

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. [325854]
2. Name of Operator [328947]		9. API Well No. 30-025-49322
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory XXXXXXXXXXXX XXX [44500]
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish 13. State
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	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		
Office		

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.

NGMP Rec 08/17/2021

SL

(Continued on page 2)



Approval Date: 08/13/2021

KZ
08/18/2021

*(Instructions on page 2)

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM connects this information to an evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Additional Operator Remarks

Location of Well

0. SHL: LOT 4 / 648 FSL / 824 FWL / TWSP: 17S / RANGE: 32E / SECTION: 7 / LAT: 32.843724 / LONG: -103.8118246 (TVD: 0 feet, MD: 0 feet)

PPP: LOT 1 / 100 FNL / 560 FWL / TWSP: 17S / RANGE: 32E / SECTION: 18 / LAT: 32.8416703 / LONG: -103.812682 (TVD: 6130 feet, MD: 6637 feet)

PPP: LOT 1 / 1 FNL / 560 FWL / TWSP: 17S / RANGE: 32E / SECTION: 18 / LAT: 32.841953 / LONG: -103.812692 (TVD: 6130 feet, MD: 6540 feet)

BHL: LOT 4 / 50 FSL / 560 FWL / TWSP: 17S / RANGE: 32E / SECTION: 18 / LAT: 32.827568 / LONG: -103.8126684 (TVD: 6130 feet, MD: 11767 feet)

BLM Point of Contact

Name: Deborah Ham

Title: Legal Landlaw Examiner

Phone: (575) 234-5965

Email: dham@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-49322	² Pool Code 44500	³ Pool Name MALJAMAR;YESO, WEST
⁴ Property Code 325854	⁵ Property Name HT 18 FEDERAL	⁶ Well Number 13H
⁷ OGRID NO. 328947	⁸ Operator Name SPUR ENERGY PARTNERS LLC.	⁹ Elevation 3973

¹⁰ Surface Location

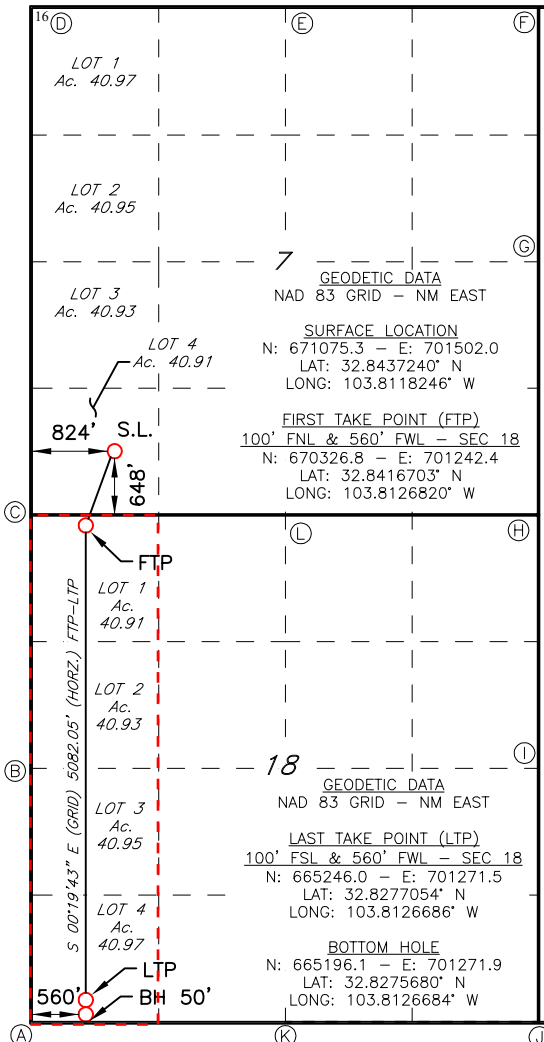
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
4	7	17S	32E		648	SOUTH	824	WEST	LEA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	18	17S	32E		50	SOUTH	560	WEST	LEA

¹² Dedicated Acres 163.76	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.



¹⁷ OPERATOR CERTIFICATION

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

Sarah Chapman 12/12/2020
Signature Date

Sarah Chapman
Printed Name

schapman@spurepllc.com
E-mail Address

¹⁸ SURVEYOR CERTIFICATION

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

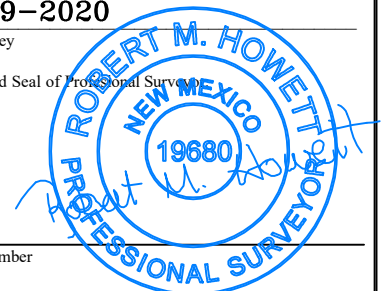
11-19-2020

Date of Survey

Signature and Seal of Professional Surveyor

19680

Certificate Number



LS20110684

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

Submit Electronically
Via E-permitting

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 / 13 / 2021

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
HT 18 FEDERAL 11H		4-7-17S-32E	665' FSL 860' FWL	260 BBL/D	455 MCF/D	1708 BBL/D
HT 18 FEDERAL 12H		4-7-17S-32E	657' FSL 842' FWL	364 BBL/D	441 MCF/D	1236 BBL/D
HT 18 FEDERAL 13H	30-025-49322	4-7-17S-32E	648' FSL 824' FWL	260 BBL/D	455 MCF/D	1708 BBL/D
HT 18 FEDERAL 14H		4-7-17S-32E	639' FSL 806' FWL	391 BBL/D	439 MCF/D	1663 BBL/D

IV. Central Delivery Point Name: HT 18 FEDERAL CENTRAL 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
HT 18 FEDERAL 11H		06/24/2022	07/01/2022	07/29/2022	08/11/2022	08/11/2022
HT 18 FEDERAL 12H		07/02/2022	07/09/2022	07/29/2022	08/11/2022	08/11/2022
HT 18 FEDERAL 13H	30-025-49322	07/10/2022	07/17/2022	07/29/2022	08/11/2022	08/11/2022
HT 18 FEDERAL 14H		07/18/2022	07/25/2022	07/29/2022	08/11/2022	08/11/2022

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

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

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

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

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

Signature:	<i>Sarah Chapman</i>
Printed Name:	SARAH CHAPMAN
Title:	REGULATORY DIRECTOR
E-mail Address:	SCHAPMAN@SPUREPLLC.COM
Date:	08/13/2021
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.



Natural Gas Management Plan – Attachment

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Spur Energy Partners LLC – HT 18 Federal 13H

1. Geologic Formations

Formation	Depth	Lithology	Expected Fluids
Quaternary	0'	Dolomite, other: Caliche	Useable Water
Rustler	360'	Dolomite, Shale, Anhydrite	Other: Brackish Water
Top Salt	530'	Anhydrite	Other: Salt
Base Salt	1050'	Anhydrite	Other: Salt
Tansill	1105'	Dolomite, Limestone	None
Yates	1205'	Sandstone	Natural Gas, Oil
Seven Rivers	1495'	Dolomite, Sandstone	Natural Gas, Oil
Queen	2095'	Dolomite, Sandstone	Natural Gas, Oil
San Andres	2830'	Dolomite, Limestone	Natural Gas, Oil
San Andres Lower	3785'	Dolomite, Limestone	Natural Gas, Oil
Glorieta	4215'	Dolomite, Siltstone	Natural Gas, Oil
Yeso	4300'	Dolomite	Natural Gas, Oil

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

2. Casing Program

Primary Plan:

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

Hole Size (in)	Casing Interval		Csg. Size (in)	Weight (lbs)	Grade	Conn.	SF	SF Burst	Body SF	Joint SF
	From (ft)	To (ft)					Collapse		Tension	Tension
17.5	0	450	13.375	54.5	J-55	BTC	1.125	1.2	1.4	1.4
12.25	0	1300	9.625	36	J-55	BTC	1.125	1.2	1.4	1.4
8.75	0	6400	7	32	L-80	BK-HT	1.125	1.2	1.4	1.4
8.75	6400	11767	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 – HT 18 Federal 13H

	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

Primary Plan:

Casing String	Top (ft)	Bottom (ft)	% Excess
Surface Tail	0	450	165%
Intermediate (Lead)	0	450	100%
Intermediate (Tail)	450	1300	165%
Production (Lead)	0	5400	0%
Production (Tail)	5400	11767	50%

Casing String	# Sks	Wt. (lb/gal)	Yld (ft3/sack)	H2O (gal/sk)	500# Comp. Strength (hours)	Slurry Description
Surface Tail	346	13.2	2.32	9.92	6:59	Clas C Premium Plus Cement
Intermediate (Lead)	89	12.2	1.84	13.48	8:12	Clas C Premium Plus Cement
Intermediate (Tail)	312	13.2	2.32	9.92	6:59	Clas C Premium Plus Cement
Production (Lead)	551	11.8	2.54	15.29	N/A	Clas C Premium Plus Cement
Production (Tail)	1253	13.2	1.81	9.81	N/A	Clas C Premium Plus Cement

Spur Energy Partners LLC – HT 18 Federal 13H

4. Pressure Control Equipment

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	2837 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	130°F

*Specify if additional ram is utilized.

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

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

	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	Are anchors required by manufacturer?
	A conventional wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. See attached schematics.

Spur Energy Partners LLC – HT 18 Federal 13H

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	450	Water-Based Mud	8.6-8.9	32-36	N/C
450	1300	Brine	10.0-10.5	32-36	N/C
1300	11767	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
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Spur Energy Partners LLC – HT 18 Federal 13H

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: 1232 bbls.

Spur Energy Partners LLC – HT 18 Federal 13H**9. Other facets of operation**

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

Attachments

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

10. Company Personnel

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



Spur Energy Partners, LLC

Lea County, NM (Nad-83/ NME)

HT 18 Federal

#13H

OH

Plan: Plan #2

Standard Planning Report

03 December, 2020





Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well #13H
Company:	Spur Energy Partners, LLC	TVD Reference:	RKB = 20' @ 3993.00usft
Project:	Lea County, NM (Nad-83/ NME)	MD Reference:	RKB = 20' @ 3993.00usft
Site:	HT 18 Federal	North Reference:	Grid
Well:	#13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Project	Lea 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		HT 18 Federal			
Site Position:		Northing:	671,004.40 usft	Latitude:	32.843528
From:	Map	Easting:	701,576.50 usft	Longitude:	-103.811584
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.283

Well	#13H					
Well Position	+N/-S	70.90 usft	Northing:	671,075.30 usft	Latitude:	32.843724
	+E/-W	-74.50 usft	Easting:	701,502.00 usft	Longitude:	-103.811825
Position Uncertainty	0.00 usft		Wellhead Elevation:		Ground Level:	3,973.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	12/15/20	6.764	60.444	47,883.28639315

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.67

Plan Survey Tool Program	Date	12/02/20		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	11,767.39 Plan #2 (OH)	MWD+IGRF	
			OWSG MWD + IGRF or WM	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.000	
484.04	3.68	308.59	483.91	3.69	-4.62	2.00	2.00	0.00	308.586	
5,097.41	3.68	308.59	5,087.77	188.40	-236.13	0.00	0.00	0.00	0.000	
6,136.60	60.00	179.67	5,953.24	-288.82	-262.24	6.00	5.42	-12.41	-130.474	
6,336.60	60.00	179.67	6,053.24	-462.03	-261.25	0.00	0.00	0.00	0.000	
6,636.60	90.00	179.67	6,130.00	-748.50	-259.60	10.00	10.00	0.00	0.000	HT 18 Fed 13H: FT
11,717.49	90.00	179.67	6,130.00	-5,829.30	-230.39	0.00	0.00	0.00	0.000	HT 18 Fed 13H: LTI
11,767.39	90.00	179.67	6,130.00	-5,879.20	-230.10	0.00	0.00	0.00	0.000	HT 18 Fed 13H: PB



Planning Report



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Project:	Lea County, NM (Nad-83/ NME)	MD Reference:	RKB = 20' @ 3993.00usft
Site:	HT 18 Federal	North Reference:	Grid
Well:	#13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	308.59	399.98	1.09	-1.36	-1.10	2.00	2.00	0.00
484.04	3.68	308.59	483.91	3.69	-4.62	-3.71	2.00	2.00	0.00
500.00	3.68	308.59	499.84	4.32	-5.42	-4.36	0.00	0.00	0.00
600.00	3.68	308.59	599.63	8.33	-10.44	-8.39	0.00	0.00	0.00
700.00	3.68	308.59	699.43	12.33	-15.46	-12.42	0.00	0.00	0.00
800.00	3.68	308.59	799.22	16.34	-20.47	-16.45	0.00	0.00	0.00
900.00	3.68	308.59	899.02	20.34	-25.49	-20.49	0.00	0.00	0.00
1,000.00	3.68	308.59	998.81	24.34	-30.51	-24.52	0.00	0.00	0.00
1,100.00	3.68	308.59	1,098.60	28.35	-35.53	-28.55	0.00	0.00	0.00
1,200.00	3.68	308.59	1,198.40	32.35	-40.55	-32.59	0.00	0.00	0.00
1,300.00	3.68	308.59	1,298.19	36.36	-45.57	-36.62	0.00	0.00	0.00
1,400.00	3.68	308.59	1,397.98	40.36	-50.58	-40.65	0.00	0.00	0.00
1,500.00	3.68	308.59	1,497.78	44.36	-55.60	-44.68	0.00	0.00	0.00
1,600.00	3.68	308.59	1,597.57	48.37	-60.62	-48.72	0.00	0.00	0.00
1,700.00	3.68	308.59	1,697.37	52.37	-65.64	-52.75	0.00	0.00	0.00
1,800.00	3.68	308.59	1,797.16	56.38	-70.66	-56.78	0.00	0.00	0.00
1,900.00	3.68	308.59	1,896.95	60.38	-75.67	-60.81	0.00	0.00	0.00
2,000.00	3.68	308.59	1,996.75	64.38	-80.69	-64.85	0.00	0.00	0.00
2,100.00	3.68	308.59	2,096.54	68.39	-85.71	-68.88	0.00	0.00	0.00
2,200.00	3.68	308.59	2,196.33	72.39	-90.73	-72.91	0.00	0.00	0.00
2,300.00	3.68	308.59	2,296.13	76.39	-95.75	-76.95	0.00	0.00	0.00
2,400.00	3.68	308.59	2,395.92	80.40	-100.77	-80.98	0.00	0.00	0.00
2,500.00	3.68	308.59	2,495.71	84.40	-105.78	-85.01	0.00	0.00	0.00
2,600.00	3.68	308.59	2,595.51	88.41	-110.80	-89.04	0.00	0.00	0.00
2,700.00	3.68	308.59	2,695.30	92.41	-115.82	-93.08	0.00	0.00	0.00
2,800.00	3.68	308.59	2,795.10	96.41	-120.84	-97.11	0.00	0.00	0.00
2,900.00	3.68	308.59	2,894.89	100.42	-125.86	-101.14	0.00	0.00	0.00
3,000.00	3.68	308.59	2,994.68	104.42	-130.87	-105.17	0.00	0.00	0.00
3,100.00	3.68	308.59	3,094.48	108.43	-135.89	-109.21	0.00	0.00	0.00
3,200.00	3.68	308.59	3,194.27	112.43	-140.91	-113.24	0.00	0.00	0.00
3,300.00	3.68	308.59	3,294.06	116.43	-145.93	-117.27	0.00	0.00	0.00
3,400.00	3.68	308.59	3,393.86	120.44	-150.95	-121.31	0.00	0.00	0.00
3,500.00	3.68	308.59	3,493.65	124.44	-155.97	-125.34	0.00	0.00	0.00
3,600.00	3.68	308.59	3,593.45	128.45	-160.98	-129.37	0.00	0.00	0.00
3,700.00	3.68	308.59	3,693.24	132.45	-166.00	-133.40	0.00	0.00	0.00
3,800.00	3.68	308.59	3,793.03	136.45	-171.02	-137.44	0.00	0.00	0.00
3,900.00	3.68	308.59	3,892.83	140.46	-176.04	-141.47	0.00	0.00	0.00
4,000.00	3.68	308.59	3,992.62	144.46	-181.06	-145.50	0.00	0.00	0.00
4,100.00	3.68	308.59	4,092.41	148.47	-186.07	-149.53	0.00	0.00	0.00
4,200.00	3.68	308.59	4,192.21	152.47	-191.09	-153.57	0.00	0.00	0.00
4,300.00	3.68	308.59	4,292.00	156.47	-196.11	-157.60	0.00	0.00	0.00
4,400.00	3.68	308.59	4,391.80	160.48	-201.13	-161.63	0.00	0.00	0.00
4,500.00	3.68	308.59	4,491.59	164.48	-206.15	-165.67	0.00	0.00	0.00
4,600.00	3.68	308.59	4,591.38	168.48	-211.17	-169.70	0.00	0.00	0.00
4,700.00	3.68	308.59	4,691.18	172.49	-216.18	-173.73	0.00	0.00	0.00
4,800.00	3.68	308.59	4,790.97	176.49	-221.20	-177.76	0.00	0.00	0.00
4,900.00	3.68	308.59	4,890.76	180.50	-226.22	-181.80	0.00	0.00	0.00
5,000.00	3.68	308.59	4,990.56	184.50	-231.24	-185.83	0.00	0.00	0.00
5,097.41	3.68	308.59	5,087.77	188.40	-236.13	-189.76	0.00	0.00	0.00
5,100.00	3.58	306.70	5,090.35	188.50	-236.26	-189.86	6.00	-3.82	-73.07



Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well #13H
Company:	Spur Energy Partners, LLC	TVD Reference:	RKB = 20' @ 3993.00usft
Project:	Lea County, NM (Nad-83/ NME)	MD Reference:	RKB = 20' @ 3993.00usft
Site:	HT 18 Federal	North Reference:	Grid
Well:	#13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,150.00	2.90	252.78	5,140.28	189.06	-238.72	-190.43	6.00	-1.36	-107.84	
5,200.00	4.69	214.64	5,190.18	187.00	-241.09	-188.39	6.00	3.58	-76.28	
5,250.00	7.32	200.43	5,239.90	182.34	-243.36	-183.73	6.00	5.26	-28.41	
5,300.00	10.15	193.90	5,289.32	175.07	-245.53	-176.48	6.00	5.67	-13.07	
5,350.00	13.06	190.22	5,338.29	165.23	-247.59	-166.65	6.00	5.82	-7.36	
5,400.00	16.00	187.87	5,386.69	152.84	-249.54	-154.27	6.00	5.88	-4.70	
5,450.00	18.96	186.23	5,434.37	137.93	-251.37	-139.38	6.00	5.92	-3.27	
5,500.00	21.93	185.03	5,481.22	120.55	-253.07	-122.00	6.00	5.94	-2.41	
5,550.00	24.91	184.10	5,527.09	100.74	-254.64	-102.20	6.00	5.95	-1.86	
5,600.00	27.89	183.35	5,571.87	78.55	-256.07	-80.03	6.00	5.96	-1.49	
5,650.00	30.88	182.74	5,615.43	54.06	-257.37	-55.54	6.00	5.97	-1.22	
5,700.00	33.87	182.23	5,657.66	27.31	-258.53	-28.80	6.00	5.97	-1.02	
5,750.00	36.86	181.79	5,698.43	-1.60	-259.54	0.11	6.00	5.98	-0.88	
5,800.00	39.85	181.41	5,737.63	-32.61	-260.41	31.11	6.00	5.98	-0.76	
5,850.00	42.84	181.08	5,775.17	-65.63	-261.12	64.12	6.00	5.98	-0.67	
5,900.00	45.83	180.78	5,810.93	-100.56	-261.68	99.05	6.00	5.99	-0.60	
5,950.00	48.82	180.50	5,844.81	-137.32	-262.09	135.80	6.00	5.99	-0.54	
6,000.00	51.82	180.26	5,876.74	-175.79	-262.34	174.28	6.00	5.99	-0.50	
6,050.00	54.81	180.03	5,906.60	-215.88	-262.44	214.37	6.00	5.99	-0.46	
6,100.00	57.81	179.82	5,934.33	-257.48	-262.38	255.97	6.00	5.99	-0.42	
6,136.60	60.00	179.67	5,953.24	-288.82	-262.24	287.31	6.00	5.99	-0.40	
6,200.00	60.00	179.67	5,984.94	-343.73	-261.93	342.21	0.00	0.00	0.00	
6,300.00	60.00	179.67	6,034.94	-430.33	-261.43	428.81	0.00	0.00	0.00	
6,336.60	60.00	179.67	6,053.24	-462.03	-261.25	460.51	0.00	0.00	0.00	
6,350.00	61.34	179.67	6,059.80	-473.70	-261.18	472.19	10.00	10.00	0.00	
6,400.00	66.34	179.67	6,081.84	-518.57	-260.92	517.06	10.00	10.00	0.00	
6,450.00	71.34	179.67	6,099.88	-565.18	-260.65	563.67	10.00	10.00	0.00	
6,500.00	76.34	179.67	6,113.79	-613.19	-260.38	611.68	10.00	10.00	0.00	
6,550.00	81.34	179.67	6,123.47	-662.23	-260.10	660.72	10.00	10.00	0.00	
6,600.00	86.34	179.67	6,128.83	-711.92	-259.81	710.41	10.00	10.00	0.00	
6,636.60	90.00	179.67	6,130.00	-748.50	-259.60	746.99	10.00	10.00	0.00	
6,700.00	90.00	179.67	6,130.00	-811.90	-259.24	810.39	0.00	0.00	0.00	
6,800.00	90.00	179.67	6,130.00	-911.89	-258.66	910.39	0.00	0.00	0.00	
6,900.00	90.00	179.67	6,130.00	-1,011.89	-258.09	1,010.39	0.00	0.00	0.00	
7,000.00	90.00	179.67	6,130.00	-1,111.89	-257.51	1,110.39	0.00	0.00	0.00	
7,100.00	90.00	179.67	6,130.00	-1,211.89	-256.94	1,210.39	0.00	0.00	0.00	
7,200.00	90.00	179.67	6,130.00	-1,311.89	-256.36	1,310.39	0.00	0.00	0.00	
7,300.00	90.00	179.67	6,130.00	-1,411.89	-255.79	1,410.39	0.00	0.00	0.00	
7,400.00	90.00	179.67	6,130.00	-1,511.88	-255.21	1,510.39	0.00	0.00	0.00	
7,500.00	90.00	179.67	6,130.00	-1,611.88	-254.64	1,610.39	0.00	0.00	0.00	
7,600.00	90.00	179.67	6,130.00	-1,711.88	-254.06	1,710.39	0.00	0.00	0.00	
7,700.00	90.00	179.67	6,130.00	-1,811.88	-253.49	1,810.39	0.00	0.00	0.00	
7,800.00	90.00	179.67	6,130.00	-1,911.88	-252.91	1,910.39	0.00	0.00	0.00	
7,900.00	90.00	179.67	6,130.00	-2,011.88	-252.34	2,010.39	0.00	0.00	0.00	
8,000.00	90.00	179.67	6,130.00	-2,111.87	-251.76	2,110.39	0.00	0.00	0.00	
8,100.00	90.00	179.67	6,130.00	-2,211.87	-251.19	2,210.39	0.00	0.00	0.00	
8,200.00	90.00	179.67	6,130.00	-2,311.87	-250.61	2,310.39	0.00	0.00	0.00	
8,300.00	90.00	179.67	6,130.00	-2,411.87	-250.04	2,410.39	0.00	0.00	0.00	
8,400.00	90.00	179.67	6,130.00	-2,511.87	-249.46	2,510.39	0.00	0.00	0.00	
8,500.00	90.00	179.67	6,130.00	-2,611.87	-248.89	2,610.39	0.00	0.00	0.00	
8,600.00	90.00	179.67	6,130.00	-2,711.86	-248.31	2,710.39	0.00	0.00	0.00	
8,700.00	90.00	179.67	6,130.00	-2,811.86	-247.74	2,810.39	0.00	0.00	0.00	
8,800.00	90.00	179.67	6,130.00	-2,911.86	-247.16	2,910.39	0.00	0.00	0.00	
8,900.00	90.00	179.67	6,130.00	-3,011.86	-246.59	3,010.39	0.00	0.00	0.00	



Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well #13H
Company:	Spur Energy Partners, LLC	TVD Reference:	RKB = 20' @ 3993.00usft
Project:	Lea County, NM (Nad-83/ NME)	MD Reference:	RKB = 20' @ 3993.00usft
Site:	HT 18 Federal	North Reference:	Grid
Well:	#13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,000.00	90.00	179.67	6,130.00	-3,111.86	-246.01	3,110.39	0.00	0.00	0.00	
9,100.00	90.00	179.67	6,130.00	-3,211.86	-245.44	3,210.39	0.00	0.00	0.00	
9,200.00	90.00	179.67	6,130.00	-3,311.85	-244.86	3,310.39	0.00	0.00	0.00	
9,300.00	90.00	179.67	6,130.00	-3,411.85	-244.29	3,410.39	0.00	0.00	0.00	
9,400.00	90.00	179.67	6,130.00	-3,511.85	-243.71	3,510.39	0.00	0.00	0.00	
9,500.00	90.00	179.67	6,130.00	-3,611.85	-243.14	3,610.39	0.00	0.00	0.00	
9,600.00	90.00	179.67	6,130.00	-3,711.85	-242.56	3,710.39	0.00	0.00	0.00	
9,700.00	90.00	179.67	6,130.00	-3,811.85	-241.99	3,810.39	0.00	0.00	0.00	
9,800.00	90.00	179.67	6,130.00	-3,911.84	-241.41	3,910.39	0.00	0.00	0.00	
9,900.00	90.00	179.67	6,130.00	-4,011.84	-240.84	4,010.39	0.00	0.00	0.00	
10,000.00	90.00	179.67	6,130.00	-4,111.84	-240.26	4,110.39	0.00	0.00	0.00	
10,100.00	90.00	179.67	6,130.00	-4,211.84	-239.69	4,210.39	0.00	0.00	0.00	
10,200.00	90.00	179.67	6,130.00	-4,311.84	-239.11	4,310.39	0.00	0.00	0.00	
10,300.00	90.00	179.67	6,130.00	-4,411.84	-238.54	4,410.39	0.00	0.00	0.00	
10,400.00	90.00	179.67	6,130.00	-4,511.83	-237.96	4,510.39	0.00	0.00	0.00	
10,500.00	90.00	179.67	6,130.00	-4,611.83	-237.39	4,610.39	0.00	0.00	0.00	
10,600.00	90.00	179.67	6,130.00	-4,711.83	-236.81	4,710.39	0.00	0.00	0.00	
10,700.00	90.00	179.67	6,130.00	-4,811.83	-236.24	4,810.39	0.00	0.00	0.00	
10,800.00	90.00	179.67	6,130.00	-4,911.83	-235.66	4,910.39	0.00	0.00	0.00	
10,900.00	90.00	179.67	6,130.00	-5,011.83	-235.09	5,010.39	0.00	0.00	0.00	
11,000.00	90.00	179.67	6,130.00	-5,111.82	-234.51	5,110.39	0.00	0.00	0.00	
11,100.00	90.00	179.67	6,130.00	-5,211.82	-233.94	5,210.39	0.00	0.00	0.00	
11,200.00	90.00	179.67	6,130.00	-5,311.82	-233.36	5,310.39	0.00	0.00	0.00	
11,300.00	90.00	179.67	6,130.00	-5,411.82	-232.79	5,410.39	0.00	0.00	0.00	
11,400.00	90.00	179.67	6,130.00	-5,511.82	-232.21	5,510.39	0.00	0.00	0.00	
11,500.00	90.00	179.67	6,130.00	-5,611.82	-231.64	5,610.39	0.00	0.00	0.00	
11,600.00	90.00	179.67	6,130.00	-5,711.81	-231.06	5,710.39	0.00	0.00	0.00	
11,700.00	90.00	179.67	6,130.00	-5,811.81	-230.49	5,810.39	0.00	0.00	0.00	
11,717.49	90.00	179.67	6,130.00	-5,829.30	-230.39	5,827.88	0.00	0.00	0.00	
11,767.39	90.00	179.67	6,130.00	-5,879.20	-230.10	5,877.78	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
HT 18 Fed 13H: SHL (- hit/miss target - Shape	0.00	0.00	0.00	0.00	0.00	671,075.30	701,502.00	32.843724	-103.811825	
- plan hits target center - Point										
HT 18 Fed 13H: 5097 - plan hits target center - Point	0.00	0.00	5,087.77	188.40	-236.13	671,263.70	701,265.87	32.844245	-103.812591	
HT 18 Fed 13H: FTP (- plan hits target center - Point	0.00	0.00	6,130.00	-748.50	-259.60	670,326.80	701,242.40	32.841670	-103.812682	
HT 18 Fed 13H: LTP (- plan misses target center by 0.11usft at 11717.49usft MD (6130.00 TVD, -5829.30 N, -230.39 E) - Point	0.00	0.01	6,130.00	-5,829.30	-230.50	665,246.00	701,271.50	32.827705	-103.812669	
HT 18 Fed 13H: PBHI - plan hits target center - Point	0.00	0.01	6,130.00	-5,879.20	-230.10	665,196.10	701,271.90	32.827568	-103.812668	



Planning Report



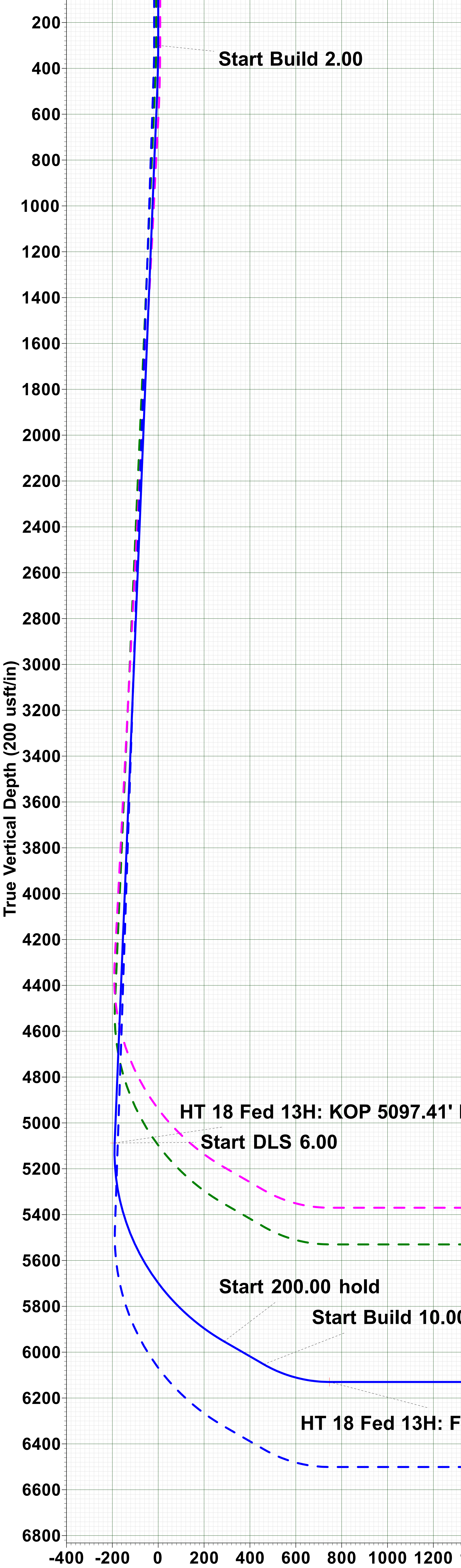
Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well #13H
Company:	Spur Energy Partners, LLC	TVD Reference:	RKB = 20' @ 3993.00usft
Project:	Lea County, NM (Nad-83/ NME)	MD Reference:	RKB = 20' @ 3993.00usft
Site:	HT 18 Federal	North Reference:	Grid
Well:	#13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		



