264.71	1,172.19	92.53	13.669	
4,250.00	4,133.15	4,129.30	4,133.15	16.45	78.74	100.763	359.93	344.51	1,266.36	1,172.72	93.64	13.523	
4,300.00	4,183.11	4,179.26	4,183.11	16.61	79.69	32.982	359.93	344.51	1,265.44	1,170.93	94.51	13.390	
4,350.00	4,232.97	4,229.12	4,232.97	16.75	80.64	11.124	359.93	344.51	1,261.96	1,166.85	95.11	13.269	
4,400.00	4,282.59	4,278.74	4,282.59	16.88	81.58	3.459	359.93	344.51	1,255.91	1,160.47	95.44	13.159	
4,450.00	4,331.84	4,327.99	4,331.84	17.02	82.52	-0.355	359.93	344.51	1,247.33	1,151.83	95.50	13.061	
4,500.00	4,380.59	4,376.74	4,380.59	17.14	83.45	-2.685	359.93	344.51	1,236.23	1,140.95	95.28	12.975	
4,550.00	4,428.69	4,424.84	4,428.69	17.27	84.36	-4.317	359.93	344.51	1,222.63	1,127.86	94.78	12.900	
4,600.00	4,476.02	4,472.17	4,476.02	17.39	85.26	-5.588	359.93	344.51	1,206.59	1,112.61	93.98	12.838	
4,650.00	4,522.45	4,518.60	4,522.45	17.51	86.14	-6.667	359.93	344.51	1,188.15	1,095.24	92.91	12.788	
4,700.00	4,567.85	4,564.01	4,567.85	17.63	87.02	-7.650	359.93	344.51	1,167.35	1,075.78	91.57	12.749	
4,750.00	4,612.10	4,608.25	4,612.10	17.74	87.95	-8.601	359.93	344.51	1,144.26	1,054.24	90.03	12.710	
4,800.00	4,655.07	4,651.23	4,655.07	17.86	88.86	-9.567	359.93	344.51	1,118.95	1,030.72	88.23	12.682	
4,850.00	4,696.65	4,692.81	4,696.65	17.98	89.73	-10.584	359.93	344.51	1,091.49	1,005.29	86.20	12.663	
4,900.00	4,736.73	4,732.88	4,736.73	18.10	90.58	-11.688	359.93	344.51	1,061.96	977.99	83.97	12.647	
4,950.00	4,775.18	4,771.34	4,775.18	18.22	91.39	-12.917	359.93	344.51	1,030.46	948.86	81.59	12.629	
5,000.00	4,811.92	4,808.07	4,811.92	18.34	92.16	-14.310	359.93	344.51	997.07	917.92	79.15	12.597	
5,050.00	4,846.83	4,842.99	4,846.83	18.47	92.90	-15.913	359.93	344.51	961.90	885.16	76.75	12.534	
5,100.00	4,879.83	4,875.98	4,879.83	18.61	93.59	-17.783	359.93	344.51	925.07	850.53	74.53	12.412	
5,150.00	4,910.81	4,906.96	4,910.81	18.75	94.25	-19.989	359.93	344.51	886.68	813.96	72.72	12.192	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 200-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	
5,200.00	4,939.70	4,935.86	4,939.70	18.90	94.86	-22.614	359.93	344.51	846.87	775.26	71.61	11.826	
5,250.00	4,966.42	4,962.58	4,966.42	19.05	95.42	-25.762	359.93	344.51	805.78	734.23	71.55	11.262	
5,300.00	4,991.50	4,987.66	4,991.50	19.21	95.95	-27.691	359.93	344.51	763.87	690.78	73.08	10.452	
5,350.00	5,016.50	5,012.66	5,016.50	19.39	96.48	-29.139	359.93	344.51	722.07	647.03	75.04	9.623	
5,400.00	5,041.50	5,037.68	5,041.50	19.57	96.99	-30.731	359.93	344.51	680.46	603.29	77.17	8.818	
5,450.00	5,066.50	5,062.68	5,066.50	19.76	97.46	-32.488	359.93	344.51	639.07	559.58	79.48	8.040	
5,500.00	5,090.48	5,086.66	5,090.48	19.96	97.92	-37.707	359.93	344.51	597.42	514.44	82.98	7.199	
5,550.00	5,110.69	5,106.87	5,110.69	20.17	98.30	-45.721	359.93	344.51	554.38	464.12	90.25	6.142	
5,600.00	5,126.84	5,123.02	5,126.84	20.38	98.61	-55.577	359.93	344.51	510.33	409.96	100.37	5.084	
5,650.00	5,138.80	5,134.98	5,138.80	20.59	98.84	-66.742	359.93	344.51	465.80	355.33	110.47	4.217	
5,700.00	5,146.49	5,142.67	5,146.49	20.79	98.98	-77.957	359.93	344.51	421.39	304.03	117.37	3.590	
5,750.00	5,149.84	5,146.02	5,149.84	21.00	99.05	-87.749	359.93	344.51	377.81	257.83	119.98	3.149	
5,800.00	5,150.00	5,146.18	5,150.00	21.20	99.05	-90.000	359.93	344.51	335.88	215.64	120.24	2.793	
5,850.00	5,150.00	5,146.18	5,150.00	21.42	99.05	-90.000	359.93	344.51	296.46	176.00	120.46	2.461	
5,900.00	5,150.00	5,146.18	5,150.00	21.64	99.05	-90.000	359.93	344.51	260.69	140.01	120.69	2.160	
5,950.00	5,150.00	5,146.18	5,150.00	21.88	99.05	-90.000	359.93	344.51	230.29	109.36	120.93	1.904	
6,000.00	5,150.00	5,146.18	5,150.00	22.13	99.05	-90.000	359.93	344.51	207.62	86.44	121.18	1.713	
6,050.00	5,150.00	5,146.18	5,150.00	22.40	99.05	-90.000	359.93	344.51	195.39	73.95	121.44	1.609	
6,074.27	5,150.00	5,146.18	5,150.00	22.53	99.05	-90.000	359.93	344.51	193.88	72.31	121.57	1.595	CC, ES, SF
6,100.00	5,150.00	5,146.18	5,150.00	22.66	99.05	-90.000	359.93	344.51	195.58	73.87	121.71	1.607	
6,150.00	5,150.00	5,146.18	5,150.00	22.95	99.05	-90.000	359.93	344.51	208.14	86.14	122.00	1.706	
6,200.00	5,150.00	5,146.18	5,150.00	23.24	99.05	-90.000	359.93	344.51	231.08	108.79	122.29	1.890	
6,250.00	5,150.00	5,146.18	5,150.00	23.55	99.05	-90.000	359.93	344.51	261.67	139.07	122.60	2.134	
6,300.00	5,150.00	5,146.18	5,150.00	23.86	99.05	-90.000	359.93	344.51	297.56	174.65	122.91	2.421	
6,350.00	5,150.00	5,146.18	5,150.00	24.19	99.05	-90.000	359.93	344.51	337.07	213.83	123.23	2.735	
6,400.00	5,150.00	5,146.18	5,150.00	24.51	99.05	-90.000	359.93	344.51	379.06	255.50	123.56	3.068	
6,450.00	5,150.00	5,146.18	5,150.00	24.86	99.05	-90.000	359.93	344.51	422.80	298.89	123.90	3.412	
6,500.00	5,150.00	5,146.18	5,150.00	25.20	99.05	-90.000	359.93	344.51	467.79	343.55	124.25	3.765	
6,550.00	5,150.00	5,146.18	5,150.00	25.56	99.05	-90.000	359.93	344.51	513.72	389.11	124.61	4.123	
6,600.00	5,150.00	5,146.18	5,150.00	25.92	99.05	-90.000	359.93	344.51	560.34	435.37	124.97	4.484	
6,650.00	5,150.00	5,146.18	5,150.00	26.29	99.05	-90.000	359.93	344.51	607.49	482.15	125.34	4.847	
6,700.00	5,150.00	5,146.18	5,150.00	26.67	99.05	-90.000	359.93	344.51	655.07	529.36	125.71	5.211	
6,750.00	5,150.00	5,146.18	5,150.00	27.05	99.05	-90.000	359.93	344.51	702.99	576.89	126.10	5.575	
6,800.00	5,150.00	5,146.18	5,150.00	27.44	99.05	-90.000	359.93	344.51	751.18	624.69	126.49	5.939	
6,850.00	5,150.00	5,146.18	5,150.00	27.84	99.05	-90.000	359.93	344.51	799.59	672.70	126.88	6.302	
6,900.00	5,150.00	5,146.18	5,150.00	28.23	99.05	-90.000	359.93	344.51	848.18	720.90	127.28	6.664	
6,950.00	5,150.00	5,146.18	5,150.00	28.64	99.05	-90.000	359.93	344.51	896.93	769.24	127.69	7.024	
7,000.00	5,150.00	5,146.18	5,150.00	29.05	99.05	-90.000	359.93	344.51	945.81	817.71	128.10	7.383	
7,050.00	5,150.00	5,146.18	5,150.00	29.47	99.05	-90.000	359.93	344.51	994.80	866.28	128.52	7.740	
7,100.00	5,150.00	5,146.18	5,150.00	29.89	99.05	-90.000	359.93	344.51	1,043.89	914.95	128.94	8.096	
7,150.00	5,150.00	5,146.18	5,150.00	30.32	99.05	-90.000	359.93	344.51	1,093.06	963.69	129.37	8.449	
7,200.00	5,150.00	5,146.18	5,150.00	30.75	99.05	-90.000	359.93	344.51	1,142.30	1,012.50	129.80	8.801	
7,250.00	5,150.00	5,146.18	5,150.00	31.19	99.05	-90.000	359.93	344.51	1,191.60	1,061.37	130.23	9.150	
7,300.00	5,150.00	5,146.18	5,150.00	31.62	99.05	-90.000	359.93	344.51	1,240.96	1,110.29	130.67	9.497	
7,350.00	5,150.00	5,146.18	5,150.00	32.07	99.05	-90.000	359.93	344.51	1,290.37	1,159.26	131.11	9.842	
7,400.00	5,150.00	5,146.18	5,150.00	32.51	99.05	-90.000	359.93	344.51	1,339.83	1,208.27	131.56	10.184	
7,450.00	5,150.00	5,146.18	5,150.00	32.96	99.05	-90.000	359.93	344.51	1,389.32	1,257.31	132.01	10.524	
7,500.00	5,150.00	5,146.18	5,150.00	33.42	99.05	-90.000	359.93	344.51	1,438.85	1,306.38	132.46	10.862	
7,550.00	5,150.00	5,146.18	5,150.00	33.88	99.05	-90.000	359.93	344.51	1,488.41	1,355.48	132.92	11.198	
7,600.00	5,150.00	5,146.18	5,150.00	34.33	99.05	-90.000	359.93	344.51	1,537.99	1,404.61	133.38	11.531	
7,650.00	5,150.00	5,146.18	5,150.00	34.80	99.05	-90.000	359.93	344.51	1,587.61	1,453.76	133.85	11.861	
7,700.00	5,150.00	5,146.18	5,150.00	35.26	99.05	-90.000	359.93	344.51	1,637.25	1,502.94	134.31	12.190	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 200-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	
7,750.00	5,150.00	5,146.18	5,150.00	35.73	99.05	-90.000	359.93	344.51	1,686.90	1,552.12	134.78	12.516	
7,800.00	5,150.00	5,146.18	5,150.00	36.20	99.05	-90.000	359.93	344.51	1,736.58	1,601.33	135.25	12.840	
7,850.00	5,150.00	5,146.18	5,150.00	36.68	99.05	-90.000	359.93	344.51	1,786.28	1,650.55	135.73	13.161	
7,900.00	5,150.00	5,146.18	5,150.00	37.16	99.05	-90.000	359.93	344.51	1,835.99	1,699.79	136.20	13.480	
7,950.00	5,150.00	5,146.18	5,150.00	37.64	99.05	-90.000	359.93	344.51	1,885.72	1,749.04	136.68	13.796	
8,000.00	5,150.00	5,146.18	5,150.00	38.12	99.05	-90.000	359.93	344.51	1,935.46	1,798.30	137.16	14.111	
8,050.00	5,150.00	5,146.18	5,150.00	38.60	99.05	-90.000	359.93	344.51	1,985.22	1,847.57	137.65	14.422	
8,100.00	5,150.00	5,146.18	5,150.00	39.09	99.05	-90.000	359.93	344.51	2,034.98	1,896.85	138.13	14.732	
8,150.00	5,150.00	5,146.18	5,150.00	39.57	99.05	-90.000	359.93	344.51	2,084.76	1,946.14	138.62	15.039	
8,200.00	5,150.00	5,146.18	5,150.00	40.06	99.05	-90.000	359.93	344.51	2,134.55	1,995.44	139.11	15.344	
8,250.00	5,150.00	5,146.18	5,150.00	40.56	99.05	-90.000	359.93	344.51	2,184.35	2,044.74	139.60	15.647	
8,300.00	5,150.00	5,146.18	5,150.00	41.05	99.05	-90.000	359.93	344.51	2,234.15	2,094.06	140.10	15.947	
8,350.00	5,150.00	5,146.18	5,150.00	41.55	99.05	-90.000	359.93	344.51	2,283.97	2,143.38	140.59	16.245	
8,400.00	5,150.00	5,146.18	5,150.00	42.04	99.05	-90.000	359.93	344.51	2,333.79	2,192.70	141.09	16.541	
8,450.00	5,150.00	5,146.18	5,150.00	42.54	99.05	-90.000	359.93	344.51	2,383.62	2,242.04	141.59	16.835	
8,500.00	5,150.00	5,146.18	5,150.00	43.04	99.05	-90.000	359.93	344.51	2,433.46	2,291.37	142.09	17.126	
8,550.00	5,150.00	5,146.18	5,150.00	43.54	99.05	-90.000	359.93	344.51	2,483.31	2,340.71	142.59	17.416	
8,600.00	5,150.00	5,146.18	5,150.00	44.05	99.05	-90.000	359.93	344.51	2,533.16	2,390.06	143.09	17.703	
8,650.00	5,150.00	5,146.18	5,150.00	44.55	99.05	-90.000	359.93	344.51	2,583.01	2,439.41	143.60	17.988	
8,700.00	5,150.00	5,146.18	5,150.00	45.06	99.05	-90.000	359.93	344.51	2,632.87	2,488.77	144.11	18.270	
8,750.00	5,150.00	5,146.18	5,150.00	45.57	99.05	-90.000	359.93	344.51	2,682.74	2,538.13	144.61	18.551	
8,800.00	5,150.00	5,146.18	5,150.00	46.08	99.05	-90.000	359.93	344.51	2,732.61	2,587.49	145.12	18.830	
8,850.00	5,150.00	5,146.18	5,150.00	46.59	99.05	-90.000	359.93	344.51	2,782.49	2,636.86	145.63	19.106	
8,900.00	5,150.00	5,146.18	5,150.00	47.10	99.05	-90.000	359.93	344.51	2,832.37	2,686.23	146.14	19.381	
8,950.00	5,150.00	5,146.18	5,150.00	47.61	99.05	-90.000	359.93	344.51	2,882.25	2,735.60	146.66	19.653	
9,000.00	5,150.00	5,146.18	5,150.00	48.12	99.05	-90.000	359.93	344.51	2,932.14	2,784.97	147.17	19.923	
9,050.00	5,150.00	5,146.18	5,150.00	48.64	99.05	-90.000	359.93	344.51	2,982.03	2,834.35	147.69	20.192	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 OCHO_TESORO OFFSETS - MCINTYRE A #17 - 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									
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	5,150.00	5,052.00	5,066.29	48.12	132.22	88.392	-2,805.77	3,581.92	2,998.14	2,817.89	180.24	16.634	
9,050.00	5,150.00	5,052.00	5,066.29	48.64	132.22	88.392	-2,805.77	3,581.92	2,993.51	2,812.75	180.76	16.561	
9,100.00	5,150.00	5,052.00	5,066.29	49.15	132.22	88.392	-2,805.77	3,581.92	2,989.72	2,808.44	181.27	16.493	
9,150.00	5,150.00	5,052.00	5,066.29	49.67	132.22	88.392	-2,805.77	3,581.92	2,986.76	2,804.97	181.79	16.430	
9,200.00	5,150.00	5,052.00	5,066.29	50.19	132.22	88.392	-2,805.77	3,581.92	2,984.63	2,802.32	182.31	16.371	
9,250.00	5,150.00	5,052.00	5,066.29	50.71	132.22	88.392	-2,805.77	3,581.92	2,983.34	2,800.51	182.83	16.318	
9,300.00	5,150.00	5,052.00	5,066.29	51.23	132.22	88.392	-2,805.77	3,581.92	2,982.89	2,799.54	183.35	16.269	
9,301.98	5,150.00	5,052.00	5,066.29	51.25	132.22	88.392	-2,805.77	3,581.92	2,982.89	2,799.52	183.37	16.267	CC
9,350.00	5,150.00	5,052.00	5,066.29	51.75	132.22	88.392	-2,805.77	3,581.92	2,983.27	2,799.41	183.87	16.225	ES
9,400.00	5,150.00	5,052.00	5,066.29	52.27	132.22	88.392	-2,805.77	3,581.92	2,984.50	2,800.11	184.39	16.186	
9,450.00	5,150.00	5,052.00	5,066.29	52.79	132.22	88.392	-2,805.77	3,581.92	2,986.56	2,801.65	184.91	16.151	
9,500.00	5,150.00	5,052.00	5,066.29	53.32	132.22	88.392	-2,805.77	3,581.92	2,989.45	2,804.02	185.44	16.121	
9,550.00	5,150.00	5,052.00	5,066.29	53.84	132.22	88.392	-2,805.77	3,581.92	2,993.18	2,807.22	185.96	16.096	
9,600.00	5,150.00	5,052.00	5,066.29	54.37	132.22	88.392	-2,805.77	3,581.92	2,997.74	2,811.25	186.48	16.075	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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 300-UNKNOWN												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,200.00	5,150.00	5,141.00	5,144.00	40.06	199.40	89.851	-2,134.72	4,369.21	2,987.88	2,748.42	239.46	12.478	
8,250.00	5,150.00	5,141.00	5,144.00	40.56	199.40	89.851	-2,134.72	4,369.21	2,956.49	2,716.54	239.95	12.321	
8,300.00	5,150.00	5,141.00	5,144.00	41.05	199.40	89.851	-2,134.72	4,369.21	2,925.61	2,685.16	240.44	12.167	
8,350.00	5,150.00	5,141.00	5,144.00	41.55	199.40	89.851	-2,134.72	4,369.21	2,895.26	2,654.32	240.94	12.016	
8,400.00	5,150.00	5,141.00	5,144.00	42.04	199.40	89.851	-2,134.72	4,369.21	2,865.47	2,624.03	241.44	11.868	
8,450.00	5,150.00	5,141.00	5,144.00	42.54	199.40	89.851	-2,134.72	4,369.21	2,836.25	2,594.31	241.94	11.723	
8,500.00	5,150.00	5,141.00	5,144.00	43.04	199.40	89.851	-2,134.72	4,369.21	2,807.61	2,565.17	242.44	11.581	
8,550.00	5,150.00	5,141.00	5,144.00	43.54	199.40	89.851	-2,134.72	4,369.21	2,779.57	2,536.63	242.94	11.441	
8,600.00	5,150.00	5,141.00	5,144.00	44.05	199.40	89.851	-2,134.72	4,369.21	2,752.16	2,508.72	243.44	11.305	
8,650.00	5,150.00	5,141.00	5,144.00	44.55	199.40	89.851	-2,134.72	4,369.21	2,725.39	2,481.44	243.95	11.172	
8,700.00	5,150.00	5,141.00	5,144.00	45.06	199.40	89.851	-2,134.72	4,369.21	2,699.28	2,454.83	244.45	11.042	
8,750.00	5,150.00	5,141.00	5,144.00	45.57	199.40	89.851	-2,134.72	4,369.21	2,673.85	2,428.89	244.96	10.915	
8,800.00	5,150.00	5,141.00	5,144.00	46.08	199.40	89.851	-2,134.72	4,369.21	2,649.13	2,403.66	245.47	10.792	
8,850.00	5,150.00	5,141.00	5,144.00	46.59	199.40	89.851	-2,134.72	4,369.21	2,625.12	2,379.13	245.98	10.672	
8,900.00	5,150.00	5,141.00	5,144.00	47.10	199.40	89.851	-2,134.72	4,369.21	2,601.85	2,355.35	246.49	10.555	
8,950.00	5,150.00	5,141.00	5,144.00	47.61	199.40	89.851	-2,134.72	4,369.21	2,579.34	2,332.33	247.01	10.442	
9,000.00	5,150.00	5,141.00	5,144.00	48.12	199.40	89.851	-2,134.72	4,369.21	2,557.60	2,310.09	247.52	10.333	
9,050.00	5,150.00	5,141.00	5,144.00	48.64	199.40	89.851	-2,134.72	4,369.21	2,536.67	2,288.64	248.03	10.227	
9,100.00	5,150.00	5,141.00	5,144.00	49.15	199.40	89.851	-2,134.72	4,369.21	2,516.56	2,268.01	248.55	10.125	
9,150.00	5,150.00	5,141.00	5,144.00	49.67	199.40	89.851	-2,134.72	4,369.21	2,497.29	2,248.22	249.07	10.027	
9,200.00	5,150.00	5,141.00	5,144.00	50.19	199.40	89.851	-2,134.72	4,369.21	2,478.87	2,229.29	249.58	9.932	
9,250.00	5,150.00	5,141.00	5,144.00	50.71	199.40	89.851	-2,134.72	4,369.21	2,461.34	2,211.23	250.10	9.841	
9,300.00	5,150.00	5,141.00	5,144.00	51.23	199.40	89.851	-2,134.72	4,369.21	2,444.70	2,194.07	250.62	9.754	
9,350.00	5,150.00	5,141.00	5,144.00	51.75	199.40	89.851	-2,134.72	4,369.21	2,428.97	2,177.83	251.15	9.672	
9,400.00	5,150.00	5,141.00	5,144.00	52.27	199.40	89.851	-2,134.72	4,369.21	2,414.18	2,162.52	251.67	9.593	
9,450.00	5,150.00	5,141.00	5,144.00	52.79	199.40	89.851	-2,134.72	4,369.21	2,400.34	2,148.15	252.19	9.518	
9,500.00	5,150.00	5,141.00	5,144.00	53.32	199.40	89.851	-2,134.72	4,369.21	2,387.47	2,134.76	252.71	9.447	
9,550.00	5,150.00	5,141.00	5,144.00	53.84	199.40	89.851	-2,134.72	4,369.21	2,375.58	2,122.34	253.24	9.381	
9,600.00	5,150.00	5,141.00	5,144.00	54.37	199.40	89.851	-2,134.72	4,369.21	2,364.69	2,110.93	253.76	9.319	
9,650.00	5,150.00	5,141.00	5,144.00	54.89	199.40	89.851	-2,134.72	4,369.21	2,354.81	2,100.52	254.29	9.260	
9,700.00	5,150.00	5,141.00	5,144.00	55.42	199.40	89.851	-2,134.72	4,369.21	2,345.95	2,091.14	254.81	9.207	
9,750.00	5,150.00	5,141.00	5,144.00	55.95	199.40	89.851	-2,134.72	4,369.21	2,338.13	2,082.79	255.34	9.157	
9,800.00	5,150.00	5,141.00	5,144.00	56.47	199.40	89.851	-2,134.72	4,369.21	2,331.36	2,075.49	255.87	9.111	
9,850.00	5,150.00	5,141.00	5,144.00	57.00	199.40	89.851	-2,134.72	4,369.21	2,325.64	2,069.24	256.40	9.070	
9,900.00	5,150.00	5,141.00	5,144.00	57.53	199.40	89.851	-2,134.72	4,369.21	2,320.98	2,064.05	256.93	9.034	
9,950.00	5,150.00	5,141.00	5,144.00	58.06	199.40	89.851	-2,134.72	4,369.21	2,317.40	2,059.94	257.46	9.001	
10,000.00	5,150.00	5,141.00	5,144.00	58.59	199.40	89.851	-2,134.72	4,369.21	2,314.89	2,056.90	257.99	8.973	
10,050.00	5,150.00	5,141.00	5,144.00	59.13	199.40	89.851	-2,134.72	4,369.21	2,313.45	2,054.93	258.52	8.949	
10,091.32	5,150.00	5,141.00	5,144.00	59.56	199.40	89.851	-2,134.72	4,369.21	2,313.08	2,054.12	258.96	8.932 CC	
10,100.00	5,150.00	5,141.00	5,144.00	59.66	199.40	89.851	-2,134.72	4,369.21	2,313.10	2,054.05	259.05	8.929 ES	
10,150.00	5,150.00	5,141.00	5,144.00	60.19	199.40	89.851	-2,134.72	4,369.21	2,313.83	2,054.24	259.58	8.914	
10,200.00	5,150.00	5,141.00	5,144.00	60.72	199.40	89.851	-2,134.72	4,369.21	2,315.64	2,055.52	260.12	8.902	
10,250.00	5,150.00	5,141.00	5,144.00	61.26	199.40	89.851	-2,134.72	4,369.21	2,318.52	2,057.87	260.65	8.895	
10,300.00	5,150.00	5,141.00	5,144.00	61.79	199.40	89.851	-2,134.72	4,369.21	2,322.48	2,061.29	261.19	8.892 SF	
10,350.00	5,150.00	5,141.00	5,144.00	62.32	199.40	89.851	-2,134.72	4,369.21	2,327.50	2,065.78	261.72	8.893	
10,400.00	5,150.00	5,141.00	5,144.00	62.86	199.40	89.851	-2,134.72	4,369.21	2,333.59	2,071.33	262.25	8.898	
10,450.00	5,150.00	5,141.00	5,144.00	63.40	199.40	89.851	-2,134.72	4,369.21	2,340.73	2,077.94	262.79	8.907	
10,500.00	5,150.00	5,141.00	5,144.00	63.93	199.40	89.851	-2,134.72	4,369.21	2,348.91	2,085.58	263.33	8.920	
10,550.00	5,150.00	5,141.00	5,144.00	64.47	199.40	89.851	-2,134.72	4,369.21	2,358.12	2,094.26	263.86	8.937	
10,600.00	5,150.00	5,141.00	5,144.00	65.01	199.40	89.851	-2,134.72	4,369.21	2,368.36	2,103.96	264.40	8.957	
10,650.00	5,150.00	5,141.00	5,144.00	65.54	199.40	89.851	-2,134.72	4,369.21	2,379.60	2,114.66	264.94	8.982	
10,700.00	5,150.00	5,141.00	5,144.00	66.08	199.40	89.851	-2,134.72	4,369.21	2,391.83	2,126.35	265.48	9.010	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 OCHO_TESORO OFFSETS - MCINTYRE A FEDERAL #14 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 300-UNKNOWN												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,750.00	5,150.00	5,141.00	5,144.00	66.62	199.40	89.851	-2,134.72	4,369.21	2,405.04	2,139.03	266.01	9.041	
10,800.00	5,150.00	5,141.00	5,144.00	67.16	199.40	89.851	-2,134.72	4,369.21	2,419.21	2,152.66	266.55	9.076	
10,850.00	5,150.00	5,141.00	5,144.00	67.70	199.40	89.851	-2,134.72	4,369.21	2,434.33	2,167.24	267.09	9.114	
10,893.39	5,150.00	5,141.00	5,144.00	68.16	199.40	89.851	-2,134.72	4,369.21	2,448.20	2,180.64	267.56	9.150	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 1465-MWD+HGRF												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,200.00	5,150.00	5,037.00	5,030.34	40.06	15.31	86.138	-1,592.72	4,875.78	2,985.69	2,930.50	55.19	54.098	
8,250.00	5,150.00	5,037.00	5,030.34	40.56	15.31	86.138	-1,592.72	4,875.78	2,945.66	2,889.98	55.68	52.902	
8,300.00	5,150.00	5,037.00	5,030.34	41.05	15.31	86.138	-1,592.72	4,875.78	2,905.93	2,849.76	56.17	51.731	
8,350.00	5,150.00	5,037.00	5,030.34	41.55	15.31	86.138	-1,592.72	4,875.78	2,866.53	2,809.86	56.67	50.584	
8,400.00	5,150.00	5,037.00	5,030.34	42.04	15.31	86.138	-1,592.72	4,875.78	2,827.46	2,770.30	57.16	49.462	
8,450.00	5,150.00	5,037.00	5,030.34	42.54	15.31	86.138	-1,592.72	4,875.78	2,788.74	2,731.08	57.66	48.363	
8,500.00	5,150.00	5,037.00	5,030.34	43.04	15.31	86.138	-1,592.72	4,875.78	2,750.39	2,692.23	58.16	47.289	
8,550.00	5,150.00	5,037.00	5,030.34	43.54	15.31	86.138	-1,592.72	4,875.78	2,712.41	2,653.75	58.66	46.237	
8,600.00	5,150.00	5,037.00	5,030.34	44.05	15.31	86.138	-1,592.72	4,875.78	2,674.83	2,615.67	59.16	45.210	
8,650.00	5,150.00	5,037.00	5,030.34	44.55	15.31	86.138	-1,592.72	4,875.78	2,637.66	2,577.99	59.67	44.205	
8,700.00	5,150.00	5,037.00	5,030.34	45.06	15.31	86.138	-1,592.72	4,875.78	2,600.92	2,540.75	60.17	43.223	
8,750.00	5,150.00	5,037.00	5,030.34	45.57	15.31	86.138	-1,592.72	4,875.78	2,564.64	2,503.95	60.68	42.264	
8,800.00	5,150.00	5,037.00	5,030.34	46.08	15.31	86.138	-1,592.72	4,875.78	2,528.81	2,467.63	61.19	41.328	
8,850.00	5,150.00	5,037.00	5,030.34	46.59	15.31	86.138	-1,592.72	4,875.78	2,493.48	2,431.78	61.70	40.414	
8,900.00	5,150.00	5,037.00	5,030.34	47.10	15.31	86.138	-1,592.72	4,875.78	2,458.66	2,396.45	62.21	39.523	
8,950.00	5,150.00	5,037.00	5,030.34	47.61	15.31	86.138	-1,592.72	4,875.78	2,424.36	2,361.64	62.72	38.654	
9,000.00	5,150.00	5,037.00	5,030.34	48.12	15.31	86.138	-1,592.72	4,875.78	2,390.62	2,327.39	63.23	37.807	
9,050.00	5,150.00	5,037.00	5,030.34	48.64	15.31	86.138	-1,592.72	4,875.78	2,357.46	2,293.72	63.75	36.982	
9,100.00	5,150.00	5,037.00	5,030.34	49.15	15.31	86.138	-1,592.72	4,875.78	2,324.90	2,260.64	64.26	36.179	
9,150.00	5,150.00	5,037.00	5,030.34	49.67	15.31	86.138	-1,592.72	4,875.78	2,292.97	2,228.19	64.78	35.398	
9,200.00	5,150.00	5,037.00	5,030.34	50.19	15.31	86.138	-1,592.72	4,875.78	2,261.69	2,196.40	65.29	34.639	
9,250.00	5,150.00	5,037.00	5,030.34	50.71	15.31	86.138	-1,592.72	4,875.78	2,231.10	2,165.29	65.81	33.901	
9,300.00	5,150.00	5,037.00	5,030.34	51.23	15.31	86.138	-1,592.72	4,875.78	2,201.22	2,134.89	66.33	33.186	
9,350.00	5,150.00	5,037.00	5,030.34	51.75	15.31	86.138	-1,592.72	4,875.78	2,172.07	2,105.22	66.85	32.491	
9,400.00	5,150.00	5,037.00	5,030.34	52.27	15.31	86.138	-1,592.72	4,875.78	2,143.70	2,076.33	67.37	31.819	
9,450.00	5,150.00	5,037.00	5,030.34	52.79	15.31	86.138	-1,592.72	4,875.78	2,116.13	2,048.23	67.89	31.169	
9,500.00	5,150.00	5,037.00	5,030.34	53.32	15.31	86.138	-1,592.72	4,875.78	2,089.39	2,020.97	68.41	30.540	
9,550.00	5,150.00	5,037.00	5,030.34	53.84	15.31	86.138	-1,592.72	4,875.78	2,063.51	1,994.57	68.94	29.933	
9,600.00	5,150.00	5,037.00	5,030.34	54.37	15.31	86.138	-1,592.72	4,875.78	2,038.54	1,969.07	69.46	29.348	
9,650.00	5,150.00	5,037.00	5,030.34	54.89	15.31	86.138	-1,592.72	4,875.78	2,014.49	1,944.50	69.99	28.784	
9,700.00	5,150.00	5,037.00	5,030.34	55.42	15.31	86.138	-1,592.72	4,875.78	1,991.41	1,920.90	70.51	28.242	
9,750.00	5,150.00	5,037.00	5,030.34	55.95	15.31	86.138	-1,592.72	4,875.78	1,969.33	1,898.29	71.04	27.722	
9,800.00	5,150.00	5,037.00	5,030.34	56.47	15.31	86.138	-1,592.72	4,875.78	1,948.28	1,876.72	71.56	27.224	
9,850.00	5,150.00	5,037.00	5,030.34	57.00	15.31	86.138	-1,592.72	4,875.78	1,928.30	1,856.21	72.09	26.748	
9,900.00	5,150.00	5,037.00	5,030.34	57.53	15.31	86.138	-1,592.72	4,875.78	1,909.42	1,836.80	72.62	26.293	
9,950.00	5,150.00	5,037.00	5,030.34	58.06	15.31	86.138	-1,592.72	4,875.78	1,891.68	1,818.53	73.15	25.860	
10,000.00	5,150.00	5,037.00	5,030.34	58.59	15.31	86.138	-1,592.72	4,875.78	1,875.10	1,801.42	73.68	25.450	
10,050.00	5,150.00	5,037.00	5,030.34	59.13	15.31	86.138	-1,592.72	4,875.78	1,859.71	1,785.51	74.21	25.060	
10,100.00	5,150.00	5,037.00	5,030.34	59.66	15.31	86.138	-1,592.72	4,875.78	1,845.56	1,770.82	74.74	24.693	
10,150.00	5,150.00	5,037.00	5,030.34	60.19	15.31	86.138	-1,592.72	4,875.78	1,832.66	1,757.38	75.27	24.347	
10,200.00	5,150.00	5,037.00	5,030.34	60.72	15.31	86.138	-1,592.72	4,875.78	1,821.04	1,745.23	75.80	24.023	
10,250.00	5,150.00	5,037.00	5,030.34	61.26	15.31	86.138	-1,592.72	4,875.78	1,810.72	1,734.39	76.34	23.721	
10,300.00	5,150.00	5,037.00	5,030.34	61.79	15.31	86.138	-1,592.72	4,875.78	1,801.74	1,724.87	76.87	23.439	
10,350.00	5,150.00	5,037.00	5,030.34	62.32	15.31	86.138	-1,592.72	4,875.78	1,794.10	1,716.70	77.40	23.179	
10,400.00	5,150.00	5,037.00	5,030.34	62.86	15.31	86.138	-1,592.72	4,875.78	1,787.84	1,709.90	77.94	22.940	
10,450.00	5,150.00	5,037.00	5,030.34	63.40	15.31	86.138	-1,592.72	4,875.78	1,782.95	1,704.48	78.47	22.721	
10,500.00	5,150.00	5,037.00	5,030.34	63.93	15.31	86.138	-1,592.72	4,875.78	1,779.45	1,700.45	79.00	22.523	
10,550.00	5,150.00	5,037.00	5,030.34	64.47	15.31	86.138	-1,592.72	4,875.78	1,777.36	1,697.82	79.54	22.345	
10,599.55	5,150.00	5,037.00	5,030.34	65.00	15.31	86.138	-1,592.72	4,875.78	1,776.66	1,696.59	80.07	22.189 CC	
10,600.00	5,150.00	5,037.00	5,030.34	65.01	15.31	86.138	-1,592.72	4,875.78	1,776.66	1,696.59	80.08	22.187 ES	
10,650.00	5,150.00	5,037.00	5,030.34	65.54	15.31	86.138	-1,592.72	4,875.78	1,777.38	1,696.77	80.61	22.049	
10,700.00	5,150.00	5,037.00	5,030.34	66.08	15.31	86.138	-1,592.72	4,875.78	1,779.50	1,698.35	81.15	21.929	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 OCHO_TESORO OFFSETS - MCINTYRE W D `C` #7 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 1465-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
10,750.00	5,150.00	5,037.00	5,030.34	66.62	15.31	86.138	-1,592.72	4,875.78	1,783.02	1,701.34	81.69	21.828	
10,800.00	5,150.00	5,037.00	5,030.34	67.16	15.31	86.138	-1,592.72	4,875.78	1,787.94	1,705.71	82.22	21.745	
10,850.00	5,150.00	5,037.00	5,030.34	67.70	15.31	86.138	-1,592.72	4,875.78	1,794.23	1,711.47	82.76	21.680	
10,893.39	5,150.00	5,037.00	5,030.34	68.16	15.31	86.138	-1,592.72	4,875.78	1,800.80	1,717.57	83.23	21.637 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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 343-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	
0.00	0.00	10.00	0.00	0.00	0.10	82.758	367.97	2,895.66	2,918.95				
50.00	50.00	60.00	50.00	0.05	0.62	82.758	367.97	2,895.66	2,918.95	2,918.28	0.67	4,364.430	
100.00	100.00	110.00	100.00	0.14	1.13	82.758	367.97	2,895.66	2,918.95	2,917.68	1.27	2,296.667	
150.00	150.00	160.00	150.00	0.32	1.64	82.758	367.97	2,895.66	2,918.95	2,916.98	1.96	1,487.201	
200.00	200.00	210.00	200.00	0.50	2.15	82.758	367.97	2,895.66	2,918.95	2,916.29	2.65	1,099.632	
250.00	250.00	260.00	250.00	0.68	2.67	82.758	367.97	2,895.66	2,918.95	2,915.60	3.35	872.307	
300.00	300.00	310.00	300.00	0.86	3.18	82.758	367.97	2,895.66	2,918.95	2,914.91	4.04	722.869	
350.00	350.00	360.00	350.00	1.04	3.85	164.096	367.97	2,895.66	2,919.37	2,914.48	4.89	597.139	
400.00	399.98	409.98	399.98	1.21	4.83	164.097	367.97	2,895.66	2,920.62	2,914.57	6.06	482.148	
450.00	449.93	459.93	449.93	1.39	5.81	164.097	367.97	2,895.66	2,922.72	2,915.50	7.23	404.493	
500.00	499.84	509.84	499.84	1.57	6.79	164.097	367.97	2,895.66	2,925.66	2,917.27	8.39	348.745	
550.00	549.68	559.68	549.68	1.75	7.77	164.097	367.97	2,895.66	2,929.43	2,919.88	9.55	306.758	
600.00	599.45	609.45	599.45	1.93	8.75	164.098	367.97	2,895.66	2,934.04	2,923.34	10.70	274.146	
650.00	649.13	659.13	649.13	2.11	9.73	164.098	367.97	2,895.66	2,939.49	2,927.64	11.85	248.090	
700.00	698.70	708.70	698.70	2.29	10.70	164.098	367.97	2,895.66	2,945.77	2,932.79	12.98	226.875	
750.00	748.15	758.17	748.15	2.47	11.65	164.098	367.97	2,895.66	2,952.88	2,938.80	14.09	209.630	
800.00	797.47	807.49	797.47	2.65	12.55	164.098	367.97	2,895.66	2,960.83	2,945.69	15.13	195.651	
850.00	846.63	856.65	846.63	2.84	13.45	164.097	367.97	2,895.66	2,969.60	2,953.43	16.17	183.655	
900.00	895.62	905.64	895.62	3.02	14.34	164.096	367.97	2,895.66	2,979.20	2,962.01	17.19	173.308	
950.00	944.44	954.46	944.44	3.21	15.23	164.094	367.97	2,895.66	2,989.63	2,971.43	18.20	164.284	
5,650.00	5,138.80	5,148.95	5,138.80	20.59	99.53	-18.349	367.97	2,895.66	2,981.02	2,935.86	45.16	66.005	
5,700.00	5,146.49	5,156.63	5,146.49	20.79	99.69	-30.974	367.97	2,895.66	2,931.74	2,867.34	64.40	45.523	
5,750.00	5,149.84	5,159.99	5,149.84	21.00	99.76	-70.801	367.97	2,895.66	2,881.98	2,767.58	114.40	25.191	
5,800.00	5,150.00	5,160.15	5,150.00	21.20	99.77	-90.000	367.97	2,895.66	2,832.10	2,711.14	120.96	23.413	
5,850.00	5,150.00	5,160.15	5,150.00	21.42	99.77	-90.000	367.97	2,895.66	2,782.22	2,661.03	121.18	22.959	
5,900.00	5,150.00	5,160.15	5,150.00	21.64	99.77	-90.000	367.97	2,895.66	2,732.34	2,610.94	121.40	22.506	
5,950.00	5,150.00	5,160.15	5,150.00	21.88	99.77	-90.000	367.97	2,895.66	2,682.47	2,560.82	121.65	22.051	
6,000.00	5,150.00	5,160.15	5,150.00	22.13	99.77	-90.000	367.97	2,895.66	2,632.60	2,510.71	121.89	21.598	
6,050.00	5,150.00	5,160.15	5,150.00	22.40	99.77	-90.000	367.97	2,895.66	2,582.74	2,460.58	122.16	21.142	
6,100.00	5,150.00	5,160.15	5,150.00	22.66	99.77	-90.000	367.97	2,895.66	2,532.89	2,410.46	122.43	20.689	
6,150.00	5,150.00	5,160.15	5,150.00	22.95	99.77	-90.000	367.97	2,895.66	2,483.04	2,360.32	122.72	20.234	
6,200.00	5,150.00	5,160.15	5,150.00	23.24	99.77	-90.000	367.97	2,895.66	2,433.19	2,310.19	123.01	19.781	
6,250.00	5,150.00	5,160.15	5,150.00	23.55	99.77	-90.000	367.97	2,895.66	2,383.35	2,260.04	123.32	19.327	
6,300.00	5,150.00	5,160.15	5,150.00	23.86	99.77	-90.000	367.97	2,895.66	2,333.52	2,209.90	123.62	18.876	
6,350.00	5,150.00	5,160.15	5,150.00	24.19	99.77	-90.000	367.97	2,895.66	2,283.70	2,159.75	123.95	18.424	
6,400.00	5,150.00	5,160.15	5,150.00	24.51	99.77	-90.000	367.97	2,895.66	2,233.89	2,109.61	124.28	17.975	
6,450.00	5,150.00	5,160.15	5,150.00	24.86	99.77	-90.000	367.97	2,895.66	2,184.08	2,059.46	124.62	17.526	
6,500.00	5,150.00	5,160.15	5,150.00	25.20	99.77	-90.000	367.97	2,895.66	2,134.28	2,009.32	124.97	17.079	
6,550.00	5,150.00	5,160.15	5,150.00	25.56	99.77	-90.000	367.97	2,895.66	2,084.49	1,959.17	125.32	16.633	
6,600.00	5,150.00	5,160.15	5,150.00	25.92	99.77	-90.000	367.97	2,895.66	2,034.72	1,909.03	125.68	16.189	
6,650.00	5,150.00	5,160.15	5,150.00	26.29	99.77	-90.000	367.97	2,895.66	1,984.95	1,858.89	126.06	15.746	
6,700.00	5,150.00	5,160.15	5,150.00	26.67	99.77	-90.000	367.97	2,895.66	1,935.20	1,808.77	126.43	15.306	
6,750.00	5,150.00	5,160.15	5,150.00	27.05	99.77	-90.000	367.97	2,895.66	1,885.46	1,758.64	126.82	14.868	
6,800.00	5,150.00	5,160.15	5,150.00	27.44	99.77	-90.000	367.97	2,895.66	1,835.73	1,708.53	127.20	14.432	
6,850.00	5,150.00	5,160.15	5,150.00	27.84	99.77	-90.000	367.97	2,895.66	1,786.02	1,658.42	127.60	13.997	
6,900.00	5,150.00	5,160.15	5,150.00	28.23	99.77	-90.000	367.97	2,895.66	1,736.32	1,608.32	128.00	13.565	
6,950.00	5,150.00	5,160.15	5,150.00	28.64	99.77	-90.000	367.97	2,895.66	1,686.64	1,558.24	128.41	13.135	
7,000.00	5,150.00	5,160.15	5,150.00	29.05	99.77	-90.000	367.97	2,895.66	1,636.99	1,508.17	128.82	12.708	
7,050.00	5,150.00	5,160.15	5,150.00	29.47	99.77	-90.000	367.97	2,895.66	1,587.35	1,458.11	129.24	12.282	
7,100.00	5,150.00	5,160.15	5,150.00	29.89	99.77	-90.000	367.97	2,895.66	1,537.74	1,408.08	129.66	11.860	
7,150.00	5,150.00	5,160.15	5,150.00	30.32	99.77	-90.000	367.97	2,895.66	1,488.15	1,358.07	130.08	11.440	
7,200.00	5,150.00	5,160.15	5,150.00	30.75	99.77	-90.000	367.97	2,895.66	1,438.59	1,308.08	130.51	11.023	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 343-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	
7,250.00	5,150.00	5,160.15	5,150.00	31.19	99.77	-90.000	367.97	2,895.66	1,389.07	1,258.12	130.95	10.608	
7,300.00	5,150.00	5,160.15	5,150.00	31.62	99.77	-90.000	367.97	2,895.66	1,339.58	1,208.19	131.39	10.196	
7,350.00	5,150.00	5,160.15	5,150.00	32.07	99.77	-90.000	367.97	2,895.66	1,290.12	1,158.29	131.83	9.786	
7,400.00	5,150.00	5,160.15	5,150.00	32.51	99.77	-90.000	367.97	2,895.66	1,240.72	1,108.44	132.28	9.380	
7,450.00	5,150.00	5,160.15	5,150.00	32.96	99.77	-90.000	367.97	2,895.66	1,191.36	1,058.63	132.73	8.976	
7,500.00	5,150.00	5,160.15	5,150.00	33.42	99.77	-90.000	367.97	2,895.66	1,142.05	1,008.87	133.18	8.575	
7,550.00	5,150.00	5,160.15	5,150.00	33.88	99.77	-90.000	367.97	2,895.66	1,092.81	959.18	133.64	8.177	
7,600.00	5,150.00	5,160.15	5,150.00	34.33	99.77	-90.000	367.97	2,895.66	1,043.65	909.55	134.10	7.783	
7,650.00	5,150.00	5,160.15	5,150.00	34.80	99.77	-90.000	367.97	2,895.66	994.56	860.00	134.56	7.391	
7,700.00	5,150.00	5,160.15	5,150.00	35.26	99.77	-90.000	367.97	2,895.66	945.58	810.55	135.03	7.003	
7,750.00	5,150.00	5,160.15	5,150.00	35.73	99.77	-90.000	367.97	2,895.66	896.70	761.20	135.50	6.618	
7,800.00	5,150.00	5,160.15	5,150.00	36.20	99.77	-90.000	367.97	2,895.66	847.95	711.99	135.97	6.236	
7,850.00	5,150.00	5,160.15	5,150.00	36.68	99.77	-90.000	367.97	2,895.66	799.36	662.92	136.44	5.859	
7,900.00	5,150.00	5,160.15	5,150.00	37.16	99.77	-90.000	367.97	2,895.66	750.96	614.04	136.92	5.485	
7,950.00	5,150.00	5,160.15	5,150.00	37.64	99.77	-90.000	367.97	2,895.66	702.78	565.38	137.40	5.115	
8,000.00	5,150.00	5,160.15	5,150.00	38.12	99.77	-90.000	367.97	2,895.66	654.87	516.99	137.88	4.750	
8,050.00	5,150.00	5,160.15	5,150.00	38.60	99.77	-90.000	367.97	2,895.66	607.30	468.93	138.37	4.389	
8,100.00	5,150.00	5,160.15	5,150.00	39.09	99.77	-90.000	367.97	2,895.66	560.15	421.30	138.85	4.034	
8,150.00	5,150.00	5,160.15	5,150.00	39.57	99.77	-90.000	367.97	2,895.66	513.54	374.20	139.34	3.686	
8,200.00	5,150.00	5,160.15	5,150.00	40.06	99.77	-90.000	367.97	2,895.66	467.63	327.80	139.83	3.344	
8,250.00	5,150.00	5,160.15	5,150.00	40.56	99.77	-90.000	367.97	2,895.66	422.65	282.33	140.32	3.012	
8,300.00	5,150.00	5,160.15	5,150.00	41.05	99.77	-90.000	367.97	2,895.66	378.93	238.12	140.81	2.691	
8,350.00	5,150.00	5,160.15	5,150.00	41.55	99.77	-90.000	367.97	2,895.66	336.96	195.65	141.31	2.385	
8,400.00	5,150.00	5,160.15	5,150.00	42.04	99.77	-90.000	367.97	2,895.66	297.49	155.69	141.81	2.098	
8,450.00	5,150.00	5,160.15	5,150.00	42.54	99.77	-90.000	367.97	2,895.66	261.64	119.34	142.31	1.839	
8,500.00	5,150.00	5,160.15	5,150.00	43.04	99.77	-90.000	367.97	2,895.66	231.11	88.31	142.81	1.618	
8,550.00	5,150.00	5,160.15	5,150.00	43.54	99.77	-90.000	367.97	2,895.66	208.26	64.95	143.31	1.453 Level 3	
8,600.00	5,150.00	5,160.15	5,150.00	44.05	99.77	-90.000	367.97	2,895.66	195.77	51.96	143.81	1.361 Level 3	
8,625.44	5,150.00	5,160.15	5,150.00	44.30	99.77	-90.000	367.97	2,895.66	194.11	50.04	144.07	1.347 Level 3, CC, ES, SF	
8,650.00	5,150.00	5,160.15	5,150.00	44.55	99.77	-90.000	367.97	2,895.66	195.66	51.34	144.32	1.356 Level 3	
8,700.00	5,150.00	5,160.15	5,150.00	45.06	99.77	-90.000	367.97	2,895.66	207.94	63.12	144.82	1.436 Level 3	
8,750.00	5,150.00	5,160.15	5,150.00	45.57	99.77	-90.000	367.97	2,895.66	230.64	85.31	145.33	1.587	
8,800.00	5,150.00	5,160.15	5,150.00	46.08	99.77	-90.000	367.97	2,895.66	261.06	115.22	145.84	1.790	
8,850.00	5,150.00	5,160.15	5,150.00	46.59	99.77	-90.000	367.97	2,895.66	296.83	150.48	146.35	2.028	
8,900.00	5,150.00	5,160.15	5,150.00	47.10	99.77	-90.000	367.97	2,895.66	336.25	189.39	146.86	2.290	
8,950.00	5,150.00	5,160.15	5,150.00	47.61	99.77	-90.000	367.97	2,895.66	378.18	230.81	147.37	2.566	
9,000.00	5,150.00	5,160.15	5,150.00	48.12	99.77	-90.000	367.97	2,895.66	421.87	273.99	147.89	2.853	
9,050.00	5,150.00	5,160.15	5,150.00	48.64	99.77	-90.000	367.97	2,895.66	466.83	318.43	148.40	3.146	
9,100.00	5,150.00	5,160.15	5,150.00	49.15	99.77	-90.000	367.97	2,895.66	512.73	363.81	148.92	3.443	
9,150.00	5,150.00	5,160.15	5,150.00	49.67	99.77	-90.000	367.97	2,895.66	559.33	409.89	149.44	3.743	
9,200.00	5,150.00	5,160.15	5,150.00	50.19	99.77	-90.000	367.97	2,895.66	606.47	456.51	149.95	4.044	
9,250.00	5,150.00	5,160.15	5,150.00	50.71	99.77	-90.000	367.97	2,895.66	654.03	503.56	150.47	4.346	
9,300.00	5,150.00	5,160.15	5,150.00	51.23	99.77	-90.000	367.97	2,895.66	701.94	550.94	150.99	4.649	
9,350.00	5,150.00	5,160.15	5,150.00	51.75	99.77	-90.000	367.97	2,895.66	750.11	598.60	151.51	4.951	
9,400.00	5,150.00	5,160.15	5,150.00	52.27	99.77	-90.000	367.97	2,895.66	798.52	646.48	152.04	5.252	
9,450.00	5,150.00	5,160.15	5,150.00	52.79	99.77	-90.000	367.97	2,895.66	847.10	694.54	152.56	5.553	
9,500.00	5,150.00	5,160.15	5,150.00	53.32	99.77	-90.000	367.97	2,895.66	895.85	742.76	153.08	5.852	
9,550.00	5,150.00	5,160.15	5,150.00	53.84	99.77	-90.000	367.97	2,895.66	944.72	791.11	153.61	6.150	
9,600.00	5,150.00	5,160.15	5,150.00	54.37	99.77	-90.000	367.97	2,895.66	993.71	839.58	154.13	6.447	
9,650.00	5,150.00	5,160.15	5,150.00	54.89	99.77	-90.000	367.97	2,895.66	1,042.79	888.13	154.66	6.743	
9,700.00	5,150.00	5,160.15	5,150.00	55.42	99.77	-90.000	367.97	2,895.66	1,091.95	936.77	155.18	7.037	
9,750.00	5,150.00	5,160.15	5,150.00	55.95	99.77	-90.000	367.97	2,895.66	1,141.19	985.48	155.71	7.329	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 OCHO_TESORO OFFSETS - THUNDER ROAD FEDERAL #7 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 343-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	
9,800.00	5,150.00	5,160.15	5,150.00	56.47	99.77	-90.000	367.97	2,895.66	1,190.49	1,034.26	156.24	7.620		
9,850.00	5,150.00	5,160.15	5,150.00	57.00	99.77	-90.000	367.97	2,895.66	1,239.85	1,083.08	156.77	7.909		
9,900.00	5,150.00	5,160.15	5,150.00	57.53	99.77	-90.000	367.97	2,895.66	1,289.26	1,131.96	157.30	8.196		
9,950.00	5,150.00	5,160.15	5,150.00	58.06	99.77	-90.000	367.97	2,895.66	1,338.71	1,180.88	157.83	8.482		
10,000.00	5,150.00	5,160.15	5,150.00	58.59	99.77	-90.000	367.97	2,895.66	1,388.20	1,229.84	158.36	8.766		
10,050.00	5,150.00	5,160.15	5,150.00	59.13	99.77	-90.000	367.97	2,895.66	1,437.73	1,278.84	158.89	9.049		
10,100.00	5,150.00	5,160.15	5,150.00	59.66	99.77	-90.000	367.97	2,895.66	1,487.28	1,327.86	159.42	9.329		
10,150.00	5,150.00	5,160.15	5,150.00	60.19	99.77	-90.000	367.97	2,895.66	1,536.87	1,376.92	159.95	9.608		
10,200.00	5,150.00	5,160.15	5,150.00	60.72	99.77	-90.000	367.97	2,895.66	1,586.48	1,426.00	160.49	9.885		
10,250.00	5,150.00	5,160.15	5,150.00	61.26	99.77	-90.000	367.97	2,895.66	1,636.12	1,475.10	161.02	10.161		
10,300.00	5,150.00	5,160.15	5,150.00	61.79	99.77	-90.000	367.97	2,895.66	1,685.78	1,524.22	161.55	10.435		
10,350.00	5,150.00	5,160.15	5,150.00	62.32	99.77	-90.000	367.97	2,895.66	1,735.45	1,573.36	162.09	10.707		
10,400.00	5,150.00	5,160.15	5,150.00	62.86	99.77	-90.000	367.97	2,895.66	1,785.15	1,622.52	162.62	10.977		
10,450.00	5,150.00	5,160.15	5,150.00	63.40	99.77	-90.000	367.97	2,895.66	1,834.86	1,671.70	163.16	11.246		
10,500.00	5,150.00	5,160.15	5,150.00	63.93	99.77	-90.000	367.97	2,895.66	1,884.59	1,720.89	163.70	11.513		
10,550.00	5,150.00	5,160.15	5,150.00	64.47	99.77	-90.000	367.97	2,895.66	1,934.33	1,770.09	164.23	11.778		
10,600.00	5,150.00	5,160.15	5,150.00	65.01	99.77	-90.000	367.97	2,895.66	1,984.08	1,819.31	164.77	12.042		
10,650.00	5,150.00	5,160.15	5,150.00	65.54	99.77	-90.000	367.97	2,895.66	2,033.85	1,868.54	165.31	12.303		
10,700.00	5,150.00	5,160.15	5,150.00	66.08	99.77	-90.000	367.97	2,895.66	2,083.62	1,917.78	165.85	12.564		
10,750.00	5,150.00	5,160.15	5,150.00	66.62	99.77	-90.000	367.97	2,895.66	2,133.41	1,967.03	166.38	12.822		
10,800.00	5,150.00	5,160.15	5,150.00	67.16	99.77	-90.000	367.97	2,895.66	2,183.21	2,016.29	166.92	13.079		
10,850.00	5,150.00	5,160.15	5,150.00	67.70	99.77	-90.000	367.97	2,895.66	2,233.02	2,065.55	167.46	13.335		
10,893.39	5,150.00	5,160.15	5,150.00	68.16	99.77	-90.000	367.97	2,895.66	2,276.25	2,108.32	167.93	13.555		