PROJECT DETAILS: Lea 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

Company: Spur Energy Partners, LLC
Project: Lea County, NM (Nad-83/ NME)
Site: HT 18 Federal
Well: #13H
Wellbore: OH
Rig:
Design: Plan #2 / 15:59, December 03 2020

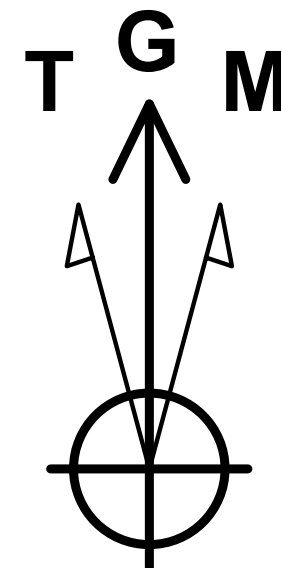


WELL DETAILS: #13H								
RKB = 20' @ 3993.00usft								
	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
	0.00	0.00	671075.30	701502.00	32.843724	-103.811825		
SECTION DETAILS								
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00
3	484.04	3.68	308.59	483.91	3.69	-4.62	2.00	-3.71
4	5097.41	3.68	308.59	5087.77	188.40	-236.13	0.00	-189.76
5	6136.60	60.00	179.67	5953.24	-288.82	-262.24	6.00	287.31
6	6336.60	60.00	179.67	6053.24	-462.03	-261.25	0.00	460.51
7	6636.60	90.00	179.67	6130.00	-748.50	-259.60	10.00	746.99
8	11717.49	90.00	179.67	6130.00	-5829.30	-230.39	0.00	5827.88
9	11767.39	90.00	179.67	6130.00	-5879.20	-230.10	0.00	5877.78

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
HT 18 Fed 13H: SHL (648' FSL & 824' FWL)	0.00	0.00	0.00	671075.30	701502.00	32.843724	-103.811825
HT 18 Fed 13H: KOP 5097.41' MD	5087.77	188.40	-236.13	671263.70	701265.87	32.844245	-103.812590
HT 18 Fed 13H: FTP (100' FNL & 560' FWL)	6130.00	-748.50	-259.60	670326.80	701242.40	32.841670	-103.812682
HT 18 Fed 13H: LTP (100' FSL & 560' FWL)	6130.00	-5829.30	-230.50	665246.00	701271.50	32.827705	-103.812669
HT 18 Fed 13H: PBHL (50' FSL & 560' FWL)	6130.00	-5879.20	-230.10	665196.10	701271.90	32.827568	-103.812668

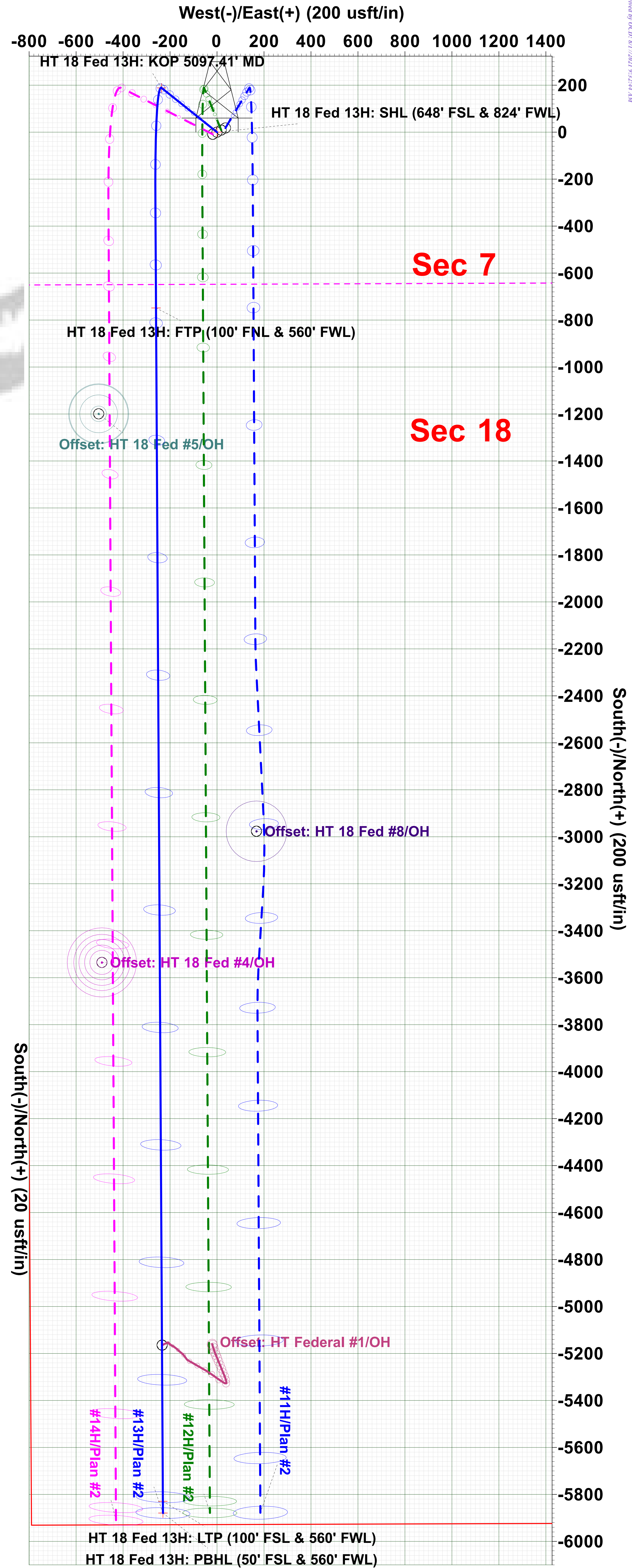
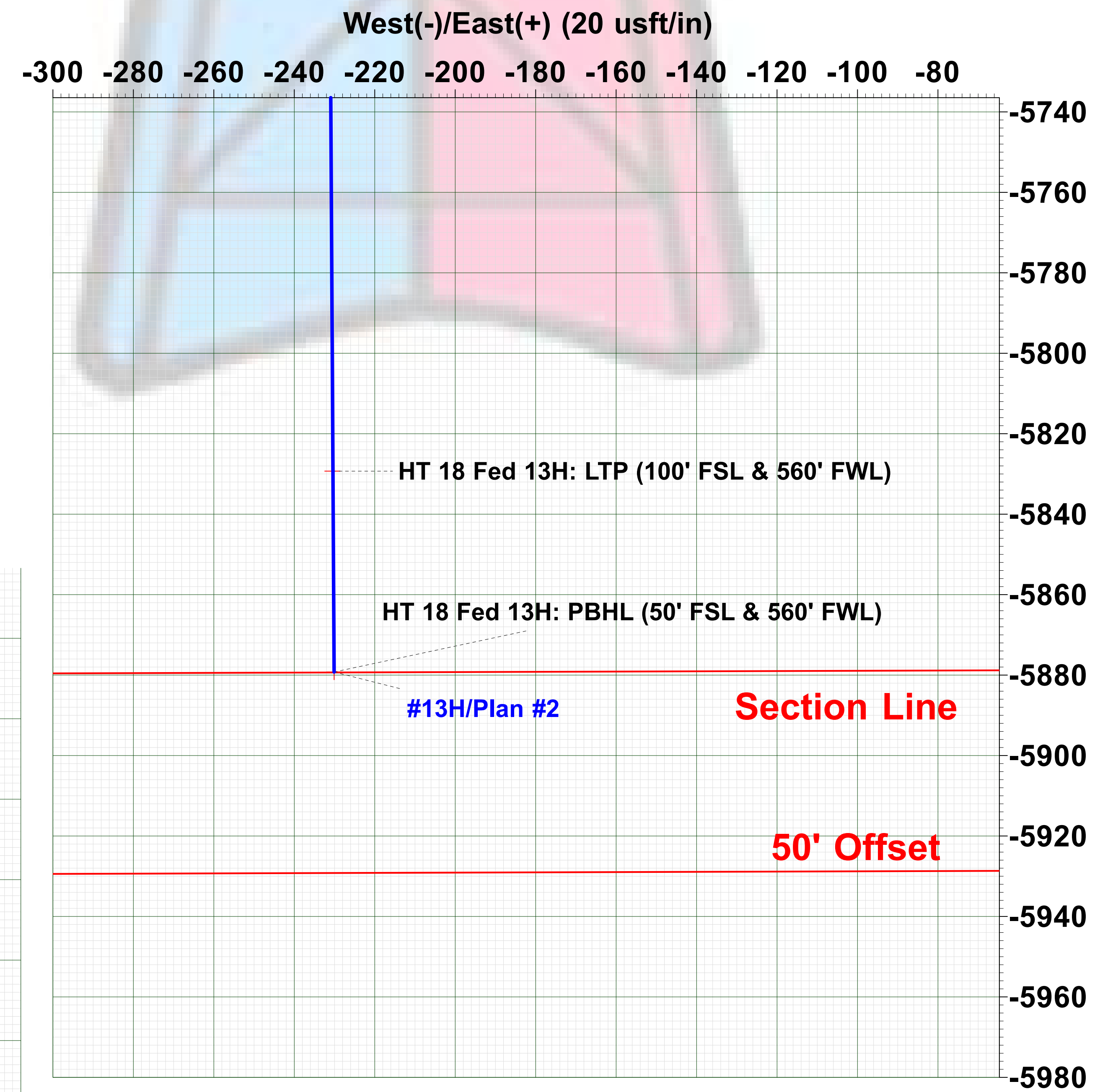
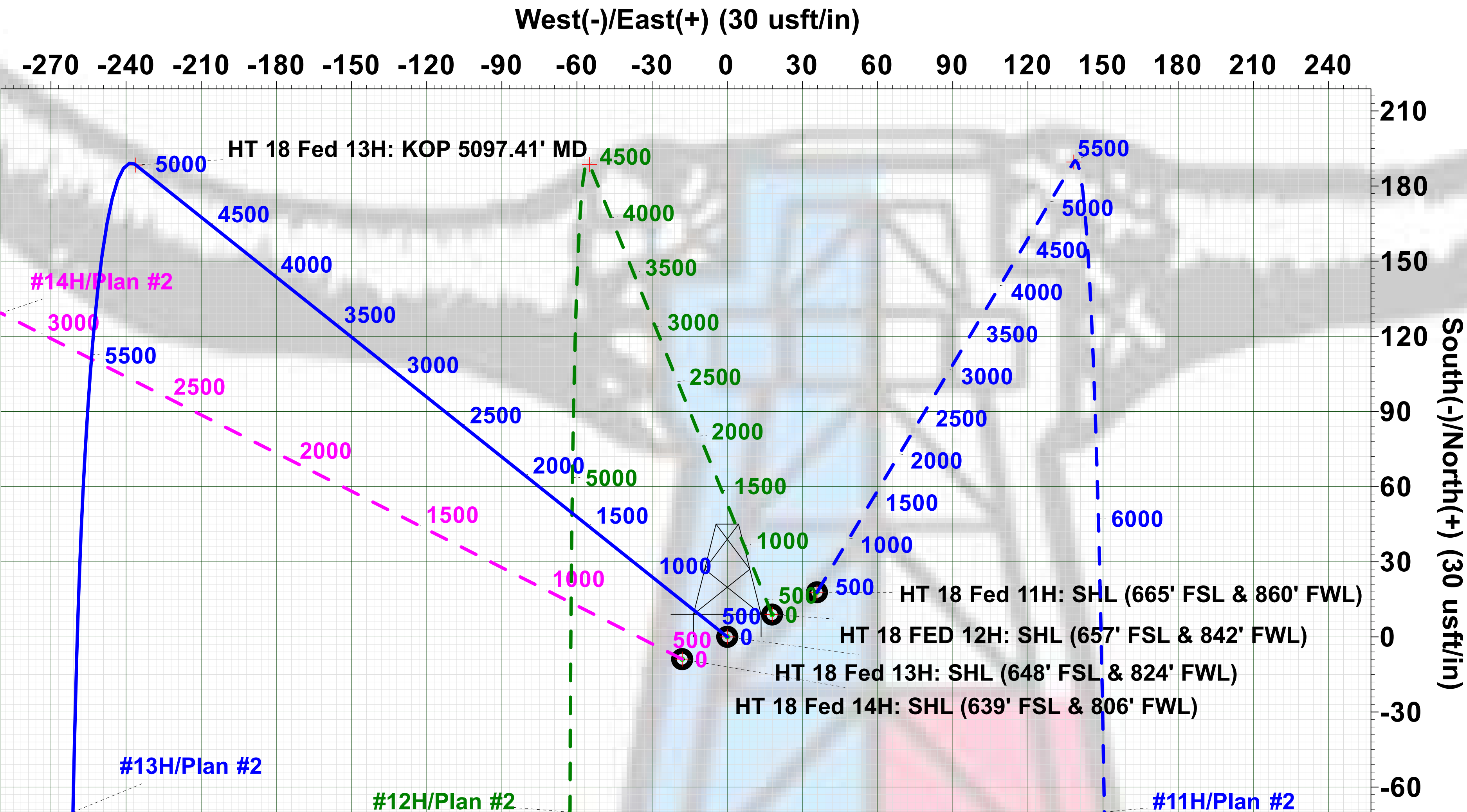
CORRECTION REFERENCE DATA:

To convert a Magnetic Direction to a Grid Direction, Add 6.481°
To convert a True Direction to a Grid Direction, Subtract 0.283°
To convert a Magnetic Direction to a True Direction, Add 6.764° East
Magnetic Declination: 6.764°
Grid Convergence: 0.283° West
Magnetic Dip Angle: 60.444°
Magnetic Field Strength: 47883.28639316nT



Azimuths to Grid North
True North: -0.28°
Magnetic North: 6.48°

Magnetic Field
Strength: 47883.3snT
Dip Angle: 60.44°
Date: 12/15/2020
Model: IGRF2020



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

Plan: Plan #2 (#13H/OH)

Created By: Matthew May Date: 15:59, December 03 2020



Spur Energy Partners, LLC

Lea County, NM (Nad-83/ NME)

HT 18 Federal

#13H

OH

Plan #2

Anticollision Report

03 December, 2020





Anticollision Report



Company:	Spur Energy Partners, LLC	Local Co-ordinate Reference:	Well #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Reference	Plan #2
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 100.00usft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 5,000.00 us
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Pedal Curve
Casing Method:	Not applied

Survey Tool Program		Date	12/02/20		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	11,767.39	Plan #2 (OH)	MWD+IGRF	OWSG MWD + IGRF or WMM	

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						
HT 18 Federal						
#11H - OH - Plan #2	300.00	299.00	39.98	38.26	23.284	CC, ES
#11H - OH - Plan #2	11,767.39	12,131.83	556.51	372.89	3.031	SF
#12H - OH - Plan #2	300.00	300.00	19.99	18.27	11.618	CC, ES
#12H - OH - Plan #2	4,700.00	4,699.25	157.89	124.15	4.679	SF
#14H - OH - Plan #2	300.00	300.00	20.08	18.36	11.670	CC
#14H - OH - Plan #2	400.00	399.58	20.38	17.95	8.388	ES
#14H - OH - Plan #2	800.00	801.72	32.43	27.09	6.069	SF
Offset: HT 18 Fed #4 - OH - OH	9,421.51	6,083.41	246.37	60.98	1.329	SF = 1.50, CC, ES, SF
Offset: HT 18 Fed #5 - OH - OH	7,084.99	6,096.47	246.76	99.31	1.674	CC, ES
Offset: HT 18 Fed #5 - OH - OH	7,100.00	6,096.52	247.22	99.41	1.673	SF
Offset: HT 18 Fed #8 - OH - OH	8,867.06	6,088.04	414.93	238.43	2.351	CC, ES, SF
Offset: HT Federal #1 - OH - OH	11,124.22	6,106.06	240.81	119.18	1.980	CC, ES, SF

Offset Design HT 18 Federal - #11H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		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	Warning
0.00	0.00	1.00	0.00	0.00	0.00	63.563	17.80	35.80	39.98				
100.00	100.00	101.00	100.00	0.14	0.15	63.563	17.80	35.80	39.98	39.69	0.29	137.693	
200.00	200.00	201.00	200.00	0.50	0.51	63.563	17.80	35.80	39.98	38.97	1.01	39.691	
300.00	300.00	299.00	300.00	0.86	0.86	63.563	17.80	35.80	39.98	38.26	1.72	23.284	CC, ES
400.00	399.98	397.80	398.78	1.22	1.21	115.836	19.23	36.66	42.14	39.72	2.43	17.353	
500.00	499.84	502.56	498.34	1.58	1.59	118.788	22.55	38.64	47.70	44.54	3.16	15.076	
600.00	599.63	602.81	598.02	1.94	1.95	122.280	25.90	40.64	54.04	50.15	3.88	13.910	
700.00	699.43	703.06	697.69	2.31	2.31	125.031	29.26	42.64	60.53	55.92	4.61	13.134	
800.00	799.22	796.69	797.37	2.68	2.65	127.246	32.61	44.64	67.14	61.83	5.31	12.643	
900.00	899.02	903.56	897.04	3.06	3.04	129.062	35.96	46.64	73.83	67.77	6.06	12.181	
1,000.00	998.81	996.19	996.72	3.43	3.38	130.575	39.31	48.64	80.58	73.82	6.76	11.919	
1,100.00	1,098.60	1,104.06	1,096.39	3.80	3.77	131.853	42.66	50.64	87.38	79.86	7.52	11.626	
1,200.00	1,198.40	1,204.30	1,196.07	4.18	4.13	132.947	46.02	52.64	94.21	85.97	8.24	11.428	
1,300.00	1,298.19	1,304.55	1,295.74	4.55	4.50	133.892	49.37	54.64	101.08	92.11	8.97	11.266	
1,400.00	1,397.98	1,404.80	1,395.42	4.93	4.86	134.717	52.72	56.64	107.97	98.27	9.70	11.131	
1,500.00	1,497.78	1,505.05	1,495.09	5.30	5.23	135.443	56.07	58.64	114.87	104.45	10.43	11.016	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - #11H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,600.00	1,597.57	1,605.30	1,594.77	5.68	5.59	136.087	59.42	60.64	121.80	110.64	11.16	10.917	
1,700.00	1,697.37	1,705.55	1,694.44	6.06	5.96	136.661	62.78	62.64	128.74	116.85	11.89	10.832	
1,800.00	1,797.16	1,805.80	1,794.12	6.43	6.32	137.176	66.13	64.64	135.69	123.07	12.61	10.757	
1,900.00	1,896.95	1,906.05	1,893.79	6.81	6.69	137.641	69.48	66.64	142.65	129.30	13.34	10.691	
2,000.00	1,996.75	2,006.30	1,993.46	7.18	7.05	138.063	72.83	68.65	149.61	135.54	14.07	10.633	
2,100.00	2,096.54	2,106.54	2,093.14	7.56	7.42	138.447	76.19	70.65	156.59	141.79	14.80	10.581	
2,200.00	2,196.33	2,206.79	2,192.81	7.94	7.79	138.799	79.54	72.65	163.57	148.04	15.53	10.534	
2,300.00	2,296.13	2,307.04	2,292.49	8.31	8.15	139.122	82.89	74.65	170.56	154.30	16.26	10.491	
2,400.00	2,395.92	2,407.29	2,392.16	8.69	8.52	139.419	86.24	76.65	177.55	160.56	16.99	10.453	
2,500.00	2,495.71	2,492.46	2,491.84	9.07	8.83	139.694	89.59	78.65	184.55	166.89	17.66	10.450	
2,600.00	2,595.51	2,607.79	2,591.51	9.44	9.25	139.948	92.95	80.65	191.55	173.10	18.44	10.386	
2,700.00	2,695.30	2,708.04	2,691.19	9.82	9.61	140.185	96.30	82.65	198.55	179.38	19.17	10.357	
2,800.00	2,795.10	2,808.29	2,790.86	10.20	9.98	140.406	99.65	84.65	205.56	185.66	19.90	10.329	
2,900.00	2,894.89	2,908.53	2,890.54	10.57	10.34	140.612	103.00	86.65	212.57	191.94	20.63	10.304	
3,000.00	2,994.68	3,008.78	2,990.21	10.95	10.71	140.805	106.35	88.65	219.58	198.22	21.36	10.281	
3,100.00	3,094.48	3,109.03	3,089.89	11.32	11.07	140.986	109.71	90.65	226.60	204.51	22.09	10.259	
3,200.00	3,194.27	3,209.28	3,189.56	11.70	11.44	141.156	113.06	92.65	233.61	210.80	22.82	10.239	
3,300.00	3,294.06	3,309.53	3,289.24	12.08	11.80	141.316	116.41	94.65	240.63	217.09	23.54	10.220	
3,400.00	3,393.86	3,409.78	3,388.91	12.45	12.17	141.467	119.76	96.66	247.65	223.38	24.27	10.203	
3,500.00	3,493.65	3,489.97	3,488.59	12.83	12.46	141.610	123.12	98.66	254.67	229.75	24.93	10.216	
3,600.00	3,593.45	3,589.72	3,588.26	13.21	12.83	141.745	126.47	100.66	261.70	236.04	25.66	10.200	
3,700.00	3,693.24	3,689.47	3,687.94	13.58	13.19	141.873	129.82	102.66	268.72	242.34	26.38	10.186	
3,800.00	3,793.03	3,789.23	3,787.61	13.96	13.55	141.994	133.17	104.66	275.75	248.64	27.11	10.172	
3,900.00	3,892.83	3,888.98	3,887.29	14.34	13.92	142.110	136.52	106.66	282.78	254.94	27.84	10.158	
4,000.00	3,992.62	3,988.73	3,986.96	14.71	14.28	142.220	139.88	108.66	289.81	261.24	28.56	10.146	
4,100.00	4,092.41	4,088.48	4,086.63	15.09	14.64	142.324	143.23	110.66	296.84	267.55	29.29	10.134	
4,200.00	4,192.21	4,188.23	4,186.31	15.47	15.01	142.424	146.58	112.66	303.87	273.85	30.02	10.123	
4,300.00	4,292.00	4,287.98	4,285.98	15.84	15.37	142.520	149.93	114.66	310.90	280.15	30.75	10.112	
4,400.00	4,391.80	4,387.73	4,385.66	16.22	15.74	142.611	153.28	116.66	317.93	286.46	31.47	10.102	
4,500.00	4,491.59	4,487.48	4,485.33	16.60	16.10	142.698	156.64	118.66	324.96	292.77	32.20	10.092	
4,600.00	4,591.38	4,587.24	4,585.01	16.97	16.46	142.781	159.99	120.66	332.00	299.07	32.93	10.083	
4,700.00	4,691.18	4,686.99	4,684.68	17.35	16.83	142.861	163.34	122.66	339.03	305.38	33.65	10.074	
4,800.00	4,790.97	4,786.74	4,784.36	17.73	17.19	142.938	166.69	124.66	346.07	311.69	34.38	10.066	
4,900.00	4,890.76	4,886.49	4,884.03	18.10	17.55	143.012	170.05	126.67	353.10	318.00	35.11	10.058	
5,000.00	4,990.56	4,986.24	4,983.71	18.48	17.92	143.082	173.40	128.67	360.14	324.31	35.83	10.050	
5,100.00	5,090.35	5,085.99	5,083.38	18.86	18.28	145.048	176.75	130.67	367.18	330.62	36.56	10.043	
5,200.00	5,190.18	5,185.59	5,182.91	19.21	18.64	-123.415	180.10	132.66	373.89	336.62	37.27	10.032	
5,300.00	5,289.32	5,284.17	5,281.41	19.51	19.00	-104.722	183.41	134.64	380.35	342.41	37.94	10.026	
5,400.00	5,388.69	5,380.63	5,377.80	19.78	19.35	-102.034	186.65	136.58	387.70	349.13	38.57	10.052	
5,500.00	5,481.22	5,474.40	5,471.49	20.02	19.70	-103.498	189.78	138.46	397.72	358.55	39.17	10.153	
5,600.00	5,571.87	5,575.78	5,572.77	20.24	20.03	-106.684	187.15	140.45	411.13	371.37	39.76	10.340	
5,700.00	5,657.66	5,682.26	5,678.21	20.45	20.34	-110.177	172.84	142.47	427.08	386.81	40.27	10.605	
5,800.00	5,737.63	5,794.51	5,786.91	20.68	20.64	-113.691	145.16	144.47	444.92	404.26	40.66	10.942	
5,900.00	5,810.93	5,913.25	5,897.52	20.96	20.92	-117.080	102.21	146.42	463.86	422.98	40.87	11.349	
6,000.00	5,876.74	6,039.13	6,007.99	21.37	21.21	-120.260	42.09	148.27	483.02	442.14	40.87	11.817	
6,100.00	5,934.33	6,172.68	6,115.46	21.91	21.62	-123.178	-36.98	149.95	501.45	460.77	40.68	12.328	
6,200.00	5,984.94	6,314.80	6,216.54	22.55	22.19	-126.158	-136.69	151.39	517.05	476.65	40.40	12.799	
6,300.00	6,034.94	6,465.33	6,306.22	23.30	22.97	-127.661	-257.39	152.48	524.23	483.81	40.43	12.967	
6,400.00	6,081.84	6,577.28	6,362.74	24.14	23.69	-127.846	-354.01	153.05	526.65	485.27	41.38	12.728	
6,500.00	6,113.79	6,675.20	6,411.70	25.09	24.43	-128.506	-438.82	153.53	538.96	496.78	42.19	12.776	
6,600.00	6,128.83	6,894.60	6,491.28	26.12	26.39	-131.419	-641.93	154.70	555.06	512.84	42.21	13.149	
6,700.00	6,130.00	7,062.79	6,501.00	27.23	28.17	-131.803	-809.52	155.66	556.58	512.48	44.10	12.621	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - #11H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-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
6,800.00	6,130.00	7,162.79	6,501.00	28.42	29.33	-131.803	-909.52	156.23	556.58	510.62	45.96	12.111	
6,900.00	6,130.00	7,262.79	6,501.00	29.68	30.57	-131.803	-1,009.52	156.80	556.58	508.64	47.93	11.611	
7,000.00	6,130.00	7,362.79	6,501.00	31.01	31.88	-131.803	-1,109.51	157.38	556.58	506.56	50.02	11.127	
7,100.00	6,130.00	7,462.79	6,501.00	32.40	33.24	-131.803	-1,209.51	157.95	556.58	504.38	52.20	10.662	
7,200.00	6,130.00	7,562.79	6,501.00	33.84	34.66	-131.803	-1,309.51	158.52	556.57	502.11	54.46	10.219	
7,300.00	6,130.00	7,662.79	6,501.00	35.32	36.12	-131.804	-1,409.51	159.10	556.57	499.77	56.80	9.799	
7,400.00	6,130.00	7,762.79	6,501.00	36.85	37.62	-131.804	-1,509.51	159.67	556.57	497.37	59.20	9.402	
7,500.00	6,130.00	7,862.79	6,501.00	38.41	39.16	-131.804	-1,609.51	160.24	556.57	494.91	61.66	9.027	
7,600.00	6,130.00	7,962.79	6,501.00	40.00	40.73	-131.804	-1,709.50	160.82	556.57	492.41	64.16	8.674	
7,700.00	6,130.00	8,062.79	6,501.00	41.61	42.33	-131.804	-1,809.50	161.39	556.57	489.85	66.72	8.342	
7,800.00	6,130.00	8,162.79	6,501.00	43.26	43.96	-131.804	-1,909.50	161.96	556.57	487.26	69.31	8.030	
7,900.00	6,130.00	8,262.79	6,501.00	44.92	45.61	-131.804	-2,009.50	162.53	556.56	484.63	71.93	7.737	
8,000.00	6,130.00	8,362.79	6,501.00	46.60	47.28	-131.805	-2,109.50	163.11	556.56	481.97	74.59	7.461	
8,047.31	6,130.00	8,410.10	6,501.00	47.41	48.07	-131.805	-2,156.81	163.38	556.56	480.70	75.86	7.337	
8,100.00	6,130.00	8,456.33	6,501.00	48.30	48.86	-131.781	-2,203.04	163.99	556.86	479.65	77.20	7.213	
8,200.00	6,130.00	8,544.43	6,501.00	50.02	50.36	-131.595	-2,291.07	167.21	559.15	479.26	79.89	6.999	
8,300.00	6,130.00	8,644.33	6,501.00	51.75	52.08	-131.298	-2,390.85	172.18	562.45	479.54	82.91	6.784	
8,400.00	6,130.00	8,744.23	6,501.00	53.49	53.82	-131.004	-2,490.63	177.14	565.76	479.79	85.97	6.581	
8,500.00	6,130.00	8,844.14	6,501.00	55.25	55.57	-130.714	-2,590.41	182.11	569.09	480.03	89.06	6.390	
8,600.00	6,130.00	8,944.04	6,501.00	57.01	57.33	-130.427	-2,690.19	187.08	572.43	480.25	92.18	6.210	
8,700.00	6,130.00	9,043.94	6,501.00	58.78	59.11	-130.143	-2,789.97	192.05	575.79	480.46	95.33	6.040	
8,800.00	6,130.00	9,143.85	6,501.00	60.57	60.89	-129.863	-2,889.75	197.01	579.16	480.65	98.51	5.879	
8,900.00	6,130.00	9,257.82	6,501.00	62.36	62.93	-129.635	-3,003.63	201.27	581.62	479.71	101.91	5.707	
9,000.00	6,130.00	9,376.33	6,501.00	64.16	65.04	-129.696	-3,122.14	201.00	581.00	475.97	105.03	5.532	
9,100.00	6,130.00	9,506.66	6,501.00	65.96	67.37	-130.060	-3,239.03	195.93	577.22	469.34	107.88	5.350	
9,200.00	6,130.00	9,606.89	6,501.00	67.77	69.15	-130.493	-3,338.61	189.80	572.09	461.81	110.28	5.188	
9,300.00	6,130.00	9,707.12	6,501.00	69.59	70.95	-130.933	-3,438.20	183.67	566.99	454.35	112.64	5.034	
9,400.00	6,130.00	9,792.66	6,501.00	71.41	72.48	-131.381	-3,537.78	177.54	561.93	447.17	114.76	4.897	
9,500.00	6,130.00	9,879.47	6,501.00	73.24	74.05	-131.683	-3,624.50	173.59	558.09	440.96	117.13	4.765	
9,600.00	6,130.00	9,966.78	6,501.00	75.07	75.64	-131.808	-3,711.80	172.27	556.53	436.84	119.69	4.650	
9,617.21	6,130.00	9,984.19	6,501.00	75.39	75.96	-131.811	-3,726.67	172.31	556.49	436.30	120.19	4.630	
9,700.00	6,130.00	10,064.44	6,501.00	76.91	77.43	-131.811	-3,809.46	172.79	556.49	433.93	122.56	4.541	
9,800.00	6,130.00	10,164.44	6,501.00	78.75	79.26	-131.811	-3,909.46	173.36	556.49	431.02	125.47	4.435	
9,900.00	6,130.00	10,264.44	6,501.00	80.59	81.10	-131.811	-4,009.45	173.94	556.49	428.10	128.40	4.334	
10,000.00	6,130.00	10,364.44	6,501.00	82.44	82.94	-131.811	-4,109.45	174.51	556.49	425.17	131.32	4.238	
10,100.00	6,130.00	10,464.44	6,501.00	84.29	84.79	-131.811	-4,209.45	175.09	556.50	422.24	134.26	4.145	
10,200.00	6,130.00	10,564.44	6,501.00	86.14	86.64	-131.811	-4,309.45	175.67	556.50	419.30	137.19	4.056	
10,300.00	6,130.00	10,664.44	6,501.00	88.00	88.49	-131.811	-4,409.45	176.24	556.50	416.36	140.13	3.971	
10,400.00	6,130.00	10,764.44	6,501.00	89.85	90.35	-131.811	-4,509.45	176.82	556.50	413.42	143.08	3.889	
10,500.00	6,130.00	10,864.44	6,501.00	91.72	92.20	-131.810	-4,609.44	177.39	556.50	410.47	146.03	3.811	
10,600.00	6,130.00	10,964.44	6,501.00	93.58	94.06	-131.810	-4,709.44	177.97	556.50	407.51	148.98	3.735	
10,700.00	6,130.00	11,064.44	6,501.00	95.44	95.92	-131.810	-4,809.44	178.55	556.50	404.56	151.94	3.663	
10,800.00	6,130.00	11,164.44	6,501.00	97.31	97.79	-131.810	-4,909.44	179.12	556.50	401.60	154.90	3.593	
10,900.00	6,130.00	11,264.44	6,501.00	99.18	99.65	-131.810	-5,009.44	179.70	556.50	398.63	157.87	3.525	
11,000.00	6,130.00	11,364.44	6,501.00	101.05	101.52	-131.810	-5,109.44	180.27	556.50	395.67	160.83	3.460	
11,100.00	6,130.00	11,464.44	6,501.00	102.92	103.39	-131.810	-5,209.43	180.85	556.50	392.70	163.80	3.397	
11,200.00	6,130.00	11,564.44	6,501.00	104.80	105.26	-131.810	-5,309.43	181.43	556.50	389.73	166.78	3.337	
11,300.00	6,130.00	11,664.44	6,501.00	106.67	107.14	-131.810	-5,409.43	182.00	556.50	386.75	169.75	3.278	
11,400.00	6,130.00	11,764.44	6,501.00	108.55	109.01	-131.810	-5,509.43	182.58	556.50	383.78	172.73	3.222	
11,500.00	6,130.00	11,864.44	6,501.00	110.43	110.89	-131.810	-5,609.43	183.15	556.51	380.80	175.71	3.167	
11,600.00	6,130.00	11,964.44	6,501.00	112.31	112.77	-131.810	-5,709.43	183.73	556.51	377.82	178.69	3.114	
11,700.00	6,130.00	12,064.44	6,501.00	114.19	114.65	-131.810	-5,809.42	184.31	556.51	374.83	181.67	3.063	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - #11H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-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
11,767.39	6,130.00	12,131.83	6,501.00	115.46	115.86	-131.810	-5,876.81	184.69	556.51	372.89	183.62	3.031 SF	



Anticollision Report



Company:	Spur Energy Partners, LLC	Local Co-ordinate Reference:	Well #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - #12H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-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	0.00	0.00	0.00	63.563	8.90	17.90	19.99					
100.00	100.00	100.00	100.00	0.14	0.14	63.563	8.90	17.90	19.99	19.70	0.29	69.707		
200.00	200.00	200.00	200.00	0.50	0.50	63.563	8.90	17.90	19.99	18.99	1.00	19.916		
300.00	300.00	300.00	300.00	0.86	0.86	63.563	8.90	17.90	19.99	18.27	1.72	11.618 CC, ES		
400.00	399.98	399.94	399.92	1.22	1.22	114.530	10.52	17.24	20.86	18.43	2.43	8.569		
500.00	499.84	500.12	499.76	1.58	1.58	115.096	14.67	15.56	23.39	20.24	3.15	7.415		
600.00	599.63	600.17	599.60	1.94	1.94	117.530	19.03	13.79	26.49	22.61	3.88	6.825		
700.00	699.43	699.78	699.43	2.31	2.31	119.452	23.39	12.02	29.62	25.01	4.61	6.426		
800.00	799.22	800.28	799.27	2.68	2.67	121.005	27.74	10.26	32.78	27.44	5.34	6.135		
900.00	899.02	900.33	899.10	3.06	3.04	122.284	32.10	8.49	35.96	29.88	6.08	5.918		
1,000.00	998.81	1,000.39	998.94	3.43	3.41	123.354	36.45	6.72	39.15	32.34	6.81	5.749		
1,100.00	1,098.60	1,100.44	1,098.78	3.80	3.77	124.263	40.81	4.95	42.36	34.81	7.54	5.615		
1,200.00	1,198.40	1,200.49	1,198.61	4.18	4.14	125.044	45.16	3.19	45.57	37.29	8.28	5.505		
1,300.00	1,298.19	1,300.55	1,298.45	4.55	4.51	125.722	49.52	1.42	48.79	39.78	9.01	5.413		
1,400.00	1,397.98	1,400.60	1,398.28	4.93	4.87	126.316	53.88	-0.35	52.02	42.27	9.75	5.337		
1,500.00	1,497.78	1,500.65	1,498.12	5.30	5.24	126.840	58.23	-2.12	55.26	44.77	10.48	5.271		
1,600.00	1,597.57	1,600.71	1,597.96	5.68	5.61	127.307	62.59	-3.88	58.49	47.27	11.22	5.214		
1,700.00	1,697.37	1,700.76	1,697.79	6.06	5.98	127.724	66.94	-5.65	61.73	49.78	11.95	5.165		
1,800.00	1,797.16	1,800.81	1,797.63	6.43	6.34	128.100	71.30	-7.42	64.98	52.29	12.69	5.121		
1,900.00	1,896.95	1,900.87	1,897.46	6.81	6.71	128.440	75.65	-9.18	68.22	54.80	13.42	5.082		
2,000.00	1,996.75	2,000.92	1,997.30	7.18	7.08	128.749	80.01	-10.95	71.47	57.31	14.16	5.048		
2,100.00	2,096.54	2,100.97	2,097.14	7.56	7.45	129.031	84.37	-12.72	74.72	59.83	14.89	5.017		
2,200.00	2,196.33	2,201.03	2,196.97	7.94	7.81	129.290	88.72	-14.49	77.97	62.35	15.63	4.989		
2,300.00	2,296.13	2,301.08	2,296.81	8.31	8.18	129.528	93.08	-16.25	81.23	64.86	16.36	4.964		
2,400.00	2,395.92	2,401.13	2,396.64	8.69	8.55	129.748	97.43	-18.02	84.48	67.38	17.10	4.941		
2,500.00	2,495.71	2,501.19	2,496.48	9.07	8.92	129.951	101.79	-19.79	87.74	69.90	17.83	4.920		
2,600.00	2,595.51	2,601.24	2,596.31	9.44	9.28	130.140	106.14	-21.56	91.00	72.43	18.57	4.900		
2,700.00	2,695.30	2,701.29	2,696.15	9.82	9.65	130.316	110.50	-23.32	94.25	74.95	19.30	4.882		
2,800.00	2,795.10	2,801.35	2,795.99	10.20	10.02	130.480	114.86	-25.09	97.51	77.47	20.04	4.866		
2,900.00	2,894.89	2,901.40	2,895.82	10.57	10.39	130.633	119.21	-26.86	100.77	80.00	20.77	4.851		
3,000.00	2,994.68	3,001.46	2,995.66	10.95	10.75	130.777	123.57	-28.62	104.03	82.52	21.51	4.836		
3,100.00	3,094.48	3,101.51	3,095.49	11.32	11.12	130.912	127.92	-30.39	107.29	85.05	22.25	4.823		
3,200.00	3,194.27	3,201.56	3,195.33	11.70	11.49	131.039	132.28	-32.16	110.55	87.57	22.98	4.811		
3,300.00	3,294.06	3,301.62	3,295.17	12.08	11.86	131.159	136.63	-33.93	113.81	90.10	23.72	4.799		
3,400.00	3,393.86	3,401.67	3,395.00	12.45	12.23	131.272	140.99	-35.69	117.08	92.63	24.45	4.788		
3,500.00	3,493.65	3,501.72	3,494.84	12.83	12.59	131.379	145.35	-37.46	120.34	95.15	25.19	4.778		
3,600.00	3,593.45	3,601.78	3,594.67	13.21	12.96	131.480	149.70	-39.23	123.60	97.68	25.92	4.768		
3,700.00	3,693.24	3,701.83	3,694.51	13.58	13.33	131.577	154.06	-41.00	126.87	100.21	26.66	4.759		
3,800.00	3,793.03	3,801.88	3,794.35	13.96	13.70	131.668	158.41	-42.76	130.13	102.74	27.39	4.751		
3,900.00	3,892.83	3,901.94	3,894.18	14.34	14.06	131.755	162.77	-44.53	133.39	105.27	28.13	4.743		
4,000.00	3,992.62	4,001.99	3,994.02	14.71	14.43	131.837	167.12	-46.30	136.66	107.80	28.86	4.735		
4,100.00	4,092.41	4,102.04	4,093.85	15.09	14.80	131.916	171.48	-48.06	139.92	110.33	29.60	4.728		
4,200.00	4,192.21	4,202.10	4,193.69	15.47	15.17	131.991	175.84	-49.83	143.19	112.86	30.33	4.721		
4,300.00	4,292.00	4,302.15	4,293.53	15.84	15.54	132.063	180.19	-51.60	146.45	115.39	31.07	4.714		
4,400.00	4,391.80	4,402.20	4,393.36	16.22	15.90	132.132	184.55	-53.37	149.72	117.92	31.80	4.708		
4,500.00	4,491.59	4,497.95	4,493.40	16.60	16.25	132.213	188.87	-55.14	152.98	120.46	32.52	4.704		
4,600.00	4,591.38	4,599.80	4,595.17	16.97	16.59	134.602	186.93	-56.84	155.47	122.28	33.19	4.684		
4,700.00	4,691.18	4,699.25	4,693.80	17.35	16.87	140.629	174.60	-58.33	157.89	124.15	33.75	4.679 SF		
4,800.00	4,790.97	4,794.35	4,786.43	17.73	17.11	149.486	153.27	-59.57	163.35	129.17	34.18	4.779		
4,900.00	4,890.76	4,883.64	4,871.07	18.10	17.32	159.767	124.96	-60.57	175.82	141.45	34.37	5.116		
5,000.00	4,990.56	4,966.23	4,946.70	18.48	17.50	169.856	91.84	-61.34	198.43	164.25	34.18	5.806		
5,100.00	5,090.35	5,041.76	5,013.12	18.86	17.68	-179.432	55.93	-61.91	232.24	198.63	33.61	6.910		