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 313-INC-ONLY												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,850.00	5,150.00	5,151.20	5,150.00	21.42	104.75	90.000	-978.24	2,889.71	2,995.75	2,869.58	126.17	23.744	
5,900.00	5,150.00	5,151.20	5,150.00	21.64	104.75	90.000	-978.24	2,889.71	2,949.66	2,823.27	126.39	23.337	
5,950.00	5,150.00	5,151.20	5,150.00	21.88	104.75	90.000	-978.24	2,889.71	2,903.70	2,777.06	126.64	22.929	
6,000.00	5,150.00	5,151.20	5,150.00	22.13	104.75	90.000	-978.24	2,889.71	2,857.87	2,730.99	126.88	22.524	
6,050.00	5,150.00	5,151.20	5,150.00	22.40	104.75	90.000	-978.24	2,889.71	2,812.18	2,685.03	127.15	22.117	
6,100.00	5,150.00	5,151.20	5,150.00	22.66	104.75	90.000	-978.24	2,889.71	2,766.65	2,639.23	127.42	21.713	
6,150.00	5,150.00	5,151.20	5,150.00	22.95	104.75	90.000	-978.24	2,889.71	2,721.27	2,593.56	127.71	21.309	
6,200.00	5,150.00	5,151.20	5,150.00	23.24	104.75	90.000	-978.24	2,889.71	2,676.06	2,548.06	128.00	20.907	
6,250.00	5,150.00	5,151.20	5,150.00	23.55	104.75	90.000	-978.24	2,889.71	2,631.01	2,502.71	128.30	20.506	
6,300.00	5,150.00	5,151.20	5,150.00	23.86	104.75	90.000	-978.24	2,889.71	2,586.16	2,457.54	128.61	20.108	
6,350.00	5,150.00	5,151.20	5,150.00	24.19	104.75	90.000	-978.24	2,889.71	2,541.49	2,412.55	128.94	19.711	
6,400.00	5,150.00	5,151.20	5,150.00	24.51	104.75	90.000	-978.24	2,889.71	2,497.02	2,367.76	129.27	19.317	
6,450.00	5,150.00	5,151.20	5,150.00	24.86	104.75	90.000	-978.24	2,889.71	2,452.77	2,323.16	129.61	18.924	
6,500.00	5,150.00	5,151.20	5,150.00	25.20	104.75	90.000	-978.24	2,889.71	2,408.74	2,278.79	129.95	18.535	
6,550.00	5,150.00	5,151.20	5,150.00	25.56	104.75	90.000	-978.24	2,889.71	2,364.96	2,234.64	130.31	18.148	
6,600.00	5,150.00	5,151.20	5,150.00	25.92	104.75	90.000	-978.24	2,889.71	2,321.42	2,190.74	130.67	17.765	
6,650.00	5,150.00	5,151.20	5,150.00	26.29	104.75	90.000	-978.24	2,889.71	2,278.14	2,147.10	131.05	17.384	
6,700.00	5,150.00	5,151.20	5,150.00	26.67	104.75	90.000	-978.24	2,889.71	2,235.15	2,103.73	131.42	17.008	
6,750.00	5,150.00	5,151.20	5,150.00	27.05	104.75	90.000	-978.24	2,889.71	2,192.46	2,060.65	131.81	16.634	
6,800.00	5,150.00	5,151.20	5,150.00	27.44	104.75	90.000	-978.24	2,889.71	2,150.08	2,017.89	132.19	16.265	
6,850.00	5,150.00	5,151.20	5,150.00	27.84	104.75	90.000	-978.24	2,889.71	2,108.03	1,975.44	132.59	15.899	
6,900.00	5,150.00	5,151.20	5,150.00	28.23	104.75	90.000	-978.24	2,889.71	2,066.34	1,933.35	132.99	15.538	
6,950.00	5,150.00	5,151.20	5,150.00	28.64	104.75	90.000	-978.24	2,889.71	2,025.02	1,891.63	133.40	15.180	
7,000.00	5,150.00	5,151.20	5,150.00	29.05	104.75	90.000	-978.24	2,889.71	1,984.11	1,850.30	133.81	14.828	
7,050.00	5,150.00	5,151.20	5,150.00	29.47	104.75	90.000	-978.24	2,889.71	1,943.62	1,809.39	134.23	14.480	
7,100.00	5,150.00	5,151.20	5,150.00	29.89	104.75	90.000	-978.24	2,889.71	1,903.58	1,768.93	134.65	14.138	
7,150.00	5,150.00	5,151.20	5,150.00	30.32	104.75	90.000	-978.24	2,889.71	1,864.02	1,728.95	135.07	13.800	
7,200.00	5,150.00	5,151.20	5,150.00	30.75	104.75	90.000	-978.24	2,889.71	1,824.98	1,689.47	135.50	13.468	
7,250.00	5,150.00	5,151.20	5,150.00	31.19	104.75	90.000	-978.24	2,889.71	1,786.48	1,650.54	135.94	13.142	
7,300.00	5,150.00	5,151.20	5,150.00	31.62	104.75	90.000	-978.24	2,889.71	1,748.56	1,612.18	136.38	12.822	
7,350.00	5,150.00	5,151.20	5,150.00	32.07	104.75	90.000	-978.24	2,889.71	1,711.26	1,574.44	136.82	12.507	
7,400.00	5,150.00	5,151.20	5,150.00	32.51	104.75	90.000	-978.24	2,889.71	1,674.63	1,537.37	137.27	12.200	
7,450.00	5,150.00	5,151.20	5,150.00	32.96	104.75	90.000	-978.24	2,889.71	1,638.70	1,500.99	137.72	11.899	
7,500.00	5,150.00	5,151.20	5,150.00	33.42	104.75	90.000	-978.24	2,889.71	1,603.53	1,465.36	138.17	11.605	
7,550.00	5,150.00	5,151.20	5,150.00	33.88	104.75	90.000	-978.24	2,889.71	1,569.17	1,430.54	138.63	11.319	
7,600.00	5,150.00	5,151.20	5,150.00	34.33	104.75	90.000	-978.24	2,889.71	1,535.66	1,396.57	139.09	11.041	
7,650.00	5,150.00	5,151.20	5,150.00	34.80	104.75	90.000	-978.24	2,889.71	1,503.07	1,363.51	139.55	10.771	
7,700.00	5,150.00	5,151.20	5,150.00	35.26	104.75	90.000	-978.24	2,889.71	1,471.45	1,331.43	140.02	10.509	
7,750.00	5,150.00	5,151.20	5,150.00	35.73	104.75	90.000	-978.24	2,889.71	1,440.88	1,300.39	140.49	10.256	
7,800.00	5,150.00	5,151.20	5,150.00	36.20	104.75	90.000	-978.24	2,889.71	1,411.42	1,270.46	140.96	10.013	
7,850.00	5,150.00	5,151.20	5,150.00	36.68	104.75	90.000	-978.24	2,889.71	1,383.13	1,241.70	141.43	9.779	
7,900.00	5,150.00	5,151.20	5,150.00	37.16	104.75	90.000	-978.24	2,889.71	1,356.11	1,214.20	141.91	9.556	
7,950.00	5,150.00	5,151.20	5,150.00	37.64	104.75	90.000	-978.24	2,889.71	1,330.41	1,188.02	142.39	9.343	
8,000.00	5,150.00	5,151.20	5,150.00	38.12	104.75	90.000	-978.24	2,889.71	1,306.12	1,163.25	142.87	9.142	
8,050.00	5,150.00	5,151.20	5,150.00	38.60	104.75	90.000	-978.24	2,889.71	1,283.32	1,139.97	143.35	8.952	
8,100.00	5,150.00	5,151.20	5,150.00	39.09	104.75	90.000	-978.24	2,889.71	1,262.09	1,118.25	143.84	8.774	
8,150.00	5,150.00	5,151.20	5,150.00	39.57	104.75	90.000	-978.24	2,889.71	1,242.51	1,098.19	144.33	8.609	
8,200.00	5,150.00	5,151.20	5,150.00	40.06	104.75	90.000	-978.24	2,889.71	1,224.66	1,079.85	144.82	8.457	
8,250.00	5,150.00	5,151.20	5,150.00	40.56	104.75	90.000	-978.24	2,889.71	1,208.62	1,063.31	145.31	8.318	
8,300.00	5,150.00	5,151.20	5,150.00	41.05	104.75	90.000	-978.24	2,889.71	1,194.46	1,048.66	145.80	8.192	
8,350.00	5,150.00	5,151.20	5,150.00	41.55	104.75	90.000	-978.24	2,889.71	1,182.24	1,035.94	146.30	8.081	
8,400.00	5,150.00	5,151.20	5,150.00	42.04	104.75	90.000	-978.24	2,889.71	1,172.03	1,025.24	146.80	7.984	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 313-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	
8,450.00	5,150.00	5,151.20	5,150.00	42.54	104.75	90.000	-978.24	2,889.71	1,163.88	1,016.59	147.30	7.902	
8,500.00	5,150.00	5,151.20	5,150.00	43.04	104.75	90.000	-978.24	2,889.71	1,157.84	1,010.04	147.79	7.834	
8,550.00	5,150.00	5,151.20	5,150.00	43.54	104.75	90.000	-978.24	2,889.71	1,153.93	1,005.63	148.30	7.781	
8,600.00	5,150.00	5,151.20	5,150.00	44.05	104.75	90.000	-978.24	2,889.71	1,152.18	1,003.38	148.80	7.743	
8,615.37	5,150.00	5,151.20	5,150.00	44.20	104.75	90.000	-978.24	2,889.71	1,152.07	1,003.12	148.96	7.734 CC, ES	
8,650.00	5,150.00	5,151.20	5,150.00	44.55	104.75	90.000	-978.24	2,889.71	1,152.59	1,003.29	149.31	7.720	
8,700.00	5,150.00	5,151.20	5,150.00	45.06	104.75	90.000	-978.24	2,889.71	1,155.18	1,005.37	149.81	7.711 SF	
8,750.00	5,150.00	5,151.20	5,150.00	45.57	104.75	90.000	-978.24	2,889.71	1,159.91	1,009.59	150.32	7.716	
8,800.00	5,150.00	5,151.20	5,150.00	46.08	104.75	90.000	-978.24	2,889.71	1,166.77	1,015.95	150.83	7.736	
8,850.00	5,150.00	5,151.20	5,150.00	46.59	104.75	90.000	-978.24	2,889.71	1,175.72	1,024.38	151.34	7.769	
8,900.00	5,150.00	5,151.20	5,150.00	47.10	104.75	90.000	-978.24	2,889.71	1,186.71	1,034.86	151.85	7.815	
8,950.00	5,150.00	5,151.20	5,150.00	47.61	104.75	90.000	-978.24	2,889.71	1,199.69	1,047.32	152.36	7.874	
9,000.00	5,150.00	5,151.20	5,150.00	48.12	104.75	90.000	-978.24	2,889.71	1,214.58	1,061.71	152.88	7.945	
9,050.00	5,150.00	5,151.20	5,150.00	48.64	104.75	90.000	-978.24	2,889.71	1,231.33	1,077.94	153.39	8.027	
9,100.00	5,150.00	5,151.20	5,150.00	49.15	104.75	90.000	-978.24	2,889.71	1,249.86	1,095.95	153.91	8.121	
9,150.00	5,150.00	5,151.20	5,150.00	49.67	104.75	90.000	-978.24	2,889.71	1,270.08	1,115.66	154.43	8.225	
9,200.00	5,150.00	5,151.20	5,150.00	50.19	104.75	90.000	-978.24	2,889.71	1,291.92	1,136.98	154.94	8.338	
9,250.00	5,150.00	5,151.20	5,150.00	50.71	104.75	90.000	-978.24	2,889.71	1,315.31	1,159.84	155.46	8.461	
9,300.00	5,150.00	5,151.20	5,150.00	51.23	104.75	90.000	-978.24	2,889.71	1,340.15	1,184.17	155.98	8.592	
9,350.00	5,150.00	5,151.20	5,150.00	51.75	104.75	90.000	-978.24	2,889.71	1,366.37	1,209.86	156.50	8.731	
9,400.00	5,150.00	5,151.20	5,150.00	52.27	104.75	90.000	-978.24	2,889.71	1,393.89	1,236.86	157.02	8.877	
9,450.00	5,150.00	5,151.20	5,150.00	52.79	104.75	90.000	-978.24	2,889.71	1,422.63	1,265.09	157.55	9.030	
9,500.00	5,150.00	5,151.20	5,150.00	53.32	104.75	90.000	-978.24	2,889.71	1,452.53	1,294.46	158.07	9.189	
9,550.00	5,150.00	5,151.20	5,150.00	53.84	104.75	90.000	-978.24	2,889.71	1,483.51	1,324.92	158.60	9.354	
9,600.00	5,150.00	5,151.20	5,150.00	54.37	104.75	90.000	-978.24	2,889.71	1,515.51	1,356.39	159.12	9.524	
9,650.00	5,150.00	5,151.20	5,150.00	54.89	104.75	90.000	-978.24	2,889.71	1,548.46	1,388.82	159.65	9.699	
9,700.00	5,150.00	5,151.20	5,150.00	55.42	104.75	90.000	-978.24	2,889.71	1,582.31	1,422.14	160.17	9.879	
9,750.00	5,150.00	5,151.20	5,150.00	55.95	104.75	90.000	-978.24	2,889.71	1,616.99	1,456.29	160.70	10.062	
9,800.00	5,150.00	5,151.20	5,150.00	56.47	104.75	90.000	-978.24	2,889.71	1,652.46	1,491.23	161.23	10.249	
9,850.00	5,150.00	5,151.20	5,150.00	57.00	104.75	90.000	-978.24	2,889.71	1,688.67	1,526.91	161.76	10.439	
9,900.00	5,150.00	5,151.20	5,150.00	57.53	104.75	90.000	-978.24	2,889.71	1,725.56	1,563.27	162.29	10.633	
9,950.00	5,150.00	5,151.20	5,150.00	58.06	104.75	90.000	-978.24	2,889.71	1,763.10	1,600.28	162.82	10.829	
10,000.00	5,150.00	5,151.20	5,150.00	58.59	104.75	90.000	-978.24	2,889.71	1,801.24	1,637.90	163.35	11.027	
10,050.00	5,150.00	5,151.20	5,150.00	59.13	104.75	90.000	-978.24	2,889.71	1,839.96	1,676.08	163.88	11.228	
10,100.00	5,150.00	5,151.20	5,150.00	59.66	104.75	90.000	-978.24	2,889.71	1,879.20	1,714.79	164.41	11.430	
10,150.00	5,150.00	5,151.20	5,150.00	60.19	104.75	90.000	-978.24	2,889.71	1,918.95	1,754.01	164.94	11.634	
10,200.00	5,150.00	5,151.20	5,150.00	60.72	104.75	90.000	-978.24	2,889.71	1,959.17	1,793.69	165.48	11.840	
10,250.00	5,150.00	5,151.20	5,150.00	61.26	104.75	90.000	-978.24	2,889.71	1,999.82	1,833.81	166.01	12.046	
10,300.00	5,150.00	5,151.20	5,150.00	61.79	104.75	90.000	-978.24	2,889.71	2,040.90	1,874.35	166.54	12.254	
10,350.00	5,150.00	5,151.20	5,150.00	62.32	104.75	90.000	-978.24	2,889.71	2,082.36	1,915.28	167.08	12.463	
10,400.00	5,150.00	5,151.20	5,150.00	62.86	104.75	90.000	-978.24	2,889.71	2,124.19	1,956.58	167.61	12.673	
10,450.00	5,150.00	5,151.20	5,150.00	63.40	104.75	90.000	-978.24	2,889.71	2,166.37	1,998.22	168.15	12.884	
10,500.00	5,150.00	5,151.20	5,150.00	63.93	104.75	90.000	-978.24	2,889.71	2,208.87	2,040.19	168.69	13.095	
10,550.00	5,150.00	5,151.20	5,150.00	64.47	104.75	90.000	-978.24	2,889.71	2,251.68	2,082.46	169.22	13.306	
10,600.00	5,150.00	5,151.20	5,150.00	65.01	104.75	90.000	-978.24	2,889.71	2,294.79	2,125.03	169.76	13.518	
10,650.00	5,150.00	5,151.20	5,150.00	65.54	104.75	90.000	-978.24	2,889.71	2,338.16	2,167.87	170.30	13.730	
10,700.00	5,150.00	5,151.20	5,150.00	66.08	104.75	90.000	-978.24	2,889.71	2,381.80	2,210.97	170.83	13.942	
10,750.00	5,150.00	5,151.20	5,150.00	66.62	104.75	90.000	-978.24	2,889.71	2,425.68	2,254.31	171.37	14.154	
10,800.00	5,150.00	5,151.20	5,150.00	67.16	104.75	90.000	-978.24	2,889.71	2,469.80	2,297.89	171.91	14.367	
10,850.00	5,150.00	5,151.20	5,150.00	67.70	104.75	90.000	-978.24	2,889.71	2,514.13	2,341.68	172.45	14.579	
10,893.39	5,150.00	5,151.20	5,150.00	68.16	104.75	90.000	-978.24	2,889.71	2,552.78	2,379.86	172.92	14.763	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 245-INC-ONLY												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,650.00	5,150.00	5,166.60	5,150.00	34.80	129.18	90.000	-287.55	4,867.49	2,982.11	2,818.14	163.97	18.187	
7,700.00	5,150.00	5,166.60	5,150.00	35.26	129.18	90.000	-287.55	4,867.49	2,932.74	2,768.31	164.44	17.835	
7,750.00	5,150.00	5,166.60	5,150.00	35.73	129.18	90.000	-287.55	4,867.49	2,883.39	2,718.49	164.91	17.485	
7,800.00	5,150.00	5,166.60	5,150.00	36.20	129.18	90.000	-287.55	4,867.49	2,834.07	2,668.69	165.38	17.137	
7,850.00	5,150.00	5,166.60	5,150.00	36.68	129.18	90.000	-287.55	4,867.49	2,784.76	2,618.91	165.85	16.790	
7,900.00	5,150.00	5,166.60	5,150.00	37.16	129.18	90.000	-287.55	4,867.49	2,735.49	2,569.16	166.33	16.446	
7,950.00	5,150.00	5,166.60	5,150.00	37.64	129.18	90.000	-287.55	4,867.49	2,686.23	2,519.42	166.81	16.104	
8,000.00	5,150.00	5,166.60	5,150.00	38.12	129.18	90.000	-287.55	4,867.49	2,637.01	2,469.72	167.29	15.763	
8,050.00	5,150.00	5,166.60	5,150.00	38.60	129.18	90.000	-287.55	4,867.49	2,587.82	2,420.04	167.78	15.424	
8,100.00	5,150.00	5,166.60	5,150.00	39.09	129.18	90.000	-287.55	4,867.49	2,538.66	2,370.40	168.26	15.088	
8,150.00	5,150.00	5,166.60	5,150.00	39.57	129.18	90.000	-287.55	4,867.49	2,489.53	2,320.78	168.75	14.753	
8,200.00	5,150.00	5,166.60	5,150.00	40.06	129.18	90.000	-287.55	4,867.49	2,440.44	2,271.20	169.24	14.420	
8,250.00	5,150.00	5,166.60	5,150.00	40.56	129.18	90.000	-287.55	4,867.49	2,391.38	2,221.65	169.73	14.089	
8,300.00	5,150.00	5,166.60	5,150.00	41.05	129.18	90.000	-287.55	4,867.49	2,342.37	2,172.14	170.22	13.761	
8,350.00	5,150.00	5,166.60	5,150.00	41.55	129.18	90.000	-287.55	4,867.49	2,293.39	2,122.67	170.72	13.434	
8,400.00	5,150.00	5,166.60	5,150.00	42.04	129.18	90.000	-287.55	4,867.49	2,244.47	2,073.25	171.22	13.109	
8,450.00	5,150.00	5,166.60	5,150.00	42.54	129.18	90.000	-287.55	4,867.49	2,195.59	2,023.87	171.72	12.786	
8,500.00	5,150.00	5,166.60	5,150.00	43.04	129.18	90.000	-287.55	4,867.49	2,146.76	1,974.54	172.22	12.466	
8,550.00	5,150.00	5,166.60	5,150.00	43.54	129.18	90.000	-287.55	4,867.49	2,097.99	1,925.27	172.72	12.147	
8,600.00	5,150.00	5,166.60	5,150.00	44.05	129.18	90.000	-287.55	4,867.49	2,049.28	1,876.05	173.22	11.830	
8,650.00	5,150.00	5,166.60	5,150.00	44.55	129.18	90.000	-287.55	4,867.49	2,000.63	1,826.90	173.73	11.516	
8,700.00	5,150.00	5,166.60	5,150.00	45.06	129.18	90.000	-287.55	4,867.49	1,952.04	1,777.81	174.23	11.204	
8,750.00	5,150.00	5,166.60	5,150.00	45.57	129.18	90.000	-287.55	4,867.49	1,903.54	1,728.80	174.74	10.893	
8,800.00	5,150.00	5,166.60	5,150.00	46.08	129.18	90.000	-287.55	4,867.49	1,855.11	1,679.86	175.25	10.586	
8,850.00	5,150.00	5,166.60	5,150.00	46.59	129.18	90.000	-287.55	4,867.49	1,806.77	1,631.01	175.76	10.280	
8,900.00	5,150.00	5,166.60	5,150.00	47.10	129.18	90.000	-287.55	4,867.49	1,758.52	1,582.24	176.27	9.976	
8,950.00	5,150.00	5,166.60	5,150.00	47.61	129.18	90.000	-287.55	4,867.49	1,710.37	1,533.58	176.78	9.675	
9,000.00	5,150.00	5,166.60	5,150.00	48.12	129.18	90.000	-287.55	4,867.49	1,662.33	1,485.03	177.30	9.376	
9,050.00	5,150.00	5,166.60	5,150.00	48.64	129.18	90.000	-287.55	4,867.49	1,614.40	1,436.59	177.81	9.079	
9,100.00	5,150.00	5,166.60	5,150.00	49.15	129.18	90.000	-287.55	4,867.49	1,566.61	1,388.28	178.33	8.785	
9,150.00	5,150.00	5,166.60	5,150.00	49.67	129.18	90.000	-287.55	4,867.49	1,518.96	1,340.12	178.85	8.493	
9,200.00	5,150.00	5,166.60	5,150.00	50.19	129.18	90.000	-287.55	4,867.49	1,471.47	1,292.11	179.36	8.204	
9,250.00	5,150.00	5,166.60	5,150.00	50.71	129.18	90.000	-287.55	4,867.49	1,424.15	1,244.27	179.88	7.917	
9,300.00	5,150.00	5,166.60	5,150.00	51.23	129.18	90.000	-287.55	4,867.49	1,377.02	1,196.61	180.40	7.633	
9,350.00	5,150.00	5,166.60	5,150.00	51.75	129.18	90.000	-287.55	4,867.49	1,330.09	1,149.17	180.92	7.352	
9,400.00	5,150.00	5,166.60	5,150.00	52.27	129.18	90.000	-287.55	4,867.49	1,283.40	1,101.96	181.45	7.073	
9,450.00	5,150.00	5,166.60	5,150.00	52.79	129.18	90.000	-287.55	4,867.49	1,236.97	1,055.00	181.97	6.798	
9,500.00	5,150.00	5,166.60	5,150.00	53.32	129.18	90.000	-287.55	4,867.49	1,190.83	1,008.34	182.49	6.525	
9,550.00	5,150.00	5,166.60	5,150.00	53.84	129.18	90.000	-287.55	4,867.49	1,145.01	961.99	183.02	6.256	
9,600.00	5,150.00	5,166.60	5,150.00	54.37	129.18	90.000	-287.55	4,867.49	1,099.56	916.02	183.54	5.991	
9,650.00	5,150.00	5,166.60	5,150.00	54.89	129.18	90.000	-287.55	4,867.49	1,054.51	870.45	184.07	5.729	
9,700.00	5,150.00	5,166.60	5,150.00	55.42	129.18	90.000	-287.55	4,867.49	1,009.94	825.34	184.59	5.471	
9,750.00	5,150.00	5,166.60	5,150.00	55.95	129.18	90.000	-287.55	4,867.49	965.89	780.77	185.12	5.218	
9,800.00	5,150.00	5,166.60	5,150.00	56.47	129.18	90.000	-287.55	4,867.49	922.46	736.81	185.65	4.969	
9,850.00	5,150.00	5,166.60	5,150.00	57.00	129.18	90.000	-287.55	4,867.49	879.72	693.54	186.18	4.725	
9,900.00	5,150.00	5,166.60	5,150.00	57.53	129.18	90.000	-287.55	4,867.49	837.78	651.07	186.71	4.487	
9,950.00	5,150.00	5,166.60	5,150.00	58.06	129.18	90.000	-287.55	4,867.49	796.77	609.54	187.24	4.255	
10,000.00	5,150.00	5,166.60	5,150.00	58.59	129.18	90.000	-287.55	4,867.49	756.85	569.08	187.77	4.031	
10,050.00	5,150.00	5,166.60	5,150.00	59.13	129.18	90.000	-287.55	4,867.49	718.19	529.89	188.30	3.814	
10,100.00	5,150.00	5,166.60	5,150.00	59.66	129.18	90.000	-287.55	4,867.49	681.01	492.18	188.83	3.606	
10,150.00	5,150.00	5,166.60	5,150.00	60.19	129.18	90.000	-287.55	4,867.49	645.56	456.20	189.36	3.409	
10,200.00	5,150.00	5,166.60	5,150.00	60.72	129.18	90.000	-287.55	4,867.49	612.15	422.25	189.90	3.224	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 OCHO_TESORO OFFSETS - W.D. MCINTYRE C #8 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 245-INC-ONLY												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,250.00	5,150.00	5,166.60	5,150.00	61.26	129.18	90.000	-287.55	4,867.49	581.12	390.69	190.43	3.052	
10,300.00	5,150.00	5,166.60	5,150.00	61.79	129.18	90.000	-287.55	4,867.49	552.88	361.91	190.96	2.895	
10,350.00	5,150.00	5,166.60	5,150.00	62.32	129.18	90.000	-287.55	4,867.49	527.87	336.37	191.50	2.757	
10,400.00	5,150.00	5,166.60	5,150.00	62.86	129.18	90.000	-287.55	4,867.49	506.58	314.55	192.03	2.638	
10,450.00	5,150.00	5,166.60	5,150.00	63.40	129.18	90.000	-287.55	4,867.49	489.49	296.92	192.57	2.542	
10,500.00	5,150.00	5,166.60	5,150.00	63.93	129.18	90.000	-287.55	4,867.49	477.05	283.94	193.11	2.470	
10,550.00	5,150.00	5,166.60	5,150.00	64.47	129.18	90.000	-287.55	4,867.49	469.62	275.98	193.64	2.425	
10,595.25	5,150.00	5,166.60	5,150.00	64.95	129.18	90.000	-287.55	4,867.49	467.44	273.31	194.13	2.408	CC
10,600.00	5,150.00	5,166.60	5,150.00	65.01	129.18	90.000	-287.55	4,867.49	467.46	273.28	194.18	2.407	ES, SF
10,650.00	5,150.00	5,166.60	5,150.00	65.54	129.18	90.000	-287.55	4,867.49	470.63	275.92	194.72	2.417	
10,700.00	5,150.00	5,166.60	5,150.00	66.08	129.18	90.000	-287.55	4,867.49	479.03	283.78	195.26	2.453	
10,750.00	5,150.00	5,166.60	5,150.00	66.62	129.18	90.000	-287.55	4,867.49	492.39	296.60	195.79	2.515	
10,800.00	5,150.00	5,166.60	5,150.00	67.16	129.18	90.000	-287.55	4,867.49	510.32	313.98	196.33	2.599	
10,850.00	5,150.00	5,166.60	5,150.00	67.70	129.18	90.000	-287.55	4,867.49	532.35	335.48	196.87	2.704	
10,893.39	5,150.00	5,166.60	5,150.00	68.16	129.18	90.000	-287.55	4,867.49	554.43	357.09	197.34	2.810	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 236-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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
6,950.00	5,150.00	5,168.24	5,150.00	28.64	107.22	-90.000	370.70	4,204.79	2,990.79	2,854.93	135.86	22.014	
7,000.00	5,150.00	5,168.24	5,150.00	29.05	107.22	-90.000	370.70	4,204.79	2,940.90	2,804.63	136.27	21.582	
7,050.00	5,150.00	5,168.24	5,150.00	29.47	107.22	-90.000	370.70	4,204.79	2,891.01	2,754.32	136.69	21.151	
7,100.00	5,150.00	5,168.24	5,150.00	29.89	107.22	-90.000	370.70	4,204.79	2,841.12	2,704.01	137.11	20.722	
7,150.00	5,150.00	5,168.24	5,150.00	30.32	107.22	-90.000	370.70	4,204.79	2,791.24	2,653.70	137.54	20.295	
7,200.00	5,150.00	5,168.24	5,150.00	30.75	107.22	-90.000	370.70	4,204.79	2,741.36	2,603.40	137.96	19.870	
7,250.00	5,150.00	5,168.24	5,150.00	31.19	107.22	-90.000	370.70	4,204.79	2,691.49	2,553.09	138.40	19.447	
7,300.00	5,150.00	5,168.24	5,150.00	31.62	107.22	-90.000	370.70	4,204.79	2,641.62	2,502.78	138.84	19.027	
7,350.00	5,150.00	5,168.24	5,150.00	32.07	107.22	-90.000	370.70	4,204.79	2,591.75	2,452.47	139.28	18.608	
7,400.00	5,150.00	5,168.24	5,150.00	32.51	107.22	-90.000	370.70	4,204.79	2,541.89	2,402.17	139.73	18.192	
7,450.00	5,150.00	5,168.24	5,150.00	32.96	107.22	-90.000	370.70	4,204.79	2,492.04	2,351.86	140.18	17.778	
7,500.00	5,150.00	5,168.24	5,150.00	33.42	107.22	-90.000	370.70	4,204.79	2,442.19	2,301.56	140.63	17.366	
7,550.00	5,150.00	5,168.24	5,150.00	33.88	107.22	-90.000	370.70	4,204.79	2,392.35	2,251.26	141.09	16.956	
7,600.00	5,150.00	5,168.24	5,150.00	34.33	107.22	-90.000	370.70	4,204.79	2,342.52	2,200.97	141.55	16.549	
7,650.00	5,150.00	5,168.24	5,150.00	34.80	107.22	-90.000	370.70	4,204.79	2,292.69	2,150.68	142.01	16.144	
7,700.00	5,150.00	5,168.24	5,150.00	35.26	107.22	-90.000	370.70	4,204.79	2,242.87	2,100.40	142.48	15.742	
7,750.00	5,150.00	5,168.24	5,150.00	35.73	107.22	-90.000	370.70	4,204.79	2,193.06	2,050.12	142.95	15.342	
7,800.00	5,150.00	5,168.24	5,150.00	36.20	107.22	-90.000	370.70	4,204.79	2,143.26	1,999.84	143.42	14.944	
7,850.00	5,150.00	5,168.24	5,150.00	36.68	107.22	-90.000	370.70	4,204.79	2,093.47	1,949.58	143.89	14.549	
7,900.00	5,150.00	5,168.24	5,150.00	37.16	107.22	-90.000	370.70	4,204.79	2,043.69	1,899.32	144.37	14.156	
7,950.00	5,150.00	5,168.24	5,150.00	37.64	107.22	-90.000	370.70	4,204.79	1,993.92	1,849.07	144.85	13.765	
8,000.00	5,150.00	5,168.24	5,150.00	38.12	107.22	-90.000	370.70	4,204.79	1,944.16	1,798.83	145.33	13.377	
8,050.00	5,150.00	5,168.24	5,150.00	38.60	107.22	-90.000	370.70	4,204.79	1,894.41	1,748.59	145.82	12.992	
8,100.00	5,150.00	5,168.24	5,150.00	39.09	107.22	-90.000	370.70	4,204.79	1,844.68	1,698.38	146.30	12.609	
8,150.00	5,150.00	5,168.24	5,150.00	39.57	107.22	-90.000	370.70	4,204.79	1,794.96	1,648.17	146.79	12.228	
8,200.00	5,150.00	5,168.24	5,150.00	40.06	107.22	-90.000	370.70	4,204.79	1,745.26	1,597.98	147.28	11.850	
8,250.00	5,150.00	5,168.24	5,150.00	40.56	107.22	-90.000	370.70	4,204.79	1,695.57	1,547.80	147.77	11.474	
8,300.00	5,150.00	5,168.24	5,150.00	41.05	107.22	-90.000	370.70	4,204.79	1,645.90	1,497.64	148.26	11.101	
8,350.00	5,150.00	5,168.24	5,150.00	41.55	107.22	-90.000	370.70	4,204.79	1,596.26	1,447.50	148.76	10.730	
8,400.00	5,150.00	5,168.24	5,150.00	42.04	107.22	-90.000	370.70	4,204.79	1,546.64	1,397.38	149.26	10.362	
8,450.00	5,150.00	5,168.24	5,150.00	42.54	107.22	-90.000	370.70	4,204.79	1,497.04	1,347.28	149.76	9.997	
8,500.00	5,150.00	5,168.24	5,150.00	43.04	107.22	-90.000	370.70	4,204.79	1,447.47	1,297.22	150.26	9.633	
8,550.00	5,150.00	5,168.24	5,150.00	43.54	107.22	-90.000	370.70	4,204.79	1,397.93	1,247.17	150.76	9.273	
8,600.00	5,150.00	5,168.24	5,150.00	44.05	107.22	-90.000	370.70	4,204.79	1,348.43	1,197.17	151.26	8.915	
8,650.00	5,150.00	5,168.24	5,150.00	44.55	107.22	-90.000	370.70	4,204.79	1,298.96	1,147.20	151.77	8.559	
8,700.00	5,150.00	5,168.24	5,150.00	45.06	107.22	-90.000	370.70	4,204.79	1,249.54	1,097.27	152.27	8.206	
8,750.00	5,150.00	5,168.24	5,150.00	45.57	107.22	-90.000	370.70	4,204.79	1,200.16	1,047.38	152.78	7.855	
8,800.00	5,150.00	5,168.24	5,150.00	46.08	107.22	-90.000	370.70	4,204.79	1,150.84	997.55	153.29	7.508	
8,850.00	5,150.00	5,168.24	5,150.00	46.59	107.22	-90.000	370.70	4,204.79	1,101.58	947.78	153.80	7.162	
8,900.00	5,150.00	5,168.24	5,150.00	47.10	107.22	-90.000	370.70	4,204.79	1,052.39	898.08	154.31	6.820	
8,950.00	5,150.00	5,168.24	5,150.00	47.61	107.22	-90.000	370.70	4,204.79	1,003.28	848.45	154.82	6.480	
9,000.00	5,150.00	5,168.24	5,150.00	48.12	107.22	-90.000	370.70	4,204.79	954.26	798.92	155.34	6.143	
9,050.00	5,150.00	5,168.24	5,150.00	48.64	107.22	-90.000	370.70	4,204.79	905.34	749.49	155.85	5.809	
9,100.00	5,150.00	5,168.24	5,150.00	49.15	107.22	-90.000	370.70	4,204.79	856.56	700.19	156.37	5.478	
9,150.00	5,150.00	5,168.24	5,150.00	49.67	107.22	-90.000	370.70	4,204.79	807.92	651.03	156.89	5.150	
9,200.00	5,150.00	5,168.24	5,150.00	50.19	107.22	-90.000	370.70	4,204.79	759.46	602.05	157.40	4.825	
9,250.00	5,150.00	5,168.24	5,150.00	50.71	107.22	-90.000	370.70	4,204.79	711.21	553.29	157.92	4.504	
9,300.00	5,150.00	5,168.24	5,150.00	51.23	107.22	-90.000	370.70	4,204.79	663.22	504.78	158.44	4.186	
9,350.00	5,150.00	5,168.24	5,150.00	51.75	107.22	-90.000	370.70	4,204.79	615.55	456.59	158.96	3.872	
9,400.00	5,150.00	5,168.24	5,150.00	52.27	107.22	-90.000	370.70	4,204.79	568.29	408.80	159.49	3.563	
9,450.00	5,150.00	5,168.24	5,150.00	52.79	107.22	-90.000	370.70	4,204.79	521.53	361.52	160.01	3.259	
9,500.00	5,150.00	5,168.24	5,150.00	53.32	107.22	-90.000	370.70	4,204.79	475.43	314.90	160.53	2.962	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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: 236-INC-ONLY												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,550.00	5,150.00	5,168.24	5,150.00	53.84	107.22	-90.000	370.70	4,204.79	430.21	269.15	161.06	2.671	
9,600.00	5,150.00	5,168.24	5,150.00	54.37	107.22	-90.000	370.70	4,204.79	386.16	224.58	161.58	2.390	
9,650.00	5,150.00	5,168.24	5,150.00	54.89	107.22	-90.000	370.70	4,204.79	343.75	181.64	162.11	2.121	
9,700.00	5,150.00	5,168.24	5,150.00	55.42	107.22	-90.000	370.70	4,204.79	303.66	141.02	162.63	1.867	
9,750.00	5,150.00	5,168.24	5,150.00	55.95	107.22	-90.000	370.70	4,204.79	266.93	103.77	163.16	1.636	
9,800.00	5,150.00	5,168.24	5,150.00	56.47	107.22	-90.000	370.70	4,204.79	235.15	71.46	163.69	1.437	Level 3
9,850.00	5,150.00	5,168.24	5,150.00	57.00	107.22	-90.000	370.70	4,204.79	210.56	46.35	164.22	1.282	Level 3
9,900.00	5,150.00	5,168.24	5,150.00	57.53	107.22	-90.000	370.70	4,204.79	195.91	31.16	164.75	1.189	Level 2
9,934.57	5,150.00	5,168.24	5,150.00	57.90	107.22	-90.000	370.70	4,204.79	192.84	27.72	165.11	1.168	Level 2, CC, ES, SF
9,950.00	5,150.00	5,168.24	5,150.00	58.06	107.22	-90.000	370.70	4,204.79	193.45	28.17	165.28	1.170	Level 2
10,000.00	5,150.00	5,168.24	5,150.00	58.59	107.22	-90.000	370.70	4,204.79	203.63	37.83	165.81	1.228	Level 2
10,050.00	5,150.00	5,168.24	5,150.00	59.13	107.22	-90.000	370.70	4,204.79	224.74	58.40	166.34	1.351	Level 3
10,100.00	5,150.00	5,168.24	5,150.00	59.66	107.22	-90.000	370.70	4,204.79	254.07	87.20	166.87	1.523	
10,150.00	5,150.00	5,168.24	5,150.00	60.19	107.22	-90.000	370.70	4,204.79	289.13	121.73	167.40	1.727	
10,200.00	5,150.00	5,168.24	5,150.00	60.72	107.22	-90.000	370.70	4,204.79	328.08	160.15	167.94	1.954	
10,250.00	5,150.00	5,168.24	5,150.00	61.26	107.22	-90.000	370.70	4,204.79	369.71	201.23	168.47	2.194	
10,300.00	5,150.00	5,168.24	5,150.00	61.79	107.22	-90.000	370.70	4,204.79	413.19	244.18	169.00	2.445	
10,350.00	5,150.00	5,168.24	5,150.00	62.32	107.22	-90.000	370.70	4,204.79	458.00	288.47	169.54	2.701	
10,400.00	5,150.00	5,168.24	5,150.00	62.86	107.22	-90.000	370.70	4,204.79	503.80	333.72	170.07	2.962	
10,450.00	5,150.00	5,168.24	5,150.00	63.40	107.22	-90.000	370.70	4,204.79	550.32	379.71	170.61	3.226	
10,500.00	5,150.00	5,168.24	5,150.00	63.93	107.22	-90.000	370.70	4,204.79	597.41	426.26	171.15	3.491	
10,550.00	5,150.00	5,168.24	5,150.00	64.47	107.22	-90.000	370.70	4,204.79	644.93	473.25	171.68	3.757	
10,600.00	5,150.00	5,168.24	5,150.00	65.01	107.22	-90.000	370.70	4,204.79	692.81	520.59	172.22	4.023	
10,650.00	5,150.00	5,168.24	5,150.00	65.54	107.22	-90.000	370.70	4,204.79	740.96	568.21	172.76	4.289	
10,700.00	5,150.00	5,168.24	5,150.00	66.08	107.22	-90.000	370.70	4,204.79	789.35	616.05	173.30	4.555	
10,750.00	5,150.00	5,168.24	5,150.00	66.62	107.22	-90.000	370.70	4,204.79	837.92	664.09	173.83	4.820	
10,800.00	5,150.00	5,168.24	5,150.00	67.16	107.22	-90.000	370.70	4,204.79	886.65	712.28	174.37	5.085	
10,850.00	5,150.00	5,168.24	5,150.00	67.70	107.22	-90.000	370.70	4,204.79	935.52	760.61	174.91	5.349	
10,893.39	5,150.00	5,168.24	5,150.00	68.16	107.22	-90.000	370.70	4,204.79	978.02	802.64	175.38	5.577	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	Offset TVD Reference:	Reference Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	180.000	-40.00	0.00	40.00				
50.00	50.00	50.00	50.00	0.05	0.07	180.000	-40.00	0.00	40.00	39.87	0.13	318.814	
100.00	100.00	100.00	100.00	0.14	0.14	180.000	-40.00	0.00	40.00	39.71	0.29	139.481	
150.00	150.00	150.00	150.00	0.32	0.32	180.000	-40.00	0.00	40.00	39.35	0.65	61.992	
200.00	200.00	200.00	200.00	0.50	0.50	180.000	-40.00	0.00	40.00	39.00	1.00	39.852	
250.00	250.00	250.00	250.00	0.68	0.68	180.000	-40.00	0.00	40.00	38.64	1.36	29.364	
300.00	300.00	300.00	300.00	0.86	0.86	180.000	-40.00	0.00	40.00	38.28	1.72	23.247	CC, ES
350.00	350.00	349.44	349.44	1.04	1.03	-98.897	-40.34	-0.25	40.41	38.34	2.07	19.546	
400.00	399.98	398.86	398.84	1.21	1.20	-99.573	-41.37	-1.02	41.65	39.24	2.41	17.249	
450.00	449.93	448.23	448.17	1.39	1.37	-100.614	-43.07	-2.29	43.73	40.97	2.76	15.839	
500.00	499.84	497.54	497.38	1.57	1.54	-101.909	-45.46	-4.07	46.66	43.55	3.11	15.017	
550.00	549.68	546.74	546.44	1.75	1.71	-103.347	-48.51	-6.35	50.46	47.00	3.46	14.583	
600.00	599.45	595.84	595.31	1.93	1.89	-104.825	-52.24	-9.12	55.13	51.32	3.81	14.459	
650.00	649.13	644.79	643.96	2.11	2.06	-106.266	-56.62	-12.38	60.69	56.52	4.17	14.554	
700.00	698.70	693.58	692.35	2.29	2.23	-107.619	-61.64	-16.13	67.13	62.60	4.53	14.831	
750.00	748.15	742.20	740.44	2.47	2.41	-108.853	-67.31	-20.35	74.46	69.57	4.89	15.238	
800.00	797.47	790.60	788.21	2.65	2.58	-109.956	-73.60	-25.04	82.67	77.42	5.24	15.762	
850.00	846.63	838.79	835.62	2.84	2.76	-110.927	-80.50	-30.19	91.75	86.15	5.61	16.367	
900.00	895.62	886.73	882.64	3.02	2.94	-111.771	-88.01	-35.78	101.70	95.74	5.97	17.047	
950.00	944.44	934.41	929.24	3.21	3.12	-112.498	-96.09	-41.81	112.52	106.19	6.33	17.781	
1,000.00	993.06	981.81	975.39	3.40	3.30	-113.119	-104.75	-48.26	124.18	117.48	6.69	18.560	
1,050.00	1,041.46	1,028.91	1,021.07	3.59	3.48	-113.645	-113.95	-55.12	136.67	129.62	7.05	19.378	
1,100.00	1,089.70	1,075.72	1,066.27	3.78	3.66	-114.189	-123.69	-62.38	149.92	142.51	7.42	20.218	
1,150.00	1,137.92	1,122.30	1,111.06	3.98	3.85	-114.500	-133.98	-70.04	163.66	155.88	7.78	21.038	
1,200.00	1,186.14	1,168.65	1,155.40	4.18	4.03	-114.555	-144.79	-78.10	177.85	169.70	8.14	21.837	
1,250.00	1,234.37	1,214.73	1,199.26	4.37	4.22	-114.414	-156.10	-86.53	192.48	183.97	8.51	22.617	
1,300.00	1,282.59	1,260.52	1,242.63	4.57	4.41	-114.120	-167.90	-95.33	207.57	198.69	8.88	23.384	
1,350.00	1,330.81	1,307.10	1,286.52	4.77	4.60	-113.719	-180.40	-104.64	223.04	213.79	9.25	24.116	
1,400.00	1,379.04	1,354.61	1,331.26	4.97	4.80	-113.346	-193.20	-114.19	238.58	228.96	9.62	24.796	
1,450.00	1,427.26	1,402.11	1,376.00	5.17	5.00	-113.018	-206.01	-123.73	254.12	244.13	10.00	25.423	
1,500.00	1,475.48	1,449.62	1,420.74	5.37	5.20	-112.729	-218.82	-133.27	269.67	259.30	10.37	26.001	
1,550.00	1,523.71	1,497.12	1,465.48	5.57	5.40	-112.470	-231.62	-142.82	285.23	274.48	10.75	26.537	
1,600.00	1,571.93	1,544.62	1,510.22	5.77	5.61	-112.239	-244.43	-152.36	300.79	289.66	11.13	27.034	
1,650.00	1,620.15	1,592.13	1,554.95	5.97	5.81	-112.030	-257.23	-161.91	316.35	304.85	11.51	27.497	
1,700.00	1,668.37	1,639.63	1,599.69	6.17	6.01	-111.841	-270.04	-171.45	331.92	320.04	11.88	27.929	
1,750.00	1,716.60	1,687.13	1,644.43	6.37	6.22	-111.668	-282.85	-181.00	347.49	335.23	12.27	28.332	
1,800.00	1,764.82	1,734.64	1,689.17	6.57	6.42	-111.511	-295.65	-190.54	363.07	350.42	12.65	28.710	
1,850.00	1,813.04	1,782.14	1,733.91	6.78	6.63	-111.366	-308.46	-200.08	378.64	365.62	13.03	29.064	
1,900.00	1,861.27	1,829.64	1,778.65	6.98	6.84	-111.233	-321.26	-209.63	394.22	380.81	13.41	29.397	
1,950.00	1,909.49	1,877.15	1,823.38	7.18	7.04	-111.110	-334.07	-219.17	409.80	396.01	13.79	29.710	
2,000.00	1,957.71	1,924.65	1,868.12	7.38	7.25	-110.996	-346.87	-228.72	425.38	411.21	14.18	30.006	
2,050.00	2,005.94	1,972.16	1,912.86	7.59	7.46	-110.890	-359.68	-238.26	440.97	426.41	14.56	30.285	
2,100.00	2,054.16	2,019.66	1,957.60	7.79	7.67	-110.792	-372.49	-247.81	456.55	441.61	14.94	30.550	
2,150.00	2,102.38	2,067.16	2,002.34	7.99	7.87	-110.699	-385.29	-257.35	472.14	456.81	15.33	30.800	
2,200.00	2,150.61	2,114.67	2,047.08	8.19	8.08	-110.613	-398.10	-266.89	487.72	472.01	15.71	31.037	
2,250.00	2,198.83	2,162.17	2,091.81	8.40	8.29	-110.532	-410.90	-276.44	503.31	487.21	16.10	31.263	
2,300.00	2,247.05	2,209.67	2,136.55	8.60	8.50	-110.456	-423.71	-285.98	518.90	502.41	16.48	31.477	
2,350.00	2,295.28	2,257.18	2,181.29	8.80	8.71	-110.384	-436.51	-295.53	534.49	517.62	16.87	31.681	
2,400.00	2,343.50	2,304.68	2,226.03	9.01	8.92	-110.317	-449.32	-305.07	550.08	532.82	17.26	31.876	
2,450.00	2,391.72	2,352.18	2,270.77	9.21	9.13	-110.253	-462.13	-314.62	565.67	548.02	17.64	32.061	
2,500.00	2,439.95	2,399.69	2,315.51	9.41	9.34	-110.193	-474.93	-324.16	581.26	563.23	18.03	32.239	
2,550.00	2,488.17	2,447.19	2,360.24	9.62	9.55	-110.135	-487.74	-333.70	596.85	578.43	18.42	32.408	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 TESORO 20 FEDERAL COM - 71H - 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		
2,600.00	2,536.39	2,494.70	2,404.98	9.82	9.76	-110.081	-500.54	-343.25	612.44	593.64	18.80	32.570		
2,650.00	2,584.61	2,542.20	2,449.72	10.02	9.97	-110.029	-513.35	-352.79	628.03	608.84	19.19	32.725		
2,700.00	2,632.84	2,589.70	2,494.46	10.23	10.18	-109.980	-526.15	-362.34	643.63	624.05	19.58	32.874		
2,750.00	2,681.06	2,637.21	2,539.20	10.43	10.39	-109.933	-538.96	-371.88	659.22	639.25	19.97	33.017		
2,800.00	2,729.28	2,684.71	2,583.94	10.64	10.60	-109.888	-551.77	-381.43	674.81	654.46	20.35	33.154		
2,850.00	2,777.51	2,732.21	2,628.67	10.84	10.81	-109.846	-564.57	-390.97	690.41	669.66	20.74	33.286		
2,900.00	2,825.73	2,779.72	2,673.41	11.04	11.02	-109.805	-577.38	-400.52	706.00	684.87	21.13	33.413		
2,950.00	2,873.95	2,827.22	2,718.15	11.25	11.23	-109.766	-590.18	-410.06	721.60	700.08	21.52	33.535		
3,000.00	2,922.18	2,874.72	2,762.89	11.45	11.44	-109.729	-602.99	-419.60	737.19	715.28	21.91	33.652		
3,050.00	2,970.40	2,922.23	2,807.63	11.66	11.65	-109.693	-615.79	-429.15	752.79	730.49	22.29	33.765		
3,100.00	3,018.62	2,969.73	2,852.36	11.86	11.86	-109.659	-628.60	-438.69	768.38	745.70	22.68	33.875		
3,150.00	3,066.85	3,017.24	2,897.10	12.06	12.07	-109.626	-641.41	-448.24	783.98	760.90	23.07	33.980		
3,200.00	3,115.07	3,064.74	2,941.84	12.27	12.28	-109.594	-654.21	-457.78	799.57	776.11	23.46	34.082		
3,250.00	3,163.29	3,112.24	2,986.58	12.47	12.50	-109.563	-667.02	-467.33	815.17	791.32	23.85	34.180		
3,300.00	3,211.52	3,159.75	3,031.32	12.68	12.71	-109.534	-679.82	-476.87	830.77	806.53	24.24	34.275		
3,350.00	3,259.74	3,207.25	3,076.06	12.88	12.92	-109.506	-692.63	-486.41	846.36	821.73	24.63	34.367		
3,400.00	3,307.96	3,254.75	3,120.79	13.08	13.13	-109.478	-705.43	-495.96	861.96	836.94	25.02	34.456		
3,450.00	3,356.19	3,302.26	3,165.53	13.29	13.34	-109.452	-718.24	-505.50	877.56	852.15	25.41	34.542		
3,500.00	3,404.41	3,349.76	3,210.27	13.49	13.55	-109.427	-731.05	-515.05	893.15	867.36	25.80	34.625		
3,550.00	3,452.63	3,397.26	3,255.01	13.70	13.76	-109.402	-743.85	-524.59	908.75	882.56	26.18	34.706		
3,600.00	3,500.85	3,444.77	3,299.75	13.90	13.98	-109.379	-756.66	-534.14	924.35	897.77	26.57	34.784		
3,650.00	3,549.08	3,492.27	3,344.49	14.11	14.19	-109.356	-769.46	-543.68	939.94	912.98	26.96	34.860		
3,700.00	3,597.30	3,539.77	3,389.22	14.31	14.40	-109.334	-782.27	-553.22	955.54	928.19	27.35	34.934		
3,750.00	3,645.52	3,587.28	3,433.96	14.51	14.61	-109.312	-795.07	-562.77	971.14	943.40	27.74	35.005		
3,800.00	3,693.75	3,634.78	3,478.70	14.72	14.82	-109.291	-807.88	-572.31	986.74	958.60	28.13	35.075		
3,850.00	3,741.97	3,682.29	3,523.44	14.92	15.03	-109.271	-820.69	-581.86	1,002.33	973.81	28.52	35.142		
3,900.00	3,790.19	3,729.79	3,568.18	15.13	15.25	-109.252	-833.49	-591.40	1,017.93	989.02	28.91	35.208		
3,950.00	3,838.42	3,777.29	3,612.92	15.33	15.46	-109.233	-846.30	-600.95	1,033.53	1,004.23	29.30	35.272		
4,000.00	3,886.64	3,824.80	3,657.65	15.54	15.67	-109.215	-859.10	-610.49	1,049.13	1,019.44	29.69	35.334		
4,050.00	3,935.06	3,872.33	3,702.42	15.74	15.88	-111.294	-871.92	-620.04	1,064.58	1,034.45	30.13	35.333		
4,100.00	3,984.05	3,919.91	3,747.23	15.93	16.09	-114.738	-884.74	-629.60	1,079.52	1,048.95	30.57	35.310		
4,150.00	4,033.48	3,967.39	3,791.95	16.11	16.31	-120.269	-897.54	-639.14	1,093.94	1,062.94	31.00	35.287		
4,200.00	4,083.23	4,014.66	3,836.46	16.29	16.52	-132.226	-910.28	-648.64	1,107.83	1,076.42	31.41	35.266		
4,250.00	4,133.15	4,061.58	3,880.65	16.45	16.73	-172.180	-922.93	-658.06	1,121.22	1,089.41	31.81	35.250		
4,300.00	4,183.11	4,108.01	3,924.38	16.61	16.93	119.867	-935.45	-667.39	1,134.13	1,101.95	32.18	35.247		
4,350.00	4,232.97	4,153.85	3,967.55	16.75	17.14	98.009	-947.81	-676.60	1,146.61	1,114.09	32.52	35.255		
4,400.00	4,282.59	4,198.95	4,010.03	16.88	17.34	90.505	-959.96	-685.66	1,158.72	1,125.87	32.85	35.272		
4,450.00	4,331.84	4,243.20	4,051.70	17.02	17.54	86.996	-971.89	-694.55	1,170.54	1,137.38	33.16	35.296		
4,500.00	4,380.59	4,286.47	4,092.45	17.14	17.73	85.105	-983.56	-703.25	1,182.14	1,148.68	33.46	35.330		
4,550.00	4,428.69	4,328.65	4,132.18	17.27	17.92	84.031	-994.93	-711.72	1,193.61	1,159.86	33.74	35.374		
4,600.00	4,476.02	4,369.62	4,170.76	17.39	18.10	83.426	-1,005.97	-719.95	1,205.04	1,171.03	34.01	35.430		
4,650.00	4,522.45	4,409.27	4,208.10	17.51	18.28	83.111	-1,016.66	-727.92	1,216.53	1,182.26	34.27	35.498		
4,700.00	4,567.85	4,447.48	4,244.09	17.63	18.45	82.979	-1,026.96	-735.60	1,228.18	1,193.66	34.52	35.579		
4,750.00	4,612.10	4,484.16	4,278.64	17.74	18.61	82.959	-1,036.85	-742.97	1,240.10	1,205.34	34.76	35.676		
4,800.00	4,655.07	4,519.21	4,311.64	17.86	18.77	83.002	-1,046.30	-750.01	1,252.37	1,217.38	34.99	35.789		
4,850.00	4,696.65	4,552.52	4,343.01	17.98	18.92	83.066	-1,055.28	-756.70	1,265.11	1,229.89	35.22	35.919		
4,900.00	4,736.73	4,584.01	4,372.67	18.10	19.06	83.122	-1,063.77	-763.03	1,278.39	1,242.95	35.44	36.069		
4,950.00	4,775.18	4,613.59	4,400.53	18.22	19.19	83.142	-1,071.74	-768.97	1,292.31	1,256.64	35.66	36.238		
5,000.00	4,811.92	4,654.30	4,438.99	18.34	19.37	83.588	-1,082.67	-776.61	1,306.85	1,270.94	35.92	36.387		
5,050.00	4,846.83	4,711.30	4,493.53	18.47	19.61	84.596	-1,097.59	-783.66	1,321.63	1,285.42	36.21	36.497		
5,100.00	4,879.83	4,778.79	4,558.78	18.61	19.87	85.902	-1,114.56	-786.22	1,336.40	1,299.88	36.52	36.597		
5,150.00	4,910.81	4,860.99	4,638.42	18.75	20.16	87.582	-1,134.01	-780.85	1,350.84	1,314.02	36.82	36.688		