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - #12H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-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	
5,200.00	5,190.18	5,112.86	5,072.87	19.21	17.85	-78.989	17.43	-62.33	272.89	240.06	32.83	8.312	
5,300.00	5,289.32	5,182.17	5,128.22	19.51	18.07	-52.077	-24.27	-62.62	314.88	282.93	31.95	9.854	
5,400.00	5,386.69	5,250.00	5,179.30	19.78	18.31	-41.462	-68.87	-62.80	356.42	325.39	31.03	11.485	
5,500.00	5,481.22	5,316.57	5,226.25	20.02	18.60	-35.161	-116.05	-62.86	396.44	366.36	30.08	13.180	
5,600.00	5,571.87	5,382.10	5,269.14	20.24	18.92	-30.839	-165.58	-62.82	434.28	405.18	29.10	14.925	
5,700.00	5,657.66	5,450.00	5,309.88	20.45	19.29	-27.612	-219.88	-62.67	469.48	441.21	28.27	16.605	
5,800.00	5,737.63	5,510.66	5,342.95	20.68	19.67	-25.258	-270.72	-62.44	501.66	474.49	27.17	18.461	
5,900.00	5,810.93	5,603.70	5,385.95	20.96	20.34	-23.218	-344.78	-62.02	529.26	502.01	27.25	19.425	
6,000.00	5,876.74	5,694.35	5,434.97	21.37	21.08	-21.850	-429.69	-61.53	547.67	519.83	27.84	19.671	
6,100.00	5,934.33	5,763.90	5,468.92	21.91	21.71	-21.145	-490.39	-61.18	557.98	530.60	27.38	20.377	
6,200.00	5,984.94	5,815.72	5,490.07	22.55	22.21	-20.805	-537.66	-60.91	568.25	541.93	26.32	21.591	
6,300.00	6,034.94	5,866.20	5,506.50	23.30	22.73	-20.462	-585.38	-60.63	586.18	560.81	25.37	23.106	
6,400.00	6,081.84	5,915.13	5,518.35	24.14	23.25	-19.566	-632.83	-60.36	608.94	584.34	24.59	24.759	
6,500.00	6,113.79	5,963.94	5,526.09	25.09	23.80	-18.795	-681.01	-60.08	624.59	600.44	24.15	25.863	
6,600.00	6,128.83	6,012.78	5,529.71	26.12	24.36	-18.452	-729.70	-59.80	631.87	607.76	24.11	26.210	
6,700.00	6,130.00	6,106.17	5,530.00	27.23	25.49	-18.426	-810.75	-59.34	632.42	607.44	24.99	25.310	
6,800.00	6,130.00	6,206.17	5,530.00	28.42	26.78	-18.426	-910.74	-58.76	632.42	606.23	26.20	24.141	
6,900.00	6,130.00	6,306.17	5,530.00	29.68	28.14	-18.426	-1,010.74	-58.19	632.42	604.94	27.49	23.008	
7,000.00	6,130.00	6,406.17	5,530.00	31.01	29.56	-18.426	-1,110.74	-57.61	632.42	603.58	28.85	21.923	
7,100.00	6,130.00	6,506.17	5,530.00	32.40	31.03	-18.426	-1,210.74	-57.04	632.42	602.16	30.27	20.894	
7,200.00	6,130.00	6,606.17	5,530.00	33.84	32.55	-18.426	-1,310.74	-56.46	632.42	600.68	31.74	19.924	
7,300.00	6,130.00	6,706.17	5,530.00	35.32	34.11	-18.426	-1,410.74	-55.89	632.42	599.16	33.26	19.013	
7,400.00	6,130.00	6,806.17	5,530.00	36.85	35.71	-18.426	-1,510.73	-55.31	632.42	597.60	34.82	18.162	
7,500.00	6,130.00	6,906.17	5,530.00	38.41	37.33	-18.426	-1,610.73	-54.74	632.42	596.01	36.41	17.367	
7,600.00	6,130.00	7,006.17	5,530.00	40.00	38.99	-18.426	-1,710.73	-54.16	632.42	594.39	38.04	16.626	
7,700.00	6,130.00	7,106.17	5,530.00	41.61	40.66	-18.426	-1,810.73	-53.59	632.42	592.73	39.69	15.934	
7,800.00	6,130.00	7,206.17	5,530.00	43.26	42.36	-18.426	-1,910.73	-53.01	632.42	591.06	41.36	15.290	
7,900.00	6,130.00	7,306.17	5,530.00	44.92	44.07	-18.426	-2,010.73	-52.44	632.42	589.37	43.06	14.688	
8,000.00	6,130.00	7,406.17	5,530.00	46.60	45.80	-18.426	-2,110.72	-51.86	632.42	587.65	44.77	14.126	
8,100.00	6,130.00	7,506.17	5,530.00	48.30	47.55	-18.426	-2,210.72	-51.29	632.42	585.92	46.50	13.601	
8,200.00	6,130.00	7,606.17	5,530.00	50.02	49.31	-18.426	-2,310.72	-50.71	632.42	584.18	48.24	13.109	
8,300.00	6,130.00	7,706.17	5,530.00	51.75	51.08	-18.426	-2,410.72	-50.14	632.42	582.42	50.00	12.649	
8,400.00	6,130.00	7,806.17	5,530.00	53.49	52.86	-18.426	-2,510.72	-49.56	632.42	580.66	51.77	12.216	
8,500.00	6,130.00	7,906.17	5,530.00	55.25	54.65	-18.426	-2,610.72	-48.99	632.42	578.88	53.55	11.811	
8,600.00	6,130.00	8,006.17	5,530.00	57.01	56.44	-18.426	-2,710.71	-48.41	632.42	577.09	55.34	11.429	
8,700.00	6,130.00	8,106.17	5,530.00	58.78	58.25	-18.426	-2,810.71	-47.84	632.42	575.29	57.13	11.069	
8,800.00	6,130.00	8,206.17	5,530.00	60.57	60.06	-18.426	-2,910.71	-47.26	632.42	573.49	58.94	10.730	
8,900.00	6,130.00	8,306.17	5,530.00	62.36	61.88	-18.426	-3,010.71	-46.69	632.42	571.67	60.75	10.410	
9,000.00	6,130.00	8,406.17	5,530.00	64.16	63.70	-18.426	-3,110.71	-46.11	632.42	569.86	62.57	10.108	
9,100.00	6,130.00	8,506.17	5,530.00	65.96	65.53	-18.426	-3,210.71	-45.54	632.42	568.03	64.39	9.821	
9,200.00	6,130.00	8,606.17	5,530.00	67.77	67.37	-18.426	-3,310.71	-44.96	632.42	566.20	66.22	9.550	
9,300.00	6,130.00	8,706.17	5,530.00	69.59	69.21	-18.426	-3,410.70	-44.39	632.42	564.37	68.06	9.293	
9,400.00	6,130.00	8,806.17	5,530.00	71.41	71.05	-18.426	-3,510.70	-43.81	632.42	562.53	69.90	9.048	
9,500.00	6,130.00	8,906.17	5,530.00	73.24	72.90	-18.426	-3,610.70	-43.24	632.42	560.68	71.74	8.815	
9,600.00	6,130.00	9,006.17	5,530.00	75.07	74.75	-18.426	-3,710.70	-42.66	632.42	558.84	73.59	8.594	
9,700.00	6,130.00	9,106.17	5,530.00	76.91	76.61	-18.426	-3,810.70	-42.09	632.42	556.98	75.44	8.383	
9,800.00	6,130.00	9,206.17	5,530.00	78.75	78.46	-18.426	-3,910.70	-41.51	632.42	555.13	77.30	8.182	
9,900.00	6,130.00	9,306.17	5,530.00	80.59	80.32	-18.426	-4,010.69	-40.94	632.42	553.27	79.15	7.990	
10,000.00	6,130.00	9,406.17	5,530.00	82.44	82.19	-18.426	-4,110.69	-40.36	632.42	551.41	81.01	7.806	
10,100.00	6,130.00	9,506.17	5,530.00	84.29	84.05	-18.426	-4,210.69	-39.79	632.42	549.55	82.88	7.631	
10,200.00	6,130.00	9,606.17	5,530.00	86.14	85.92	-18.426	-4,310.69	-39.21	632.42	547.68	84.74	7.463	
10,300.00	6,130.00	9,706.17	5,530.00	88.00	87.79	-18.426	-4,410.69	-38.64	632.42	545.81	86.61	7.302	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - #12H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-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	
10,400.00	6,130.00	9,806.17	5,530.00	89.85	89.66	-18.426	-4,510.69	-38.06	632.42	543.94	88.48	7.147	
10,500.00	6,130.00	9,906.17	5,530.00	91.72	91.54	-18.426	-4,610.68	-37.49	632.42	542.07	90.36	6.999	
10,600.00	6,130.00	10,006.17	5,530.00	93.58	93.41	-18.426	-4,710.68	-36.92	632.42	540.19	92.23	6.857	
10,700.00	6,130.00	10,106.17	5,530.00	95.44	95.29	-18.426	-4,810.68	-36.34	632.42	538.31	94.11	6.720	
10,800.00	6,130.00	10,206.17	5,530.00	97.31	97.17	-18.426	-4,910.68	-35.77	632.42	536.44	95.99	6.589	
10,900.00	6,130.00	10,306.17	5,530.00	99.18	99.05	-18.426	-5,010.68	-35.19	632.42	534.56	97.87	6.462	
11,000.00	6,130.00	10,406.17	5,530.00	101.05	100.93	-18.426	-5,110.68	-34.62	632.42	532.67	99.75	6.340	
11,100.00	6,130.00	10,506.17	5,530.00	102.92	102.81	-18.426	-5,210.67	-34.04	632.42	530.79	101.63	6.223	
11,200.00	6,130.00	10,606.17	5,530.00	104.80	104.70	-18.426	-5,310.67	-33.47	632.42	528.91	103.52	6.109	
11,300.00	6,130.00	10,706.17	5,530.00	106.67	106.58	-18.426	-5,410.67	-32.89	632.42	527.02	105.40	6.000	
11,400.00	6,130.00	10,806.17	5,530.00	108.55	108.47	-18.426	-5,510.67	-32.32	632.42	525.13	107.29	5.894	
11,500.00	6,130.00	10,906.17	5,530.00	110.43	110.36	-18.426	-5,610.67	-31.74	632.42	523.24	109.18	5.792	
11,600.00	6,130.00	11,006.17	5,530.00	112.31	112.25	-18.426	-5,710.67	-31.17	632.42	521.35	111.07	5.694	
11,700.00	6,130.00	11,093.83	5,530.00	114.19	113.91	-18.426	-5,810.66	-30.59	632.42	519.58	112.84	5.604	
11,767.39	6,130.00	11,161.22	5,530.00	115.46	115.18	-18.426	-5,878.05	-30.20	632.42	518.31	114.12	5.542	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - #14H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		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	-116.310	-8.90	-18.00	20.08				
100.00	100.00	100.00	100.00	0.14	0.14	-116.310	-8.90	-18.00	20.08	19.79	0.29	70.020	
200.00	200.00	200.00	200.00	0.50	0.50	-116.310	-8.90	-18.00	20.08	19.08	1.00	20.006	
300.00	300.00	300.00	300.00	0.86	0.86	-116.310	-8.90	-18.00	20.08	18.36	1.72	11.670 CC	
400.00	399.98	399.58	399.56	1.22	1.21	-65.417	-8.12	-19.54	20.38	17.95	2.43	8.388 ES	
500.00	499.84	499.16	498.99	1.58	1.57	-66.784	-5.77	-24.17	21.31	18.17	3.14	6.783	
600.00	599.63	598.66	598.12	1.94	1.94	-63.842	-1.86	-31.87	23.77	19.91	3.87	6.149	
700.00	699.43	698.41	697.25	2.31	2.33	-57.594	3.17	-41.77	27.94	23.35	4.60	6.078	
800.00	799.22	801.72	796.48	2.68	2.74	-52.886	8.25	-51.76	32.43	27.09	5.34	6.069 SF	
900.00	899.02	901.86	895.72	3.06	3.14	-49.340	13.33	-61.76	37.08	31.01	6.08	6.102	
1,000.00	998.81	1,001.99	994.96	3.43	3.54	-46.592	18.41	-71.76	41.85	35.04	6.81	6.144	
1,100.00	1,098.60	1,102.12	1,094.20	3.80	3.95	-44.409	23.48	-81.75	46.69	39.14	7.54	6.188	
1,200.00	1,198.40	1,202.25	1,193.43	4.18	4.36	-42.638	28.56	-91.75	51.58	43.30	8.28	6.231	
1,300.00	1,298.19	1,302.38	1,292.67	4.55	4.76	-41.176	33.64	-101.75	56.52	47.50	9.01	6.272	
1,400.00	1,397.98	1,402.51	1,391.91	4.93	5.17	-39.949	38.72	-111.74	61.48	51.74	9.74	6.310	
1,500.00	1,497.78	1,502.64	1,491.14	5.30	5.58	-38.905	43.79	-121.74	66.47	55.99	10.48	6.345	
1,600.00	1,597.57	1,602.77	1,590.38	5.68	6.00	-38.008	48.87	-131.73	71.48	60.27	11.21	6.377	
1,700.00	1,697.37	1,702.91	1,689.62	6.06	6.41	-37.228	53.95	-141.73	76.50	64.56	11.94	6.406	
1,800.00	1,797.16	1,803.04	1,788.86	6.43	6.82	-36.544	59.03	-151.73	81.54	68.86	12.67	6.433	
1,900.00	1,896.95	1,896.83	1,888.09	6.81	7.21	-35.940	64.11	-161.72	86.59	73.20	13.38	6.469	
2,000.00	1,996.75	2,003.30	1,987.33	7.18	7.64	-35.403	69.18	-171.72	91.64	77.50	14.14	6.481	
2,100.00	2,096.54	2,103.43	2,086.57	7.56	8.06	-34.922	74.26	-181.72	96.70	81.83	14.87	6.502	
2,200.00	2,196.33	2,196.44	2,185.81	7.94	8.44	-34.488	79.34	-191.71	101.77	86.19	15.58	6.532	
2,300.00	2,296.13	2,303.69	2,285.04	8.31	8.88	-34.096	84.42	-201.71	106.84	90.50	16.34	6.539	
2,400.00	2,395.92	2,396.17	2,384.28	8.69	9.27	-33.740	89.49	-211.71	111.92	94.88	17.04	6.567	
2,500.00	2,495.71	2,503.96	2,483.52	9.07	9.71	-33.414	94.57	-221.70	117.00	99.20	17.81	6.571	
2,600.00	2,595.51	2,604.09	2,582.75	9.44	10.12	-33.116	99.65	-231.70	122.09	103.55	18.54	6.586	
2,700.00	2,695.30	2,704.22	2,681.99	9.82	10.54	-32.841	104.73	-241.70	127.18	107.91	19.27	6.599	
2,800.00	2,795.10	2,804.35	2,781.23	10.20	10.95	-32.587	109.81	-251.69	132.27	112.26	20.00	6.612	
2,900.00	2,894.89	2,904.48	2,880.47	10.57	11.37	-32.353	114.88	-261.69	137.36	116.62	20.74	6.624	
3,000.00	2,994.68	3,004.61	2,979.70	10.95	11.78	-32.135	119.96	-271.69	142.46	120.99	21.47	6.635	
3,100.00	3,094.48	3,104.74	3,078.94	11.32	12.19	-31.932	125.04	-281.68	147.56	125.35	22.20	6.646	
3,200.00	3,194.27	3,195.12	3,178.18	11.70	12.57	-31.743	130.12	-291.68	152.65	129.75	22.90	6.666	
3,300.00	3,294.06	3,305.01	3,277.42	12.08	13.02	-31.566	135.19	-301.68	157.76	134.09	23.67	6.665	
3,400.00	3,393.86	3,405.14	3,376.65	12.45	13.43	-31.400	140.27	-311.67	162.86	138.45	24.40	6.674	
3,500.00	3,493.65	3,505.27	3,475.89	12.83	13.85	-31.244	145.35	-321.67	167.96	142.83	25.14	6.682	
3,600.00	3,593.45	3,594.60	3,575.13	13.21	14.22	-31.097	150.43	-331.67	173.07	147.24	25.83	6.701	
3,700.00	3,693.24	3,694.47	3,674.36	13.58	14.63	-30.959	155.51	-341.66	178.17	151.61	26.56	6.708	
3,800.00	3,793.03	3,805.66	3,773.60	13.96	15.09	-30.828	160.58	-351.66	183.28	155.94	27.34	6.705	
3,900.00	3,892.83	3,905.80	3,872.84	14.34	15.51	-30.705	165.66	-361.66	188.39	160.32	28.07	6.712	
4,000.00	3,992.62	4,005.93	3,972.08	14.71	15.92	-30.588	170.74	-371.65	193.49	164.69	28.80	6.718	
4,100.00	4,092.41	4,106.06	4,071.31	15.09	16.33	-30.477	175.82	-381.65	198.60	169.07	29.53	6.724	
4,200.00	4,192.21	4,206.19	4,170.55	15.47	16.75	-30.371	180.89	-391.65	203.71	173.45	30.27	6.730	
4,300.00	4,292.00	4,293.68	4,269.79	15.84	17.11	-30.271	185.97	-401.64	208.82	177.87	30.95	6.746	
4,400.00	4,391.80	4,395.98	4,371.50	16.22	17.53	-30.581	189.62	-411.79	213.64	181.93	31.71	6.738	
4,500.00	4,491.59	4,499.47	4,474.30	16.60	17.89	-33.454	183.41	-421.44	216.81	184.32	32.49	6.672	
4,600.00	4,591.38	4,599.66	4,572.69	16.97	18.20	-38.887	166.80	-430.01	219.64	186.34	33.30	6.596	
4,700.00	4,691.18	4,694.64	4,663.93	17.35	18.45	-46.269	141.61	-437.34	224.96	190.87	34.09	6.599	
4,800.00	4,790.97	4,783.10	4,746.33	17.73	18.66	-54.699	110.09	-443.43	236.19	201.48	34.71	6.804	
4,900.00	4,890.76	4,864.33	4,819.18	18.10	18.84	-63.180	74.54	-448.33	256.29	221.33	34.96	7.332	
5,000.00	4,990.56	4,938.16	4,882.59	18.48	19.00	-70.938	36.97	-452.18	286.77	252.07	34.71	8.263	
5,100.00	5,090.35	5,004.79	4,937.21	18.86	19.14	-75.773	-1.05	-455.15	327.56	293.52	34.04	9.623	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - #14H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,190.18	5,067.43	4,986.05	19.21	19.28	8.545	-40.18	-457.49	374.31	341.16	33.15	11.292	
5,300.00	5,289.32	5,128.92	5,031.43	19.51	19.43	23.148	-81.62	-459.35	422.04	389.92	32.12	13.141	
5,400.00	5,386.69	5,189.45	5,073.43	19.78	19.60	24.311	-125.18	-460.74	469.07	438.03	31.04	15.113	
5,500.00	5,481.22	5,250.00	5,112.62	20.02	19.81	23.245	-171.31	-461.70	514.37	484.39	29.97	17.160	
5,600.00	5,571.87	5,308.30	5,147.54	20.24	20.04	21.814	-217.98	-462.21	557.21	528.35	28.86	19.305	
5,700.00	5,657.66	5,366.85	5,179.70	20.45	20.33	20.390	-266.90	-462.32	597.10	569.29	27.82	21.465	
5,800.00	5,737.63	5,443.93	5,218.55	20.68	20.79	18.888	-333.46	-461.98	632.92	605.45	27.47	23.040	
5,900.00	5,810.93	5,539.42	5,266.29	20.96	21.48	17.707	-416.15	-461.50	660.42	632.64	27.79	23.768	
6,000.00	5,876.74	5,614.02	5,303.27	21.37	22.09	17.145	-480.94	-461.13	679.34	651.84	27.50	24.702	
6,100.00	5,934.33	5,650.00	5,319.11	21.91	22.41	16.892	-513.24	-460.95	695.23	669.06	26.17	26.567	
6,200.00	5,984.94	5,700.00	5,337.70	22.55	22.89	16.670	-559.64	-460.68	710.66	685.18	25.48	27.893	
6,300.00	6,034.94	5,750.00	5,352.17	23.30	23.40	16.405	-607.48	-460.41	732.90	707.90	25.01	29.307	
6,400.00	6,081.84	5,800.00	5,362.42	24.14	23.93	15.652	-656.41	-460.13	759.11	734.35	24.76	30.664	
6,500.00	6,113.79	5,834.78	5,367.01	25.09	24.32	15.052	-690.88	-459.93	776.88	752.30	24.57	31.616	
6,600.00	6,128.83	5,877.72	5,369.79	26.12	24.81	14.766	-733.72	-459.69	785.22	760.30	24.92	31.510	
6,700.00	6,130.00	5,957.05	5,370.00	27.23	25.75	14.744	-813.04	-459.24	785.88	760.03	25.85	30.405	
6,800.00	6,130.00	6,057.05	5,370.00	28.42	27.01	14.744	-913.04	-458.66	785.88	758.87	27.00	29.101	
6,900.00	6,130.00	6,157.05	5,370.00	29.68	28.33	14.744	-1,013.04	-458.09	785.88	757.65	28.23	27.838	
7,000.00	6,130.00	6,257.05	5,370.00	31.01	29.72	14.745	-1,113.03	-457.52	785.88	756.36	29.52	26.626	
7,100.00	6,130.00	6,357.05	5,370.00	32.40	31.17	14.745	-1,213.03	-456.95	785.88	755.03	30.85	25.473	
7,200.00	6,130.00	6,457.05	5,370.00	33.84	32.66	14.745	-1,313.03	-456.38	785.88	753.65	32.23	24.380	
7,300.00	6,130.00	6,557.05	5,370.00	35.32	34.19	14.745	-1,413.03	-455.81	785.88	752.23	33.66	23.350	
7,400.00	6,130.00	6,657.05	5,370.00	36.85	35.76	14.745	-1,513.03	-455.23	785.88	750.77	35.11	22.381	
7,500.00	6,130.00	6,757.05	5,370.00	38.41	37.37	14.746	-1,613.03	-454.66	785.88	749.28	36.60	21.471	
7,600.00	6,130.00	6,857.05	5,370.00	40.00	39.00	14.746	-1,713.02	-454.09	785.88	747.77	38.12	20.618	
7,700.00	6,130.00	6,957.05	5,370.00	41.61	40.65	14.746	-1,813.02	-453.52	785.88	746.23	39.66	19.817	
7,800.00	6,130.00	7,057.05	5,370.00	43.26	42.33	14.746	-1,913.02	-452.95	785.89	744.67	41.22	19.067	
7,900.00	6,130.00	7,157.05	5,370.00	44.92	44.02	14.747	-2,013.02	-452.38	785.89	743.09	42.80	18.363	
8,000.00	6,130.00	7,257.05	5,370.00	46.60	45.74	14.747	-2,113.02	-451.80	785.89	741.49	44.40	17.702	
8,100.00	6,130.00	7,357.05	5,370.00	48.30	47.47	14.747	-2,213.02	-451.23	785.89	739.88	46.01	17.082	
8,200.00	6,130.00	7,457.05	5,370.00	50.02	49.21	14.747	-2,313.01	-450.66	785.89	738.25	47.63	16.498	
8,300.00	6,130.00	7,557.05	5,370.00	51.75	50.96	14.748	-2,413.01	-450.09	785.89	736.62	49.27	15.950	
8,400.00	6,130.00	7,657.05	5,370.00	53.49	52.73	14.748	-2,513.01	-449.52	785.89	734.97	50.92	15.433	
8,500.00	6,130.00	7,757.05	5,370.00	55.25	54.51	14.748	-2,613.01	-448.95	785.89	733.31	52.58	14.946	
8,600.00	6,130.00	7,857.05	5,370.00	57.01	56.29	14.748	-2,713.01	-448.37	785.89	731.64	54.25	14.486	
8,700.00	6,130.00	7,957.05	5,370.00	58.78	58.09	14.749	-2,813.01	-447.80	785.89	729.96	55.93	14.051	
8,800.00	6,130.00	8,057.05	5,370.00	60.57	59.89	14.749	-2,913.00	-447.23	785.89	728.28	57.62	13.640	
8,900.00	6,130.00	8,157.05	5,370.00	62.36	61.70	14.749	-3,013.00	-446.66	785.89	726.59	59.31	13.251	
9,000.00	6,130.00	8,257.05	5,370.00	64.16	63.51	14.749	-3,113.00	-446.09	785.90	724.89	61.01	12.882	
9,100.00	6,130.00	8,357.05	5,370.00	65.96	65.33	14.749	-3,213.00	-445.52	785.90	723.19	62.71	12.532	
9,200.00	6,130.00	8,457.05	5,370.00	67.77	67.16	14.750	-3,313.00	-444.95	785.90	721.48	64.42	12.199	
9,300.00	6,130.00	8,557.05	5,370.00	69.59	68.99	14.750	-3,413.00	-444.37	785.90	719.76	66.14	11.883	
9,400.00	6,130.00	8,657.05	5,370.00	71.41	70.83	14.750	-3,512.99	-443.80	785.90	718.04	67.86	11.582	
9,500.00	6,130.00	8,757.05	5,370.00	73.24	72.67	14.750	-3,612.99	-443.23	785.90	716.32	69.58	11.295	
9,600.00	6,130.00	8,857.05	5,370.00	75.07	74.51	14.751	-3,712.99	-442.66	785.90	714.59	71.31	11.021	
9,700.00	6,130.00	8,957.05	5,370.00	76.91	76.36	14.751	-3,812.99	-442.09	785.90	712.86	73.04	10.760	
9,800.00	6,130.00	9,057.05	5,370.00	78.75	78.21	14.751	-3,912.99	-441.52	785.90	711.13	74.78	10.510	
9,900.00	6,130.00	9,157.05	5,370.00	80.59	80.06	14.751	-4,012.99	-440.94	785.90	709.39	76.51	10.271	
10,000.00	6,130.00	9,257.05	5,370.00	82.44	81.92	14.752	-4,112.99	-440.37	785.90	707.65	78.26	10.043	
10,100.00	6,130.00	9,357.05	5,370.00	84.29	83.78	14.752	-4,212.98	-439.80	785.91	705.91	80.00	9.824	
10,200.00	6,130.00	9,457.05	5,370.00	86.14	85.64	14.752	-4,312.98	-439.23	785.91	704.16	81.75	9.614	
10,300.00	6,130.00	9,557.05	5,370.00	88.00	87.51	14.752	-4,412.98	-438.66	785.91	702.41	83.50	9.412	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - #14H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-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
10,400.00	6,130.00	9,657.05	5,370.00	89.85	89.37	14.753	-4,512.98	-438.09	785.91	700.66	85.25	9.219	
10,500.00	6,130.00	9,757.05	5,370.00	91.72	91.24	14.753	-4,612.98	-437.51	785.91	698.91	87.00	9.033	
10,600.00	6,130.00	9,857.05	5,370.00	93.58	93.11	14.753	-4,712.98	-436.94	785.91	697.15	88.76	8.855	
10,700.00	6,130.00	9,957.05	5,370.00	95.44	94.99	14.753	-4,812.97	-436.37	785.91	695.39	90.52	8.683	
10,800.00	6,130.00	10,057.05	5,370.00	97.31	96.86	14.753	-4,912.97	-435.80	785.91	693.64	92.28	8.517	
10,900.00	6,130.00	10,157.05	5,370.00	99.18	98.74	14.754	-5,012.97	-435.23	785.91	691.88	94.04	8.358	
11,000.00	6,130.00	10,257.05	5,370.00	101.05	100.62	14.754	-5,112.97	-434.66	785.91	690.11	95.80	8.204	
11,100.00	6,130.00	10,357.05	5,370.00	102.92	102.50	14.754	-5,212.97	-434.08	785.91	688.35	97.56	8.055	
11,200.00	6,130.00	10,457.05	5,370.00	104.80	104.38	14.754	-5,312.97	-433.51	785.91	686.58	99.33	7.912	
11,300.00	6,130.00	10,557.05	5,370.00	106.67	106.26	14.755	-5,412.96	-432.94	785.92	684.82	101.10	7.774	
11,400.00	6,130.00	10,657.05	5,370.00	108.55	108.14	14.755	-5,512.96	-432.37	785.92	683.05	102.87	7.640	
11,500.00	6,130.00	10,757.05	5,370.00	110.43	110.03	14.755	-5,612.96	-431.80	785.92	681.28	104.64	7.511	
11,600.00	6,130.00	10,857.05	5,370.00	112.31	111.91	14.755	-5,712.96	-431.23	785.92	679.51	106.41	7.386	
11,700.00	6,130.00	10,957.05	5,370.00	114.19	113.80	14.756	-5,812.96	-430.65	785.92	677.74	108.18	7.265	
11,767.39	6,130.00	11,024.44	5,370.00	115.46	115.07	14.756	-5,880.34	-430.27	785.92	676.55	109.37	7.186	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 227-INC-ONLY												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		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	47.00	0.00	0.00	-172.109	-3,534.95	-489.95	3,569.05				
100.00	100.00	53.00	100.00	0.14	0.48	-172.109	-3,534.95	-489.95	3,568.74	3,568.12	0.62	5,721.498	
200.00	200.00	153.00	200.00	0.50	1.39	-172.109	-3,534.95	-489.95	3,568.74	3,566.85	1.89	1,890.059	
300.00	300.00	253.00	300.00	0.86	2.55	-172.109	-3,534.95	-489.95	3,568.74	3,565.33	3.41	1,047.178	
400.00	399.98	352.98	399.98	1.22	4.44	-120.703	-3,534.95	-489.95	3,569.63	3,563.98	5.65	631.569	
500.00	499.84	445.56	492.56	1.58	6.18	-120.731	-3,534.79	-489.95	3,572.14	3,564.38	7.76	460.275	
600.00	599.63	552.65	599.63	1.94	8.27	-120.827	-3,534.95	-489.95	3,575.58	3,565.37	10.21	350.304	
700.00	699.43	632.37	679.35	2.31	9.87	-120.897	-3,534.86	-489.95	3,578.85	3,566.67	12.17	293.962	
800.00	799.22	752.26	799.22	2.68	12.29	-121.003	-3,534.95	-489.95	3,582.18	3,567.22	14.96	239.407	
900.00	899.02	845.39	892.35	3.06	14.17	-121.083	-3,534.35	-489.95	3,584.91	3,567.70	17.21	208.260	
1,000.00	998.81	930.43	977.39	3.43	15.88	-121.159	-3,534.69	-489.95	3,588.63	3,569.33	19.30	185.925	
1,100.00	1,098.60	1,051.67	1,098.60	3.80	18.34	-121.266	-3,534.95	-489.95	3,592.16	3,570.03	22.13	162.351	
1,200.00	1,198.40	1,142.10	1,189.02	4.18	20.17	-121.344	-3,534.57	-489.95	3,595.13	3,570.81	24.33	147.778	
1,300.00	1,298.19	1,251.29	1,298.19	4.55	22.35	-121.440	-3,534.95	-489.95	3,598.85	3,571.96	26.89	133.858	
1,400.00	1,397.98	1,350.24	1,397.14	4.93	24.28	-121.525	-3,534.46	-489.95	3,601.72	3,572.54	29.18	123.435	
1,500.00	1,497.78	1,431.79	1,478.68	5.30	25.86	-121.597	-3,534.68	-489.95	3,605.36	3,574.22	31.13	115.802	
1,600.00	1,597.57	1,550.69	1,597.57	5.68	28.28	-121.700	-3,534.95	-489.95	3,608.94	3,575.02	33.93	106.372	
1,700.00	1,697.37	1,650.48	1,697.37	6.06	30.36	-121.787	-3,534.95	-489.95	3,612.33	3,575.95	36.38	99.295	
1,800.00	1,797.16	1,746.52	1,793.40	6.43	32.36	-121.869	-3,534.49	-489.95	3,615.27	3,576.51	38.75	93.289	
1,900.00	1,896.95	1,839.72	1,886.60	6.81	34.30	-121.950	-3,534.68	-489.95	3,618.86	3,577.79	41.07	88.119	
2,000.00	1,996.75	1,949.93	1,996.75	7.18	36.65	-122.046	-3,534.95	-489.95	3,622.52	3,578.74	43.78	82.742	
2,100.00	2,096.54	2,046.91	2,093.72	7.56	38.79	-122.128	-3,534.19	-489.95	3,625.19	3,578.90	46.29	78.307	
2,200.00	2,196.33	2,120.56	2,167.36	7.94	40.41	-122.191	-3,534.52	-489.95	3,629.05	3,580.76	48.29	75.149	
2,300.00	2,296.13	2,249.36	2,296.13	8.31	43.03	-122.303	-3,534.95	-489.95	3,632.79	3,581.52	51.28	70.846	
2,400.00	2,395.92	2,344.95	2,391.72	8.69	44.88	-122.383	-3,534.34	-489.95	3,635.63	3,582.13	53.50	67.953	
2,500.00	2,495.71	2,429.58	2,476.34	9.07	46.52	-122.456	-3,534.62	-489.95	3,639.40	3,583.89	55.51	65.559	
2,600.00	2,595.51	2,548.77	2,595.51	9.44	48.71	-122.558	-3,534.95	-489.95	3,643.14	3,585.06	58.08	62.730	
2,700.00	2,695.30	2,641.38	2,688.12	9.82	50.34	-122.637	-3,534.76	-489.95	3,646.42	3,586.34	60.08	60.693	
2,800.00	2,795.10	2,748.36	2,795.10	10.20	52.18	-122.728	-3,534.95	-489.95	3,650.07	3,587.78	62.29	58.598	
2,900.00	2,894.89	2,846.66	2,893.39	10.57	53.81	-122.811	-3,534.79	-489.95	3,653.40	3,589.10	64.29	56.825	
3,000.00	2,994.68	2,939.38	2,986.12	10.95	55.35	-122.890	-3,534.92	-489.95	3,657.02	3,590.82	66.20	55.240	
3,100.00	3,094.48	3,047.74	3,094.48	11.32	57.18	-122.981	-3,534.95	-489.95	3,660.54	3,592.13	68.41	53.508	
3,200.00	3,194.27	3,145.86	3,192.60	11.70	58.85	-123.064	-3,534.91	-489.95	3,664.00	3,593.55	70.45	52.008	
3,300.00	3,294.06	3,247.33	3,294.06	12.08	60.61	-123.149	-3,534.95	-489.95	3,667.55	3,594.97	72.58	50.528	
3,400.00	3,393.86	3,345.78	3,392.52	12.45	62.37	-123.231	-3,534.73	-489.95	3,670.86	3,596.14	74.71	49.132	
3,500.00	3,493.65	3,436.43	3,483.16	12.83	63.99	-123.308	-3,534.88	-489.95	3,674.54	3,597.84	76.70	47.905	
3,600.00	3,593.45	3,546.72	3,593.45	13.21	66.03	-123.400	-3,534.95	-489.95	3,678.14	3,599.02	79.12	46.490	
3,700.00	3,693.24	3,640.84	3,687.57	13.58	67.78	-123.478	-3,534.77	-489.95	3,681.51	3,600.26	81.24	45.314	
3,800.00	3,793.03	3,746.32	3,793.03	13.96	69.78	-123.566	-3,534.95	-489.95	3,685.23	3,601.62	83.61	44.076	
3,900.00	3,892.83	3,844.81	3,891.53	14.34	71.69	-123.648	-3,534.56	-489.95	3,688.40	3,602.51	85.90	42.940	
4,000.00	3,992.62	3,929.56	3,976.27	14.71	73.34	-123.718	-3,534.77	-489.95	3,692.21	3,604.30	87.91	41.999	
4,100.00	4,092.41	4,045.72	4,092.41	15.09	75.55	-123.815	-3,534.95	-489.95	3,695.93	3,605.43	90.50	40.839	
4,200.00	4,192.21	4,136.89	4,183.58	15.47	77.27	-123.890	-3,534.62	-489.95	3,699.19	3,606.60	92.59	39.951	
4,300.00	4,292.00	4,245.32	4,292.00	15.84	79.30	-123.980	-3,534.95	-489.95	3,703.10	3,608.10	94.99	38.982	
4,400.00	4,391.80	4,344.65	4,391.33	16.22	81.10	-124.061	-3,534.67	-489.95	3,706.42	3,609.25	97.17	38.144	
4,500.00	4,491.59	4,433.19	4,479.87	16.60	82.71	-124.134	-3,534.82	-489.95	3,710.19	3,611.04	99.15	37.421	
4,600.00	4,591.38	4,544.71	4,591.38	16.97	84.72	-124.226	-3,534.95	-489.95	3,713.91	3,612.38	101.53	36.580	
4,700.00	4,691.18	4,639.86	4,686.54	17.35	86.43	-124.303	-3,534.76	-489.95	3,717.34	3,613.74	103.60	35.880	
4,800.00	4,790.97	4,744.30	4,790.97	17.73	88.30	-124.389	-3,534.95	-489.95	3,721.16	3,615.31	105.85	35.155	
4,900.00	4,890.76	4,844.10	4,890.76	18.10	90.09	-124.470	-3,534.95	-489.95	3,724.79	3,616.78	108.01	34.485	
5,000.00	4,990.56	4,934.92	4,981.59	18.48	91.72	-124.544	-3,534.83	-489.95	3,728.33	3,618.32	110.01	33.890	
5,100.00	5,090.35	5,043.69	5,090.35	18.86	93.77	-122.746	-3,534.95	-489.95	3,732.08	3,619.64	112.44	33.192	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - Offset: HT 18 Fed #4 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 227-INC-ONLY												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside 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	5,190.18	5,141.16	5,187.82	19.21	95.66	-30.896	-3,534.71	-489.95	3,730.02	3,615.34	114.68	32.524	
5,300.00	5,289.32	5,232.00	5,278.66	19.51	97.43	-10.279	-3,534.87	-489.95	3,718.00	3,601.22	116.77	31.839	
5,400.00	5,386.69	5,333.47	5,380.11	19.78	99.49	-4.301	-3,534.68	-489.95	3,695.36	3,576.21	119.15	31.015	
5,500.00	5,481.22	5,434.59	5,481.22	20.02	101.54	-1.422	-3,534.95	-489.95	3,663.16	3,541.68	121.49	30.153	
5,600.00	5,571.87	5,522.44	5,569.06	20.24	103.29	0.397	-3,534.46	-489.95	3,620.57	3,497.07	123.50	29.317	
5,700.00	5,657.66	5,592.69	5,639.30	20.45	104.69	1.784	-3,534.67	-489.95	3,569.54	3,444.40	125.13	28.526	
5,800.00	5,737.63	5,691.04	5,737.63	20.68	106.56	3.044	-3,534.95	-489.95	3,509.85	3,382.63	127.22	27.588	
5,900.00	5,810.93	5,764.33	5,810.93	20.96	107.91	4.341	-3,534.95	-489.95	3,441.97	3,313.21	128.76	26.732	
6,000.00	5,876.74	5,823.56	5,870.15	21.37	109.00	5.829	-3,534.56	-489.95	3,366.48	3,236.47	130.00	25.896	
6,100.00	5,934.33	5,874.19	5,920.78	21.91	109.94	7.715	-3,534.71	-489.95	3,285.15	3,154.09	131.06	25.066	
6,200.00	5,984.94	5,938.35	5,984.94	22.55	111.11	8.781	-3,534.95	-489.95	3,199.36	3,067.03	132.33	24.178	
6,300.00	6,034.94	5,988.35	6,034.94	23.30	112.01	9.022	-3,534.95	-489.95	3,113.02	2,979.70	133.32	23.351	
6,400.00	6,081.84	6,035.25	6,081.84	24.14	112.85	11.509	-3,534.95	-489.95	3,025.06	2,890.81	134.25	22.533	
6,500.00	6,113.79	6,066.67	6,113.25	25.09	113.41	19.645	-3,534.77	-489.95	2,930.59	2,795.71	134.87	21.729	
6,600.00	6,128.83	6,080.95	6,127.54	26.12	113.67	53.633	-3,534.77	-489.95	2,832.22	2,697.08	135.14	20.958	
6,700.00	6,130.00	6,082.11	6,128.69	27.23	113.69	89.696	-3,534.77	-489.95	2,732.64	2,597.49	135.14	20.220	
6,800.00	6,130.00	6,082.15	6,128.74	28.42	113.69	89.707	-3,534.78	-489.95	2,633.06	2,497.93	135.13	19.486	
6,900.00	6,130.00	6,082.20	6,128.78	29.68	113.69	89.717	-3,534.78	-489.95	2,533.52	2,398.40	135.11	18.751	
7,000.00	6,130.00	6,082.24	6,128.83	31.01	113.69	89.728	-3,534.78	-489.95	2,434.01	2,298.91	135.10	18.017	
7,100.00	6,130.00	6,082.29	6,128.88	32.40	113.69	89.739	-3,534.78	-489.95	2,334.54	2,199.46	135.09	17.282	
7,200.00	6,130.00	6,082.34	6,128.92	33.84	113.69	89.750	-3,534.78	-489.95	2,235.13	2,100.05	135.08	16.547	
7,300.00	6,130.00	6,082.38	6,128.97	35.32	113.69	89.760	-3,534.78	-489.95	2,135.77	2,000.69	135.08	15.812	
7,400.00	6,130.00	6,082.43	6,129.02	36.85	113.69	89.771	-3,534.78	-489.95	2,036.47	1,901.39	135.08	15.076	
7,500.00	6,130.00	6,082.48	6,129.06	38.41	113.69	89.782	-3,534.78	-489.95	1,937.24	1,802.15	135.09	14.340	
7,600.00	6,130.00	6,082.52	6,129.11	40.00	113.70	89.793	-3,534.78	-489.95	1,838.09	1,702.98	135.11	13.604	
7,700.00	6,130.00	6,082.57	6,129.16	41.61	113.70	89.804	-3,534.78	-489.95	1,739.05	1,603.90	135.14	12.868	
7,800.00	6,130.00	6,082.62	6,129.21	43.26	113.70	89.815	-3,534.78	-489.95	1,640.12	1,504.92	135.20	12.131	
7,900.00	6,130.00	6,082.67	6,129.25	44.92	113.70	89.826	-3,534.78	-489.95	1,541.33	1,406.05	135.27	11.394	
8,000.00	6,130.00	6,082.71	6,129.30	46.60	113.70	89.837	-3,534.78	-489.95	1,442.70	1,307.32	135.38	10.656	
8,100.00	6,130.00	6,082.76	6,129.35	48.30	113.70	89.848	-3,534.78	-489.95	1,344.28	1,208.74	135.54	9.918	
8,200.00	6,130.00	6,082.81	6,129.40	50.02	113.70	89.860	-3,534.78	-489.95	1,246.11	1,110.34	135.76	9.179	
8,300.00	6,130.00	6,082.86	6,129.44	51.75	113.70	89.871	-3,534.78	-489.95	1,148.25	1,012.18	136.07	8.439	
8,400.00	6,130.00	6,082.91	6,129.49	53.49	113.70	89.882	-3,534.78	-489.95	1,050.80	914.29	136.51	7.698	
8,500.00	6,130.00	6,082.96	6,129.54	55.25	113.70	89.893	-3,534.78	-489.95	953.87	816.75	137.13	6.956	
8,600.00	6,130.00	6,083.00	6,129.59	57.01	113.70	89.905	-3,534.78	-489.95	857.66	719.64	138.02	6.214	
8,700.00	6,130.00	6,083.05	6,129.64	58.78	113.71	89.916	-3,534.78	-489.95	762.41	623.11	139.30	5.473	
8,800.00	6,130.00	6,083.10	6,129.69	60.57	113.71	89.928	-3,534.78	-489.95	668.56	527.37	141.19	4.735	
8,900.00	6,130.00	6,083.15	6,129.74	62.36	113.71	89.939	-3,534.78	-489.95	576.77	432.78	143.99	4.006	
9,000.00	6,130.00	6,083.20	6,129.79	64.16	113.71	89.951	-3,534.78	-489.95	488.23	340.04	148.19	3.295	
9,100.00	6,130.00	6,083.25	6,129.84	65.96	113.71	89.962	-3,534.78	-489.95	405.05	250.59	154.46	2.622	
9,200.00	6,130.00	6,083.30	6,129.89	67.77	113.71	89.974	-3,534.78	-489.95	331.31	167.77	163.54	2.026	
9,300.00	6,130.00	6,083.35	6,129.94	69.59	113.71	89.986	-3,534.78	-489.95	274.70	99.70	175.01	1.570	
9,400.00	6,130.00	6,083.40	6,129.99	71.41	113.71	89.997	-3,534.78	-489.95	247.31	62.90	184.41	1.341 SF = 1.50	
9,421.51	6,130.00	6,083.41	6,130.00	71.81	113.71	90.000	-3,534.78	-489.95	246.37	60.98	185.39	1.329 SF = 1.50, CC, ES, SF	
9,500.00	6,130.00	6,083.45	6,130.04	73.24	113.71	90.009	-3,534.78	-489.95	258.57	73.66	184.92	1.398 SF = 1.50	
9,600.00	6,130.00	6,083.50	6,130.09	75.07	113.71	90.021	-3,534.78	-489.95	304.23	126.15	178.09	1.708	
9,700.00	6,130.00	6,083.55	6,130.14	76.91	113.71	90.033	-3,534.78	-489.95	371.83	201.73	170.10	2.186	
9,800.00	6,130.00	6,083.61	6,130.19	78.75	113.72	90.045	-3,534.78	-489.95	451.61	288.04	163.57	2.761	
9,900.00	6,130.00	6,083.66	6,130.24	80.59	113.72	90.056	-3,534.78	-489.95	538.19	379.50	158.70	3.391	
10,000.00	6,130.00	6,083.71	6,130.29	82.44	113.72	90.068	-3,534.78	-489.95	628.77	473.68	155.09	4.054	
10,100.00	6,130.00	6,083.76	6,130.35	84.29	113.72	90.080	-3,534.78	-489.95	721.84	569.44	152.39	4.737	
10,200.00	6,130.00	6,083.81	6,130.40	86.14	113.72	90.093	-3,534.78	-489.95	816.55	666.21	150.33	5.432	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - Offset: HT 18 Fed #4 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 227-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
10,300.00	6,130.00	6,083.86	6,130.45	88.00	113.72	90.105	-3,534.78	-489.95	912.38	763.65	148.73	6.134	
10,400.00	6,130.00	6,083.92	6,130.50	89.85	113.72	90.117	-3,534.78	-489.95	1,009.03	861.56	147.47	6.842	
10,500.00	6,130.00	6,083.97	6,130.56	91.72	113.72	90.129	-3,534.78	-489.95	1,106.27	959.83	146.45	7.554	
10,600.00	6,130.00	6,084.02	6,130.61	93.58	113.72	90.141	-3,534.78	-489.95	1,203.97	1,058.35	145.62	8.268	
10,700.00	6,130.00	6,084.07	6,130.66	95.44	113.72	90.154	-3,534.78	-489.95	1,302.01	1,157.08	144.93	8.984	
10,800.00	6,130.00	6,084.13	6,130.71	97.31	113.72	90.166	-3,534.78	-489.95	1,400.33	1,255.97	144.36	9.700	
10,900.00	6,130.00	6,084.18	6,130.77	99.18	113.73	90.178	-3,534.78	-489.95	1,498.88	1,355.00	143.88	10.418	
11,000.00	6,130.00	6,084.23	6,130.82	101.05	113.73	90.191	-3,534.78	-489.95	1,597.60	1,454.13	143.47	11.135	
11,100.00	6,130.00	6,084.29	6,130.87	102.92	113.73	90.203	-3,534.78	-489.95	1,696.48	1,553.35	143.12	11.853	
11,200.00	6,130.00	6,084.34	6,130.93	104.80	113.73	90.216	-3,534.78	-489.95	1,795.47	1,652.65	142.83	12.571	
11,300.00	6,130.00	6,084.40	6,130.98	106.67	113.73	90.229	-3,534.78	-489.95	1,894.58	1,752.01	142.57	13.289	
11,400.00	6,130.00	6,084.45	6,131.04	108.55	113.73	90.241	-3,534.78	-489.95	1,993.77	1,851.42	142.35	14.006	
11,500.00	6,130.00	6,084.51	6,131.09	110.43	113.73	90.254	-3,534.78	-489.95	2,093.04	1,950.89	142.16	14.724	
11,600.00	6,130.00	6,084.56	6,131.15	112.31	113.73	90.267	-3,534.78	-489.95	2,192.38	2,050.39	141.99	15.440	
11,700.00	6,130.00	6,084.62	6,131.20	114.19	113.73	90.279	-3,534.78	-489.95	2,291.77	2,149.93	141.84	16.157	
11,767.39	6,130.00	6,084.65	6,131.24	115.46	113.73	90.288	-3,534.78	-489.95	2,358.78	2,217.02	141.76	16.639	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - Offset: HT 18 Fed #5 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 260-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
0.00	0.00	0.00	34.00	0.00	0.00	-157.213	-1,199.18	-503.78	1,301.15				
100.00	100.00	66.00	100.00	0.14	0.60	-157.213	-1,199.18	-503.78	1,300.70	1,299.96	0.74	1,754.101	
200.00	200.00	166.00	200.00	0.50	1.50	-157.213	-1,199.18	-503.78	1,300.70	1,298.70	2.01	648.422	
300.00	300.00	266.00	300.00	0.86	2.47	-157.213	-1,199.18	-503.78	1,300.70	1,297.38	3.33	391.093	
400.00	399.98	365.98	399.98	1.22	4.29	-105.863	-1,199.18	-503.78	1,301.18	1,295.67	5.51	236.115	
500.00	499.84	465.84	499.84	1.58	6.12	-106.060	-1,199.18	-503.78	1,302.61	1,294.91	7.70	169.230	
600.00	599.63	564.13	598.13	1.94	7.92	-106.321	-1,198.84	-503.78	1,304.09	1,294.23	9.86	132.247	
700.00	699.43	662.07	696.07	2.31	9.71	-106.589	-1,199.04	-503.78	1,306.10	1,294.08	12.02	108.646	
800.00	799.22	765.24	799.22	2.68	11.57	-106.869	-1,199.18	-503.78	1,308.08	1,293.83	14.25	91.813	
900.00	899.02	865.03	899.02	3.06	13.33	-107.138	-1,199.18	-503.78	1,309.96	1,293.57	16.39	79.931	
1,000.00	998.81	964.45	998.43	3.43	15.10	-107.396	-1,198.66	-503.78	1,311.38	1,292.86	18.52	70.794	
1,100.00	1,098.60	1,062.06	1,096.04	3.80	16.83	-107.659	-1,198.78	-503.78	1,313.43	1,292.80	20.63	63.672	
1,200.00	1,198.40	1,159.67	1,193.64	4.18	18.56	-107.923	-1,199.07	-503.78	1,315.68	1,292.94	22.73	57.878	
1,300.00	1,298.19	1,264.21	1,298.19	4.55	20.50	-108.203	-1,199.18	-503.78	1,317.77	1,292.72	25.05	52.606	
1,400.00	1,397.98	1,364.01	1,397.98	4.93	22.39	-108.467	-1,199.18	-503.78	1,319.79	1,292.48	27.31	48.326	
1,500.00	1,497.78	1,463.78	1,497.75	5.30	24.27	-108.729	-1,199.11	-503.78	1,321.78	1,292.21	29.57	44.701	
1,600.00	1,597.57	1,563.33	1,597.30	5.68	26.16	-108.991	-1,199.12	-503.78	1,323.87	1,292.04	31.83	41.598	
1,700.00	1,697.37	1,662.88	1,696.85	6.06	28.04	-109.253	-1,199.15	-503.78	1,326.00	1,291.92	34.08	38.908	
1,800.00	1,797.16	1,763.22	1,797.16	6.43	30.02	-109.516	-1,199.18	-503.78	1,328.16	1,291.72	36.44	36.445	
1,900.00	1,896.95	1,857.55	1,891.48	6.81	32.01	-109.756	-1,198.76	-503.78	1,329.94	1,291.14	38.80	34.274	
2,000.00	1,996.75	1,962.85	1,996.75	7.18	34.17	-110.035	-1,199.18	-503.78	1,332.52	1,291.18	41.33	32.237	
2,100.00	2,096.54	2,062.64	2,096.54	7.56	36.14	-110.294	-1,199.18	-503.78	1,334.73	1,291.05	43.69	30.553	
2,200.00	2,196.33	2,162.05	2,195.94	7.94	38.11	-110.535	-1,198.03	-503.78	1,335.88	1,289.85	46.03	29.023	
2,300.00	2,296.13	2,257.03	2,290.91	8.31	39.99	-110.782	-1,198.24	-503.78	1,338.36	1,290.08	48.28	27.719	
2,400.00	2,395.92	2,351.99	2,385.87	8.69	41.87	-111.033	-1,198.81	-503.78	1,341.23	1,290.69	50.54	26.540	
2,500.00	2,495.71	2,461.87	2,495.71	9.07	43.96	-111.319	-1,199.18	-503.78	1,343.87	1,290.87	53.00	25.357	
2,600.00	2,595.51	2,561.66	2,595.51	9.44	45.80	-111.573	-1,199.18	-503.78	1,346.22	1,291.01	55.22	24.381	
2,700.00	2,695.30	2,661.03	2,694.88	9.82	47.64	-111.818	-1,198.64	-503.78	1,348.09	1,290.66	57.42	23.476	
2,800.00	2,795.10	2,758.60	2,792.45	10.20	49.44	-112.067	-1,198.76	-503.78	1,350.60	1,291.00	59.60	22.662	
2,900.00	2,894.89	2,856.16	2,890.00	10.57	51.24	-112.316	-1,199.04	-503.78	1,353.31	1,291.54	61.77	21.908	
3,000.00	2,994.68	2,960.85	2,994.68	10.95	53.25	-112.580	-1,199.18	-503.78	1,355.89	1,291.73	64.16	21.132	
3,100.00	3,094.48	3,060.65	3,094.48	11.32	55.21	-112.830	-1,199.18	-503.78	1,358.37	1,291.88	66.49	20.429	
3,200.00	3,194.27	3,159.71	3,193.53	11.70	57.15	-113.071	-1,198.67	-503.78	1,360.39	1,291.58	68.81	19.770	
3,300.00	3,294.06	3,257.16	3,290.99	12.08	59.07	-113.314	-1,198.81	-503.78	1,363.06	1,291.97	71.09	19.173	
3,400.00	3,393.86	3,354.61	3,388.43	12.45	60.98	-113.559	-1,199.13	-503.78	1,365.93	1,292.55	73.38	18.615	
3,500.00	3,493.65	3,459.87	3,493.65	12.83	63.04	-113.819	-1,199.18	-503.78	1,368.56	1,292.74	75.82	18.050	
3,600.00	3,593.45	3,559.66	3,593.45	13.21	65.00	-114.064	-1,199.18	-503.78	1,371.17	1,293.02	78.15	17.545	
3,700.00	3,693.24	3,656.94	3,690.72	13.58	66.91	-114.292	-1,198.19	-503.78	1,372.85	1,292.41	80.43	17.068	
3,800.00	3,793.03	3,752.08	3,785.85	13.96	68.78	-114.527	-1,198.54	-503.78	1,375.86	1,293.19	82.67	16.642	
3,900.00	3,892.83	3,859.08	3,892.83	14.34	70.88	-114.793	-1,199.18	-503.78	1,379.15	1,294.00	85.15	16.197	
4,000.00	3,992.62	3,958.88	3,992.62	14.71	72.84	-115.035	-1,199.18	-503.78	1,381.86	1,294.37	87.48	15.795	
4,100.00	4,092.41	4,058.67	4,092.41	15.09	74.80	-115.275	-1,199.18	-503.78	1,384.59	1,294.77	89.82	15.415	
4,200.00	4,192.21	4,157.01	4,190.76	15.47	76.74	-115.506	-1,198.67	-503.78	1,386.85	1,294.72	92.12	15.054	
4,300.00	4,292.00	4,254.52	4,288.26	15.84	78.65	-115.741	-1,198.85	-503.78	1,389.81	1,295.40	94.41	14.721	
4,400.00	4,391.80	4,358.10	4,391.80	16.22	80.70	-115.990	-1,199.18	-503.78	1,392.94	1,296.10	96.83	14.385	
4,500.00	4,491.59	4,457.89	4,491.59	16.60	82.79	-116.226	-1,199.18	-503.78	1,395.77	1,296.47	99.30	14.057	
4,600.00	4,591.38	4,557.68	4,591.38	16.97	84.88	-116.462	-1,199.18	-503.78	1,398.62	1,296.86	101.76	13.745	
4,700.00	4,691.18	4,654.02	4,687.70	17.35	86.90	-116.680	-1,198.23	-503.78	1,400.57	1,296.43	104.14	13.448	
4,800.00	4,790.97	4,749.03	4,782.71	17.73	88.89	-116.906	-1,198.64	-503.78	1,403.89	1,297.38	106.50	13.182	
4,900.00	4,890.76	4,857.14	4,890.76	18.10	91.11	-117.163	-1,199.18	-503.78	1,407.32	1,298.22	109.10	12.900	
5,000.00	4,990.56	4,956.93	4,990.56	18.48	93.07	-117.395	-1,199.18	-503.78	1,410.27	1,298.83	111.43	12.656	
5,100.00	5,090.35	5,056.72	5,090.35	18.86	95.03	-117.739	-1,199.18	-503.78	1,413.23	1,299.46	113.77	12.422	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - Offset: HT 18 Fed #5 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 260-INC-ONLY												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		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	5,190.18	5,151.78	5,185.39	19.21	96.90	-23.966	-1,198.32	-503.78	1,410.01	1,294.02	115.99	12.156	
5,300.00	5,289.32	5,246.18	5,279.79	19.51	98.76	-3.298	-1,198.81	-503.78	1,397.97	1,279.80	118.17	11.830	
5,400.00	5,386.69	5,353.10	5,386.69	19.78	100.87	2.894	-1,199.18	-503.78	1,375.72	1,255.14	120.58	11.409	
5,500.00	5,481.22	5,447.63	5,481.22	20.02	102.73	6.174	-1,199.18	-503.78	1,343.33	1,220.62	122.72	10.947	
5,600.00	5,571.87	5,537.74	5,571.32	20.24	104.50	8.609	-1,198.70	-503.78	1,301.05	1,176.32	124.74	10.430	
5,700.00	5,657.66	5,621.53	5,655.11	20.45	106.15	10.880	-1,198.81	-503.78	1,250.41	1,123.81	126.60	9.877	
5,800.00	5,737.63	5,699.84	5,733.42	20.68	107.69	13.373	-1,199.03	-503.78	1,191.55	1,063.22	128.33	9.285	
5,900.00	5,810.93	5,777.38	5,810.93	20.96	109.22	16.487	-1,199.18	-503.78	1,124.98	994.97	130.01	8.653	
6,000.00	5,876.74	5,843.19	5,876.74	21.37	110.51	20.506	-1,199.18	-503.78	1,051.48	920.06	131.43	8.000	
6,100.00	5,934.33	5,900.79	5,934.33	21.91	111.65	25.991	-1,199.18	-503.78	972.15	839.50	132.65	7.329	
6,200.00	5,984.94	5,951.39	5,984.94	22.55	112.64	30.023	-1,199.18	-503.78	888.99	755.27	133.71	6.648	
6,300.00	6,034.94	6,001.04	6,034.58	23.30	113.62	32.760	-1,198.09	-503.78	805.11	670.34	134.77	5.974	
6,400.00	6,081.84	6,046.90	6,080.44	24.14	114.52	42.064	-1,198.15	-503.78	721.68	585.90	135.78	5.315	
6,500.00	6,113.79	6,078.41	6,111.95	25.09	115.15	60.497	-1,198.23	-503.78	633.66	497.13	136.53	4.641	
6,600.00	6,128.83	6,093.51	6,127.04	26.12	115.44	82.441	-1,198.29	-503.78	544.13	407.07	137.05	3.970	
6,700.00	6,130.00	6,095.03	6,128.56	27.23	115.47	89.666	-1,198.29	-503.78	457.28	319.70	137.58	3.324	
6,800.00	6,130.00	6,095.40	6,128.93	28.42	115.48	89.752	-1,198.29	-503.78	376.97	238.27	138.70	2.718	
6,900.00	6,130.00	6,095.77	6,129.30	29.68	115.49	89.838	-1,198.29	-503.78	308.40	167.44	140.96	2.188	
7,000.00	6,130.00	6,096.15	6,129.68	31.01	115.49	89.925	-1,198.30	-503.78	260.99	116.46	144.53	1.806	
7,084.99	6,130.00	6,096.47	6,130.00	32.19	115.50	90.000	-1,198.30	-503.78	246.76	99.31	147.45	1.674 CC, ES	
7,100.00	6,130.00	6,096.52	6,130.06	32.40	115.50	90.013	-1,198.30	-503.78	247.22	99.41	147.81	1.673 SF	
7,200.00	6,130.00	6,096.90	6,130.44	33.84	115.51	90.101	-1,198.30	-503.78	272.25	123.71	148.54	1.833	
7,300.00	6,130.00	6,097.29	6,130.82	35.32	115.52	90.190	-1,198.30	-503.78	327.29	179.93	147.37	2.221	
7,400.00	6,130.00	6,097.67	6,131.21	36.85	115.52	90.280	-1,198.30	-503.78	400.15	254.30	145.85	2.744	
7,500.00	6,130.00	6,098.06	6,131.59	38.41	115.53	90.370	-1,198.30	-503.78	482.83	338.25	144.58	3.340	
7,600.00	6,130.00	6,098.45	6,131.99	40.00	115.54	90.461	-1,198.30	-503.78	571.07	427.46	143.61	3.976	
7,700.00	6,130.00	6,098.85	6,132.38	41.61	115.55	90.552	-1,198.31	-503.78	662.67	519.77	142.89	4.638	
7,800.00	6,130.00	6,099.24	6,132.78	43.26	115.56	90.645	-1,198.31	-503.78	756.39	614.04	142.35	5.314	
7,900.00	6,130.00	6,099.64	6,133.18	44.92	115.56	90.737	-1,198.31	-503.78	851.54	709.62	141.93	6.000	
8,000.00	6,130.00	6,100.05	6,133.58	46.60	115.57	90.831	-1,198.31	-503.78	947.69	806.09	141.60	6.693	
8,100.00	6,130.00	6,100.45	6,133.98	48.30	115.58	90.925	-1,198.31	-503.78	1,044.57	903.22	141.34	7.390	
8,200.00	6,130.00	6,100.86	6,134.39	50.02	115.59	91.020	-1,198.31	-503.78	1,141.98	1,000.84	141.14	8.091	
8,300.00	6,130.00	6,101.27	6,134.80	51.75	115.60	91.115	-1,198.31	-503.78	1,239.81	1,098.83	140.97	8.795	
8,400.00	6,130.00	6,101.69	6,135.22	53.49	115.60	91.212	-1,198.32	-503.78	1,337.95	1,197.12	140.84	9.500	
8,500.00	6,130.00	6,102.11	6,135.64	55.25	115.61	91.308	-1,198.32	-503.78	1,436.36	1,295.63	140.73	10.206	
8,600.00	6,130.00	6,102.53	6,136.06	57.01	115.62	91.406	-1,198.32	-503.78	1,534.96	1,394.32	140.64	10.914	
8,700.00	6,130.00	6,102.95	6,136.48	58.78	115.63	91.504	-1,198.32	-503.78	1,633.74	1,493.17	140.57	11.622	
8,800.00	6,130.00	6,103.38	6,136.91	60.57	115.64	91.603	-1,198.32	-503.78	1,732.66	1,592.15	140.51	12.331	
8,900.00	6,130.00	6,103.81	6,137.34	62.36	115.65	91.703	-1,198.33	-503.78	1,831.70	1,691.23	140.46	13.040	
9,000.00	6,130.00	6,104.24	6,137.77	64.16	115.65	91.804	-1,198.33	-503.78	1,930.83	1,790.40	140.43	13.750	
9,100.00	6,130.00	6,104.68	6,138.21	65.96	115.66	91.905	-1,198.33	-503.78	2,030.05	1,889.65	140.40	14.459	
9,200.00	6,130.00	6,105.12	6,138.65	67.77	115.67	92.007	-1,198.33	-503.78	2,129.34	1,988.96	140.38	15.169	
9,300.00	6,130.00	6,105.56	6,139.09	69.59	115.68	92.110	-1,198.33	-503.78	2,228.70	2,088.33	140.36	15.878	
9,400.00	6,130.00	6,106.01	6,139.54	71.41	115.69	92.213	-1,198.33	-503.78	2,328.11	2,187.75	140.36	16.587	
9,500.00	6,130.00	6,106.46	6,139.99	73.24	115.70	92.318	-1,198.34	-503.78	2,427.57	2,287.21	140.35	17.296	
9,600.00	6,130.00	6,106.91	6,140.44	75.07	115.71	92.423	-1,198.34	-503.78	2,527.07	2,386.71	140.36	18.005	
9,700.00	6,130.00	6,107.37	6,140.90	76.91	115.72	92.529	-1,198.34	-503.78	2,626.61	2,486.25	140.36	18.713	
9,800.00	6,130.00	6,107.83	6,141.36	78.75	115.72	92.635	-1,198.34	-503.78	2,726.18	2,585.81	140.37	19.421	
9,900.00	6,130.00	6,108.29	6,141.82	80.59	115.73	92.743	-1,198.34	-503.78	2,825.78	2,685.40	140.38	20.129	
10,000.00	6,130.00	6,108.76	6,142.29	82.44	115.74	92.851	-1,198.35	-503.78	2,925.41	2,785.01	140.40	20.836	
10,100.00	6,130.00	6,109.23	6,142.76	84.29	115.75	92.960	-1,198.35	-503.78	3,025.07	2,884.65	140.42	21.543	
10,200.00	6,130.00	6,109.70	6,143.24	86.14	115.76	93.070	-1,198.35	-503.78	3,124.75	2,984.30	140.44	22.249	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - Offset: HT 18 Fed #5 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 260-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
10,300.00	6,130.00	6,110.18	6,143.71	88.00	115.77	93.181	-1,198.35	-503.78	3,224.44	3,083.97	140.47	22.955	
10,400.00	6,130.00	6,110.67	6,144.20	89.85	115.78	93.293	-1,198.35	-503.78	3,324.16	3,183.66	140.50	23.660	
10,500.00	6,130.00	6,111.15	6,144.68	91.72	115.79	93.405	-1,198.36	-503.78	3,423.89	3,283.36	140.53	24.365	
10,600.00	6,130.00	6,111.64	6,145.17	93.58	115.80	93.518	-1,198.36	-503.78	3,523.63	3,383.08	140.56	25.069	
10,700.00	6,130.00	6,112.14	6,145.67	95.44	115.81	93.633	-1,198.36	-503.78	3,623.39	3,482.80	140.59	25.772	
10,800.00	6,130.00	6,112.63	6,146.16	97.31	115.82	93.748	-1,198.36	-503.78	3,723.17	3,582.54	140.63	26.475	
10,900.00	6,130.00	6,113.14	6,146.67	99.18	115.83	93.864	-1,198.36	-503.78	3,822.95	3,682.29	140.67	27.177	
11,000.00	6,130.00	6,113.64	6,147.17	101.05	115.84	93.981	-1,198.37	-503.78	3,922.75	3,782.04	140.71	27.879	
11,100.00	6,130.00	6,114.15	6,147.68	102.92	115.85	94.099	-1,198.37	-503.78	4,022.55	3,881.81	140.75	28.580	
11,200.00	6,130.00	6,114.67	6,148.20	104.80	115.86	94.218	-1,198.37	-503.78	4,122.37	3,981.58	140.79	29.280	
11,300.00	6,130.00	6,115.19	6,148.72	106.67	115.87	94.337	-1,198.37	-503.78	4,222.19	4,081.36	140.84	29.980	
11,400.00	6,130.00	6,115.71	6,149.24	108.55	115.88	94.458	-1,198.38	-503.78	4,322.03	4,181.14	140.88	30.678	
11,500.00	6,130.00	6,116.24	6,149.77	110.43	115.89	94.580	-1,198.38	-503.78	4,421.87	4,280.94	140.93	31.377	
11,600.00	6,130.00	6,116.77	6,150.30	112.31	115.90	94.702	-1,198.38	-503.78	4,521.71	4,380.73	140.98	32.074	
11,700.00	6,130.00	6,117.30	6,150.83	114.19	115.91	94.826	-1,198.38	-503.78	4,621.56	4,480.54	141.03	32.770	
11,767.39	6,130.00	6,117.67	6,151.20	115.46	115.92	94.910	-1,198.38	-503.78	4,688.86	4,547.79	141.06	33.239	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - Offset: HT 18 Fed #8 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 292-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
0.00	0.00	0.00	42.00	0.00	0.00	176.767	-2,976.53	168.15	2,981.57				
100.00	100.00	58.00	100.00	0.14	0.51	176.767	-2,976.53	168.15	2,981.28	2,980.63	0.65	4,588.391	
200.00	200.00	158.00	200.00	0.50	1.38	176.767	-2,976.53	168.15	2,981.28	2,979.40	1.88	1,585.031	
300.00	300.00	326.00	300.00	0.86	3.15	176.767	-2,976.53	168.15	2,981.28	2,977.27	4.01	743.981	
400.00	399.98	357.98	399.98	1.22	3.71	-131.827	-2,976.53	168.15	2,982.44	2,977.52	4.93	605.371	
500.00	499.84	457.84	499.84	1.58	5.47	-131.859	-2,976.53	168.15	2,985.91	2,978.86	7.05	423.788	
600.00	599.63	557.51	599.51	1.94	7.22	-131.951	-2,976.52	168.15	2,990.18	2,981.02	9.16	326.367	
700.00	699.43	657.06	699.06	2.31	8.97	-132.042	-2,976.52	168.15	2,994.49	2,983.21	11.28	265.495	
800.00	799.22	757.23	799.22	2.68	10.75	-132.133	-2,976.53	168.15	2,998.81	2,985.39	13.42	223.477	
900.00	899.02	857.02	899.02	3.06	12.53	-132.224	-2,976.53	168.15	3,003.12	2,987.55	15.57	192.862	
1,000.00	998.81	956.81	998.81	3.43	14.32	-132.314	-2,976.53	168.15	3,007.45	2,989.72	17.72	169.678	
1,100.00	1,098.60	1,053.07	1,095.06	3.80	16.04	-132.402	-2,976.15	168.15	3,011.39	2,991.58	19.81	151.979	
1,200.00	1,198.40	1,148.82	1,190.82	4.18	17.75	-132.488	-2,976.33	168.15	3,015.92	2,994.02	21.90	137.738	
1,300.00	1,298.19	1,256.20	1,298.19	4.55	19.70	-132.584	-2,976.53	168.15	3,020.46	2,996.25	24.21	124.773	
1,400.00	1,397.98	1,356.00	1,397.98	4.93	21.54	-132.674	-2,976.53	168.15	3,024.81	2,998.39	26.42	114.496	
1,500.00	1,497.78	1,455.79	1,497.78	5.30	23.38	-132.763	-2,976.53	168.15	3,029.17	3,000.54	28.63	105.806	
1,600.00	1,597.57	1,552.79	1,594.78	5.68	25.17	-132.850	-2,976.25	168.15	3,033.26	3,002.47	30.79	98.517	
1,700.00	1,697.37	1,649.49	1,691.47	6.06	26.95	-132.935	-2,976.39	168.15	3,037.78	3,004.83	32.94	92.214	
1,800.00	1,797.16	1,755.20	1,797.16	6.43	28.96	-133.029	-2,976.53	168.15	3,042.30	3,006.97	35.32	86.132	
1,900.00	1,896.95	1,854.99	1,896.95	6.81	30.94	-133.117	-2,976.53	168.15	3,046.68	3,009.02	37.67	80.880	
2,000.00	1,996.75	1,954.78	1,996.75	7.18	32.92	-133.205	-2,976.53	168.15	3,051.08	3,011.06	40.02	76.244	
2,100.00	2,096.54	2,054.58	2,096.54	7.56	34.90	-133.292	-2,976.53	168.15	3,055.48	3,013.12	42.37	72.122	
2,200.00	2,196.33	2,154.37	2,196.33	7.94	36.88	-133.380	-2,976.53	168.15	3,059.90	3,015.18	44.71	68.433	
2,300.00	2,296.13	2,254.16	2,296.13	8.31	38.86	-133.467	-2,976.53	168.15	3,064.31	3,017.25	47.06	65.113	
2,400.00	2,395.92	2,353.96	2,395.92	8.69	40.84	-133.554	-2,976.53	168.15	3,068.74	3,019.33	49.41	62.108	
2,500.00	2,495.71	2,453.75	2,495.71	9.07	42.81	-133.641	-2,976.53	168.15	3,073.17	3,021.41	51.76	59.376	
2,600.00	2,595.51	2,553.55	2,595.51	9.44	44.79	-133.727	-2,976.53	168.15	3,077.61	3,023.50	54.11	56.882	
2,700.00	2,695.30	2,653.34	2,695.30	9.82	46.77	-133.813	-2,976.53	168.15	3,082.05	3,025.60	56.45	54.595	
2,800.00	2,795.10	2,753.13	2,795.10	10.20	48.75	-133.899	-2,976.53	168.15	3,086.51	3,027.71	58.80	52.491	
2,900.00	2,894.89	2,852.93	2,894.89	10.57	50.73	-133.985	-2,976.53	168.15	3,090.97	3,029.82	61.15	50.548	
3,000.00	2,994.68	2,952.72	2,994.68	10.95	52.71	-134.070	-2,976.53	168.15	3,095.43	3,031.94	63.50	48.749	
3,100.00	3,094.48	3,052.51	3,094.48	11.32	54.69	-134.155	-2,976.53	168.15	3,099.91	3,034.06	65.84	47.079	
3,200.00	3,194.27	3,152.31	3,194.27	11.70	56.67	-134.240	-2,976.53	168.15	3,104.39	3,036.19	68.19	45.524	
3,300.00	3,294.06	3,252.10	3,294.06	12.08	58.64	-134.325	-2,976.53	168.15	3,108.87	3,038.33	70.54	44.072	
3,400.00	3,393.86	3,351.90	3,393.86	12.45	60.62	-134.409	-2,976.53	168.15	3,113.37	3,040.48	72.89	42.714	
3,500.00	3,493.65	3,451.69	3,493.65	12.83	62.60	-134.493	-2,976.53	168.15	3,117.87	3,042.63	75.24	41.441	
3,600.00	3,593.45	3,551.48	3,593.45	13.21	64.58	-134.577	-2,976.53	168.15	3,122.37	3,044.79	77.58	40.245	
3,700.00	3,693.24	3,651.28	3,693.24	13.58	66.56	-134.661	-2,976.53	168.15	3,126.89	3,046.96	79.93	39.120	
3,800.00	3,793.03	3,751.07	3,793.03	13.96	68.54	-134.745	-2,976.53	168.15	3,131.41	3,049.13	82.28	38.059	
3,900.00	3,892.83	3,850.86	3,892.83	14.34	70.52	-134.828	-2,976.53	168.15	3,135.94	3,051.31	84.63	37.056	
4,000.00	3,992.62	3,950.66	3,992.62	14.71	72.50	-134.911	-2,976.53	168.15	3,140.47	3,053.50	86.97	36.108	
4,100.00	4,092.41	4,050.45	4,092.41	15.09	74.47	-134.993	-2,976.53	168.15	3,145.01	3,055.69	89.32	35.210	
4,200.00	4,192.21	4,150.25	4,192.21	15.47	76.45	-135.076	-2,976.53	168.15	3,149.56	3,057.89	91.67	34.358	
4,300.00	4,292.00	4,250.04	4,292.00	15.84	78.43	-135.158	-2,976.53	168.15	3,154.11	3,060.09	94.02	33.549	
4,400.00	4,391.80	4,349.83	4,391.80	16.22	80.41	-135.240	-2,976.53	168.15	3,158.67	3,062.31	96.36	32.779	
4,500.00	4,491.59	4,449.63	4,491.59	16.60	82.39	-135.322	-2,976.53	168.15	3,163.24	3,064.53	98.71	32.045	
4,600.00	4,591.38	4,549.42	4,591.38	16.97	84.37	-135.404	-2,976.53	168.15	3,167.81	3,066.75	101.06	31.346	
4,700.00	4,691.18	4,649.21	4,691.18	17.35	86.35	-135.485	-2,976.53	168.15	3,172.39	3,068.98	103.41	30.679	
4,800.00	4,790.97	4,749.01	4,790.97	17.73	88.32	-135.566	-2,976.53	168.15	3,176.97	3,071.22	105.75	30.042	
4,900.00	4,890.76	4,848.80	4,890.76	18.10	90.30	-135.647	-2,976.53	168.15	3,181.57	3,073.47	108.10	29.432	
5,000.00	4,990.56	4,948.60	4,990.56	18.48	92.28	-135.728	-2,976.53	168.15	3,186.16	3,075.72	110.45	28.848	
5,100.00	5,090.35	5,048.39	5,090.35	18.86	94.26	-133.921	-2,976.53	168.15	3,190.77	3,077.97	112.79	28.288	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - Offset: HT 18 Fed #8 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 292-INC-ONLY												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,190.18	5,148.22	5,190.18	19.21	96.24	-42.105	-2,976.53	168.15	3,189.90	3,074.77	115.13	27.707	
5,300.00	5,289.32	5,247.36	5,289.32	19.51	98.21	-21.683	-2,976.53	168.15	3,178.64	3,061.21	117.43	27.068	
5,400.00	5,386.69	5,344.72	5,386.69	19.78	100.14	-16.062	-2,976.53	168.15	3,157.12	3,037.44	119.68	26.379	
5,500.00	5,481.22	5,439.25	5,481.22	20.02	102.01	-13.732	-2,976.53	168.15	3,125.59	3,003.73	121.87	25.648	
5,600.00	5,571.87	5,529.91	5,571.87	20.24	103.81	-12.693	-2,976.53	168.15	3,084.40	2,960.44	123.95	24.883	
5,700.00	5,657.66	5,615.69	5,657.66	20.45	105.51	-12.363	-2,976.53	168.15	3,034.00	2,908.07	125.93	24.093	
5,800.00	5,737.63	5,695.67	5,737.63	20.68	107.10	-12.544	-2,976.53	168.15	2,974.95	2,847.18	127.77	23.284	
5,900.00	5,810.93	5,768.97	5,810.93	20.96	108.55	-13.191	-2,976.53	168.15	2,907.92	2,778.46	129.46	22.462	
6,000.00	5,876.74	5,834.77	5,876.74	21.37	109.85	-14.363	-2,976.53	168.15	2,833.63	2,702.65	130.98	21.634	
6,100.00	5,934.33	5,892.37	5,934.33	21.91	111.00	-16.228	-2,976.53	168.15	2,752.92	2,620.61	132.32	20.805	
6,200.00	5,984.94	5,942.97	5,984.94	22.55	112.00	-17.480	-2,976.53	168.15	2,667.70	2,534.20	133.50	19.983	
6,300.00	6,034.94	5,992.97	6,034.94	23.30	112.99	-18.036	-2,976.53	168.15	2,582.19	2,447.51	134.68	19.173	
6,400.00	6,081.84	6,039.87	6,081.84	24.14	113.92	-22.794	-2,976.53	168.15	2,495.13	2,359.33	135.80	18.373	
6,500.00	6,113.79	6,071.83	6,113.79	25.09	114.55	-36.599	-2,976.53	168.15	2,401.88	2,265.26	136.62	17.581	
6,600.00	6,128.83	6,086.87	6,128.83	26.12	114.85	-70.771	-2,976.53	168.15	2,304.69	2,167.61	137.08	16.813	
6,700.00	6,130.00	6,088.04	6,130.00	27.23	114.87	-90.000	-2,976.53	168.15	2,206.43	2,069.16	137.26	16.075	
6,800.00	6,130.00	6,088.04	6,130.00	28.42	114.87	-90.000	-2,976.53	168.15	2,108.29	1,970.85	137.44	15.340	
6,900.00	6,130.00	6,088.04	6,130.00	29.68	114.87	-90.000	-2,976.53	168.15	2,010.35	1,872.70	137.65	14.605	
7,000.00	6,130.00	6,088.04	6,130.00	31.01	114.87	-90.000	-2,976.53	168.15	1,912.61	1,774.72	137.89	13.870	
7,100.00	6,130.00	6,088.04	6,130.00	32.40	114.87	-90.000	-2,976.53	168.15	1,815.12	1,676.94	138.18	13.136	
7,200.00	6,130.00	6,088.04	6,130.00	33.84	114.87	-90.000	-2,976.53	168.15	1,717.92	1,579.41	138.51	12.403	
7,300.00	6,130.00	6,088.04	6,130.00	35.32	114.87	-90.000	-2,976.53	168.15	1,621.06	1,482.15	138.91	11.670	
7,400.00	6,130.00	6,088.04	6,130.00	36.85	114.87	-90.000	-2,976.53	168.15	1,524.61	1,385.23	139.38	10.939	
7,500.00	6,130.00	6,088.04	6,130.00	38.41	114.87	-90.000	-2,976.53	168.15	1,428.64	1,288.70	139.94	10.209	
7,600.00	6,130.00	6,088.04	6,130.00	40.00	114.87	-90.000	-2,976.53	168.15	1,333.27	1,192.65	140.62	9.481	
7,700.00	6,130.00	6,088.04	6,130.00	41.61	114.87	-90.000	-2,976.53	168.15	1,238.63	1,097.18	141.45	8.757	
7,800.00	6,130.00	6,088.04	6,130.00	43.26	114.87	-90.000	-2,976.53	168.15	1,144.89	1,002.43	142.46	8.037	
7,900.00	6,130.00	6,088.04	6,130.00	44.92	114.87	-90.000	-2,976.53	168.15	1,052.32	908.61	143.71	7.323	
8,000.00	6,130.00	6,088.04	6,130.00	46.60	114.87	-90.000	-2,976.53	168.15	961.23	815.97	145.26	6.617	
8,100.00	6,130.00	6,088.04	6,130.00	48.30	114.87	-90.000	-2,976.53	168.15	872.09	724.90	147.19	5.925	
8,200.00	6,130.00	6,088.04	6,130.00	50.02	114.87	-90.000	-2,976.53	168.15	785.58	635.97	149.61	5.251	
8,300.00	6,130.00	6,088.04	6,130.00	51.75	114.87	-90.000	-2,976.53	168.15	702.65	550.00	152.65	4.603	
8,400.00	6,130.00	6,088.04	6,130.00	53.49	114.87	-90.000	-2,976.53	168.15	624.75	468.33	156.42	3.994	
8,500.00	6,130.00	6,088.04	6,130.00	55.25	114.87	-90.000	-2,976.53	168.15	553.98	393.02	160.97	3.442	
8,600.00	6,130.00	6,088.04	6,130.00	57.01	114.87	-90.000	-2,976.53	168.15	493.44	327.31	166.14	2.970	
8,700.00	6,130.00	6,088.04	6,130.00	58.78	114.87	-90.000	-2,976.53	168.15	447.30	275.99	171.30	2.611	
8,800.00	6,130.00	6,088.04	6,130.00	60.57	114.87	-90.000	-2,976.53	168.15	420.31	245.07	175.25	2.398	
8,867.06	6,130.00	6,088.04	6,130.00	61.77	114.87	-90.000	-2,976.53	168.15	414.93	238.43	176.50	2.351	CC, ES, SF
8,900.00	6,130.00	6,088.04	6,130.00	62.36	114.87	-90.000	-2,976.53	168.15	416.24	239.62	176.61	2.357	
9,000.00	6,130.00	6,088.04	6,130.00	64.16	114.87	-90.000	-2,976.53	168.15	435.71	260.70	175.01	2.490	
9,100.00	6,130.00	6,088.04	6,130.00	65.96	114.87	-90.000	-2,976.53	168.15	475.84	304.49	171.35	2.777	
9,200.00	6,130.00	6,088.04	6,130.00	67.77	114.87	-90.000	-2,976.53	168.15	531.99	365.03	166.97	3.186	
9,300.00	6,130.00	6,088.04	6,130.00	69.59	114.87	-90.000	-2,976.53	168.15	599.67	436.94	162.73	3.685	
9,400.00	6,130.00	6,088.04	6,130.00	71.41	114.87	-90.000	-2,976.53	168.15	675.42	516.39	159.03	4.247	
9,500.00	6,130.00	6,088.04	6,130.00	73.24	114.87	-90.000	-2,976.53	168.15	756.82	600.90	155.93	4.854	
9,600.00	6,130.00	6,088.04	6,130.00	75.07	114.87	-90.000	-2,976.53	168.15	842.24	688.87	153.37	5.491	
9,700.00	6,130.00	6,088.04	6,130.00	76.91	114.87	-90.000	-2,976.53	168.15	930.57	779.28	151.28	6.151	
9,800.00	6,130.00	6,088.04	6,130.00	78.75	114.87	-90.000	-2,976.53	168.15	1,021.05	871.48	149.57	6.827	
9,900.00	6,130.00	6,088.04	6,130.00	80.59	114.87	-90.000	-2,976.53	168.15	1,113.16	965.00	148.16	7.513	
10,000.00	6,130.00	6,088.04	6,130.00	82.44	114.87	-90.000	-2,976.53	168.15	1,206.53	1,059.54	146.99	8.208	
10,100.00	6,130.00	6,088.04	6,130.00	84.29	114.87	-90.000	-2,976.53	168.15	1,300.89	1,154.88	146.01	8.910	
10,200.00	6,130.00	6,088.04	6,130.00	86.14	114.87	-90.000	-2,976.53	168.15	1,396.03	1,250.84	145.19	9.615	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - Offset: HT 18 Fed #8 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 292-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	
10,300.00	6,130.00	6,088.04	6,130.00	88.00	114.87	-90.000	-2,976.53	168.15	1,491.81	1,347.31	144.50	10.324	
10,400.00	6,130.00	6,088.04	6,130.00	89.85	114.87	-90.000	-2,976.53	168.15	1,588.10	1,444.20	143.91	11.036	
10,500.00	6,130.00	6,088.04	6,130.00	91.72	114.87	-90.000	-2,976.53	168.15	1,684.83	1,541.43	143.40	11.749	
10,600.00	6,130.00	6,088.04	6,130.00	93.58	114.87	-90.000	-2,976.53	168.15	1,781.92	1,638.95	142.97	12.464	
10,700.00	6,130.00	6,088.04	6,130.00	95.44	114.87	-90.000	-2,976.53	168.15	1,879.32	1,736.72	142.60	13.179	
10,800.00	6,130.00	6,088.04	6,130.00	97.31	114.87	-90.000	-2,976.53	168.15	1,976.97	1,834.70	142.27	13.896	
10,900.00	6,130.00	6,088.04	6,130.00	99.18	114.87	-90.000	-2,976.53	168.15	2,074.85	1,932.86	141.99	14.612	
11,000.00	6,130.00	6,088.04	6,130.00	101.05	114.87	-90.000	-2,976.53	168.15	2,172.92	2,031.17	141.75	15.329	
11,100.00	6,130.00	6,088.04	6,130.00	102.92	114.87	-90.000	-2,976.53	168.15	2,271.17	2,129.62	141.54	16.046	
11,200.00	6,130.00	6,088.04	6,130.00	104.80	114.87	-90.000	-2,976.53	168.15	2,369.55	2,228.20	141.36	16.763	
11,300.00	6,130.00	6,088.04	6,130.00	106.67	114.87	-90.000	-2,976.53	168.15	2,468.07	2,326.87	141.20	17.480	
11,400.00	6,130.00	6,088.04	6,130.00	108.55	114.87	-90.000	-2,976.53	168.15	2,566.70	2,425.64	141.06	18.196	
11,500.00	6,130.00	6,088.04	6,130.00	110.43	114.87	-90.000	-2,976.53	168.15	2,665.43	2,524.50	140.94	18.912	
11,600.00	6,130.00	6,088.04	6,130.00	112.31	114.87	-90.000	-2,976.53	168.15	2,764.26	2,623.43	140.83	19.628	
11,700.00	6,130.00	6,088.04	6,130.00	114.19	114.87	-90.000	-2,976.53	168.15	2,863.17	2,722.43	140.74	20.344	
11,767.39	6,130.00	6,088.04	6,130.00	115.46	114.87	-90.000	-2,976.53	168.15	2,929.86	2,789.17	140.69	20.825	

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 #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - Offset: HT Federal #1 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 1860-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
6,100.00	5,934.33	6,338.24	6,369.90	21.91	19.61	-6.150	-5,213.91	-1.68	4,982.36	4,941.82	40.54	122.902	
6,200.00	5,984.94	6,396.00	6,427.41	22.55	19.79	-6.404	-5,208.98	-3.84	4,892.15	4,851.32	40.83	119.811	
6,300.00	6,034.94	6,428.00	6,459.26	23.30	19.89	-6.460	-5,206.19	-5.11	4,801.52	4,760.47	41.06	116.948	
6,400.00	6,081.84	6,478.02	6,509.06	24.14	20.05	-8.675	-5,201.77	-6.86	4,709.51	4,668.18	41.33	113.959	
6,500.00	6,113.79	6,491.00	6,521.98	25.09	20.09	-18.261	-5,200.62	-7.28	4,612.50	4,571.04	41.46	111.242	
6,600.00	6,128.83	6,497.86	6,528.81	26.12	20.11	-116.423	-5,200.02	-7.51	4,512.94	4,471.41	41.54	108.649	
6,700.00	6,130.00	6,491.00	6,521.98	27.23	20.09	-149.955	-5,200.62	-7.28	4,413.39	4,371.84	41.55	106.222	
6,800.00	6,130.00	6,488.23	6,519.21	28.42	20.08	-149.769	-5,200.87	-7.19	4,313.93	4,272.36	41.57	103.771	
6,900.00	6,130.00	6,481.15	6,512.17	29.68	20.06	-149.287	-5,201.49	-6.96	4,214.48	4,172.90	41.59	101.340	
7,000.00	6,130.00	6,474.02	6,505.07	31.01	20.03	-148.787	-5,202.13	-6.73	4,115.05	4,073.44	41.61	98.903	
7,100.00	6,130.00	6,466.81	6,497.89	32.40	20.01	-148.268	-5,202.77	-6.49	4,015.62	3,973.99	41.63	96.461	
7,200.00	6,130.00	6,458.73	6,489.85	33.84	19.99	-147.670	-5,203.50	-6.23	3,916.21	3,874.56	41.65	94.017	
7,300.00	6,130.00	6,439.73	6,470.94	35.32	19.93	-146.180	-5,205.18	-5.56	3,816.80	3,775.14	41.66	91.618	
7,400.00	6,130.00	6,428.00	6,459.26	36.85	19.89	-145.198	-5,206.19	-5.11	3,717.37	3,675.69	41.69	89.176	
7,500.00	6,130.00	6,420.08	6,451.38	38.41	19.86	-144.508	-5,206.87	-4.79	3,617.96	3,576.24	41.72	86.710	
7,600.00	6,130.00	6,414.09	6,445.41	40.00	19.85	-143.971	-5,207.39	-4.55	3,518.57	3,476.79	41.77	84.231	
7,700.00	6,130.00	6,407.99	6,439.34	41.61	19.83	-143.411	-5,207.92	-4.31	3,419.19	3,377.37	41.83	81.747	
7,800.00	6,130.00	6,401.78	6,433.17	43.26	19.81	-142.828	-5,208.47	-4.07	3,319.84	3,277.95	41.89	79.259	
7,900.00	6,130.00	6,393.80	6,425.22	44.92	19.78	-142.055	-5,209.18	-3.75	3,220.51	3,178.56	41.95	76.773	
8,000.00	6,130.00	6,369.18	6,400.70	46.60	19.71	-139.511	-5,211.31	-2.82	3,121.18	3,079.19	41.99	74.339	
8,100.00	6,130.00	6,359.64	6,391.21	48.30	19.68	-138.457	-5,212.10	-2.48	3,021.83	2,979.77	42.06	71.843	
8,200.00	6,130.00	6,353.03	6,384.62	50.02	19.66	-137.700	-5,212.66	-2.24	2,922.52	2,880.36	42.15	69.332	
8,300.00	6,130.00	6,346.32	6,377.94	51.75	19.64	-136.910	-5,213.23	-1.99	2,823.23	2,780.97	42.25	66.817	
8,400.00	6,130.00	6,339.52	6,371.17	53.49	19.62	-136.087	-5,213.81	-1.73	2,723.97	2,681.60	42.37	64.297	
8,500.00	6,130.00	6,331.76	6,363.45	55.25	19.59	-135.119	-5,214.47	-1.43	2,624.74	2,582.25	42.49	61.775	
8,600.00	6,130.00	6,320.61	6,352.35	57.01	19.56	-133.672	-5,215.42	-1.01	2,525.55	2,482.92	42.62	59.255	
8,700.00	6,130.00	6,309.70	6,341.48	58.78	19.52	-132.192	-5,216.34	-0.61	2,426.38	2,383.61	42.77	56.728	
8,800.00	6,130.00	6,300.38	6,332.20	60.57	19.49	-130.875	-5,217.12	-0.27	2,327.24	2,284.30	42.94	54.192	
8,900.00	6,130.00	6,293.33	6,325.18	62.36	19.47	-129.846	-5,217.71	-0.02	2,228.15	2,185.01	43.14	51.644	
9,000.00	6,130.00	6,286.20	6,318.08	64.16	19.45	-128.774	-5,218.31	0.25	2,129.12	2,085.75	43.37	49.091	
9,100.00	6,130.00	6,278.98	6,310.89	65.96	19.43	-127.657	-5,218.92	0.52	2,030.15	1,986.53	43.63	46.533	
9,200.00	6,130.00	6,271.67	6,303.61	67.77	19.41	-126.492	-5,219.55	0.80	1,931.26	1,887.34	43.92	43.970	
9,300.00	6,130.00	6,264.51	6,296.49	69.59	19.38	-125.321	-5,220.16	1.08	1,832.46	1,788.20	44.26	41.401	
9,400.00	6,130.00	6,257.22	6,289.23	71.41	19.36	-124.095	-5,220.80	1.35	1,733.75	1,689.10	44.65	38.828	
9,500.00	6,130.00	6,249.76	6,281.81	73.24	19.34	-122.807	-5,221.45	1.61	1,635.17	1,590.06	45.11	36.251	
9,600.00	6,130.00	6,242.13	6,274.21	75.07	19.32	-121.454	-5,222.13	1.88	1,536.72	1,491.08	45.64	33.670	
9,700.00	6,130.00	6,233.89	6,266.01	76.91	19.29	-119.953	-5,222.87	2.15	1,438.44	1,392.17	46.27	31.087	
9,800.00	6,130.00	6,225.41	6,257.57	78.75	19.26	-118.363	-5,223.64	2.44	1,340.35	1,293.33	47.02	28.504	
9,900.00	6,130.00	6,216.87	6,249.07	80.59	19.24	-116.715	-5,224.41	2.73	1,242.51	1,194.58	47.93	25.924	
10,000.00	6,130.00	6,208.22	6,240.46	82.44	19.21	-115.000	-5,225.20	3.03	1,144.97	1,095.94	49.04	23.350	
10,100.00	6,130.00	6,199.07	6,231.35	84.29	19.18	-113.135	-5,226.03	3.35	1,047.82	997.42	50.40	20.790	
10,200.00	6,130.00	6,189.92	6,222.25	86.14	19.16	-111.225	-5,226.86	3.68	951.17	899.06	52.11	18.253	
10,300.00	6,130.00	6,180.80	6,213.16	88.00	19.13	-109.273	-5,227.69	4.00	855.20	800.91	54.29	15.754	
10,400.00	6,130.00	6,172.07	6,204.48	89.85	19.10	-107.367	-5,228.49	4.31	760.16	703.06	57.10	13.313	
10,500.00	6,130.00	6,163.56	6,196.01	91.72	19.08	-105.473	-5,229.27	4.63	666.45	605.64	60.81	10.960	
10,600.00	6,130.00	6,154.97	6,187.46	93.58	19.05	-103.530	-5,230.05	4.96	574.73	508.92	65.81	8.734	
10,700.00	6,130.00	6,146.30	6,178.84	95.44	19.02	-101.543	-5,230.85	5.31	486.12	413.45	72.67	6.690	
10,800.00	6,130.00	6,137.08	6,169.67	97.31	19.00	-99.404	-5,231.71	5.68	402.67	320.48	82.19	4.899	
10,900.00	6,130.00	6,127.65	6,160.29	99.18	18.97	-97.197	-5,232.60	6.04	328.33	233.23	95.10	3.452	
11,000.00	6,130.00	6,118.02	6,150.70	101.05	18.94	-94.925	-5,233.51	6.41	270.70	160.35	110.35	2.453	
11,100.00	6,130.00	6,108.38	6,141.12	102.92	18.91	-92.646	-5,234.44	6.76	242.02	120.99	121.02	2.000	
11,124.22	6,130.00	6,106.06	6,138.80	103.38	18.90	-92.095	-5,234.66	6.85	240.81	119.18	121.63	1.980 CC, ES, SF	