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	Offset TVD Reference:	Reference Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	4,939.70	4,963.96	4,736.94	18.90	20.45	89.697	-1,156.10	-761.09	1,364.45	1,327.35	37.10	36.780	
5,250.00	4,966.42	5,095.80	4,858.02	19.05	20.75	92.218	-1,180.02	-715.28	1,376.46	1,339.14	37.33	36.875	
5,300.00	4,991.50	5,265.73	4,999.59	19.21	21.03	95.213	-1,202.45	-624.75	1,385.66	1,348.18	37.48	36.972	
5,350.00	5,016.50	5,473.61	5,139.96	19.39	21.23	97.040	-1,215.40	-472.95	1,390.24	1,352.45	37.80	36.782	
5,400.00	5,041.50	5,571.69	5,191.20	19.57	21.28	97.142	-1,215.90	-389.37	1,390.49	1,352.32	38.17	36.430	
5,450.00	5,066.50	5,621.69	5,216.20	19.76	21.31	97.142	-1,215.77	-346.07	1,390.49	1,352.00	38.49	36.130	
5,500.00	5,090.48	5,671.66	5,241.19	19.96	21.34	97.175	-1,215.64	-302.79	1,390.63	1,351.83	38.81	35.835	
5,550.00	5,110.69	5,721.36	5,266.03	20.17	21.38	97.324	-1,215.51	-259.76	1,391.32	1,352.19	39.12	35.564	
5,600.00	5,126.84	5,787.31	5,296.97	20.38	21.43	97.655	-1,215.33	-201.54	1,392.39	1,352.91	39.48	35.268	
5,650.00	5,138.80	5,861.67	5,323.75	20.59	21.49	97.953	-1,215.12	-132.23	1,393.26	1,353.37	39.88	34.932	
5,700.00	5,146.49	5,937.42	5,341.58	20.79	21.55	98.152	-1,214.90	-58.66	1,393.84	1,353.52	40.32	34.568	
5,750.00	5,149.84	6,014.00	5,349.59	21.00	21.61	98.243	-1,214.67	17.43	1,394.11	1,353.33	40.78	34.184	
5,800.00	5,150.00	6,071.59	5,350.00	21.20	21.66	98.248	-1,214.49	75.03	1,394.13	1,352.95	41.18	33.853	
5,850.00	5,150.00	6,121.59	5,350.00	21.42	21.73	98.248	-1,214.34	125.03	1,394.13	1,352.55	41.58	33.526	
5,900.00	5,150.00	6,171.59	5,350.00	21.64	21.81	98.248	-1,214.19	175.03	1,394.13	1,352.13	42.00	33.194	
5,950.00	5,150.00	6,221.59	5,350.00	21.88	21.92	98.248	-1,214.03	225.03	1,394.13	1,351.68	42.45	32.841	
6,000.00	5,150.00	6,271.59	5,350.00	22.13	22.06	98.248	-1,213.88	275.03	1,394.13	1,351.22	42.92	32.485	
6,050.00	5,150.00	6,321.59	5,350.00	22.40	22.21	98.248	-1,213.73	325.02	1,394.13	1,350.72	43.42	32.111	
6,100.00	5,150.00	6,371.59	5,350.00	22.66	22.40	98.248	-1,213.58	375.02	1,394.14	1,350.21	43.93	31.736	
6,150.00	5,150.00	6,421.59	5,350.00	22.95	22.61	98.248	-1,213.43	425.02	1,394.14	1,349.66	44.47	31.348	
6,200.00	5,150.00	6,471.59	5,350.00	23.24	22.84	98.248	-1,213.27	475.02	1,394.14	1,349.11	45.03	30.961	
6,250.00	5,150.00	6,521.59	5,350.00	23.55	23.09	98.248	-1,213.12	525.02	1,394.14	1,348.52	45.61	30.563	
6,300.00	5,150.00	6,571.59	5,350.00	23.86	23.36	98.248	-1,212.97	575.02	1,394.14	1,347.93	46.21	30.168	
6,350.00	5,150.00	6,621.59	5,350.00	24.19	23.64	98.248	-1,212.82	625.02	1,394.14	1,347.30	46.84	29.766	
6,400.00	5,150.00	6,671.59	5,350.00	24.51	23.94	98.248	-1,212.67	675.02	1,394.14	1,346.67	47.47	29.368	
6,450.00	5,150.00	6,721.59	5,350.00	24.86	24.25	98.248	-1,212.51	725.02	1,394.14	1,346.01	48.13	28.965	
6,500.00	5,150.00	6,771.59	5,350.00	25.20	24.57	98.248	-1,212.36	775.02	1,394.14	1,345.34	48.80	28.568	
6,550.00	5,150.00	6,821.59	5,350.00	25.56	24.90	98.248	-1,212.21	825.02	1,394.14	1,344.65	49.49	28.168	
6,600.00	5,150.00	6,871.59	5,350.00	25.92	25.24	98.248	-1,212.06	875.02	1,394.15	1,343.95	50.20	27.774	
6,650.00	5,150.00	6,921.59	5,350.00	26.29	25.59	98.248	-1,211.91	925.02	1,394.15	1,343.23	50.92	27.380	
6,700.00	5,150.00	6,971.59	5,350.00	26.67	25.94	98.248	-1,211.75	975.02	1,394.15	1,342.50	51.65	26.992	
6,750.00	5,150.00	7,021.59	5,350.00	27.05	26.31	98.248	-1,211.60	1,025.02	1,394.15	1,341.75	52.40	26.606	
6,800.00	5,150.00	7,071.59	5,350.00	27.44	26.68	98.248	-1,211.45	1,075.02	1,394.15	1,340.99	53.16	26.226	
6,850.00	5,150.00	7,121.59	5,350.00	27.84	27.06	98.248	-1,211.30	1,125.02	1,394.15	1,340.22	53.93	25.849	
6,900.00	5,150.00	7,171.59	5,350.00	28.23	27.45	98.248	-1,211.15	1,175.02	1,394.15	1,339.43	54.72	25.479	
6,950.00	5,150.00	7,221.59	5,350.00	28.64	27.84	98.248	-1,210.99	1,225.02	1,394.15	1,338.64	55.52	25.112	
7,000.00	5,150.00	7,271.59	5,350.00	29.05	28.24	98.248	-1,210.84	1,275.02	1,394.15	1,337.83	56.32	24.753	
7,050.00	5,150.00	7,321.59	5,350.00	29.47	28.64	98.248	-1,210.69	1,325.02	1,394.15	1,337.01	57.14	24.398	
7,100.00	5,150.00	7,371.59	5,350.00	29.89	29.06	98.248	-1,210.54	1,375.02	1,394.15	1,336.19	57.97	24.050	
7,150.00	5,150.00	7,421.59	5,350.00	30.32	29.47	98.248	-1,210.39	1,425.02	1,394.16	1,335.35	58.81	23.707	
7,200.00	5,150.00	7,471.59	5,350.00	30.75	29.89	98.248	-1,210.23	1,475.02	1,394.16	1,334.50	59.65	23.371	
7,250.00	5,150.00	7,521.59	5,350.00	31.19	30.32	98.248	-1,210.08	1,525.02	1,394.16	1,333.65	60.51	23.039	
7,300.00	5,150.00	7,571.59	5,350.00	31.62	30.75	98.248	-1,209.93	1,575.02	1,394.16	1,332.78	61.37	22.715	
7,350.00	5,150.00	7,621.59	5,350.00	32.07	31.18	98.248	-1,209.78	1,625.02	1,394.16	1,331.91	62.25	22.396	
7,400.00	5,150.00	7,671.59	5,350.00	32.51	31.62	98.248	-1,209.63	1,675.02	1,394.16	1,331.03	63.13	22.085	
7,450.00	5,150.00	7,721.59	5,350.00	32.96	32.06	98.248	-1,209.47	1,725.02	1,394.16	1,330.14	64.02	21.778	
7,500.00	5,150.00	7,771.59	5,350.00	33.42	32.50	98.248	-1,209.32	1,775.02	1,394.16	1,329.25	64.91	21.478	
7,550.00	5,150.00	7,821.59	5,350.00	33.88	32.95	98.248	-1,209.17	1,825.02	1,394.16	1,328.35	65.81	21.183	
7,600.00	5,150.00	7,871.59	5,350.00	34.33	33.41	98.248	-1,209.02	1,875.02	1,394.16	1,327.44	66.72	20.895	
7,650.00	5,150.00	7,921.59	5,350.00	34.80	33.86	98.248	-1,208.87	1,925.02	1,394.17	1,326.53	67.64	20.612	
7,700.00	5,150.00	7,971.59	5,350.00	35.26	34.32	98.248	-1,208.71	1,975.02	1,394.17	1,325.61	68.56	20.336	
7,750.00	5,150.00	8,021.59	5,350.00	35.73	34.78	98.248	-1,208.56	2,025.02	1,394.17	1,324.68	69.49	20.064	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	Offset TVD Reference:	Reference Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,800.00	5,150.00	8,071.59	5,350.00	36.20	35.25	98.248	-1,208.41	2,075.02	1,394.17	1,323.75	70.42	19.799	
7,850.00	5,150.00	8,121.59	5,350.00	36.68	35.72	98.248	-1,208.26	2,125.02	1,394.17	1,322.81	71.36	19.538	
7,900.00	5,150.00	8,171.59	5,350.00	37.16	36.19	98.248	-1,208.10	2,175.02	1,394.17	1,321.87	72.30	19.284	
7,950.00	5,150.00	8,221.59	5,350.00	37.64	36.66	98.248	-1,207.95	2,225.02	1,394.17	1,320.92	73.25	19.034	
8,000.00	5,150.00	8,271.59	5,350.00	38.12	37.14	98.248	-1,207.80	2,275.02	1,394.17	1,319.97	74.20	18.790	
8,050.00	5,150.00	8,321.59	5,350.00	38.60	37.62	98.248	-1,207.65	2,325.02	1,394.17	1,319.02	75.16	18.550	
8,100.00	5,150.00	8,371.59	5,350.00	39.09	38.10	98.248	-1,207.50	2,375.02	1,394.17	1,318.06	76.12	18.316	
8,150.00	5,150.00	8,421.59	5,350.00	39.57	38.58	98.248	-1,207.34	2,425.02	1,394.17	1,317.09	77.08	18.086	
8,200.00	5,150.00	8,471.59	5,350.00	40.06	39.06	98.248	-1,207.19	2,475.02	1,394.18	1,316.12	78.05	17.862	
8,250.00	5,150.00	8,521.59	5,350.00	40.56	39.55	98.248	-1,207.04	2,525.01	1,394.18	1,315.15	79.03	17.641	
8,300.00	5,150.00	8,571.59	5,350.00	41.05	40.04	98.248	-1,206.89	2,575.01	1,394.18	1,314.17	80.01	17.426	
8,350.00	5,150.00	8,621.59	5,350.00	41.55	40.53	98.248	-1,206.74	2,625.01	1,394.18	1,313.19	80.99	17.215	
8,400.00	5,150.00	8,671.59	5,350.00	42.04	41.03	98.248	-1,206.58	2,675.01	1,394.18	1,312.21	81.97	17.008	
8,450.00	5,150.00	8,721.59	5,350.00	42.54	41.52	98.248	-1,206.43	2,725.01	1,394.18	1,311.22	82.96	16.805	
8,500.00	5,150.00	8,771.59	5,350.00	43.04	42.02	98.248	-1,206.28	2,775.01	1,394.18	1,310.23	83.95	16.607	
8,550.00	5,150.00	8,821.59	5,350.00	43.54	42.51	98.248	-1,206.13	2,825.01	1,394.18	1,309.23	84.95	16.412	
8,600.00	5,150.00	8,871.59	5,350.00	44.05	43.01	98.248	-1,205.98	2,875.01	1,394.18	1,308.24	85.95	16.222	
8,650.00	5,150.00	8,921.59	5,350.00	44.55	43.52	98.248	-1,205.82	2,925.01	1,394.18	1,307.24	86.95	16.035	
8,700.00	5,150.00	8,971.59	5,350.00	45.06	44.02	98.248	-1,205.67	2,975.01	1,394.19	1,306.23	87.95	15.852	
8,750.00	5,150.00	9,021.59	5,350.00	45.57	44.52	98.248	-1,205.52	3,025.01	1,394.19	1,305.23	88.96	15.672	
8,800.00	5,150.00	9,071.59	5,350.00	46.08	45.03	98.248	-1,205.37	3,075.01	1,394.19	1,304.22	89.97	15.497	
8,850.00	5,150.00	9,121.59	5,350.00	46.59	45.53	98.248	-1,205.22	3,125.01	1,394.19	1,303.21	90.98	15.324	
8,900.00	5,150.00	9,171.59	5,350.00	47.10	46.04	98.248	-1,205.06	3,175.01	1,394.19	1,302.20	91.99	15.155	
8,950.00	5,150.00	9,221.59	5,350.00	47.61	46.55	98.248	-1,204.91	3,225.01	1,394.19	1,301.18	93.01	14.990	
9,000.00	5,150.00	9,271.59	5,350.00	48.12	47.06	98.248	-1,204.76	3,275.01	1,394.19	1,300.16	94.03	14.827	
9,050.00	5,150.00	9,321.59	5,350.00	48.64	47.58	98.248	-1,204.61	3,325.01	1,394.19	1,299.14	95.05	14.668	
9,100.00	5,150.00	9,371.59	5,350.00	49.15	48.09	98.248	-1,204.46	3,375.01	1,394.19	1,298.12	96.07	14.512	
9,150.00	5,150.00	9,421.59	5,350.00	49.67	48.60	98.248	-1,204.30	3,425.01	1,394.19	1,297.09	97.10	14.358	
9,200.00	5,150.00	9,471.59	5,350.00	50.19	49.12	98.248	-1,204.15	3,475.01	1,394.19	1,296.07	98.13	14.208	
9,250.00	5,150.00	9,521.59	5,350.00	50.71	49.63	98.248	-1,204.00	3,525.01	1,394.20	1,295.04	99.16	14.061	
9,300.00	5,150.00	9,571.59	5,350.00	51.23	50.15	98.248	-1,203.85	3,575.01	1,394.20	1,294.01	100.19	13.916	
9,350.00	5,150.00	9,621.59	5,350.00	51.75	50.67	98.248	-1,203.70	3,625.01	1,394.20	1,292.98	101.22	13.774	
9,400.00	5,150.00	9,671.59	5,350.00	52.27	51.19	98.248	-1,203.54	3,675.01	1,394.20	1,291.94	102.26	13.634	
9,450.00	5,150.00	9,721.59	5,350.00	52.79	51.71	98.248	-1,203.39	3,725.01	1,394.20	1,290.91	103.29	13.497	
9,500.00	5,150.00	9,771.59	5,350.00	53.32	52.23	98.248	-1,203.24	3,775.01	1,394.20	1,289.87	104.33	13.363	
9,550.00	5,150.00	9,821.59	5,350.00	53.84	52.75	98.248	-1,203.09	3,825.01	1,394.20	1,288.83	105.37	13.231	
9,600.00	5,150.00	9,871.59	5,350.00	54.37	53.28	98.248	-1,202.93	3,875.01	1,394.20	1,287.79	106.41	13.102	
9,650.00	5,150.00	9,921.59	5,350.00	54.89	53.80	98.248	-1,202.78	3,925.01	1,394.20	1,286.74	107.46	12.974	
9,700.00	5,150.00	9,971.59	5,350.00	55.42	54.32	98.248	-1,202.63	3,975.01	1,394.20	1,285.70	108.50	12.849	
9,750.00	5,150.00	10,021.59	5,350.00	55.95	54.85	98.248	-1,202.48	4,025.01	1,394.21	1,284.66	109.55	12.727	
9,800.00	5,150.00	10,071.59	5,350.00	56.47	55.37	98.248	-1,202.33	4,075.01	1,394.21	1,283.61	110.60	12.606	
9,850.00	5,150.00	10,121.59	5,350.00	57.00	55.90	98.248	-1,202.17	4,125.01	1,394.21	1,282.56	111.65	12.488	
9,900.00	5,150.00	10,171.59	5,350.00	57.53	56.43	98.248	-1,202.02	4,175.01	1,394.21	1,281.51	112.70	12.371	
9,950.00	5,150.00	10,221.59	5,350.00	58.06	56.96	98.248	-1,201.87	4,225.01	1,394.21	1,280.46	113.75	12.257	
10,000.00	5,150.00	10,271.59	5,350.00	58.59	57.49	98.248	-1,201.72	4,275.01	1,394.21	1,279.41	114.80	12.144	
10,050.00	5,150.00	10,321.59	5,350.00	59.13	58.02	98.248	-1,201.57	4,325.01	1,394.21	1,278.35	115.86	12.034	
10,100.00	5,150.00	10,371.59	5,350.00	59.66	58.55	98.248	-1,201.41	4,375.01	1,394.21	1,277.30	116.91	11.925	
10,150.00	5,150.00	10,421.59	5,350.00	60.19	59.08	98.248	-1,201.26	4,425.01	1,394.21	1,276.24	117.97	11.818	
10,200.00	5,150.00	10,471.59	5,350.00	60.72	59.61	98.248	-1,201.11	4,475.01	1,394.21	1,275.19	119.03	11.713	
10,250.00	5,150.00	10,521.59	5,350.00	61.26	60.14	98.248	-1,200.96	4,525.01	1,394.22	1,274.13	120.09	11.610	
10,300.00	5,150.00	10,571.59	5,350.00	61.79	60.67	98.248	-1,200.81	4,575.01	1,394.22	1,273.07	121.15	11.508	
10,350.00	5,150.00	10,621.59	5,350.00	62.32	61.20	98.248	-1,200.65	4,625.01	1,394.22	1,272.01	122.21	11.408	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 TESORO 20 FEDERAL COM - 71H - Wellbore #1 - PERMIT												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	5,150.00	10,671.59	5,350.00	62.86	61.74	98.248	-1,200.50	4,675.00	1,394.22	1,270.95	123.27	11.310	
10,450.00	5,150.00	10,721.59	5,350.00	63.40	62.27	98.247	-1,200.35	4,725.00	1,394.22	1,269.88	124.33	11.213	
10,500.00	5,150.00	10,771.59	5,350.00	63.93	62.81	98.247	-1,200.20	4,775.00	1,394.22	1,268.82	125.40	11.118	
10,550.00	5,150.00	10,821.59	5,350.00	64.47	63.34	98.247	-1,200.05	4,825.00	1,394.22	1,267.76	126.46	11.025	
10,600.00	5,150.00	10,871.59	5,350.00	65.01	63.88	98.247	-1,199.89	4,875.00	1,394.22	1,266.69	127.53	10.933	
10,650.00	5,150.00	10,921.59	5,350.00	65.54	64.41	98.247	-1,199.74	4,925.00	1,394.22	1,265.63	128.60	10.842	
10,700.00	5,150.00	10,971.59	5,350.00	66.08	64.95	98.247	-1,199.59	4,975.00	1,394.22	1,264.56	129.66	10.753	
10,750.00	5,150.00	11,021.59	5,350.00	66.62	65.49	98.247	-1,199.44	5,025.00	1,394.22	1,263.49	130.73	10.665	
10,800.00	5,150.00	11,071.59	5,350.00	67.16	66.02	98.247	-1,199.29	5,075.00	1,394.23	1,262.42	131.80	10.578	
10,850.00	5,150.00	11,121.59	5,350.00	67.70	66.56	98.247	-1,199.13	5,125.00	1,394.23	1,261.35	132.87	10.493	
10,893.39	5,150.00	11,164.99	5,350.00	68.16	67.03	98.247	-1,199.00	5,168.40	1,394.23	1,260.43	133.80	10.420 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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	Offset TVD Reference:	Reference Datum

Offset Design													Offset Site Error: 0.00 usft	
Survey Program: 0-MWD+IFR1+SAG+FDIR													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	180.000	-20.00	0.00	20.00					
50.00	50.00	50.00	50.00	0.05	0.07	180.000	-20.00	0.00	20.00	19.87	0.13	159.407		
100.00	100.00	100.00	100.00	0.14	0.14	180.000	-20.00	0.00	20.00	19.71	0.29	69.740		
150.00	150.00	150.00	150.00	0.32	0.32	180.000	-20.00	0.00	20.00	19.35	0.65	30.996		
200.00	200.00	200.00	200.00	0.50	0.50	180.000	-20.00	0.00	20.00	19.00	1.00	19.926		
250.00	250.00	250.00	250.00	0.68	0.68	180.000	-20.00	0.00	20.00	18.64	1.36	14.682		
300.00	300.00	300.00	300.00	0.86	0.86	180.000	-20.00	0.00	20.00	18.28	1.72	11.623 CC		
350.00	350.00	349.84	349.84	1.04	1.03	-98.780	-20.20	-0.39	20.26	18.19	2.07	9.788 ES		
400.00	399.98	399.67	399.65	1.21	1.21	-99.116	-20.79	-1.54	21.05	18.63	2.42	8.700		
450.00	449.93	449.49	449.42	1.39	1.38	-99.623	-21.77	-3.47	22.37	19.60	2.77	8.081		
500.00	499.84	499.28	499.12	1.57	1.55	-100.237	-23.14	-6.17	24.22	21.10	3.12	7.770		
550.00	549.68	549.03	548.72	1.75	1.73	-100.897	-24.91	-9.64	26.59	23.12	3.47	7.660 SF		
600.00	599.45	598.75	598.21	1.93	1.91	-101.553	-27.06	-13.87	29.50	25.67	3.83	7.710		
650.00	649.13	648.41	647.56	2.11	2.08	-102.173	-29.60	-18.86	32.93	28.75	4.19	7.869		
700.00	698.70	698.02	696.74	2.29	2.26	-102.736	-32.53	-24.60	36.90	32.35	4.54	8.119		
750.00	748.15	747.56	745.74	2.47	2.44	-103.234	-35.83	-31.09	41.39	36.48	4.91	8.432		
800.00	797.47	797.03	794.54	2.65	2.62	-103.666	-39.52	-38.32	46.40	41.13	5.27	8.802		
850.00	846.63	846.41	843.10	2.84	2.80	-104.035	-43.58	-46.29	51.94	46.30	5.64	9.209		
900.00	895.62	895.70	891.42	3.02	2.99	-104.346	-48.01	-54.99	58.00	51.99	6.01	9.654		
950.00	944.44	944.90	939.47	3.21	3.17	-104.605	-52.80	-64.41	64.57	58.19	6.38	10.120		
1,000.00	993.06	994.00	987.23	3.40	3.36	-104.817	-57.96	-74.54	71.66	64.91	6.75	10.610		
1,050.00	1,041.46	1,043.12	1,034.82	3.59	3.55	-105.017	-63.48	-85.37	79.25	72.11	7.13	11.111		
1,100.00	1,089.70	1,092.49	1,082.61	3.78	3.74	-105.557	-69.11	-96.43	87.08	79.57	7.51	11.593		
1,150.00	1,137.92	1,141.87	1,130.40	3.98	3.93	-106.076	-74.75	-107.50	94.93	87.04	7.89	12.025		
1,200.00	1,186.14	1,191.24	1,178.18	4.18	4.13	-106.516	-80.38	-118.56	102.79	94.51	8.28	12.417		
1,250.00	1,234.37	1,240.61	1,225.97	4.37	4.32	-106.893	-86.02	-129.63	110.65	101.99	8.66	12.770		
1,300.00	1,282.59	1,289.98	1,273.76	4.57	4.52	-107.220	-91.65	-140.69	118.52	109.47	9.05	13.094		
1,350.00	1,330.81	1,339.36	1,321.54	4.77	4.72	-107.506	-97.29	-151.75	126.39	116.95	9.44	13.388		
1,400.00	1,379.04	1,388.73	1,369.33	4.97	4.91	-107.759	-102.92	-162.82	134.26	124.43	9.83	13.660		
1,450.00	1,427.26	1,438.10	1,417.11	5.17	5.11	-107.983	-108.56	-173.88	142.14	131.92	10.22	13.908		
1,500.00	1,475.48	1,487.48	1,464.90	5.37	5.31	-108.185	-114.19	-184.94	150.01	139.40	10.61	14.138		
1,550.00	1,523.71	1,536.85	1,512.69	5.57	5.51	-108.366	-119.83	-196.01	157.89	146.89	11.00	14.350		
1,600.00	1,571.93	1,586.22	1,560.47	5.77	5.70	-108.529	-125.46	-207.07	165.77	154.38	11.39	14.548		
1,650.00	1,620.15	1,635.60	1,608.26	5.97	5.90	-108.678	-131.09	-218.13	173.65	161.86	11.79	14.731		
1,700.00	1,668.37	1,684.97	1,656.05	6.17	6.10	-108.815	-136.73	-229.20	181.53	169.35	12.18	14.902		
1,750.00	1,716.60	1,734.34	1,703.83	6.37	6.30	-108.939	-142.36	-240.26	189.42	176.84	12.58	15.062		
1,800.00	1,764.82	1,783.71	1,751.62	6.57	6.50	-109.054	-148.00	-251.32	197.30	184.33	12.97	15.212		
1,850.00	1,813.04	1,833.09	1,799.41	6.78	6.70	-109.160	-153.63	-262.39	205.19	191.82	13.37	15.352		
1,900.00	1,861.27	1,882.46	1,847.19	6.98	6.90	-109.258	-159.27	-273.45	213.07	199.31	13.76	15.484		
1,950.00	1,909.49	1,931.83	1,894.98	7.18	7.10	-109.349	-164.90	-284.51	220.96	206.80	14.16	15.608		
2,000.00	1,957.71	1,981.21	1,942.77	7.38	7.30	-109.434	-170.54	-295.58	228.84	214.29	14.55	15.725		
2,050.00	2,005.94	2,030.58	1,990.55	7.59	7.50	-109.513	-176.17	-306.64	236.73	221.78	14.95	15.836		
2,100.00	2,054.16	2,079.95	2,038.34	7.79	7.70	-109.587	-181.81	-317.71	244.62	229.27	15.35	15.941		
2,150.00	2,102.38	2,129.33	2,086.13	7.99	7.90	-109.657	-187.44	-328.77	252.51	236.76	15.74	16.040		
2,200.00	2,150.61	2,178.70	2,133.91	8.19	8.10	-109.722	-193.08	-339.83	260.40	244.26	16.14	16.134		
2,250.00	2,198.83	2,228.07	2,181.70	8.40	8.30	-109.783	-198.71	-350.90	268.28	251.75	16.54	16.223		
2,300.00	2,247.05	2,277.44	2,229.48	8.60	8.50	-109.841	-204.34	-361.96	276.17	259.24	16.93	16.308		
2,350.00	2,295.28	2,326.82	2,277.27	8.80	8.70	-109.896	-209.98	-373.02	284.06	266.73	17.33	16.389		
2,400.00	2,343.50	2,376.19	2,325.06	9.01	8.90	-109.948	-215.61	-384.09	291.95	274.22	17.73	16.466		
2,450.00	2,391.72	2,425.56	2,372.84	9.21	9.10	-109.997	-221.25	-395.15	299.84	281.71	18.13	16.540		
2,500.00	2,439.95	2,474.94	2,420.63	9.41	9.30	-110.043	-226.88	-406.21	307.73	289.20	18.53	16.610		
2,550.00	2,488.17	2,524.31	2,468.42	9.62	9.50	-110.087	-232.52	-417.28	315.62	296.69	18.92	16.678		