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



Anticollision Report



Company:	Spur Energy Partners, LLC	Local Co-ordinate Reference:	Well #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design HT 18 Federal - Offset: HT Federal #1 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 1860-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
11,200.00	6,130.00	6,098.70	6,131.49	104.80	18.88	-90.354	-5,235.38	7.12	252.35	134.82	117.53	2.147	
11,300.00	6,130.00	6,088.81	6,121.65	106.67	18.85	-88.018	-5,236.35	7.49	297.65	193.93	103.72	2.870	
11,400.00	6,130.00	6,079.02	6,111.92	108.55	18.82	-85.721	-5,237.32	7.86	365.12	275.63	89.49	4.080	
11,500.00	6,130.00	6,069.70	6,102.65	110.43	18.79	-83.553	-5,238.24	8.23	444.79	366.38	78.41	5.672	
11,600.00	6,130.00	6,060.50	6,093.50	112.31	18.77	-81.437	-5,239.14	8.60	531.21	460.86	70.36	7.550	
11,700.00	6,130.00	6,051.30	6,084.36	114.19	18.74	-79.352	-5,240.04	8.99	621.58	557.06	64.52	9.634	
11,767.39	6,130.00	6,044.03	6,077.13	115.46	18.72	-77.729	-5,240.75	9.30	683.90	622.42	61.49	11.123	

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



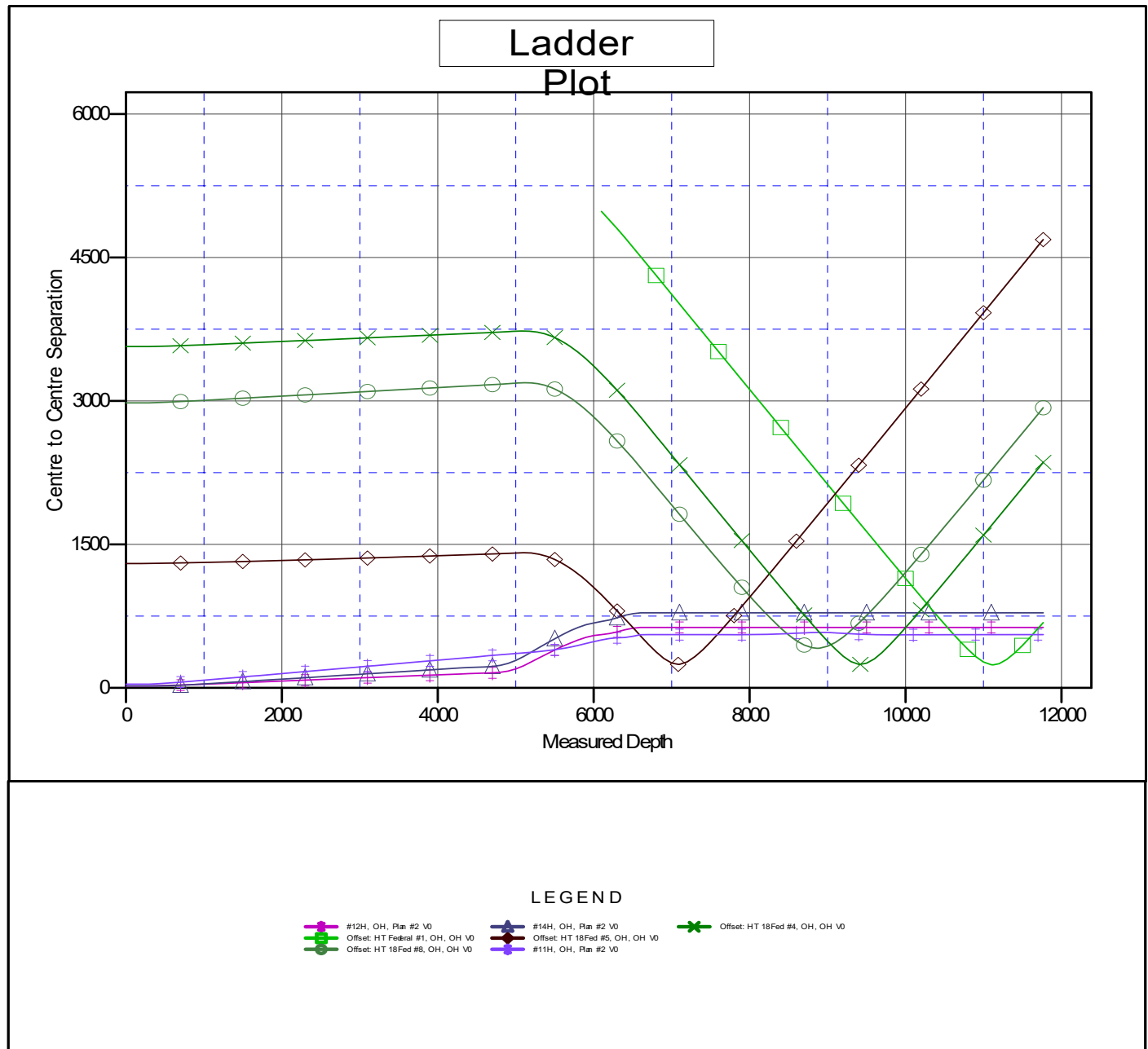
Anticollision Report



Company:	Spur Energy Partners, LLC	Local Co-ordinate Reference:	Well #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Reference Depths are relative to RKB = 20' @ 3993.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334

Coordinates are relative to: #13H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.283°



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



Anticollision Report

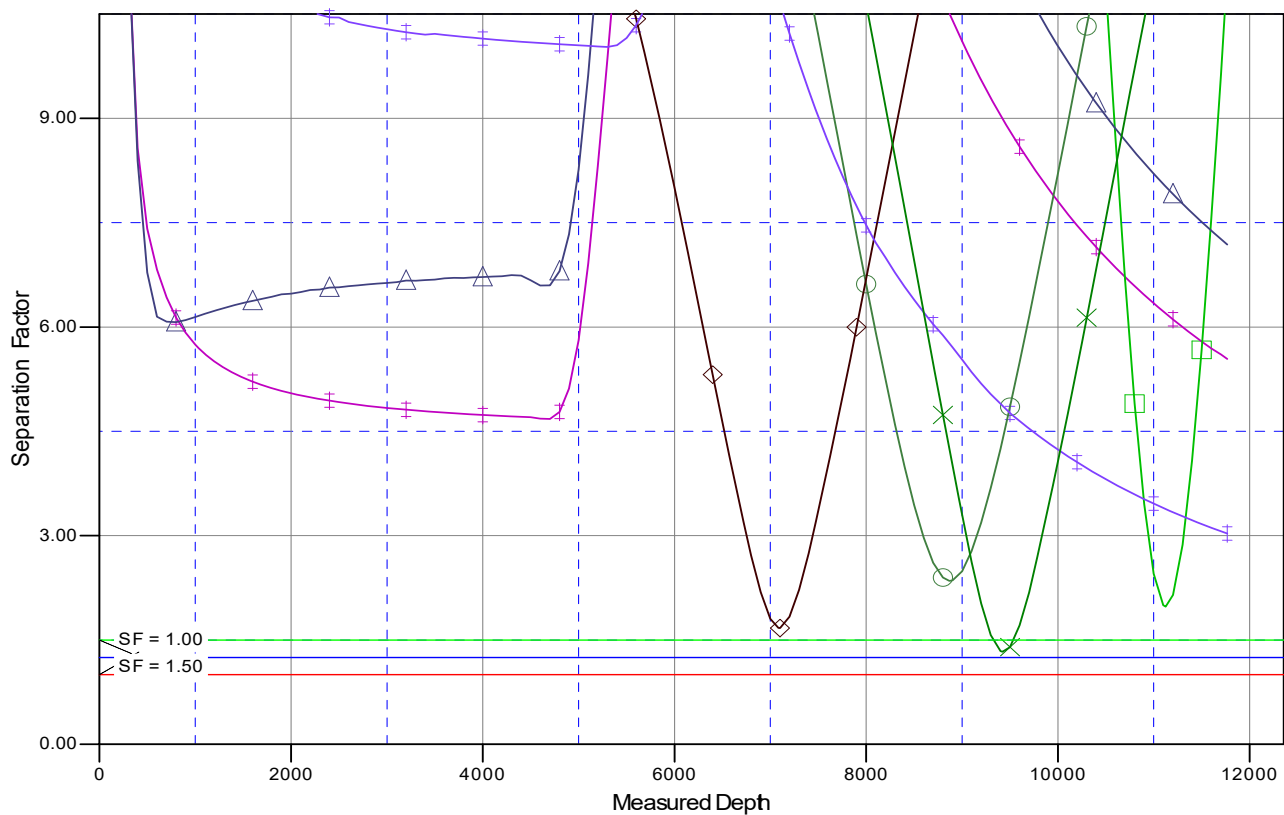


Company:	Spur Energy Partners, LLC	Local Co-ordinate Reference:	Well #13H
Project:	Lea County, NM (Nad-83/ NME)	TVD Reference:	RKB = 20' @ 3993.00usft
Reference Site:	HT 18 Federal	MD Reference:	RKB = 20' @ 3993.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	#13H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_2
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

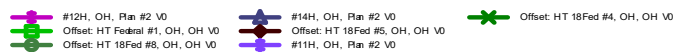
Reference Depths are relative to RKB = 20' @ 3993.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334

Coordinates are relative to: #13H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.283°

Separation Factor Plot



LEGEND



Spur Energy Partners LLC 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	Artestia	575-616-5400	713-264-2517
Superintendent - Jerry Mathews	Artestia	575-616-5400	575-748-5234
Asst. Superintendent - Kenny Kidd	Artestia	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	Artestia	575-748-1283	After Hours 575-370-7545
New Mexico Oil Conservation Division	Hobbs	575-393-6161	
New Mexico Oil Conservation Division	Santa Fe	505-476-3770	
New Mexico OCD Environmental Bureau	Santa Fe	505-827-7152 505-476-3470	
New Mexico Environmental Department	Hobbs	575-827-9329	
NM State Emergency Response Center	Santa Fe	505-476-9600	
Medical Facilities			
Artesia General Hospital	Artesia	575-748-3333	
Covenant Medical Center	Lubbock	806-725-1011	
Covenant Medical Center Lakeside	Lubbock	806-725-6000	
Guadalupe County Hospital	Carlsbad	575-887-6633	
Lea Regional Hospital	Hobbs	575-492-5000	
Medical Center Hospital	Odessa	432-640-4000	
Midland Memorial Hospital	Midland	432-685-1111	
Nor-Lea General Hospital	Lovington	575-396-6611	
Odessa Regional Hospital	Odessa	432-334-8200	
Union County General Hospital	Clayton	575-374-2585	
University Medical Center	Lubbock	806-725-8200	
Law Enforcement - Sheriff			
Ector County Sheriff's Department	Odessa	432-335-3050	
Ector County Sheriff's Department	Artesia	575-746-2704	

Ector County Sheriff's Department	Carlsbad	575-887-7551	
Lea County Sherrif's Department	Eunice	575-384-2020	
Lea County Sherrif's Department	Hobbs	575-393-2515	
Lea County Sherrif's Department	Lovington	575-396-3611	
Lubbock County Sheriff's Department	Abernathy	806-296-2724	
Midland County Sheriff's Department	Midland	432-688-1277	
Union County Sheriff's Department	Clayton	575-374-2583	
Law Enforcement - Police			
Abernathy Police Department	Abernathy	806-298-2545	
Artesia City Police	Artesia	575-746-2704	
Carlsbad City Police	Carlsbad	575-885-2111	
Clayton City Police	Clayton	575-374-2504	
Eunice City Police	Eunice	575-394-2112	
Hobbs City Police	Hobbs	575-397-9265 575-393-2677	
Jal City Police	Jal	575-395-2501	
Lovington City Police	Lovington	575-396-2811	
Midland City Police	Midland	432-685-7113	
Odessa City Police	Odessa	432-335-3378	
Law Enforcement - FBI			
FBI	Albuquerque	505-224-2000	
FBI	Midland	432-570-0255	
Law Enforcement - DPS (911)			
NM State Police	Artesia	575-746-2704	
NM State Police	Carlsbad	575-885-3137	
NM State Police	Eunice	575-392-5588	
NM State Police	Hobbs	575-392-5588	
NM State Police	Clayton	575-374-2473	
Firefighting and Rescue (911)			
Abernathy	Abernathy	806-298-2022	
Amistad/Rosebud	Amistad/Rosebud	575-633-9113	
Artesia	Artesia	575-746-5751	
Carlsbad	Carlsbad	575-885-3125	
Clayton	Clayton	575-374-2435	
Eunice	Eunice	575-394-2111	
Hobbs	Hobbs	575-397-9308	
Jal	Jal	575-395-2221	
Lovington	Lovington	575-396-2359	
Maljamar	Maljamar	575-676-4100	
Midland	Midland	432-685-7346	
Nara Visa	Nara Visa	575-461-3300	
Odessa	Odessa	432-335-4659	
Tucumcari	Tucumcari	911	
West Odessa	Odessa	432-381-3033	

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



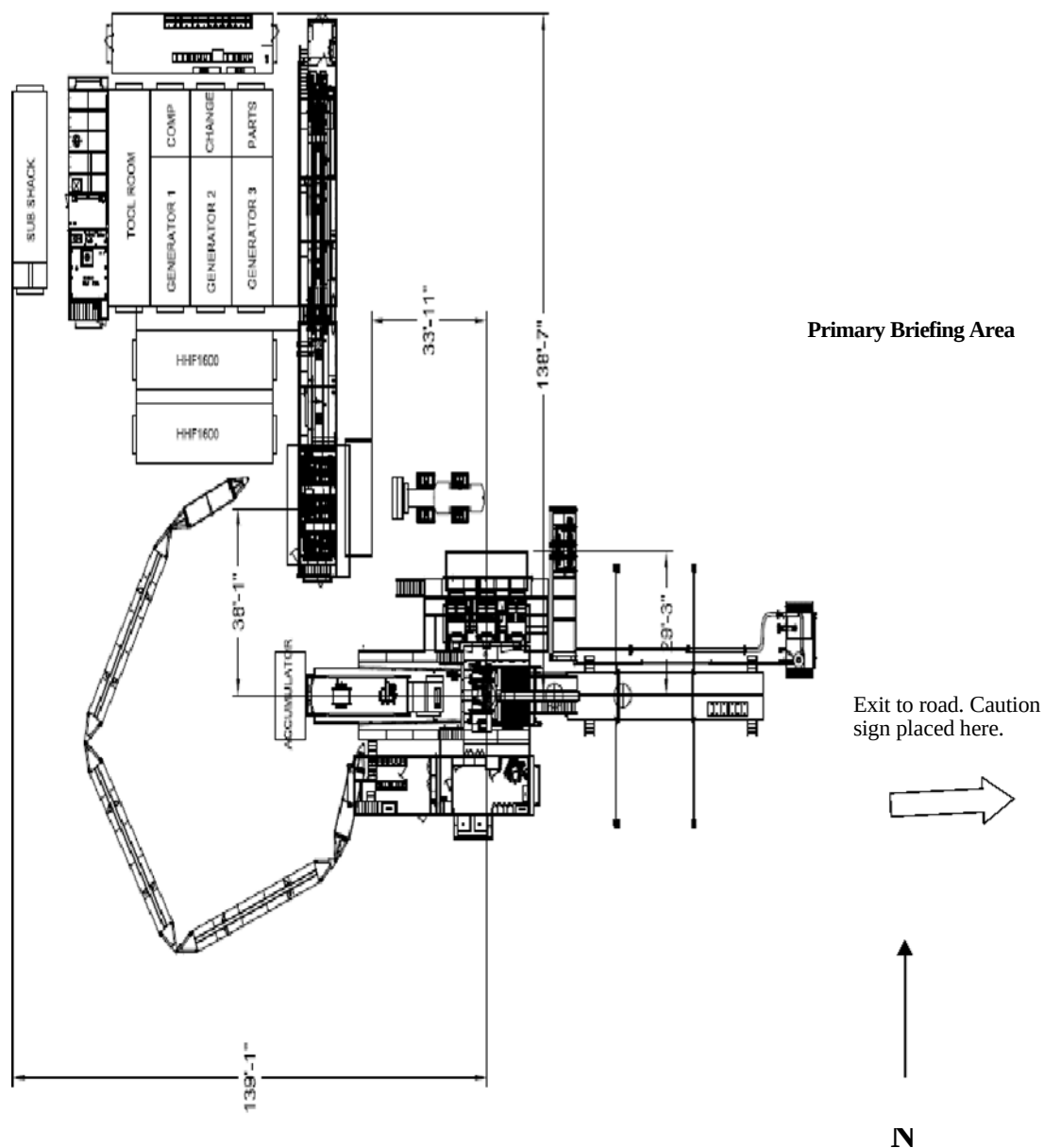
Permian Drilling Hydrogen Sulfide Drilling Operations Plan HT 18 Federal 13H