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	Offset TVD Reference:	Reference Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.00	2,536.39	2,573.68	2,516.20	9.82	9.70	-110.129	-238.15	-428.34	323.51	304.19	19.32	16.742	
2,650.00	2,584.61	2,623.06	2,563.99	10.02	9.90	-110.169	-243.79	-439.40	331.40	311.68	19.72	16.804	
2,700.00	2,632.84	2,672.43	2,611.78	10.23	10.10	-110.207	-249.42	-450.47	339.29	319.17	20.12	16.863	
2,750.00	2,681.06	2,721.80	2,659.56	10.43	10.30	-110.244	-255.06	-461.53	347.18	326.66	20.52	16.920	
2,800.00	2,729.28	2,771.18	2,707.35	10.64	10.50	-110.279	-260.69	-472.60	355.07	334.15	20.92	16.974	
2,850.00	2,777.51	2,820.55	2,755.14	10.84	10.71	-110.312	-266.33	-483.66	362.96	341.64	21.32	17.027	
2,900.00	2,825.73	2,869.92	2,802.92	11.04	10.91	-110.344	-271.96	-494.72	370.85	349.14	21.72	17.077	
2,950.00	2,873.95	2,919.29	2,850.71	11.25	11.11	-110.374	-277.59	-505.79	378.74	356.63	22.12	17.125	
3,000.00	2,922.18	2,968.67	2,898.49	11.45	11.31	-110.403	-283.23	-516.85	386.63	364.12	22.52	17.172	
3,050.00	2,970.40	3,018.04	2,946.28	11.66	11.51	-110.432	-288.86	-527.91	394.52	371.61	22.91	17.217	
3,100.00	3,018.62	3,067.41	2,994.07	11.86	11.71	-110.459	-294.50	-538.98	402.42	379.10	23.31	17.261	
3,150.00	3,066.85	3,116.79	3,041.85	12.06	11.91	-110.485	-300.13	-550.04	410.31	386.59	23.71	17.303	
3,200.00	3,115.07	3,166.16	3,089.64	12.27	12.11	-110.510	-305.77	-561.10	418.20	394.09	24.11	17.343	
3,250.00	3,163.29	3,215.53	3,137.43	12.47	12.32	-110.534	-311.40	-572.17	426.09	401.58	24.51	17.382	
3,300.00	3,211.52	3,264.91	3,185.21	12.68	12.52	-110.557	-317.04	-583.23	433.98	409.07	24.91	17.420	
3,350.00	3,259.74	3,314.28	3,233.00	12.88	12.72	-110.579	-322.67	-594.29	441.87	416.56	25.31	17.457	
3,400.00	3,307.96	3,363.65	3,280.79	13.08	12.92	-110.601	-328.31	-605.36	449.76	424.05	25.71	17.492	
3,450.00	3,356.19	3,413.02	3,328.57	13.29	13.12	-110.622	-333.94	-616.42	457.66	431.54	26.11	17.527	
3,500.00	3,404.41	3,462.40	3,376.36	13.49	13.32	-110.642	-339.58	-627.49	465.55	439.04	26.51	17.560	
3,550.00	3,452.63	3,511.77	3,424.15	13.70	13.52	-110.661	-345.21	-638.55	473.44	446.53	26.91	17.592	
3,600.00	3,500.85	3,561.14	3,471.93	13.90	13.73	-110.680	-350.85	-649.61	481.33	454.02	27.31	17.623	
3,650.00	3,549.08	3,610.52	3,519.72	14.11	13.93	-110.698	-356.48	-660.68	489.22	461.51	27.71	17.654	
3,700.00	3,597.30	3,659.89	3,567.50	14.31	14.13	-110.716	-362.11	-671.74	497.12	469.00	28.11	17.683	
3,750.00	3,645.52	3,709.26	3,615.29	14.51	14.33	-110.733	-367.75	-682.80	505.01	476.49	28.51	17.712	
3,800.00	3,693.75	3,758.64	3,663.08	14.72	14.53	-110.750	-373.38	-693.87	512.90	483.99	28.91	17.739	
3,850.00	3,741.97	3,808.01	3,710.86	14.92	14.73	-110.766	-379.02	-704.93	520.79	491.48	29.31	17.766	
3,900.00	3,790.19	3,857.38	3,758.65	15.13	14.94	-110.781	-384.65	-715.99	528.68	498.97	29.71	17.793	
3,950.00	3,838.42	3,906.75	3,806.44	15.33	15.14	-110.796	-390.29	-727.06	536.58	506.46	30.11	17.818	
4,000.00	3,886.64	3,956.13	3,854.22	15.54	15.34	-110.811	-395.92	-738.12	544.47	513.95	30.51	17.843	
4,050.00	3,935.06	4,005.52	3,902.03	15.74	15.54	-112.494	-401.56	-749.19	552.18	521.25	30.93	17.850	
4,100.00	3,984.05	4,054.90	3,949.82	15.93	15.74	-115.318	-407.19	-760.26	559.33	527.98	31.35	17.843	
4,150.00	4,033.48	4,104.14	3,997.48	16.11	15.94	-120.116	-412.81	-771.29	565.91	534.17	31.75	17.826	
4,200.00	4,083.23	4,153.11	4,044.87	16.29	16.14	-131.234	-418.40	-782.26	572.00	539.87	32.13	17.802	
4,250.00	4,133.15	4,201.66	4,091.87	16.45	16.34	-170.252	-423.94	-793.14	577.66	545.17	32.50	17.776	
4,300.00	4,183.11	4,249.67	4,138.33	16.61	16.54	122.819	-429.42	-803.90	583.03	550.19	32.84	17.753	
4,350.00	4,232.97	4,297.00	4,184.14	16.75	16.73	102.064	-434.82	-814.50	588.24	555.07	33.17	17.736	
4,400.00	4,282.59	4,343.53	4,229.17	16.88	16.92	95.725	-440.13	-824.93	593.46	559.98	33.48	17.728	
4,450.00	4,331.84	4,389.12	4,273.30	17.02	17.11	93.432	-445.34	-835.15	598.87	565.10	33.77	17.734	
4,500.00	4,380.59	4,433.65	4,316.40	17.14	17.29	92.786	-450.42	-845.13	604.69	570.64	34.05	17.759	
4,550.00	4,428.69	4,477.01	4,358.37	17.27	17.47	92.969	-455.37	-854.84	611.13	576.82	34.31	17.811	
4,600.00	4,476.02	4,519.06	4,399.07	17.39	17.64	93.610	-460.17	-864.26	618.42	583.86	34.56	17.897	
4,650.00	4,522.45	4,559.70	4,438.40	17.51	17.80	94.508	-464.80	-873.37	626.77	591.99	34.78	18.021	
4,700.00	4,567.85	4,601.54	4,478.95	17.63	17.97	95.671	-469.57	-882.50	636.37	601.38	34.99	18.189	
4,750.00	4,612.10	4,646.91	4,523.30	17.74	18.15	97.068	-474.66	-890.61	647.07	611.89	35.17	18.396	
4,800.00	4,655.07	4,693.97	4,569.66	17.86	18.33	98.536	-479.84	-896.77	658.78	623.45	35.33	18.644	
4,850.00	4,696.65	4,742.93	4,618.16	17.98	18.51	100.058	-485.11	-900.73	671.44	635.98	35.47	18.932	
4,900.00	4,736.73	4,794.04	4,668.97	18.10	18.68	101.622	-490.45	-902.20	684.96	649.40	35.56	19.262	
4,950.00	4,775.18	4,847.60	4,722.23	18.22	18.84	103.224	-495.87	-900.82	699.24	663.62	35.62	19.632	
5,000.00	4,811.92	4,903.94	4,778.10	18.34	19.00	104.862	-501.35	-896.13	714.15	678.52	35.63	20.043	
5,050.00	4,846.83	4,963.46	4,836.74	18.47	19.16	106.536	-506.88	-887.59	729.57	693.96	35.60	20.492	
5,100.00	4,879.83	5,026.60	4,898.25	18.61	19.32	108.248	-512.42	-874.56	745.33	709.80	35.53	20.978	
5,150.00	4,910.81	5,093.87	4,962.72	18.75	19.48	109.999	-517.94	-856.23	761.28	725.87	35.41	21.500	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	Offset TVD Reference:	Reference Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,200.00	4,939.70	5,165.82	5,030.11	18.90	19.64	111.788	-523.36	-831.64	777.20	741.96	35.24	22.055	
5,250.00	4,966.42	5,243.07	5,100.21	19.05	19.80	113.610	-528.60	-799.67	792.87	757.85	35.02	22.640	
5,300.00	4,991.50	5,326.94	5,173.18	19.21	19.97	116.085	-533.57	-758.67	807.77	773.10	34.66	23.302	
5,350.00	5,016.50	5,419.44	5,249.19	19.39	20.15	118.493	-538.14	-706.23	820.74	786.41	34.33	23.908	
5,400.00	5,041.50	5,520.10	5,325.80	19.57	20.33	120.439	-541.97	-641.11	831.16	797.06	34.11	24.368	
5,450.00	5,066.50	5,627.56	5,399.61	19.76	20.54	121.814	-544.71	-563.14	838.50	804.42	34.08	24.603	
5,500.00	5,090.48	5,739.36	5,466.69	19.96	20.76	122.424	-546.04	-473.79	842.95	808.83	34.12	24.706	
5,550.00	5,110.69	5,822.68	5,509.95	20.17	20.95	122.705	-546.04	-402.60	846.38	812.18	34.20	24.750	
5,600.00	5,126.84	5,871.72	5,534.47	20.38	21.08	122.797	-545.91	-360.13	851.69	817.35	34.34	24.802	
5,650.00	5,138.80	5,919.73	5,558.47	20.59	21.21	122.897	-545.79	-318.55	859.45	824.89	34.56	24.865	
5,700.00	5,146.49	5,966.34	5,581.78	20.79	21.34	122.969	-545.66	-278.18	869.75	834.86	34.89	24.931	
5,750.00	5,149.84	6,138.27	5,652.53	21.00	21.90	125.482	-545.19	-122.08	881.80	847.10	34.70	25.411	
5,800.00	5,150.00	6,335.46	5,675.00	21.20	22.57	126.488	-544.59	73.00	882.86	847.72	35.14	25.121	
5,850.00	5,150.00	6,385.46	5,675.00	21.42	22.75	126.488	-544.44	123.00	882.86	847.35	35.51	24.860	
5,900.00	5,150.00	6,435.46	5,675.00	21.64	22.95	126.488	-544.28	173.00	882.86	846.96	35.90	24.593	
5,950.00	5,150.00	6,485.46	5,675.00	21.88	23.16	126.488	-544.13	223.00	882.86	846.55	36.31	24.314	
6,000.00	5,150.00	6,535.46	5,675.00	22.13	23.38	126.488	-543.98	273.00	882.86	846.13	36.74	24.032	
6,050.00	5,150.00	6,585.46	5,675.00	22.40	23.62	126.488	-543.82	323.00	882.86	845.68	37.19	23.741	
6,100.00	5,150.00	6,635.46	5,675.00	22.66	23.86	126.488	-543.67	373.00	882.86	845.21	37.65	23.448	
6,150.00	5,150.00	6,685.46	5,675.00	22.95	24.12	126.488	-543.52	423.00	882.86	844.72	38.14	23.148	
6,200.00	5,150.00	6,735.46	5,675.00	23.24	24.39	126.488	-543.36	473.00	882.86	844.22	38.64	22.849	
6,250.00	5,150.00	6,785.46	5,675.00	23.55	24.67	126.488	-543.21	523.00	882.86	843.70	39.16	22.545	
6,300.00	5,150.00	6,835.46	5,675.00	23.86	24.96	126.488	-543.06	573.00	882.86	843.17	39.69	22.242	
6,350.00	5,150.00	6,885.46	5,675.00	24.19	25.25	126.488	-542.91	623.00	882.86	842.62	40.25	21.937	
6,400.00	5,150.00	6,935.46	5,675.00	24.51	25.56	126.488	-542.75	673.00	882.86	842.05	40.81	21.634	
6,450.00	5,150.00	6,985.46	5,675.00	24.86	25.88	126.488	-542.60	723.00	882.86	841.47	41.39	21.330	
6,500.00	5,150.00	7,035.46	5,675.00	25.20	26.21	126.488	-542.45	773.00	882.86	840.88	41.98	21.030	
6,550.00	5,150.00	7,085.46	5,675.00	25.56	26.54	126.488	-542.29	823.00	882.86	840.27	42.59	20.729	
6,600.00	5,150.00	7,135.46	5,675.00	25.92	26.88	126.488	-542.14	873.00	882.86	839.66	43.21	20.433	
6,650.00	5,150.00	7,185.46	5,675.00	26.29	27.23	126.488	-541.99	923.00	882.86	839.02	43.84	20.139	
6,700.00	5,150.00	7,235.46	5,675.00	26.67	27.59	126.488	-541.83	973.00	882.86	838.38	44.48	19.849	
6,750.00	5,150.00	7,285.46	5,675.00	27.05	27.95	126.488	-541.68	1,023.00	882.86	837.73	45.13	19.561	
6,800.00	5,150.00	7,335.46	5,675.00	27.44	28.32	126.488	-541.53	1,073.00	882.86	837.07	45.80	19.278	
6,850.00	5,150.00	7,385.46	5,675.00	27.84	28.70	126.488	-541.38	1,123.00	882.86	836.39	46.47	18.998	
6,900.00	5,150.00	7,435.46	5,675.00	28.23	29.08	126.488	-541.22	1,173.00	882.86	835.71	47.15	18.724	
6,950.00	5,150.00	7,485.46	5,675.00	28.64	29.47	126.488	-541.07	1,223.00	882.86	835.02	47.85	18.452	
7,000.00	5,150.00	7,535.46	5,675.00	29.05	29.86	126.488	-540.92	1,273.00	882.86	834.32	48.55	18.186	
7,050.00	5,150.00	7,585.46	5,675.00	29.47	30.26	126.488	-540.76	1,323.00	882.86	833.61	49.26	17.924	
7,100.00	5,150.00	7,635.46	5,675.00	29.89	30.67	126.488	-540.61	1,373.00	882.86	832.89	49.97	17.667	
7,150.00	5,150.00	7,685.46	5,675.00	30.32	31.07	126.488	-540.46	1,423.00	882.86	832.16	50.70	17.414	
7,200.00	5,150.00	7,735.46	5,675.00	30.75	31.49	126.488	-540.30	1,473.00	882.86	831.43	51.43	17.166	
7,250.00	5,150.00	7,785.46	5,675.00	31.19	31.91	126.488	-540.15	1,523.00	882.86	830.69	52.17	16.923	
7,300.00	5,150.00	7,835.46	5,675.00	31.62	32.33	126.488	-540.00	1,573.00	882.86	829.95	52.92	16.684	
7,350.00	5,150.00	7,885.46	5,675.00	32.07	32.76	126.488	-539.85	1,623.00	882.86	829.19	53.67	16.450	
7,400.00	5,150.00	7,935.46	5,675.00	32.51	33.19	126.488	-539.69	1,673.00	882.86	828.43	54.43	16.221	
7,450.00	5,150.00	7,985.46	5,675.00	32.96	33.63	126.488	-539.54	1,722.99	882.86	827.67	55.19	15.995	
7,500.00	5,150.00	8,035.46	5,675.00	33.42	34.07	126.488	-539.39	1,772.99	882.86	826.90	55.96	15.775	
7,550.00	5,150.00	8,085.46	5,675.00	33.88	34.51	126.488	-539.23	1,822.99	882.86	826.12	56.74	15.559	
7,600.00	5,150.00	8,135.46	5,675.00	34.33	34.96	126.488	-539.08	1,872.99	882.86	825.34	57.52	15.348	
7,650.00	5,150.00	8,185.46	5,675.00	34.80	35.41	126.488	-538.93	1,922.99	882.86	824.55	58.31	15.141	
7,700.00	5,150.00	8,235.46	5,675.00	35.26	35.86	126.488	-538.77	1,972.99	882.86	823.76	59.10	14.938	
7,750.00	5,150.00	8,285.46	5,675.00	35.73	36.32	126.488	-538.62	2,022.99	882.86	822.96	59.90	14.739	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.1.13 Single User Db
Reference Design:	PERMIT	Offset TVD Reference:	Reference Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,800.00	5,150.00	8,335.46	5,675.00	36.20	36.78	126.488	-538.47	2,072.99	882.86	822.16	60.70	14.545	
7,850.00	5,150.00	8,385.46	5,675.00	36.68	37.24	126.488	-538.32	2,122.99	882.86	821.36	61.50	14.355	
7,900.00	5,150.00	8,435.46	5,675.00	37.16	37.71	126.488	-538.16	2,172.99	882.86	820.55	62.31	14.168	
7,950.00	5,150.00	8,485.46	5,675.00	37.64	38.17	126.488	-538.01	2,222.99	882.86	819.74	63.13	13.986	
8,000.00	5,150.00	8,535.46	5,675.00	38.12	38.64	126.488	-537.86	2,272.99	882.86	818.92	63.94	13.807	
8,050.00	5,150.00	8,585.46	5,675.00	38.60	39.12	126.488	-537.70	2,322.99	882.86	818.10	64.76	13.632	
8,100.00	5,150.00	8,635.46	5,675.00	39.09	39.59	126.488	-537.55	2,372.99	882.86	817.27	65.59	13.461	
8,150.00	5,150.00	8,685.46	5,675.00	39.57	40.07	126.488	-537.40	2,422.99	882.86	816.45	66.42	13.293	
8,200.00	5,150.00	8,735.46	5,675.00	40.06	40.55	126.488	-537.24	2,472.99	882.86	815.62	67.25	13.129	
8,250.00	5,150.00	8,785.46	5,675.00	40.56	41.03	126.488	-537.09	2,522.99	882.86	814.78	68.08	12.968	
8,300.00	5,150.00	8,835.46	5,675.00	41.05	41.52	126.488	-536.94	2,572.99	882.86	813.94	68.92	12.810	
8,350.00	5,150.00	8,885.46	5,675.00	41.55	42.00	126.488	-536.78	2,622.99	882.86	813.10	69.76	12.656	
8,400.00	5,150.00	8,935.46	5,675.00	42.04	42.49	126.488	-536.63	2,672.99	882.86	812.26	70.60	12.505	
8,450.00	5,150.00	8,985.46	5,675.00	42.54	42.98	126.488	-536.48	2,722.99	882.86	811.42	71.45	12.357	
8,500.00	5,150.00	9,035.46	5,675.00	43.04	43.47	126.488	-536.33	2,772.99	882.86	810.57	72.30	12.212	
8,550.00	5,150.00	9,085.46	5,675.00	43.54	43.96	126.488	-536.17	2,822.99	882.86	809.72	73.15	12.070	
8,600.00	5,150.00	9,135.46	5,675.00	44.05	44.46	126.488	-536.02	2,872.99	882.86	808.86	74.00	11.931	
8,650.00	5,150.00	9,185.46	5,675.00	44.55	44.96	126.488	-535.87	2,922.99	882.86	808.01	74.86	11.794	
8,700.00	5,150.00	9,235.46	5,675.00	45.06	45.45	126.488	-535.71	2,972.99	882.86	807.15	75.71	11.661	
8,750.00	5,150.00	9,285.46	5,675.00	45.57	45.95	126.488	-535.56	3,022.99	882.86	806.29	76.57	11.530	
8,800.00	5,150.00	9,335.46	5,675.00	46.08	46.45	126.488	-535.41	3,072.99	882.86	805.43	77.44	11.401	
8,850.00	5,150.00	9,385.46	5,675.00	46.59	46.96	126.488	-535.25	3,122.99	882.86	804.56	78.30	11.275	
8,900.00	5,150.00	9,435.46	5,675.00	47.10	47.46	126.488	-535.10	3,172.99	882.86	803.70	79.17	11.152	
8,950.00	5,150.00	9,485.46	5,675.00	47.61	47.97	126.488	-534.95	3,222.99	882.86	802.83	80.04	11.031	
9,000.00	5,150.00	9,535.46	5,675.00	48.12	48.47	126.488	-534.80	3,272.99	882.86	801.96	80.91	10.912	
9,050.00	5,150.00	9,585.46	5,675.00	48.64	48.98	126.488	-534.64	3,322.99	882.86	801.09	81.78	10.796	
9,100.00	5,150.00	9,635.46	5,675.00	49.15	49.49	126.488	-534.49	3,372.99	882.86	800.21	82.65	10.682	
9,150.00	5,150.00	9,685.46	5,675.00	49.67	50.00	126.488	-534.34	3,422.99	882.86	799.34	83.53	10.570	
9,200.00	5,150.00	9,735.46	5,675.00	50.19	50.51	126.488	-534.18	3,472.99	882.86	798.46	84.40	10.460	
9,250.00	5,150.00	9,785.46	5,675.00	50.71	51.02	126.488	-534.03	3,522.99	882.86	797.58	85.28	10.352	
9,300.00	5,150.00	9,835.46	5,675.00	51.23	51.54	126.488	-533.88	3,572.99	882.86	796.70	86.16	10.246	
9,350.00	5,150.00	9,885.46	5,675.00	51.75	52.05	126.488	-533.72	3,622.99	882.86	795.82	87.05	10.143	
9,400.00	5,150.00	9,935.46	5,675.00	52.27	52.57	126.488	-533.57	3,672.99	882.86	794.93	87.93	10.041	
9,450.00	5,150.00	9,985.46	5,675.00	52.79	53.08	126.488	-533.42	3,722.99	882.86	794.05	88.81	9.941	
9,500.00	5,150.00	10,035.46	5,675.00	53.32	53.60	126.488	-533.27	3,772.99	882.86	793.16	89.70	9.842	
9,550.00	5,150.00	10,085.46	5,675.00	53.84	54.12	126.488	-533.11	3,822.99	882.86	792.28	90.59	9.746	
9,600.00	5,150.00	10,135.46	5,675.00	54.37	54.64	126.488	-532.96	3,872.98	882.86	791.39	91.48	9.651	
9,650.00	5,150.00	10,185.46	5,675.00	54.89	55.16	126.488	-532.81	3,922.98	882.86	790.50	92.37	9.558	
9,700.00	5,150.00	10,235.46	5,675.00	55.42	55.68	126.488	-532.65	3,972.98	882.86	789.61	93.26	9.467	
9,750.00	5,150.00	10,285.46	5,675.00	55.95	56.20	126.488	-532.50	4,022.98	882.86	788.71	94.15	9.377	
9,800.00	5,150.00	10,335.46	5,675.00	56.47	56.73	126.488	-532.35	4,072.98	882.86	787.82	95.04	9.289	
9,850.00	5,150.00	10,385.46	5,675.00	57.00	57.25	126.488	-532.19	4,122.98	882.86	786.93	95.94	9.202	
9,900.00	5,150.00	10,435.46	5,675.00	57.53	57.77	126.488	-532.04	4,172.98	882.86	786.03	96.83	9.117	
9,950.00	5,150.00	10,485.46	5,675.00	58.06	58.30	126.488	-531.89	4,222.98	882.86	785.13	97.73	9.034	
10,000.00	5,150.00	10,535.46	5,675.00	58.59	58.82	126.488	-531.73	4,272.98	882.86	784.23	98.63	8.951	
10,050.00	5,150.00	10,585.46	5,675.00	59.13	59.35	126.488	-531.58	4,322.98	882.86	783.34	99.53	8.871	
10,100.00	5,150.00	10,635.46	5,675.00	59.66	59.88	126.488	-531.43	4,372.98	882.86	782.44	100.43	8.791	
10,150.00	5,150.00	10,685.46	5,675.00	60.19	60.40	126.488	-531.28	4,422.98	882.86	781.54	101.33	8.713	
10,200.00	5,150.00	10,735.46	5,675.00	60.72	60.93	126.488	-531.12	4,472.98	882.86	780.63	102.23	8.636	
10,250.00	5,150.00	10,785.46	5,675.00	61.26	61.46	126.488	-530.97	4,522.98	882.86	779.73	103.13	8.561	
10,300.00	5,150.00	10,835.46	5,675.00	61.79	61.99	126.488	-530.82	4,572.98	882.86	778.83	104.04	8.486	
10,350.00	5,150.00	10,885.46	5,675.00	62.32	62.52	126.488	-530.66	4,622.98	882.86	777.92	104.94	8.413	

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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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 TESORO 20 FEDERAL COM - 90H - Wellbore #1 - PERMIT												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	5,150.00	10,935.46	5,675.00	62.86	63.05	126.488	-530.51	4,672.98	882.86	777.02	105.85	8.341	
10,450.00	5,150.00	10,985.46	5,675.00	63.40	63.58	126.488	-530.36	4,722.98	882.86	776.11	106.75	8.270	
10,500.00	5,150.00	11,035.46	5,675.00	63.93	64.12	126.488	-530.20	4,772.98	882.86	775.21	107.66	8.201	
10,550.00	5,150.00	11,085.46	5,675.00	64.47	64.65	126.488	-530.05	4,822.98	882.86	774.30	108.57	8.132	
10,600.00	5,150.00	11,135.46	5,675.00	65.01	65.18	126.488	-529.90	4,872.98	882.86	773.39	109.47	8.065	
10,650.00	5,150.00	11,185.46	5,675.00	65.54	65.71	126.488	-529.75	4,922.98	882.86	772.48	110.38	7.998	
10,700.00	5,150.00	11,235.46	5,675.00	66.08	66.25	126.488	-529.59	4,972.98	882.86	771.57	111.29	7.933	
10,750.00	5,150.00	11,285.46	5,675.00	66.62	66.78	126.488	-529.44	5,022.98	882.86	770.66	112.20	7.868	
10,800.00	5,150.00	11,335.46	5,675.00	67.16	67.32	126.488	-529.29	5,072.98	882.86	769.75	113.11	7.805	
10,850.00	5,150.00	11,385.46	5,675.00	67.70	67.85	126.488	-529.13	5,122.98	882.86	768.84	114.02	7.743	
10,893.39	5,150.00	11,428.85	5,675.00	68.16	68.32	126.488	-529.00	5,166.37	882.86	768.05	114.82	7.689	

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



Anticollision Report

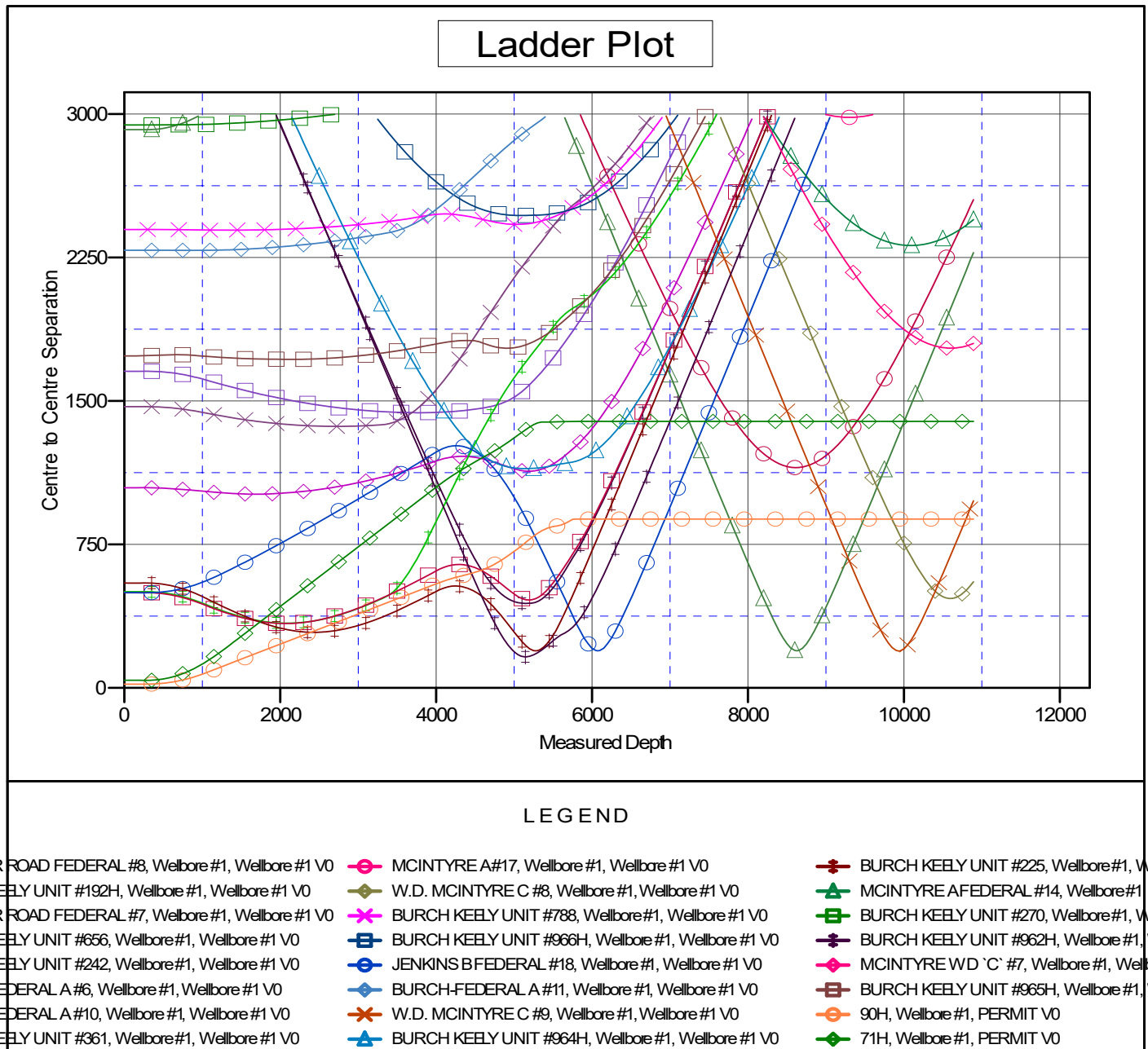
Company:	SPUR ENERGY PARTNERS, LLC	Local Co-ordinate Reference:	Well 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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' @ 3658.00usft (AKITA 57) Coordinates are relative to: 70H

Offset Depths are relative to Offset Datum

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

Grid Convergence at Surface is: 0.179°



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 70H
Project:	EDDY COUNTY, NM (NAD 83 - NME)	TVD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Reference Site:	TESORO 20 FEDERAL COM	MD Reference:	RKB = 20' @ 3658.00usft (AKITA 57)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	70H	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' @ 3658.00usft (AKITA 57) Coordinates are relative to: 70H

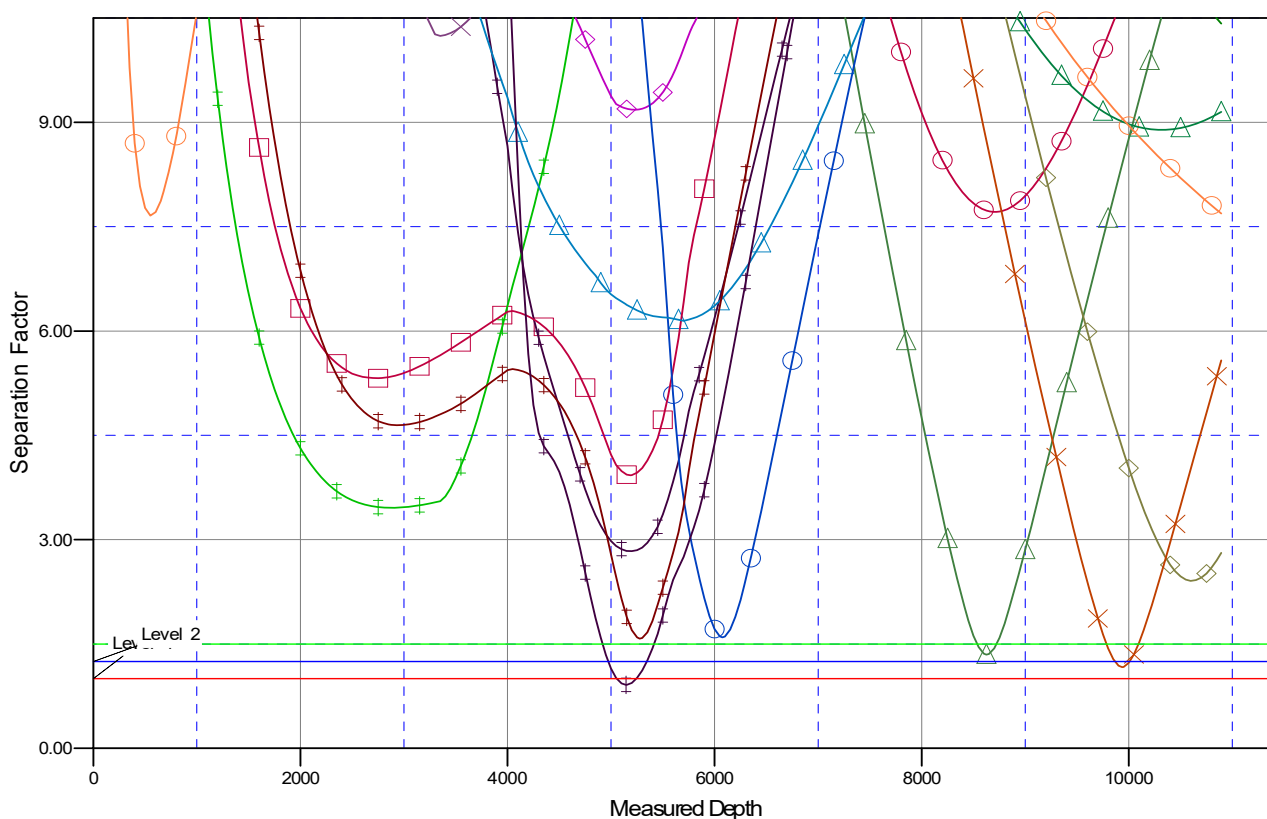
Offset Depths are relative to Offset Datum

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

Central Meridian is -104.3333333

Grid Convergence at Surface is: 0.179°

Separation Factor Plot



LEGEND

R ROAD FEDERAL #8, Wellbore #1, Wellbore #1 V0	MCINTYRE A#17, Wellbore #1, Wellbore #1 V0	BURCH KEELY UNIT #225, Wellbore #1, We
KEELY UNIT #192H, Wellbore #1, Wellbore #1 V0	W.D. MCINTYRE C #8, Wellbore #1, Wellbore #1 V0	MCINTYRE AFEDERAL #14, Wellbore #1 V
R ROAD FEDERAL #7, Wellbore #1, Wellbore #1 V0	BURCH KEELY UNIT #788, Wellbore #1, Wellbore #1 V0	BURCH KEELY UNIT #270, Wellbore #1, We
KEELY UNIT #656, Wellbore #1, Wellbore #1 V0	BURCH KEELY UNIT #966H, Wellbore #1, Wellbore #1 V0	BURCH KEELY UNIT #962H, Wellbore #1, V
KEELY UNIT #242, Wellbore #1, Wellbore #1 V0	JENKINS BFEDERAL #18, Wellbore #1, Wellbore #1 V0	MCINTYRE WD 'C' #7, Wellbore #1, Wellboc
FEDERAL A#6, Wellbore #1, Wellbore #1 V0	BURCH-FEDERAL A#11, Wellbore #1, Wellbore #1 V0	BURCH KEELY UNIT #965H, Wellbore #1, V
FEDERAL A#10, Wellbore #1, Wellbore #1 V0	W.D. MCINTYRE C #9, Wellbore #1, Wellbore #1 V0	90H, Wellbore #1, PERMIT V0
KEELY UNIT #361, Wellbore #1, Wellbore #1 V0	BURCH KEELY UNIT #964H, Wellbore #1, Wellbore #1 V0	71H, Wellbore #1, PERMIT V0

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

Pecos District

Application for Permit to Drill

Conditions of Approval

Geology Concerns

Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst	☐ Medium	☐ High	☐ Critical
H2S	☐ None	☐ Below 100 PPM	☒ Above 100 PPM
Other	☐ 4 String Area	☐ Capitan Reef	☐ SWD Well

Note: The geology of the area where the well is being drilled determines the COAs that apply, not the above table.