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

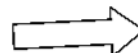
1. Escape

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

Secondary Egress

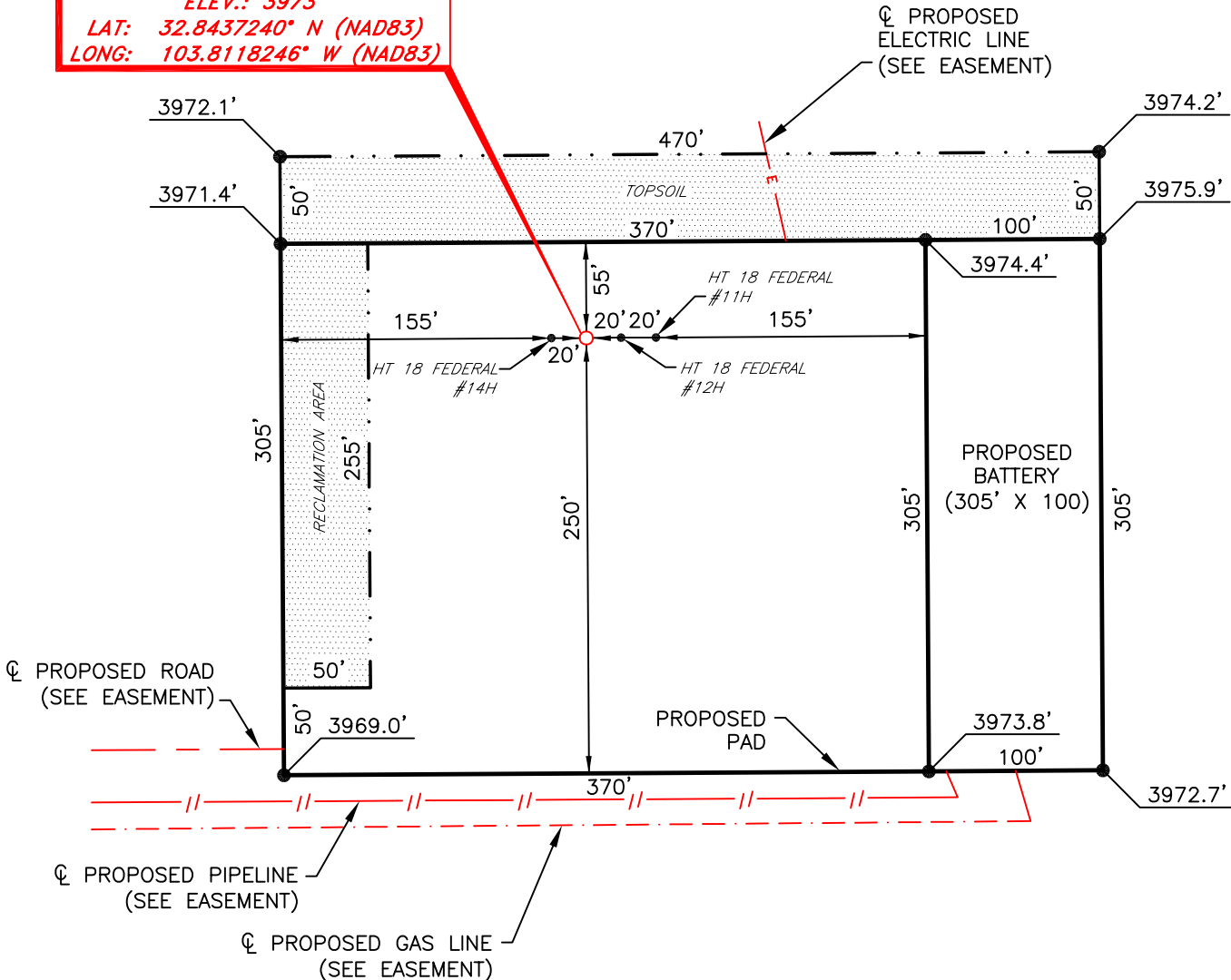


WIND: Prevailing winds are from the Southwest



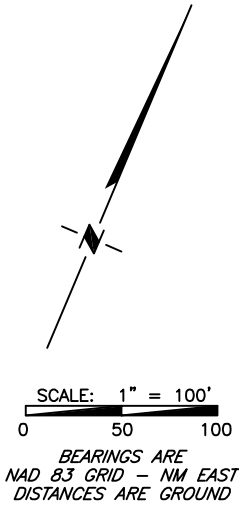
SPUR ENERGY PARTNERS LLC.
HT 18 FEDERAL #13H
(648' FSL & 824' FWL)
SECTION 7, T17S, R32E
N. M. P. M., LEA COUNTY, NEW MEXICO

HT 18 FEDERAL #13H
ELEV.: 3973'
LAT: 32.8437240° N (NAD83)
LONG: 103.8118246° W (NAD83)



DIRECTIONS TO LOCATION

From the intersection of U.S. Hwy 82 (Lovington Hwy.) and CR #124 (Supee Rd.);
Go Southwest on U.S. Hwy 82 approx. 1.4 miles to a lease road on the left;
Turn left and go South approx. 350 feet to a proposed road on the left;
Turn left and go Northeast approx. 700 feet to location on the left.



I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this unclassified survey of a well location from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M. Howett
Robert M. Howett NM PS 19680



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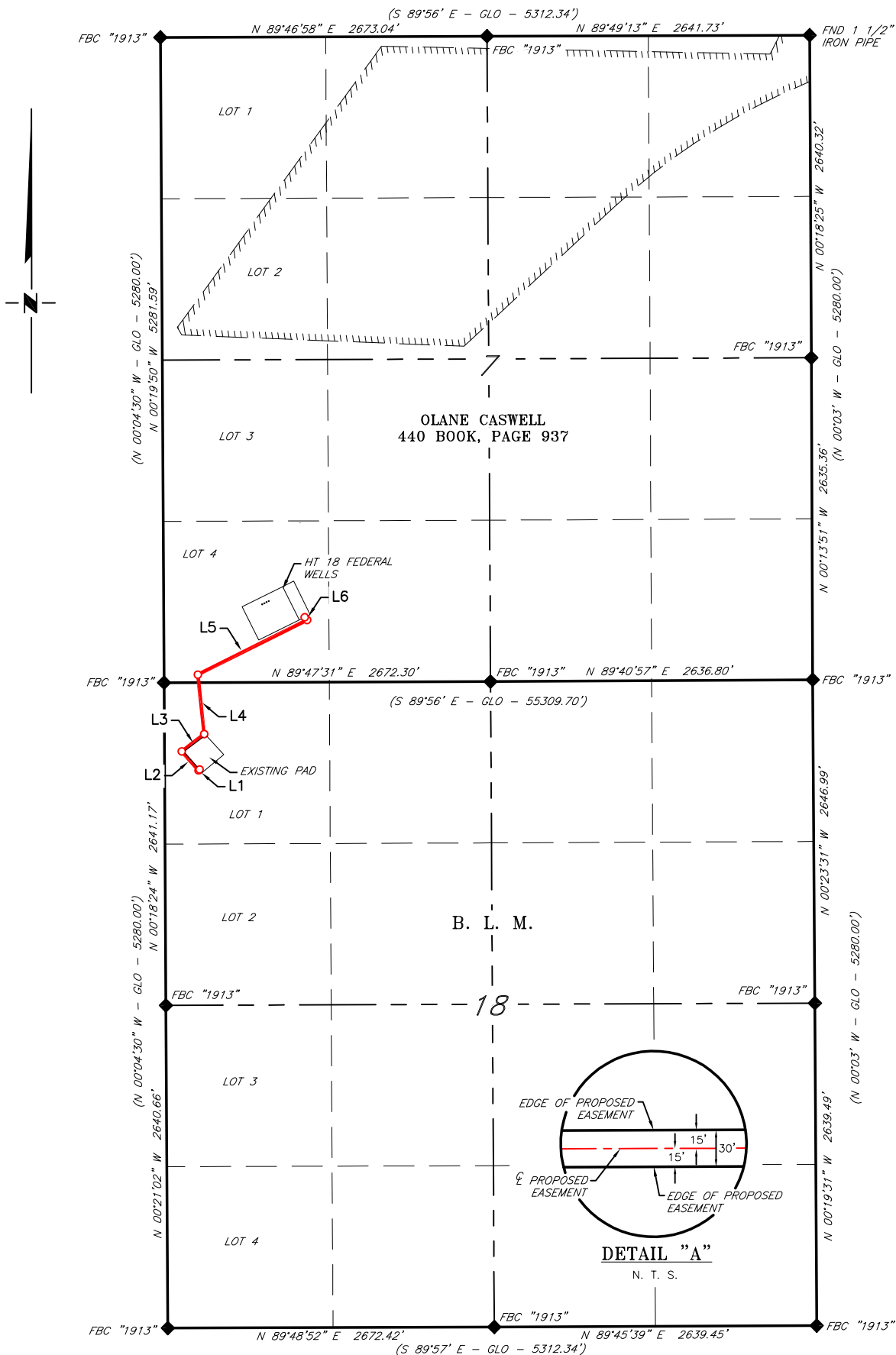
NO.	REVISION	DATE
JOB NO.: LS20110684		
DWG. NO.: 20110684-5		



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

SCALE: 1" = 100'
DATE: 11-19-2020
SURVEYED BY: JF/JH
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

SPUR ENERGY PARTNERS LLC.
PROPOSED GAS LINE FOR THE HT 18 FEDERAL WELL LOCATIONS
SECTIONS 7 & 18, T17S, R32E,
N. M. P. M., LEA CO., NEW MEXICO



SCALE: 1" = 1200'

0 600' 1200'

BEARINGS ARE GRID NAD 83
NM EAST
DISTANCES ARE HORIZ. GROUND.

LINE TABLE		
LINE	BEARING	LENGTH
L1	S 49°57'28" W	11.68'
L2	N 41°34'59" W	207.20'
L3	N 52°02'37" E	232.20'
L4	N 06°06'28" W	488.80'
L5	N 63°29'35" E	1,000.78'
L6	N 42°23'22" W	30.08'

LEGEND

() RECORD DATA - GLO

◆ FOUND MONUMENT AS NOTED

— PROPOSED GAS LINE

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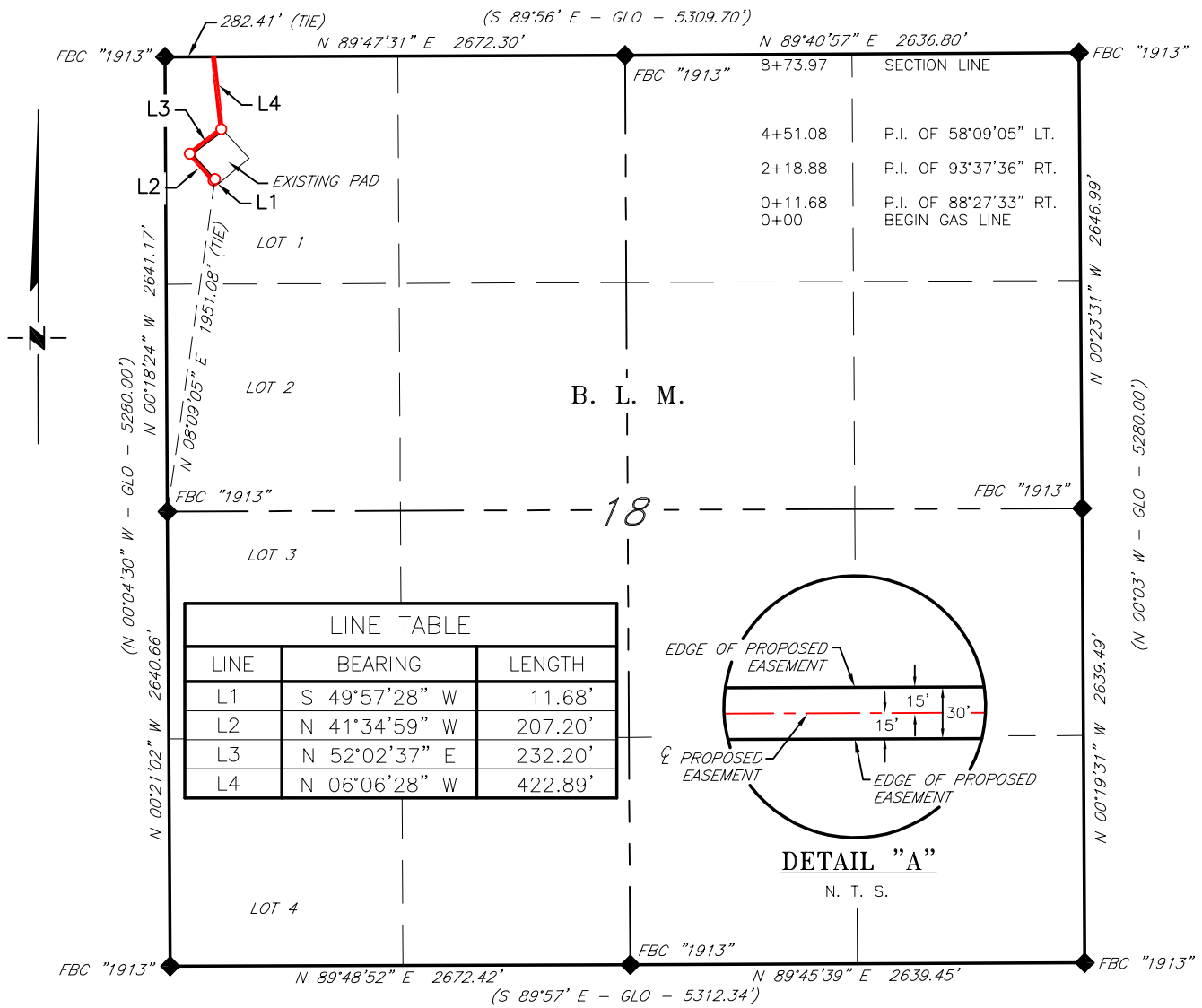
NO.	REVISION	DATE
JOB NO.: LS20110681		
DWG. NO.: 20110681-1		



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

SCALE: 1" = 1200'
DATE: 11-12-2020
SURVEYED BY: JF/JH
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 3

SPUR ENERGY PARTNERS LLC.
PROPOSED GAS LINE FOR THE HT 18 FEDERAL WELL LOCATIONS
SECTION 18, T17S, R32E,
N. M. P. M., LEA CO., NEW MEXICO



DESCRIPTION

A strip of land 30 feet wide, being 873.97 feet or 52.968 rods in length, lying in Section 18, Township 17 South, Range 32 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in Lot 1, Section 18, which bears, N 08°09'05" W, 1,951.08 feet, from a brass cap, stamped "1913", found for the West quarter corner of Section 18;

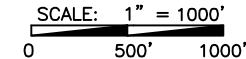
Thence S 49°57'28" W, 11.68 feet, to Engr. Sta. 0+11.68, to a P. I. of 88°27'33" right;

Thence N 41°34'59" W, 207.20 feet, to Engr. Sta. 2+18.88, to a P. I. of 93°37'36" right;

Thence N 52°02'37" E, 232.20 feet, to Engr. Sta. 4+51.08, to a P. I. of 58°09'05" left;

Thence N 06°06'28" W, 422.89 feet, to Engr. Sta. 8+73.97, to a point on the North line of Section 18, which bears, N 89°47'31" E, 282.41 feet, from a brass cap, stamped "1913", found for the Northwest corner of Section 18.

Said strip of land contains 0.602 acres, more or less, and is allocated by forties as follows:



Lot 1 52.968 Rods 0.602 Acres

BEARINGS ARE GRID NAD 83
NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

() RECORD DATA - GLO

◆ FOUND MONUMENT AS NOTED

— PROPOSED GAS LINE

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M. Howett
Robert M. Howett NM PS 19680



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NO.	REVISION	DATE
JOB NO.:	LS20110681	
DWG. NO.:	20110681-2	



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

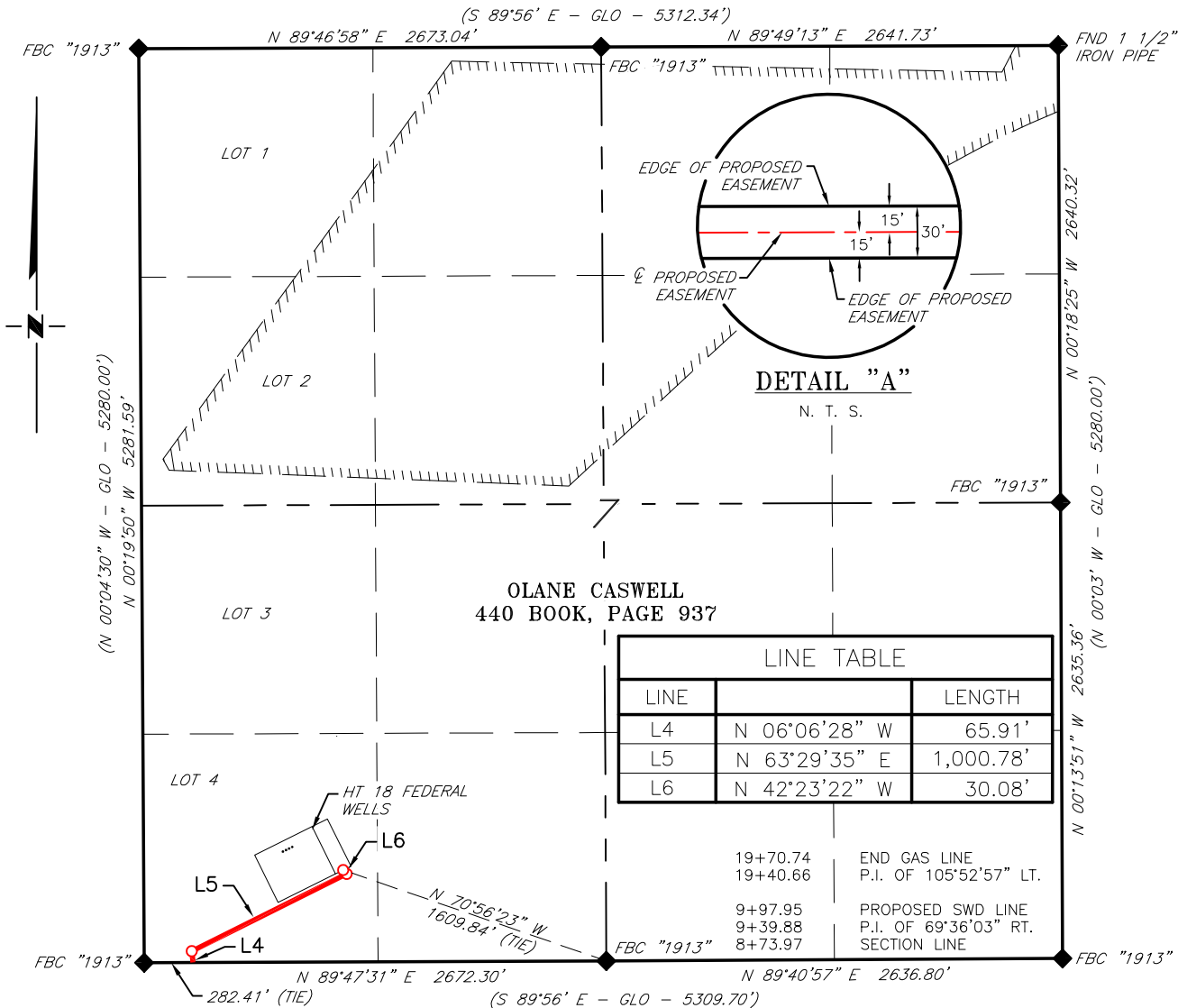
SCALE:	1" = 1000'
DATE:	11-19-2020
SURVEYED BY:	JF/JH
DRAWN BY:	LPS
APPROVED BY:	RMH
SHEET:	2 OF 3

SPUR ENERGY PARTNERS LLC.

PROPOSED GAS LINE FOR THE HT 18 FEDERAL WELL LOCATIONS

SECTION 7, T17S, R32E,

N. M. P. M., LEA CO., NEW MEXICO



DESCRIPTION

A strip of land 30 feet wide, being 1,096.77 feet or 66.471 rods in length, lying in Section 7, Township 17 South, Range 32 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across the lands of Olane Caswell, according to a deed filed for record in Book 440, Page 937, of the Deed Records of Lea County, New Mexico:

BEGINNING at Engr. Sta. 8+73.97, a point on the South line of Section 7, which bears, N 89°47'31" E, 282.41 feet, from a brass cap, stamped "1913", found for the Southwest corner of Section 7;

Thence N 06°06'28" W, 65.91 feet, to Engr. Sta. 9+39.88, to a P. I. of 69°36'03" right;

Thence N 63°29'35" E, 1,000.78 feet, to Engr. Sta. 19+40.66, to a P. I. of 105°52'57" left;

Thence N 42°23'22" W, 30.08 feet, to Engr. Sta. 19+70.74, the End of Survey, a point in Lot 4, Section 7, which bears, N 70°56'23" W, 1,609.84 feet, from a brass cap, stamped "1913", found for the South quarter corner of Section 7.

Said strip of land contains 0.755 acres, more or less, and is allocated by forties as follows:

Lot 4 66.471 Rods 0.755 Acres

SCALE: 1" = 1000'

0 500' 1000'

BEARINGS ARE GRID NAD 83
NM EAST

DISTANCES ARE HORIZ. GROUND.

LEGEND

() RECORD DATA - GLO

◆ FOUND MONUMENT
AS NOTED

— PROPOSED GAS LINE

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M. Howett

Robert M. Howett NM PS 19680



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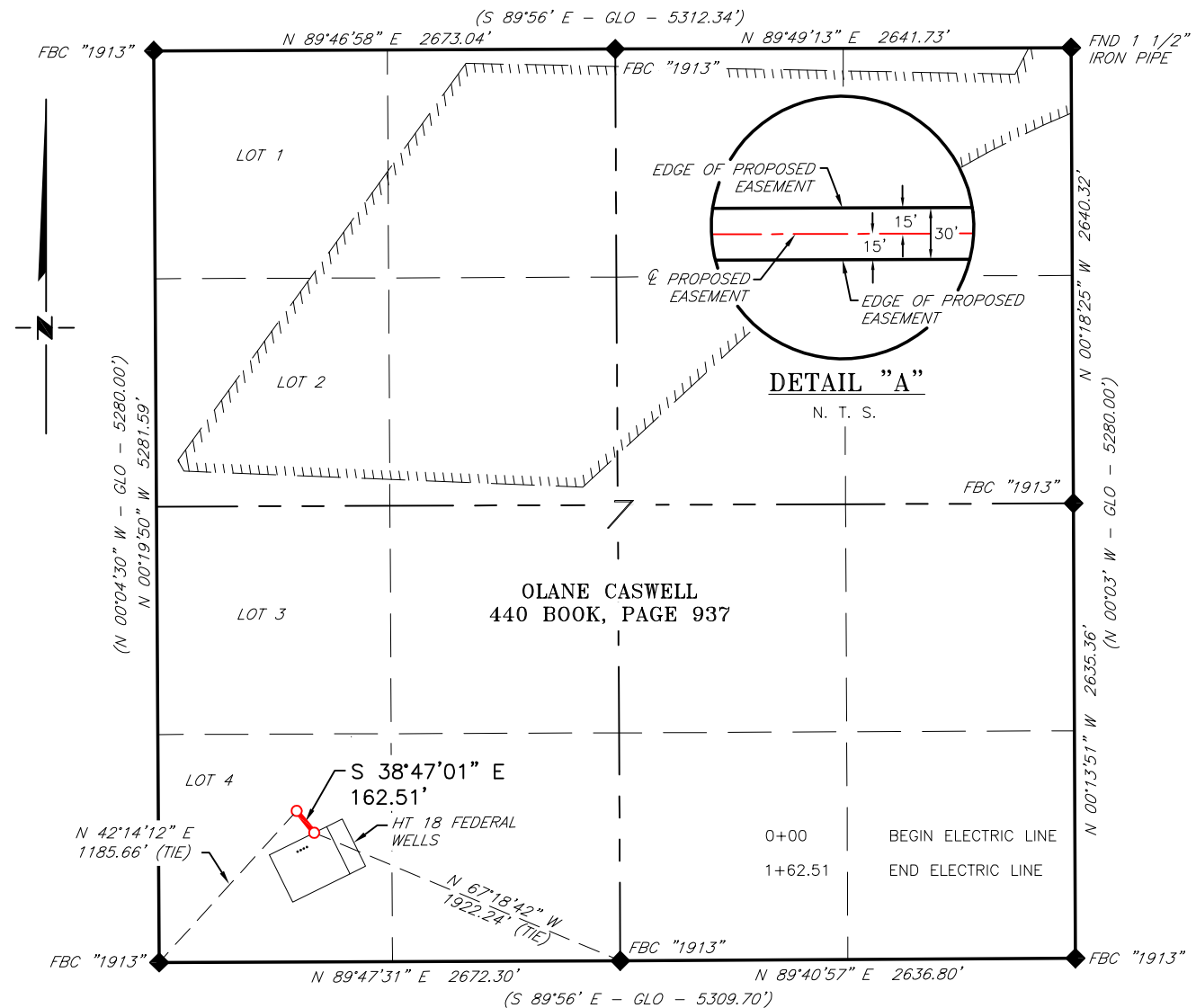
NO.	REVISION	DATE
JOB NO.: LS20110681		
DWG. NO.: 20110681-3		



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

SCALE: 1" = 1000'
DATE: 11-19-2020
SURVEYED BY: JF/JH
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 3 OF 3

SPUR ENERGY PARTNERS LLC.
PROPOSED ELECTRIC LINE FOR THE HT 18 FEDERAL WELL LOCATIONS
SECTION 7, T17S, R32E,
N. M. P. M., LEA CO., NEW MEXICO



DESCRIPTION

A strip of land 30 feet wide, being 162.51 feet or 9.849 rods in length, lying in Section 7, Township 17 South, Range 32 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across the lands of Olane Caswell, according to a deed filed for record in Book 440, Page 937, of the Deed Records of Lea County, New Mexico:

BEGINNING at Engr. Sta. 0+00, a point in the Southwest quarter of Section 7, which bears, N 42°14'12" E, 1,185.66 feet, from a brass cap, stamped "1913", found for the Southwest corner of Section 7;

Thence S 38°47'01" E, 162.51 feet, to Engr. Sta. 1+62.51, the End of Survey, a point in Lot 4, Section 7, which bears, N 67°18'42" W, 1,922.24 feet, from a brass cap, stamped "1913", found for the South quarter corner of Section 7.

Said strip of land contains 0.112 acres, more or less, and is allocated by forties as follows:

LOT 4 9.849 Rods 0.112 Acres

SCALE: 1" = 1000'

0 500' 1000'

BEARINGS ARE GRID NAD 83
NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

() RECORD DATA - GLO

◆ FOUND MONUMENT
AS NOTED

— PROPOSED ELECTRIC LINE

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M. Howett
Robert M. Howett NM PS 19680



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NO.	REVISION	DATE
JOB NO.:	LS20110682	
DWG. NO.:	20110682-3	



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

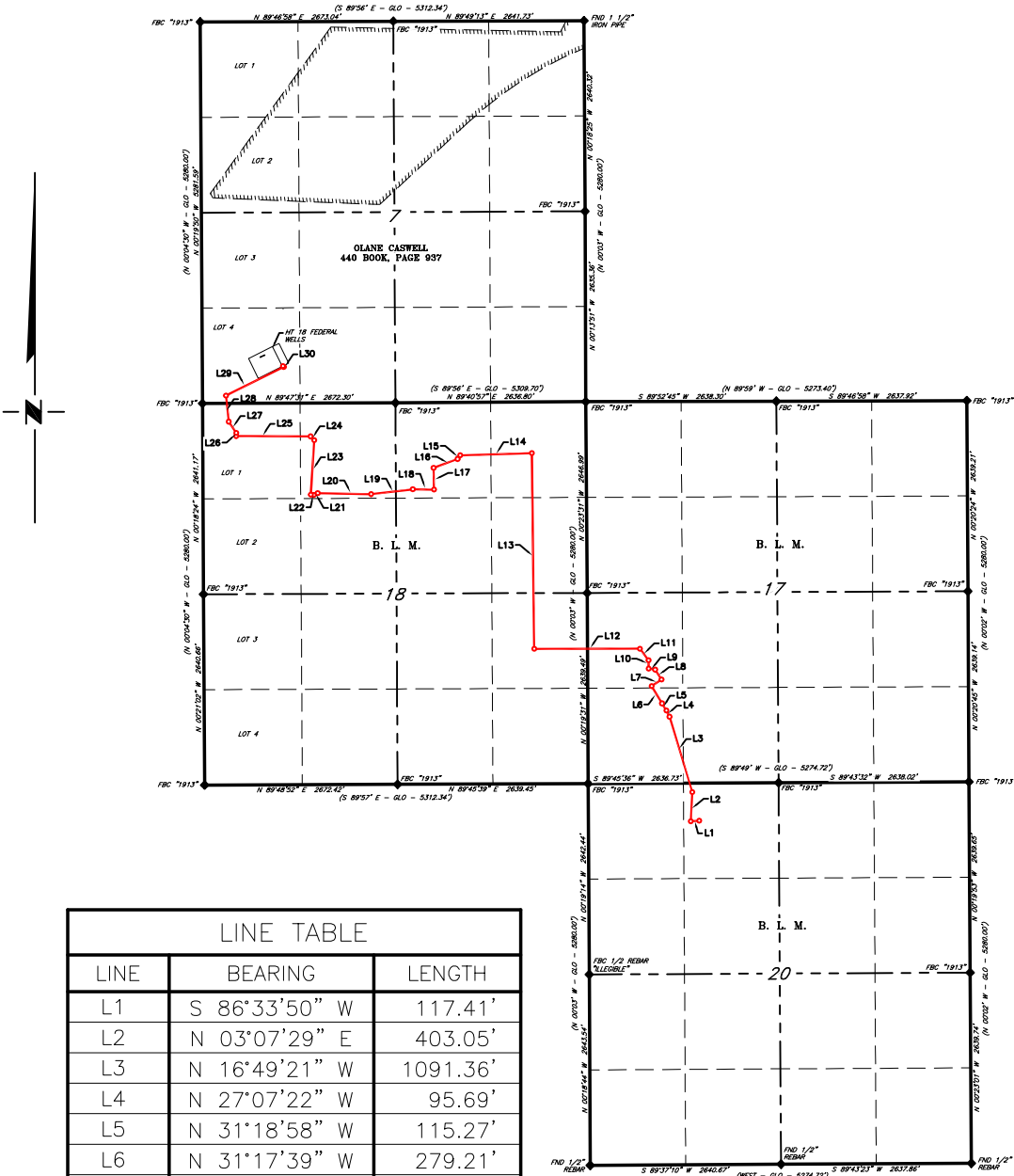
SCALE: 1" = 1000'
DATE: 11-19-2020
SURVEYED BY: JF/JH
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

SPUR ENERGY PARTNERS LLC.