Additional Engineering Requirements

Surface casing must be set at: 345 feet

Intermediate casing must be set at: 1,500 feet

General Requirements

1. Changes to the approved APD casing program need prior approval.
2. The Bureau of Land Management (BLM) will be notified in advance for a representative to witness:
 - a. Well spudding (minimum of 24 hours notice)
 - b. Setting and/or cementing of all casing strings (minimum of 4 hours notice)
 - c. BOPE tests (minimum of 4 hours notice)

Eddy County

620 East Greene Street, Carlsbad, NM 88220

(575) 361-2822

BLM_NM_CFO_DrillingNotifications@BLM.GOV

Lea County

414 West Taylor, Hobbs, NM 88240

(575) 689-5981

3. The initial wellhead installed on the well will remain on the well with spools used as needed.
4. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

- a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig:
 - i. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with a Spudder Rig:
 - i. Notify the BLM when moving in and removing the Spudder Rig.
 - ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - iii. BOP/BOPE test to be conducted per 43 CFR 3172.6 as soon as 2nd Rig is rigged up on well.
5. Floor controls are required for 3M or greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller, and will always be operational during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table or the area immediately above the substructure on which the draw works are located (this does not include the doghouse or stairway area).
6. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

Pressure Control

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR 3172.6 and API STD 53 Sec. 5.3.
2. 5M or higher systems require an HCR valve, remote kill line, and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE, and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
 - b. The results of the test shall be reported to the appropriate BLM office.
 - c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

- d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
 - e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per 43 CFR 3172.6(b)(9).
 - f. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - g. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, no tests shall commence until the cement has had a minimum of 24 hours setup time.
 - h. The tests shall be done by an independent service company utilizing a test plug, not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to 43 CFR 3172 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
4. If the operator has proposed using a 5,000 (5M) Annular on a 10M BOP:
- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 10,000 (10M) psi.
5. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
- a. Wellhead shall be installed by manufacturer's representatives (submit documentation with subsequent sundry).

- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed, and another wellhead installed.
6. If a variance is approved for break testing the BOPE, the following requirements apply:
- a. BOPE break testing is only approved for a BOP rated at 5M or less.
 - b. Approval is only for the intermediate hole sections, so long as those sections do not go deeper than the Bone Springs formation.
 - c. The Annular Preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.
 - d. A full BOP test shall be performed every 21 days (at a minimum).
 - e. A full BOP test is required prior to drilling the first intermediate hole section (if applicable). If any subsequent intermediate hole interval is deeper than the first, a full BOP test shall be required (a maximum 200 foot difference in true vertical depth (TVD) is allowed).
 - f. BOPE break testing is not permitted for drilling the production hole section.
 - g. While in transfer, the BOP shall be secured by the hydraulic carrier or cradle.
 - h. If any repairs or replacements of the BOPE is required, the BOPE shall be tested as required by 43 CFR 3172.
 - i. Pressure tests shall be performed on any BOPE components that have been disconnected. A low pressure (250-300 psi) and a high pressure (BOP max pressure rating) test are required.
 - j. If a testing plug is used, pressure shall be maintained for at least 10 minutes. If there is any bleed off in pressure, the test shall be considered to have failed.
 - k. If no testing plug is used, pressure shall be maintained for at least 30 minutes. If there is a decline in pressure of more than 10 percent, the test shall be considered to have failed.
 - l. The appropriate Bureau of Land Management (BLM) office shall be notified a minimum of 4 hours before testing occurs.
 - m. Any well control event while drilling require notification to the BLM Petroleum Engineer (575-706-2779) prior to the commencement of any BOPE Break Testing operations.
 - n. If break testing is not used, then a full BOPE test shall be conducted.
7. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply:
- a. The flex line must meet the requirements of API 16C.

- b. Check condition of flexible line from BOP to choke manifold (replace if exterior is damaged or if line fails test).
- c. Line is to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements.
- d. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating.
- e. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, shall be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

Casing and Cement

1. Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).
2. On any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. The formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
3. Provide compressive strengths (including hours to reach required 500 pounds compressive strength) prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
4. The surface casing shall be set at a minimum of 25 feet into the Rustler Anhydrite and 80 feet above the salt and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of 8 hours (or 24 hours in the Potash Area) or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

5. Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.
6. Intermediate casing must be cemented to surface. For medium/high cave/karst, potash, and Capitan Reef, wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
7. The production cement should tie-back at least 200 feet (500 feet in Secretary Potash, surface in R-111-P potash) into previous casing string. Operator shall provide method of verification.
8. Production liner cement should tie-back at least 100 feet into previous casing string. Operator shall provide verification of cement top.
9. In WIPP Areas, cement must come to surface on the first three casing strings.
10. If cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
11. No pea gravel permitted for remedial cement or fall back remedial cement without prior authorization from a BLM petroleum engineer.
12. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
13. DV tools:
 - a. First stage to DV tool (The DV tool may be cancelled if cement circulates to surface on the first stage):
 - i. Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
 - b. Second stage above DV tool:
 - i. For intermediate casing, cement to surface.
 - ii. For production casing, cement should tie-back at least 200 feet (500 feet in Secretary Potash, surface in R-111-P potash) into previous casing string. Operator shall provide method of verification.
 - iii. If cement does not circulate, contact the appropriate BLM office.

14. Potash Areas:

- a. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
- b. After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met:
 - i. Cement reaches a minimum compressive strength of 500 psi for all cement blends
 - ii. Until cement has been in place at least 24 hours.
- c. WOC time will be recorded in the driller's log.
- d. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.
- e. In R111 Potash Areas, if cement does not circulate to surface on the first two salt protection casing strings, the cement on the 3rd casing salt string must come to surface.
- f. In Secretary Potash Areas, if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

15. Wait on cement (WOC) for Water Basin:

- a. After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met:
 - i. Cement reaches a minimum compressive strength of 500 psi at the shoe
 - ii. Until cement has been in place at least 8 hours.
- b. WOC time will be recorded in the driller's log.

16. Medium/High/Critical Cave/Karst Areas:

- a. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
- b. In Critical Cave/Karst Areas cement must come to surface on the first three casing strings.
- c. In Medium and High Cave/Karst Areas, if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- d. In Critical Cave/Karst Areas, if cement does not circulate to surface on the first three casing strings, the cement on the 4th casing string must come to surface.

Drilling Mud

1. Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation and shall be used until production casing is run and cemented.

Waste Material and Fluids

1. All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and

disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

2. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

Special Requirements

1. Communitization Agreement
 - a. The operator will submit a Communitization Agreement to the Santa Fe Office (301 Dinosaur Trail, Santa Fe, NM 87508), at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division.
 - b. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
 - i. The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
 - ii. If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
 - c. In addition, the well sign shall include the surface and bottom hole lease numbers.
 - i. When the Communitization Agreement number is known, it shall also be on the sign.
2. Unit Wells
 - a. The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers.
 - i. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.
 - b. Commercial Well Determination
 - i. A commercial well determination shall be submitted after production has been established for at least six months (this is not necessary for secondary recovery unit wells).
3. Hydrogen Sulfide (H₂S)
 - a. If H₂S is encountered, provide measured values and formations to the BLM.
 - b. An H₂S area must meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items.

- c. An H2S Drilling Plan shall be activated 500 feet prior to drilling into any formation designated as having H2S.
 - d. Hydrogen Sulfide monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items.
4. Capitan Reef
- a. If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following (Use this for 3 string wells in the Capitan Reef, if it is a 4 string well ensure fresh water based mud is used across the Capitan interval):
 - i. Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
 - ii. Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports.
 - iii. The daily drilling report should show mud volume per shift/tour.
 - iv. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval.
 - v. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.
5. Salt Water Disposal Wells
- a. The operator shall supply the BLM with a copy of a mudlog over the permitted disposal interval and estimated in situ water salinity based on open-hole logs.
 - b. If hydrocarbons are encountered while drilling, the operator shall notify the BLM.
 - c. The operator shall provide to the BLM a summary of formation depth picks based on mudlog and geophysical logs along with a copy of the mudlog and open-hole logs from total depth to top of Devonian.
 - d. An NOI sundry with the completion procedure for this well shall be submitted and approved prior to commencing completion work. The procedure will be reviewed to verify that the completion proposal will allow the operator to:
 - i. Properly evaluate the injection zone utilizing open-hole logs, swab testing and/or any other method to confirm that hydrocarbons cannot be produced in paying quantities. This evaluation shall be reviewed by the BLM prior to injection commencing.
 - ii. Restrict the injection fluid to the approved formation.
 - iii. If a step rate test will be run, an NOI sundry shall be submitted to the BLM for approval.

- e. If off-lease water will be disposed in this well, the operator shall provide proof of right-of-way approval.
6. WIPP Requirements
- a. If the proposed surface well or bottom hole is located within 330 feet of the WIPP Land Withdrawal Area boundary:
 - i. Daily drilling reports, logs, and deviation survey information are required to be submitted to the Bureau of Land Management Engineering Department and the U.S. Department of Energy (per requirements of the Joint Powers Agreement) until a total vertical depth of 7,000 feet is reached. These reports will have at a minimum the rate of penetration and a clearly marked section showing the deviation for each 500-foot interval. Operator may be required to do more frequent deviation surveys based on the daily information submitted and may be required to take other corrective measures.
 - ii. Information will also be provided to the New Mexico Oil Conservation Division after drilling activities have been completed.
 - iii. Upon completion of the well, the operator shall submit a complete directional survey.
 - iv. Any future entry into the well for purposes of completing additional drilling will require supplemental information.
 - b. Required information shall be emailed to OilGasReports@wipp.ws.
 - i. Attached files must not be greater than 20 MB.
 - ii. Call WIPP Tech Support at 575-234-7422, during the hours of 7:00am to 4:30pm, if there are any issues sending to this address.



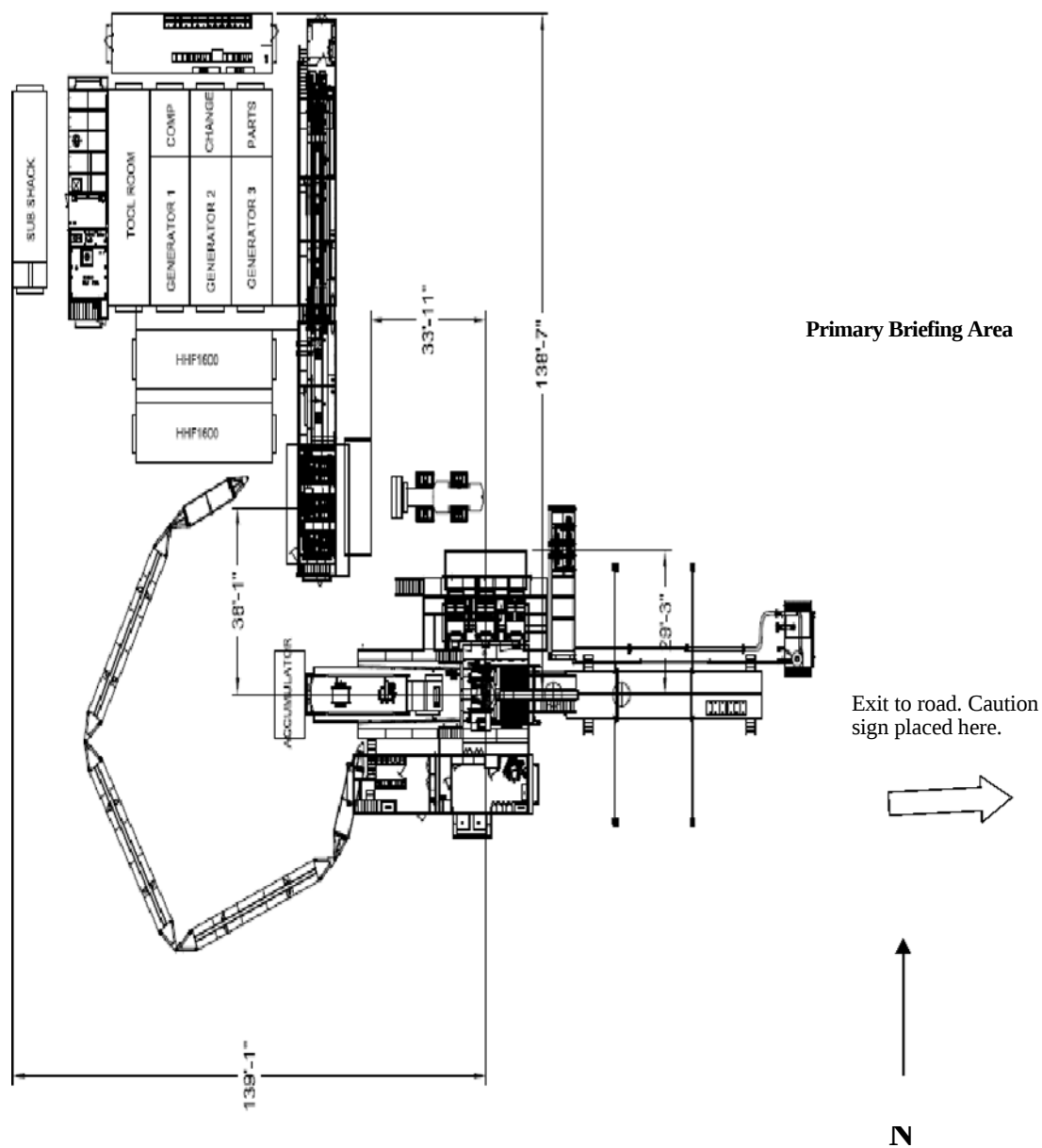
Permian Drilling Hydrogen Sulfide Drilling Operations Plan Tesoro Federal Com Development

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

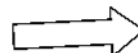
1. Escape

Personnel shall escape upwind of wellbore in the event of an emergency gas release. Escape can take place through the lease road on the Southeast side of the location. Personnel need to move to a safe distance and block the entrance to location. If the primary route is not an option due to the wind direction, then a secondary egress route should be taken.

Secondary Briefing Area



Exit to road. Caution sign placed here.



N

WIND: Prevailing winds are from the Southwest

Secondary Egress



Spur Energy Partners New Mexico Operations Hydrogen Sulfide Operation Plan

A. Introduction:

The Safety of all personnel at Spur Energy Partners Facilities is of utmost importance to the company, and therefor management and employees must take responsibility for their safety and for the safety of all employees and others at a facility. If you have any concerns about the safe operations of the facility, contract personnel, or vendors, please contact the Company's Safety Contact, Superintendent, or Production Foreman immediately.

The objective of this contingency plan is to provide an organized plan of action for alerting, responding to and protecting employees, other workers and the public from H₂S exposure in the event of a release of a potentially hazardous volume of H₂S to the atmosphere. This plan should be activated immediately if any such release occurs. The Superintendent is responsible for initiating and carrying out the plan.

B. Scope:

Prevent the uncontrolled release of H₂S into the atmosphere. Provide proper procedures and equipment to alert and respond to emergencies.

Provide immediate and adequate medical attention should an injury occur.

To provide Company employees working at actual or potential Hydrogen Sulfide (H₂S) facilities with a safe procedure to comply with applicable Federal, State and Company requirements.

This document is intended to provide general policy, procedures and expectations surrounding elevated levels of H₂S. The intent is to promote sound and safe operations, while seeking effective communication surrounding operational considerations working around H₂S.

This procedure applies to all Company employees and contractors working at facilities that have the potential to release 100 ppm or higher concentrations of H₂S.

The plan establishes guidelines for all personnel whose work activity may involve exposure to Hydrogen Sulfide Gas (H₂S).

C. Hydrogen Sulfide Gas (H₂S) Characteristics:

1. H₂S is a toxic, poisonous gas that could cause death or injury. And it is also flammable.
2. H₂S is an irritant and extremely toxic gas that is several times deadlier than carbon monoxide (CO).
3. H₂S is heavier than air with a specific gravity of 1.1895 @ 600 F. so it will tend to lie in lower areas. Wind movement or air currents can readily disperse H₂S since wind currents can easily overcome the heavier weight. On calm days, with no wind, the H₂S will tend to accumulate in dangerous concentrations; however, if the H₂S is warmer than the surrounding air it may rise.
4. H₂S is colorless.
5. In small concentrations, H₂S has the characteristic odor of rotten eggs. It may be detected by smell at a concentration in air of about 2 ppm but may NOT be detected

at high concentrations. DO NOT DEPEND ON THE SENSE OF SMELL TO DETECT H₂S! H₂S will paralyze the olfactory nerve causing a loss of the sense of smell within 2 – 15 minutes of an exposure in concentrations as low as 100-150 ppm.

6. H₂S burns with a blue flame and has an auto ignition temperature of 5000 F. H₂S forms an explosive mixture in the range of 4.3% to 45% by volume with air. H₂S, when ignited, produces Sulfur Dioxide (SO₂). SO₂ is another toxic gas but less toxic than H₂S.
7. Physiological Effects
 - 1,000-2,000+ ppm: Loss of consciousness and possible death.
 - 100-1,000 ppm: Serious respiratory, central nervous, and cardiovascular system effects.
 - 150-200 ppm: Olfactory fatigue (sense of smell is significantly impaired).
 - 100 ppm: Immediately Dangerous to Life and Health (IDLH concentration).
 - 5-30 ppm: Moderate irritation of the eyes.
 - 5-10 ppm: Relatively minor metabolic changes in exercising individuals during short-term exposures.
 - Less than 5 ppm: Metabolic changes observed in exercising individuals, but not clinically significant.
 - 5 ppm: Increase in anxiety symptoms (single exposure).
 - 5 ppm: Start of the dose-response curve (short-term exposure).
 - 0.032-0.02 ppm: Olfactory threshold (begin to smell).

D. H₂S Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing work at an effected facility:

1. The hazards and characteristics of hydrogen sulfide (H₂S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.
5. The procedures for operating process equipment.

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

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

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

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

E. Protective equipment controls:

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

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

F. Emergency Procedures

1. Spill or Release of H₂S gas

If a spill or leak releases H₂S the following action must be initiated and completed:

- a. Internally – Employee contacts supervisor and HSE Department and performs “d” below.
- b. Externally - Someone identifies a possible H₂S emergency and reports it to Company Management, via the listed phone number on posted facility signs.
- c. The Company dispatches an employee to investigate possible H₂S emergency and will secure situation or initiate emergency call for backup.
- d. If the Radius of Exposure has been breached begin the following:
 - Establish safe command center.
 - Call for additional personnel and delegate the following:
 - i. Notifying public safety agencies (Sheriff, Fire Department, Department of Public Safety, Hwy. Department).
 - ii. Safeguarding the facility and effected area.
 - iii. Blocking roads as needed.
 - iv. Notifying/evacuating public.
 - v. Notifying regulatory agencies.
 - vi. Gathering additional information about release ie., location, flowrate, quantity, etc.
 - vii. Stopping release if safe to do so (use 2 trained persons)
 - viii. Notifying company management.
 - ix. Cleanup/repair facilities.

e. Facility Standard Operating Procedure

- Evacuate the area, travel crosswind then proceed upwind.
- Gather at muster point. Ensure Primary Muster point is upwind
- Notify managers & appropriate EMS if required.
- Safely shut down (ESD) facility if the facility hasn't already shut in.
- Pick up SCBA (should be a 30 minute - 1 hour pack, located at Muster point.)
- Use buddy system for man down scenario with rescuers assigned.
 - 1 person to mask up to operate facility controls as needed.
 - 1 person for rescue if needed.
 - 1 person for calling EMS and company management
- Investigate area and isolate release of gas if safe to do and ensure closure using 4 gas monitor.
- If venting gas can't be isolated, return to muster point, and re-evaluate path forward.
- Give detailed description where/how gas is being released.
- After isolation verify that area monitors return to 0 and are not in alarm.
- Resume normal operations, once managers agree the ROOT CAUSE has been addressed and corrected.

G. Contacting Authorities

Company personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the NM Emergency Response Commission must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Spur Energy Partners response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER).

H. Call List

Spur Energy Partners Emergency Contact List			
Person	Location	Office Phone	Cell Phone
Drilling and Completions Department			
Drilling Manager - Chris Hollis	Houston	832-930-8629	713-380-7754
Completions Manager - Theresa Voss	Houston	832-930-8614	832-849-8635
VP of Operations - Seth Ireland	Houston	832-930-8527	940-704-6375
Senior VP of Operations - John Nabors	Houston	832-930-8526	281-904-8811
Executive VP of Operations - Todd Mucha	Houston	832-930-8515	281-795-2286
HES/Environmental and Regulatory Department			
EHS Manager - Braidy Moulder	Artesia	575-616-5400	713-264-2517
Superintendent - Jerry Mathews	Artesia	575-616-5400	575-748-5234
Asst. Superintendent - Kenny Kidd	Artesia	575-616-5400	575-703-5851
Regulatory Director - Sarah Chapman	Houston	832-930-8613	281-642-5503
Regulatory Agencies			
Bureau of Land Management	Carlsbad	575-886-6544	
Bureau of Land Management	Hobbs	575-393-3612	
Bureau of Land Management	Roswell	575-622-5335	
Bureau of Land Management	Santa Fe	505-954-2000	
DOT Judicial Pipelines - Incident Reporting NM Public Regulation Commission	Santa Fe	505-827-3549 505-490-2375	
EPA Hotline	Dallas	214-665-6444	
Federal OSHA, Area Office	Lubbock	806-472-7681	
National Response Center	Washington, D.C.	800-424-8803	
National Infrastructure Coordinator Center	Washington, D.C.	202-282-2901	
New Mexico Air Quality Bureau	Santa Fe	505-827-1494	
New Mexico Oil Conservation Division	Artesia	575-748-1283 575-370-7545After	
New Mexico Oil Conservation Division	Hobbs	575-393-6161	
New Mexico Oil Conservation Division	Santa Fe	505-476-3770	
New Mexico OCD Environmental Bureau	Santa Fe	505-827-7152 505-476-3470	
New Mexico Environmental Department	Hobbs	575-827-9329	
NM State Emergency Response Center	Santa Fe	505-476-9600	

Medical Facilities		
Artesia General Hospital	Artesia	575-748-3333
Covenant Medical Center	Lubbock	806-725-1011
Covenant Medical Center Lakeside	Lubbock	806-725-6000
Guadalupe County Hospital	Carlsbad	575-887-6633
Lea Regional Hospital	Hobbs	575-492-5000
Medical Center Hospital	Odessa	432-640-4000
Midland Memorial Hospital	Midland	432-685-1111
Nor-Lea General Hospital	Lovington	575-396-6611
Odessa Regional Hospital	Odessa	432-334-8200
Union County General Hospital	Clayton	575-374-2585
University Medical Center	Lubbock	806-725-8200
Law Enforcement - Sheriff		
Ector County Sheriff's Department	Odessa	432-335-3050
Ector County Sheriff's Department	Artesia	575-746-2704

Ector County Sheriff's Department	Carlsbad	575-887-7551
Lea County Sherri's Department	Eunice	575-384-2020
Lea County Sherri's Department	Hobbs	575-393-2515
Lea County Sherri's Department	Lovington	575-396-3611
Lubbock County Sheriff's Department	Abernathy	806-296-2724
Midland County Sheriff's Department	Midland	432-688-1277
Union County Sheriff's Department	Clayton	575-374-2583
Law Enforcement - Police		
Abernathy Police Department	Abernathy	806-298-2545
Artesia City Police	Artesia	575-746-2704
Carlsbad City Police	Carlsbad	575-885-2111
Clayton City Police	Clayton	575-374-2504
Eunice City Police	Eunice	575-394-2112
Hobbs City Police	Hobbs	575-397-9265 575-393-2677
Jal City Police	Jal	575-395-2501
Lovington City Police	Lovington	575-396-2811

Midland City Police	Midland	432-685-7113
Odessa City Police	Odessa	432-335-3378
Law Enforcement - FBI		
FBI	Albuquerque	505-224-2000
FBI	Midland	432-570-0255
Law Enforcement - DPS (911)		
NM State Police	Artesia	575-746-2704
NM State Police	Carlsbad	575-885-3137
NM State Police	Eunice	575-392-5588
NM State Police	Hobbs	575-392-5588
NM State Police	Clayton	575-374-2473
Firefighting and Rescue (911)		
Abernathy	Abernathy	806-298-2022
Amistad/Rosebud	Amistad/Rosebud	575-633-9113
Artesia	Artesia	575-746-5751
Carlsbad	Carlsbad	575-885-3125
Clayton	Clayton	575-374-2435
Eunice	Eunice	575-394-2111
Hobbs	Hobbs	575-397-9308
Jal	Jal	575-395-2221
Lovington	Lovington	575-396-2359
Maljamar	Maljamar	575-676-4100
Midland	Midland	432-685-7346
Nara Visa	Nara Visa	575-461-3300
Odessa	Odessa	432-335-4659
Tucumcari	Tucumcari	911
West Odessa	Odessa	432-381-3033

Ambulance (911)		
Abernathy Ambulance	Abernathy	806-298-2241
Amistad/Rosebud	Amistad/Rosebud	575-633-9113
Artesia Ambulance	Artesia	575-746-2701
Carlsbad Ambulance	Carlsbad	575-885-2111
Clayton Ambulance	Clayton	575-374-2501
Eunice Ambulance	Eunice	575-394-3258
Hobbs Ambulance	Hobbs	575-397-9308
Jal Ambulance	Jal	575-395-3501
Lovington Ambulance	Lovington	575-396-2811
Midland Ambulance	Midland	432-685-7499
Nara Visa Ambulance	Nara Visa	575-461-3300
Odessa Ambulance	Odessa	432-335-3378
Tucumcari Ambulance	Tucumcari	911
Medical Air Ambulance Service		
AEROCARE - Methodist Hospital	Lubbock	800-627-2376
Southwest MediVac	Hobbs	800-242-6199
Odessa Care Star	Odessa	888-624-3571

I. List of Facilities with the potential for 500ppm or higher H₂S exposure.

ATTACHMENT 1: SPUR FACILITIES WITH ROE REVIEW

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

ATTACHMENT 1: SPUR FACILITIES WITH ROE REVIEW

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

ATTACHMENT 1: SPUR FACILITIES WITH ROE REVIEW

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

ATTACHMENT 1: SPUR FACILITIES WITH ROE REVIEW

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



POWERING PROGRESS™

MTR DATA BOOK

CL2013

CUSTOMER: GATES CANADA INC**DATE:** 12/19/2017**Purchase Order:** D235455 (PO 45750)**Sales Order #:** 509128**Product Description:** 5K 3 1/2 in. 17 FT. Fire Rated Choke & Kill Gates Hose Assembly c/w 3 1/8
5K Flange with Safety Clamps & Slings Attached**Hose S/N:** H-121917-14**PART NUMBER:** FR5K3.517.0CK31/85KFLG S/C**CONTENTS INCLUDED****GMCO FITTINGS**

17-309-1

INSERT STEM

15-095-1A

FERRULE

3 1/8 in. 5K FIXED FLANGE X 3 1/8 in. 5K FLOAT FLANGE

V4131

FIXED FLANGE

V5054

FLOAT FLANGE

WELDING SPECIFICATIONS

Certification and Procedure for welding

NDE RESULTS

1622371-03/1622371-01 Ultrasonic Test Results and Imaging

Safety Clamps

34145/34144

TEST CHART

Chart Recording of Hydrostatic Test

TEST CERTIFICATE

Document Product Details & Positive Results of Hydrostatic Testing

CERTIFICATE OF CONFORMANCE

A Declaration of the conformity with the type approval

IMAGES

Images of the product prior to shipping.

PACKING LIST

Details of Shipping Contents, Dimensions and Weights



GATES ENGINEERING & SERVICES NORTH AMERICA
7603 Prairie Oak Dr. Suite 190
Houston, TX. 77086

PHONE: +1 (281) 602-4100
FAX: +1 (281) 602-4147
EMAIL: gesna.quality@gates.com
WEB: www.gates.com/ollandgas

PRESSURE TEST CERTIFICATE

Customer:	GATES CANADA INC	Test Date:	12/19/2017
Customer Ref.:	D235455 (PO 45750)	Hose Serial No.:	H-121917-14
Invoice No.:	509128	Created By:	Cristian Rivera

Product Description: 5K 3 1/2 in. 17 FT. Fire Rated Choke & Kill c/w 3 1/8 5K Flange with Safety Clamps & Slings Attached

End Fitting 1:	3 1/8 in. 5K FIXED FLG	End Fitting 2:	3 1/8 in. 5K FLOAT FLG
Oracle Star No.:	68903550-9725917	Assembly Code:	15M5019042016H-121917-14
CUSTOMER P/N:	FR5K3.517.0CK31/85KFLG S/C	Test Pressure:	7,500 psi.
		Working Pressure:	5,000 psi.

Gates Engineering & Services North America certifies that:

The following hose assembly has successfully passed all pressure testing requirements set forth in Gates specifications: GTS-04-052 (for 5K assemblies) or GTS-04-053 (10K assemblies) or GTS-04-048 (15K assemblies), which include reference to Specification API 16C (2nd Edition); sections 7.5.4, 7.5.9, and 10.8.7. A test graph will accompany this test certificate to illustrate conformity to test requirements. This hose assembly was pressure tested using equipment and instrumentation that has been calibrated in accordance with the requirements set-forth in the GESNA management system.

Quality:	QUALITY
Date :	8/5/2021
Signature :	

F-PRD-005B

Production:	PRODUCTION
Date :	8/5/2021
Signature :	

Revision 6_05032021

**BLACK GOLD®**

GATES ENGINEERING & SERVICES NORTH AMERICA
7603 Prairie Oak Dr.
Houston, TX. 77086

PHONE: +1 (281) 602-4100
FAX: +1 (281) 602-4147
EMAIL: gesna.quality@gates.com
WEB: www.gates.com/ollandgas

CERTIFICATE OF CONFORMANCE

This is to certify that all parts and materials included in this shipment have manufactured and/or processed in accordance with various Gates and API assembly and test specifications. Records of required tests are on-file and subject to examination. Test reports and subsequent test graphs have been made available with this shipment. Additional supporting documentation related to materials, welding, weld inspections, and heat-treatment activities are available upon request.

CUSTOMER: GATES CANADA INC
CUSTOMER P.O.#: D235455 (PO 45750)
PART DESCRIPTION: FR5K3.517.0CK31/85KFLG S/C

PART DESCRIPTION: 5K 3 1/2 in. 17 FT. Fire Rated Choke & Kill c/w 3 1/8 5K Flange with Safety Clamps & Slings Attached

SALES ORDER #: 509128
QUANTITY: 1
SERIAL #: H-121917-14

SIGNATURE: _____

A handwritten signature in black ink, appearing to read "O. Rivera", written over a horizontal line.

TITLE: _____

QUALITY ASSURANCE

DATE: _____

8/5/2021

Gates E&S

North America

7603 Prairie Oak dr.

Houston, TX

Hydrostatic Test

Customer= **GATES CANADA**

Date of test= **12/19/17**

Serial # = **H-121917-13,-14**

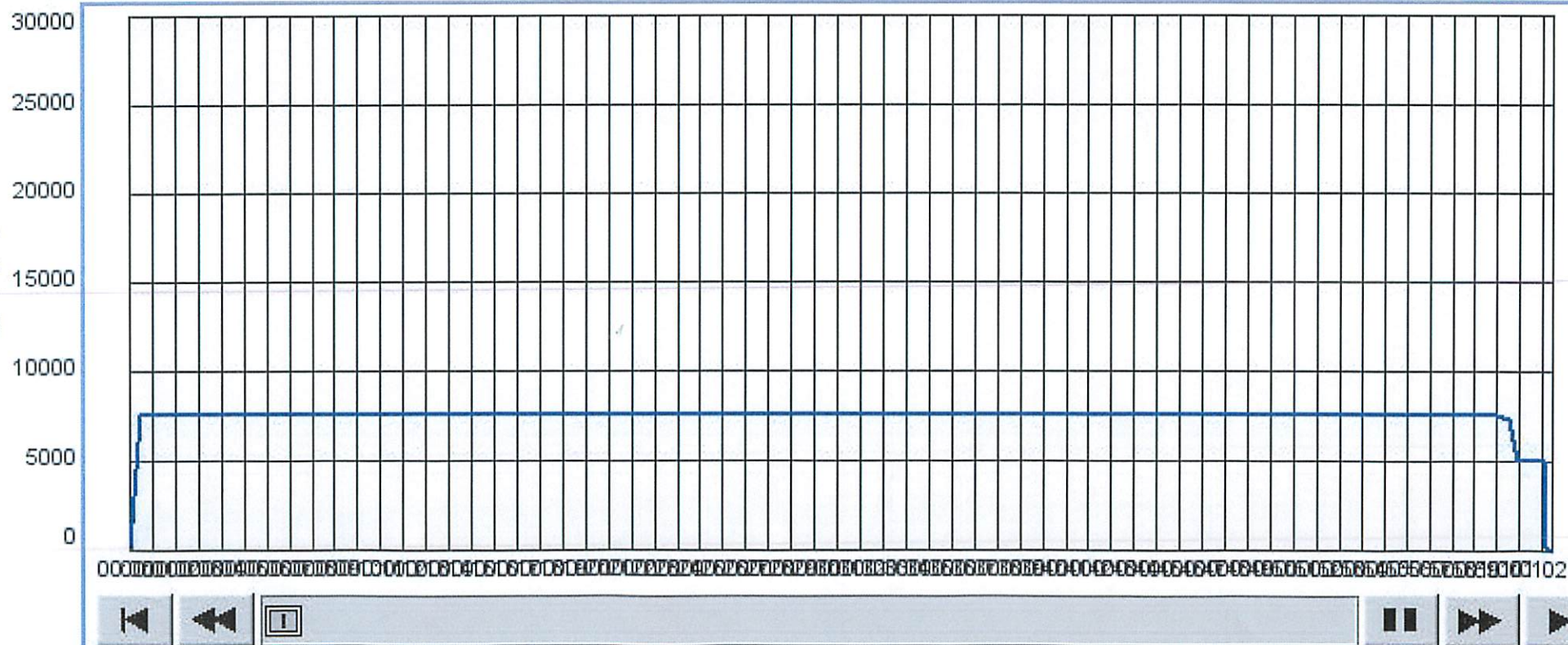
Description = **3.5 5K 3 1/8 FLG 5K**

Technician= **CHRIS OLIVO**

12/19/2017 16:53:26

17:55:52

P
S
I
G





Edwards Fabrication, L.L.C.

1385 Hwy. 35 Bypass S. O: (361) 790-7910
 P.O. Box 2350 F: (361) 790-7927
 Rockport, TX 78381

tedwards@edwardsfabrication.com
 www.edwardsfabrication.com

CERTIFICATE OF TEST

Client:
 Gates E & S North America
 134 44th Street
 Corpus Christi, TX 78405

Purchase Order: 1592198/0

Certificate Number			Date of Examination	
34145			04/27/17	
ID#	Part Number	Description	SWL*	Proofload
34145	E3.5S	3.5" E Safety Clamp	6016 lbs.	12031 lbs.

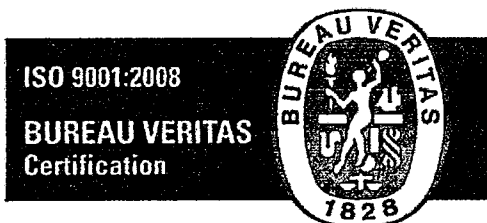
The Safety Clamp unit identified on this certificate has been load tested completely assembled; including the clamp body, (2) 3/4" shackles, 5/8" x 48" wire rope sling and anchor tab. Thus, all components are tested at the "Proof" load. Do not disassemble. Do not interchange any part or parts of this tested unit with parts of other Safety Clamp units. DO NOT WELD, CUT, ADD-TO, TAKE AWAY ANY COMPONENTS OR MAKE ANY MODIFICATION TO THIS CLAMP UNIT. Doing so voids this test certificate.

Cutting/Removing either one or both stainless steel Tamper-proof hardware cables renders this Test Certificate VOID.

* Safe Work Load

THIS PRODUCT IS MANUFACTURED IN THE U.S.A.

We hereby verify that the above information is correct
 as contained in the records of Edwards Fabrication L.L.C.



Edwards Fabrication L.L.C. is certified as
 having a Quality Management System.

Thomas F. Edwards
 President
 Edwards Fabrication L.L.C.



1385 Hwy. 35 Bypass S. O: (361) 790-7910
 P.O. Box 2350 F: (361) 790-7927
 Rockport, TX 78381

tedwards@edwardsfabrication.com
 www.edwardsfabrication.com

CERTIFICATE OF TEST

Client:
 Gates E & S North America
 134 44th Street
 Corpus Christi, TX 78405

Purchase Order: 1592198/0

Certificate Number				Date of Examination	
34144				04/27/17	
ID#	Part Number	Description	SWL*	Proofload	
34144	E3.5S	3.5" E Safety Clamp	6014 lbs.	12027 lbs.	
The Safety Clamp unit identified on this certificate has been load tested completely assembled; including the clamp body, (2) 3/4" shackles, 5/8" x 48" wire rope sling and anchor tab. Thus, all components are tested at the "Proof" load. Do not disassemble. Do not interchange any part or parts of this tested unit with parts of other Safety Clamp units. DO NOT WELD, CUT, ADD-TO, TAKE AWAY ANY COMPONENTS OR MAKE ANY MODIFICATION TO THIS CLAMP UNIT. Doing so voids this test certificate. Cutting/Removing either one or both stainless steel Tamper-proof hardware cables renders this Test Certificate VOID. * Safe Work Load					

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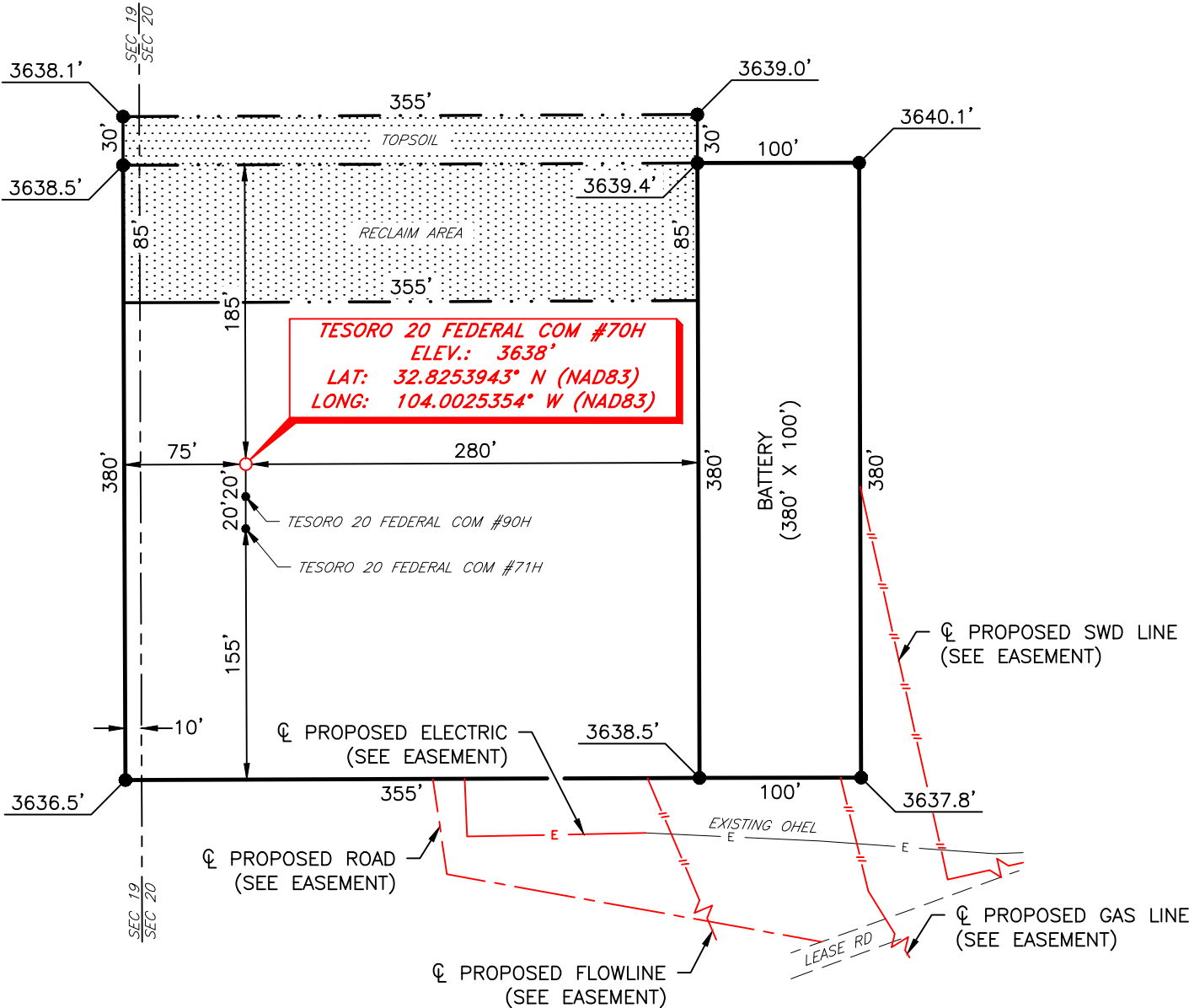


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TRANSCEND RIG 4	Contractor Specification
Make	Schram
Model	TXD 130
Year of Manufacture	2006
Truck Mounted	YES
Rated Drilling Depth	130,000# hook load
Rated Depth with Tubing	
Derrick Height	69' 9"
Derrick Type	Telescoping Hydraulic
Derrick Capacity	130,000#
Elevators	N/A
Drawworks	760 HP Detroit
Wire Diameter	Hydraulic
Workfloor Max Height	8'
Tongs	Hydraulic Iron Roughneck
Slips	Manual Slips
Included Tubing Handling Tools	• 13 3/8" handling tools
Included Rod Handling Tools	85jts of 4.5" drill pipe
BOP Class Compatibility	
Weight Indicator	Hydraulic
Rig Safety Equipment	Eye wash station, fire extengushers, wind sock
Pad Size Requirements/Limitations	60' x 60'
Guy Line Spacing	N/A
Other Supplied Rig Equipment	Standard Rig Hand Tools: • (2) 36" pipe wrenches • (2) 24" pipe wrenches • (2) 18" pipe wrenches • (1) 24" crescent wrench • (2) 12" crescent wrenches • (1) 4 lb shop hammer • (1) 12 lb sledge hammer • (1) 4 foot pry bar • Vehicles for Contractor personnel • Air Impact Wrench with Sockets • Mud Scales (as needed) 1- F800 pump 1- Pill pit 80bbl 1- 400 bbl mud mix 1- Shaker 150mesh 1- 500 bbl fresh water frac tank

SPUR ENERGY PARTNERS LLC.
TESORO 20 FEDERAL COM #70H
(690' FNL & 65' FWL)
SECTION 20, T17S, R30E
N. M. P. M., EDDY COUNTY, NEW MEXICO



CENTER POINT OF PAD LAT: 32.8253809° N LON: 104.0022021° W	CENTER POINT OF BATTERY LAT: 32.8253807° N LON: 104.0014617° W
--	--

DIRECTIONS TO LOCATION

From the intersection of CR #217 (Hagerman Cutoff Rd.) & U.S. Hwy 82;
Go West on U.S. Hwy 82 approx. 0.5 miles to a lease road on the right;
Turn right and go Northeast approx. 0.2 miles to a lease road on the left;
Turn left and go Northwest approx. 0.5 miles to a proposed road on the left;
Turn left and go Northwest approx. 380 feet to location on the left.

THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS
AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY.

I, Thomas Aaron Fitzhugh, New Mexico Professional Surveyor
No. 26382, do hereby certify that this Unclassified Well Location Plat
and the actual survey on the ground upon which it is based were
performed by me or under my direct supervision; that I am
responsible for this survey; that this survey meets the Minimum
standards for Surveying in New Mexico; and that it is true and
correct to the best of my knowledge and belief.

Aaron Fitzhugh
Aaron Fitzhugh N.M. P.S. 26382



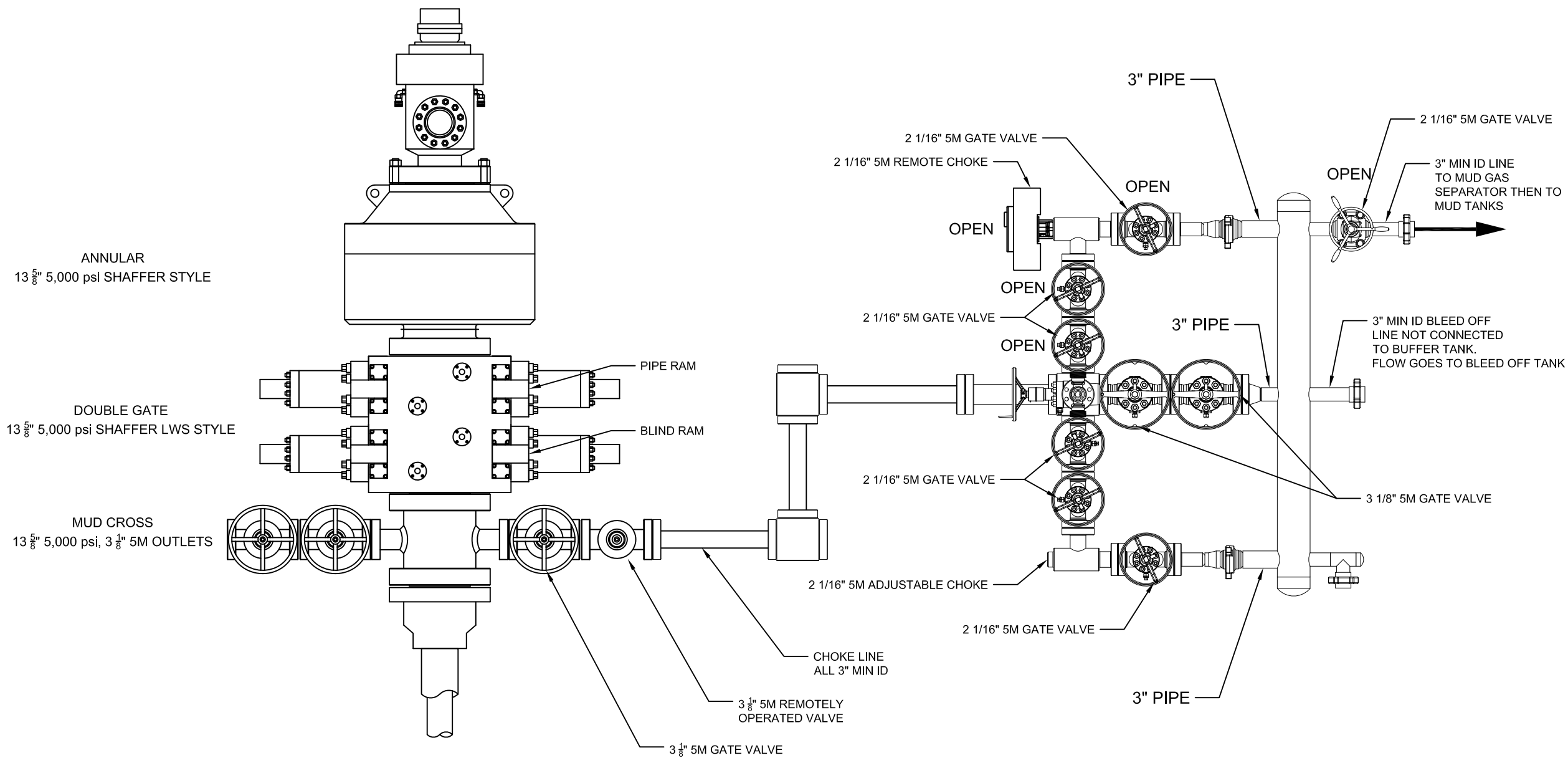
SCALE: 1" = 100'
0 50 100
BEARINGS ARE
NAD 83 GRID - NM EAST
DISTANCES ARE GROUND

1	NAME CHANGE	07/15/24
NO.	REVISION	DATE
JOB NO.: LS24050458R		
DWG. NO.: 24050458R-4		



701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 05/28/2024
SURVEYED BY: RG/AM/EU
DRAWN BY: AR
APPROVED BY: TAF
SHEET: 1 OF 1



Notes
-
-
-

No.	Revision	Date
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AKITA
DRILLING LTD.
2302 8th Street, Nisku Alberta
T9E 7Z2 Tel: (780) 955-6700

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Date	5-6-2021	Scale	NTS
Des / Chk'd By	BG	File Name	R57 13 5M dou..
Project	R57		

RIG 57 BOP SCHEMATIC



POWERING PROGRESS™

MTR DATA BOOK

CL2013

CUSTOMER: GATES CANADA INC**DATE:** 12/19/2017**Purchase Order:** D235455 (PO 45750)**Sales Order #:** 509128**Product Description:** 5K 3 1/2 in. 17 FT. Fire Rated Choke & Kill Gates Hose Assembly c/w 3 1/8
5K Flange with Safety Clamps & Slings Attached**Hose S/N:** H-121917-14**PART NUMBER:** FR5K3.517.0CK31/85KFLG S/C**CONTENTS INCLUDED****GMCO FITTINGS**

17-309-1

INSERT STEM

15-095-1A

FERRULE

3 1/8 in. 5K FIXED FLANGE X 3 1/8 in. 5K FLOAT FLANGE

V4131

FIXED FLANGE

V5054

FLOAT FLANGE

WELDING SPECIFICATIONS

Certification and Procedure for welding

NDE RESULTS

1622371-03/1622371-01 Ultrasonic Test Results and Imaging

Safety Clamps

34145/34144

TEST CHART

Chart Recording of Hydrostatic Test

TEST CERTIFICATE

Document Product Details & Positive Results of Hydrostatic Testing

CERTIFICATE OF CONFORMANCE

A Declaration of the conformity with the type approval

IMAGES

Images of the product prior to shipping.

PACKING LIST

Details of Shipping Contents, Dimensions and Weights



GATES ENGINEERING & SERVICES NORTH AMERICA
7603 Prairie Oak Dr. Suite 190
Houston, TX. 77086

PHONE: +1 (281) 602-4100
FAX: +1 (281) 602-4147
EMAIL: gesna.quality@gates.com
WEB: www.gates.com/ollandgas

PRESSURE TEST CERTIFICATE

Customer:	GATES CANADA INC	Test Date:	12/19/2017
Customer Ref.:	D235455 (PO 45750)	Hose Serial No.:	H-121917-14
Invoice No.:	509128	Created By:	Cristian Rivera

Product Description: 5K 3 1/2 in. 17 FT. Fire Rated Choke & Kill c/w 3 1/8 5K Flange with Safety Clamps & Slings Attached

End Fitting 1:	3 1/8 in. 5K FIXED FLG	End Fitting 2:	3 1/8 in. 5K FLOAT FLG
Oracle Star No.:	68903550-9725917	Assembly Code:	15M5019042016H-121917-14
CUSTOMER P/N:	FR5K3.517.0CK31/85KFLG S/C	Test Pressure:	7,500 psi.
		Working Pressure:	5,000 psi.

Gates Engineering & Services North America certifies that:

The following hose assembly has successfully passed all pressure testing requirements set forth in Gates specifications: GTS-04-052 (for 5K assemblies) or GTS-04-053 (10K assemblies) or GTS-04-048 (15K assemblies), which include reference to Specification API 16C (2nd Edition); sections 7.5.4, 7.5.9, and 10.8.7. A test graph will accompany this test certificate to illustrate conformity to test requirements. This hose assembly was pressure tested using equipment and instrumentation that has been calibrated in accordance with the requirements set-forth in the GESNA management system.

Quality: QUALITY
 Date : 8/5/2021
 Signature :

Production: PRODUCTION
 Date : 8/5/2021
 Signature :

F-PRD-005B

Revision 6_05032021

**BLACK GOLD®**

GATES ENGINEERING & SERVICES NORTH AMERICA
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Houston, TX. 77086

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FAX: +1 (281) 602-4147
EMAIL: gesna.quality@gates.com
WEB: www.gates.com/ollandgas

CERTIFICATE OF CONFORMANCE

This is to certify that all parts and materials included in this shipment have manufactured and/or processed in accordance with various Gates and API assembly and test specifications. Records of required tests are on-file and subject to examination. Test reports and subsequent test graphs have been made available with this shipment. Additional supporting documentation related to materials, welding, weld inspections, and heat-treatment activities are available upon request.

CUSTOMER: GATES CANADA INC
CUSTOMER P.O.#: D235455 (PO 45750)
PART DESCRIPTION: FR5K3.517.0CK31/85KFLG S/C

PART DESCRIPTION: 5K 3 1/2 in. 17 FT. Fire Rated Choke & Kill c/w 3 1/8 5K Flange with Safety Clamps & Slings Attached

SALES ORDER #: 509128
QUANTITY: 1
SERIAL #: H-121917-14

SIGNATURE: _____

A handwritten signature in black ink, appearing to read "J. Rivera", written over a horizontal line.

TITLE: _____

QUALITY ASSURANCE

DATE: _____

8/5/2021

Gates E&S

North America

7603 Prairie Oak dr.

Houston, TX

Hydrostatic Test

Customer= **GATES CANADA**

Date of test= **12/19/17**

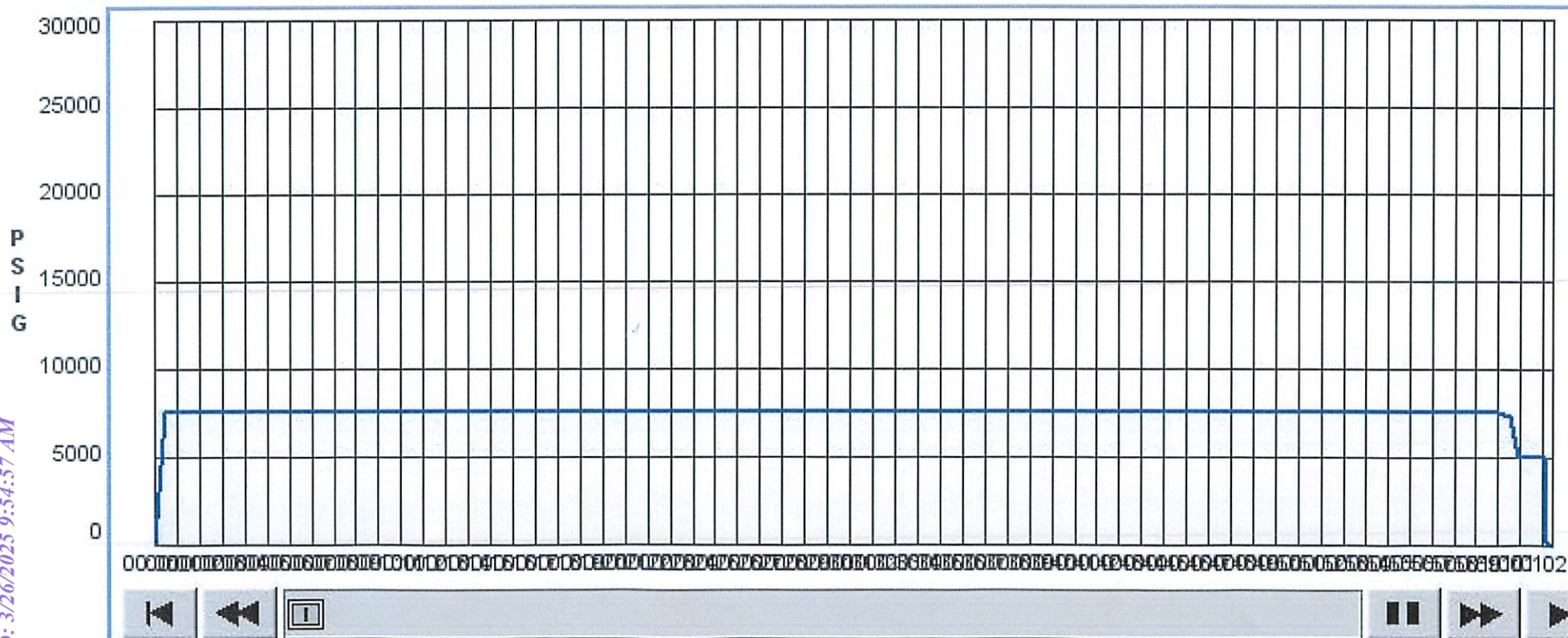
Serial # = **H-121917-13,-14**

Description = **3.5 5K 3 1/8 FLG 5K**

Technician= **CHRIS OLIVO**

12/19/2017 16:53:26

17:55:52





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 134 44th Street
 Corpus Christi, TX 78405

Purchase Order: 1592198/0

Certificate Number			Date of Examination	
34145			04/27/17	
ID#	Part Number	Description	SWL*	Proofload
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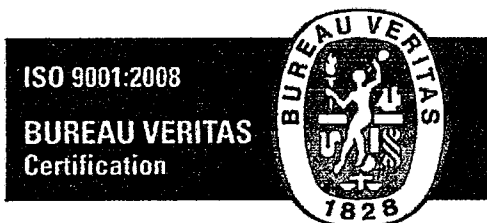
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* Safe Work Load

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Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/oed/contact-us>

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

CONDITIONS

Action 445769

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 445769
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
schapman01	Cement is required to circulate on both surface and intermediate1 strings of casing.	3/26/2025
schapman01	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	3/26/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	4/11/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	4/11/2025
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.	4/11/2025
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.	4/11/2025