PROPOSED SWD PIPELINE FOR THE HT 18 FEDERAL WELL LOCATIONS

SECTIONS 7, 17, 18 & 20, T17S, R32E,

N. M. P. M., LEA CO., NEW MEXICO



LINE TABLE		
LINE	BEARING	LENGTH
L1	S 86°33'50" W	117.41'
L2	N 03°07'29" E	403.05'
L3	N 16°49'21" W	1091.36'
L4	N 27°07'22" W	95.69'
L5	N 31°18'58" W	115.27'
L6	N 31°17'39" W	279.21'
L7	N 55°54'39" E	165.60'
L8	N 32°51'20" W	162.05'
L9	N 80°07'18" W	90.34'
L10	N 01°00'17" W	115.07'
L11	N 36°51'20" W	198.95'
L12	S 89°56'40" W	1,463.51'
L13	N 00°43'00" W	2,708.71'
L14	S 88°17'05" W	992.94'
L15	S 34°39'07" W	61.73'
L16	S 69°51'27" W	354.36'
L17	S 00°56'22" E	301.98'
L18	S 89°10'21" E	292.77'
L19	S 83°23'12" W	582.17'
L20	N 88°55'17" W	739.11'

LINE TABLE		
LINE	BEARING	LENGTH
L21	S 66°02'57" W	59.92'
L22	N 84°25'56" W	40.77'
L23	N 03°34'16" E	755.50'
L24	N 43°17'50" W	71.12'
L25	N 89°42'34" W	1,030.39'
L26	N 01°28'16" W	42.39'
L27	N 33°04'11" W	187.24'
L28	N 06°19'01" W	363.35'
L29	N 63°39'30" E	894.86'
L30	N 49°27'00" W	16.35'

SCALE: 1" = 2500'

0 1250 2500'

BEARINGS ARE GRID NAD 83
NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

() RECORD DATA - GLO

◆ FOUND MONUMENT
AS NOTED

— PROPOSED SWD PIPELINE

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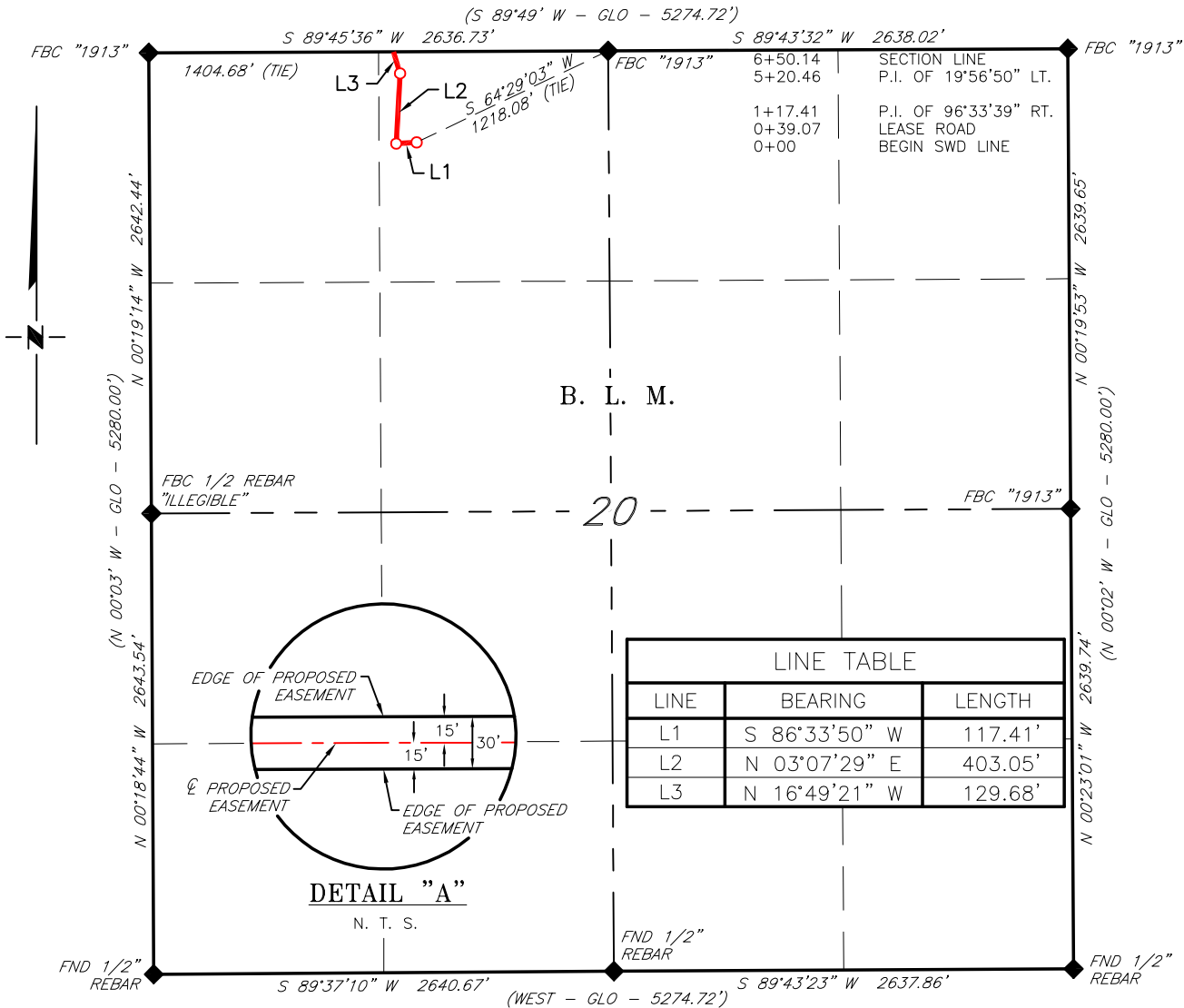
NO.	REVISION	DATE
JOB NO.: LS20110680		
DWG. NO.: 20110680-1		



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

SCALE: 1" = 2500'
DATE: 11/19/2020
SURVEYED BY: JF/JH
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 7

SPUR ENERGY PARTNERS LLC.
PROPOSED SWD PIPELINE FOR THE HT 18 FEDERAL WELL LOCATIONS
SECTION 20, T17S, R32E,
N. M. P. M., LEA CO., NEW MEXICO



DESCRIPTION

A strip of land 30 feet wide, being 650.14 feet or 39.402 rods in length, lying in Section 20, Township 17 South, Range 32 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in the Northwest quarter of Section 17, which bears, S 64°29'03" W, 1,218.08 feet, from a brass cap, stamped "1913", found for the North quarter corner of Section 20;

Thence S 86°33'50" W, 117.41 feet, to Engr. Sta. 1+17.41, to a P. I. of 96°33'39" right;

Thence N 03°07'29" E, 403.05 feet, to Engr. Sta. 5+20.46, to a P. I. of 19°56'50" left;

Thence N 16°49'21" W, 129.68 feet, to Engr. Sta. 6+50.14, to a point on the North line of Section 20, which bears, N 89°45'36" E, 1,404.68 feet, from a brass cap, stamped "1913", found for the Northwest corner of Section 20.

Said strip of land contains 0.448 acres, more or less, and is allocated by forties as follows:

SCALE: 1" = 1000'

0 500' 1000'

BEARINGS ARE GRID NAD 83
NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

() RECORD DATA - GLO

◆ FOUND MONUMENT
AS NOTED

— PROPOSED SWD PIPELINE

NE 1/4 NW 1/4 39.402 Rods 0.448 Acres

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M. Howett

Robert M. Howett NM PS 19680



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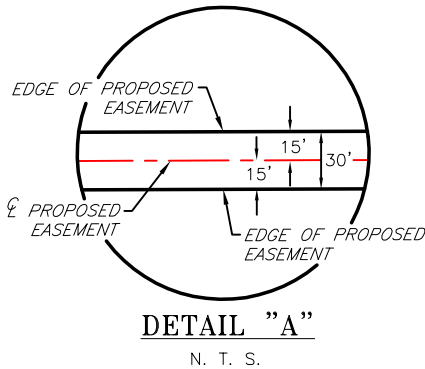
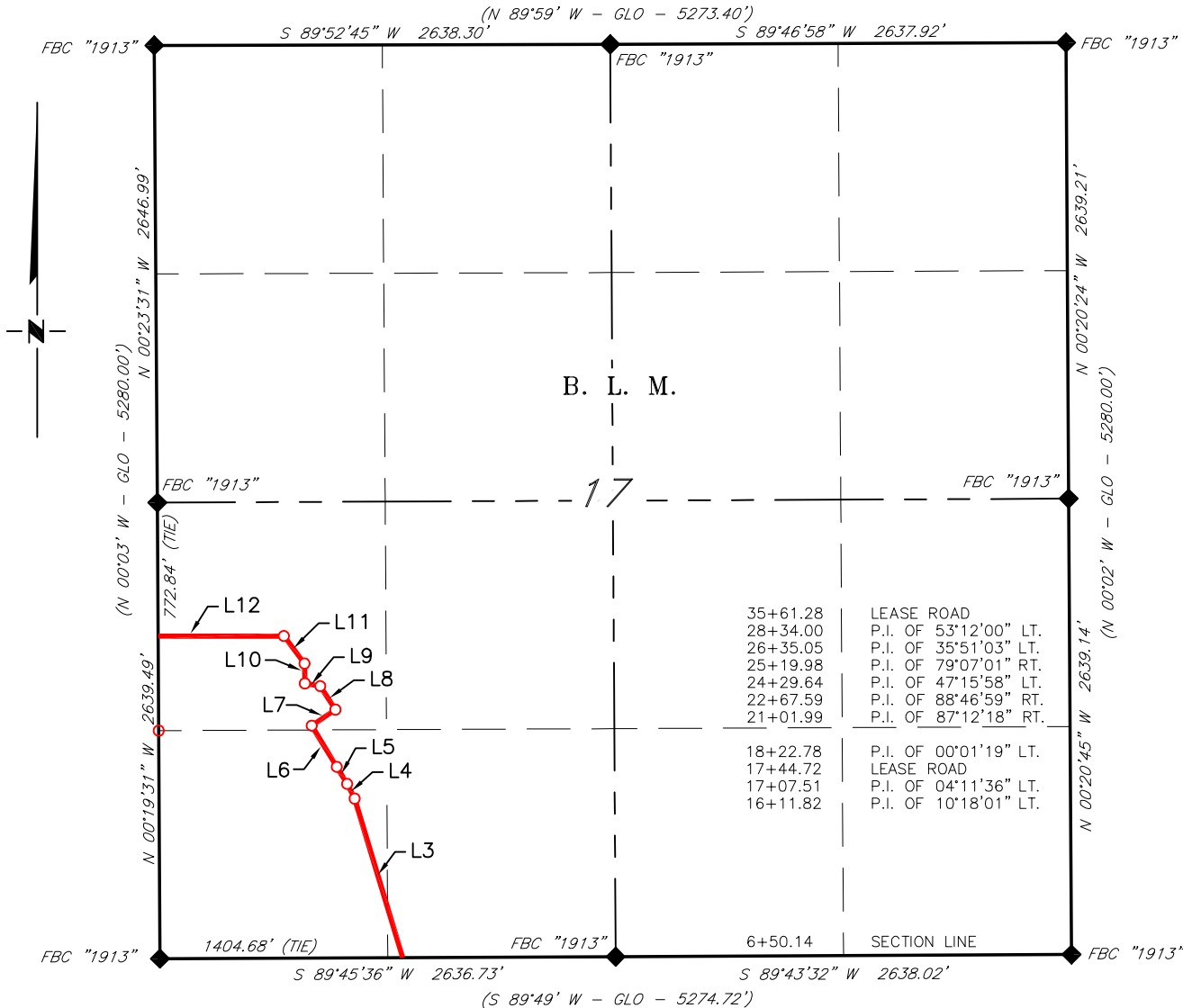
NO.	REVISION	DATE
JOB NO.:	LS20110680	
DWG. NO.:	20110680-2	



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

SCALE: 1" = 1000'
DATE: 11-19-2020
SURVEYED BY: JF/JH
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 2 OF 7

SPUR ENERGY PARTNERS LLC.
PROPOSED SWD PIPELINE FOR THE HT 18 FEDERAL WELL LOCATIONS
SECTION 17, T17S, R32E,
N. M. P. M., LEA CO., NEW MEXICO



LINE TABLE		
LINE	BEARING	LENGTH
L3	N 16°49'21" W	961.68'
L4	N 27°07'22" W	95.69'
L5	N 31°18'58" W	115.27'
L6	N 31°17'39" W	279.21'
L7	N 55°54'39" E	165.60'
L8	N 32°51'20" W	162.05'
L9	N 80°07'18" W	90.34'
L10	N 01°00'17" W	115.07'
L11	N 36°51'20" W	198.95'
L12	S 89°56'40" W	727.28'

SCALE: 1" = 1000'
0 500' 1000'

BEARINGS ARE GRID NAD 83
NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND
() RECORD DATA - GLO
◆ FOUND MONUMENT
AS NOTED
— PROPOSED SWD PIPELINE

I, R. M. Howett, a N. M. Professional Surveyor, hereby
certify that I prepared this plat from an actual survey
made on the ground under my direct supervision, said
survey and plat meet the Min. Stds. for Land Surveying in
the State of N. M. and are true and correct to the best
of my knowledge and belief.

Robert M. Howett
Robert M. Howett NM PS 19680



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NO.	REVISION	DATE
JOB NO.:	LS20110680	
DWG. NO.:	20110680-3	



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

SCALE: 1" = 1000'
DATE: 11-19-20
SURVEYED BY: JF/JH
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 3 OF 7

SPUR ENERGY PARTNERS LLC.

PROPOSED SWD PIPELINE FOR THE HT 18 FEDERAL WELL LOCATIONS

SECTION 17, T17S, R32E,

N. M. P. M., LEA CO., NEW MEXICO

DESCRIPTION

A strip of land 30 feet wide, being 2,911.14 feet or 176.433 rods in length, lying in Section 17, Township 17 South, Range 32 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 6+50.14, a point on the South line of Section 17, which bears, N 89°45'36" E, 1,404.68 feet, from a brass cap, stamped "1913", found for the Southwest corner of Section 17;

Thence N 16°49'21" W, 961.68 feet, to Engr. Sta. 16+11.82, a P. I. of 10°18'01" left;

Thence N 27°07'22" W, 95.69 feet, to Engr. Sta. 17+07.51, a P. I. of 04°11'36" left;

Thence N 31°18'58" W, 115.27 feet, to Engr. Sta. 18+22.78, a P. I. of 00°01'19" left;

Thence N 31°17'39" W, 279.21 feet, to Engr. Sta. 21+01.99, a P. I. of 87°12'18" right;

Thence N 55°54'39" E, 165.60 feet, to Engr. Sta. 22+67.59, a P. I. of 88°46'59" left;

Thence N 32°51'20" W, 162.05 feet, to Engr. Sta. 24+29.64, a P. I. of 47°15'58" left;

Thence N 80°07'18" W, 90.34 feet, to Engr. Sta. 25+19.98, o P. I. of 79°07'01" right;

Thence N 01°00'17" W, 115.07 feet, to Engr. Sta. 26+35.05, a P. I. of 35°51'03" left;

Thence N 36°51'20" W, 198.95 feet, to Engr. Sta. 28+34.00, a P. I. of 53°12'00" left;

Thence S 89°56'40" W, 727.28 feet, to Engr. Sta. 35+61.28, a point on the West line of Section 17, which bears, S 00°19'31" E, 772.84 feet, from a brass cap, stamped "1913", found for the West quarter corner of Section 17.

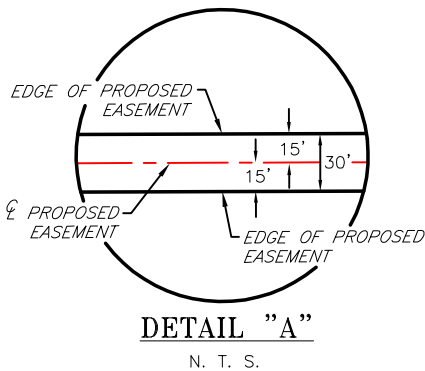
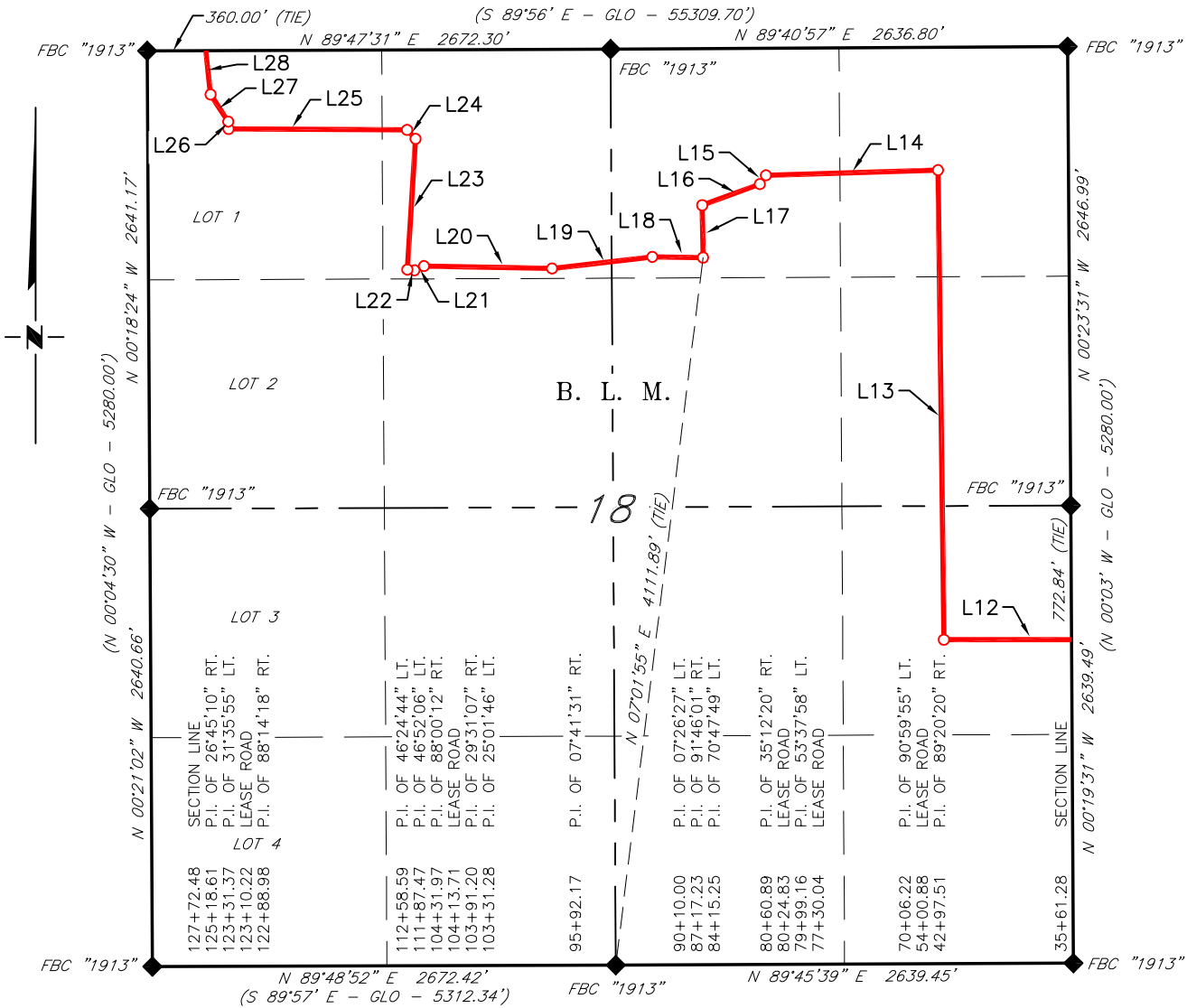
Said strip of land contains 2.005 acres, more or less, and is allocated by forties as follows:

SE 1/4 SW 1/4	18.432 Rods	0.210 Acres
SW 1/4 SW 1/4	67.783 Rods	0.770 Acres
NW 1/4 SW 1/4	90.218 Rods	1.025 Acres

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			RRC  701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200	SCALE: 1" = 1000'
				DATE: 11-19-20
				SURVEYED BY: JF/JH
NO.	REVISION	DATE		DRAWN BY: LPS
JOB NO.: LS20110680				APPROVED BY: RMH
DWG. NO.: 20110680-4				SHEET: 4 OF 7

SPUR ENERGY PARTNERS LLC.
PROPOSED SWD PIPELINE FOR THE HT 18 FEDERAL WELL LOCATIONS
SECTION 18, T17S, R32E,
N. M. P. M., LEA CO., NEW MEXICO



LINE TABLE		
LINE	BEARING	LENGTH
L12	S 89°56'40" W	736.23'
L13	N 00°43'00" W	2,708.71'
L14	S 88°17'05" W	992.94'
L15	S 34°39'07" W	61.73'
L16	S 69°51'27" W	354.36'
L17	S 00°56'22" E	301.98'
L18	N 89°10'21" W	292.77'
L19	S 83°23'12" W	582.17'
L20	N 88°55'17" W	739.11'
L21	S 66°02'57" W	59.92'
L22	N 84°25'56" W	40.77'
L23	N 03°34'16" E	755.50'
L24	N 43°17'50" W	71.12'
L25	N 89°42'34" W	1,030.39'
L26	N 01°28'16" W	42.39'
L27	N 33°04'11" W	187.24'
L28	N 06°19'01" W	253.87'

SCALE: 1" = 1000'
0 500' 1000'

BEARINGS ARE GRID NAD 83
NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

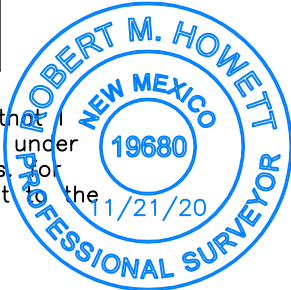
() RECORD DATA - GLO

◆ FOUND MONUMENT AS NOTED

— PROPOSED SWD PIPELINE

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M. Howett
Robert M. Howett NM PS 19680



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NO.	REVISION	DATE
JOB NO.: LS20110680		
DWG. NO.: 20110680-5		



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

SCALE: 1" = 1000'
DATE: 11-19-20
SURVEYED BY: JF/JH
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 5 OF 7

SPUR ENERGY PARTNERS LLC.

PROPOSED SWD PIPELINE FOR THE HT 18 FEDERAL WELL LOCATIONS

SECTION 18, T17S, R32E,

N. M. P. M., LEA CO., NEW MEXICO

DESCRIPTION

A strip of land 30 feet wide, being 9,211.20 feet or 558.255 rods in length, lying in Section 18, Township 17 South, Range 32 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 35+61.28, a point on the East line of Section 18, which bears, S 00°19'31" E, 772.84 feet, from a brass cap, stamped "1913", found for the East quarter corner of Section 18;

Thence S 89°56'40" W, 736.23 feet, to Engr. Sta. 42+97.51, a P. I. of 89°20'20" right;

Thence N 00°43'00" W, 2,708.71 feet, to Engr. Sta. 70+06.22, a P. I. of 90°59'55" left;

Thence S 88°17'05" W, 992.94 feet, to Engr. Sta. 79+99.16, a P. I. of 53°37'58" left;

Thence S 34°39'07" W, 61.73 feet, to Engr. Sta. 80+60.89, a P. I. of 35°12'20" right;

Thence S 69°51'27" W, 354.36 feet, to Engr. Sta. 84+15.25, a P. I. of 70°47'49" left;

Thence S 00°56'22" E, 301.98 feet, to Engr. Sta. 87+17.23, a P. I. of 91°46'01" right, a point which bears N 07°01'55" E 4,111.89 feet from a brass cap, stamped "1913";

Thence N 89°10'21" W, 292.77 feet, to Engr. Sta. 90+10.00, o P. I. of 07°26'27" left;

Thence S 83°23'12" W, 582.17 feet, to Engr. Sta. 95+92.17, a P. I. of 07°41'31" right;

Thence N 88°55'17" W, 739.11 feet, to Engr. Sta. 103+31.28, a P. I. of 25°01'46" left;

Thence S 66°02'57" W, 59.92 feet, to Engr. Sta. 103+91.20, a P. I. of 29°31'07" right;

Thence N 84°25'56" W, 40.77 feet, to Engr. Sta. 104+31.97, a P. I. of 88°00'12" right;

Thence N 03°34'16" E, 755.50 feet, to Engr. Sta. 111+87.47, a P. I. of 46°52'06" left;

Thence N 43°17'50" W, 71.12 feet, to Engr. Sta. 112+58.59, a P. I. of 46°24'44" left;

Thence N 89°42'34" W, 1,030.39 feet, to Engr. Sta. 122+88.98, a P. I. of 88°14'18" right;

Thence N 01°28'16" W, 42.39 feet, to Engr. Sta. 123+31.37, a P. I. of 31°35'55" left;

Thence N 33°04'11" W, 187.24 feet, to Engr. Sta. 125+18.61, a P. I. of 26°45'10" right;

Thence N 06°19'01" W, 253.87 feet, to Engr. Sta. 127+72.48, a point on the North line of Section 18, which bears, N 89°47'31" E, 360.00 feet, from a brass cap, stamped "1913", found for the Northwest corner of Section 18.

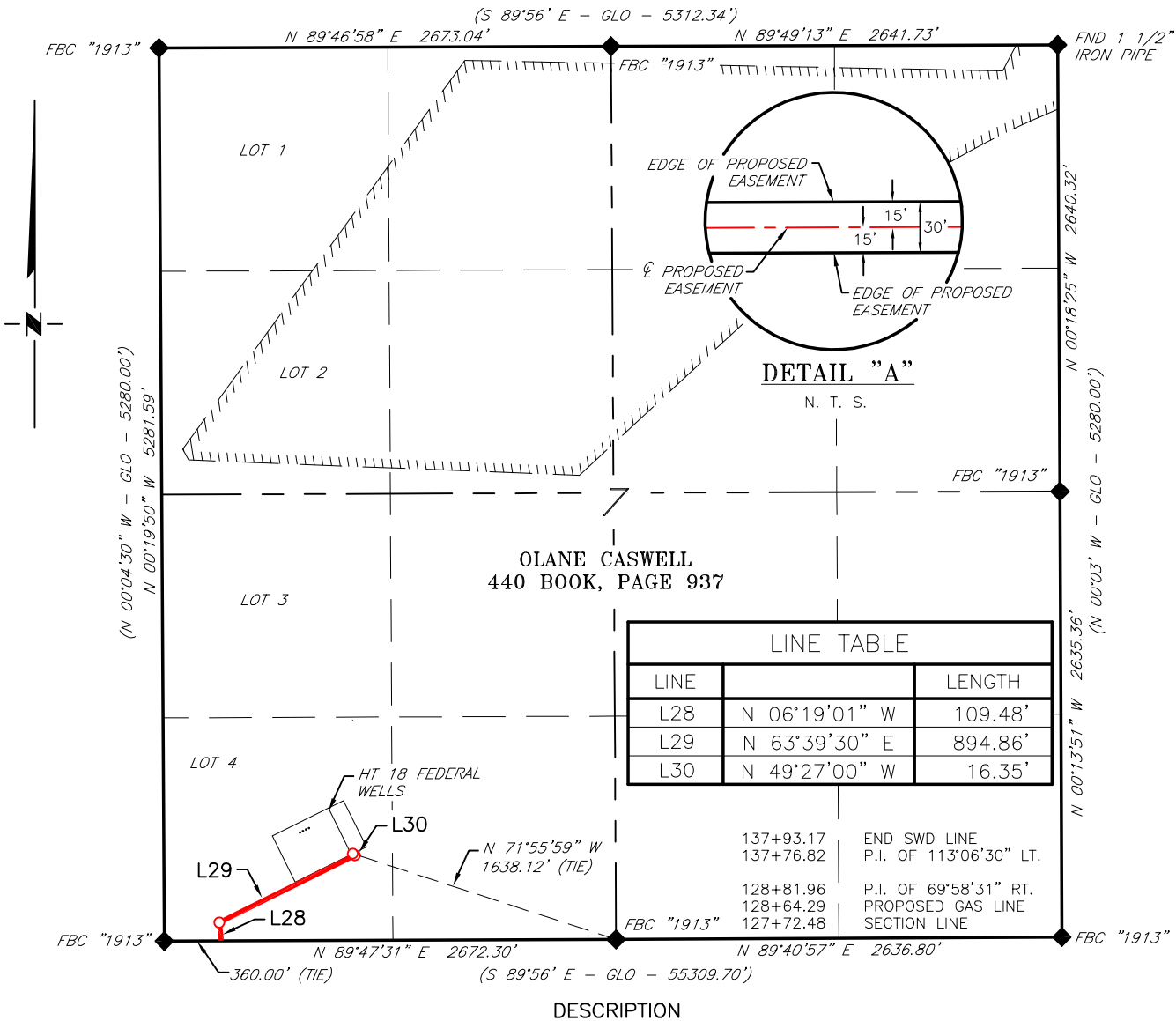
Said strip of land contains 6.344 acres, more or less, and is allocated by forties as follows:

NE 1/4 SE 1/4	91.349 Rods	1.038 Acres
SE 1/4 NE 1/4	80.168 Rods	0.911 Acres
NE 1/4 NE 1/4	71.600 Rods	0.814 Acres
NW 1/4 NE 1/4	101.388 Rods	1.152 Acres
NE 1/4 NW 1/4	130.732 Rods	1.486 Acres
Lot 1	83.018 Rods	0.943 Acres

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			RRC  701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200	SCALE: 1" = 1000'
				DATE: 11-19-20
				SURVEYED BY: JF/JH
NO.	REVISION	DATE		DRAWN BY: LPS
JOB NO.: LS20110680				APPROVED BY: RMH
DWG. NO.: 20110680-6				SHEET: 6 OF 7

SPUR ENERGY PARTNERS LLC.
PROPOSED SWD PIPELINE FOR THE HT 18 FEDERAL WELL LOCATIONS
SECTION 7, T17S, R32E,
N. M. P. M., LEA CO., NEW MEXICO



NO.	REVISION	DATE
JOB NO.:	LS20110680	
DWG. NO.:	20110680-7	



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

SCALE: 1" = 1000'
DATE: 11-19-2020
SURVEYED BY: JF/JH
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 7 OF 7



 **AKITA**
DRILLING LTD.
2302 8th Street, Nisku Alberta
T9E 7Z2 Tel: (780) 955-6700

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Date	5-6-2021	Scale	NTS
Drawn / Check'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

**BLACK GOLD®**

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:
 Date :
 Signature :

PRODUCTION
 8/5/2021

F-PRD-005B

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 "J. Rivera", written over a horizontal line.

TITLE: _____

QUALITY ASSURANCE

DATE: _____

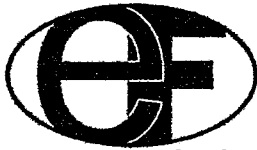
8/5/2021

Hydrostatic Test

Technician= CHRIS OLIVO

17:55:52





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.

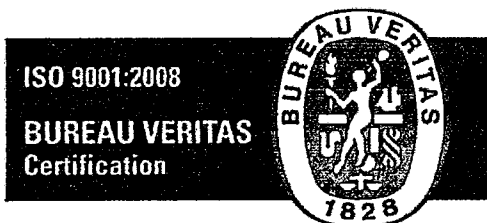
The Safety Clamp unit identified on this certificate has been load tested completely assembled; including the clamp body, (2) 3/4" shackles, 5/8" x 48" wire rope sling and anchor tab. Thus, all components are tested at the "Proof" load. Do not disassemble. Do not interchange any part or parts of this 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.



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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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 President
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District I

1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 42458

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 42458
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	8/18/2021
pkautz	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	8/18/2021
pkautz	Cement is required to circulate on both surface and production strings of casing	8/18/2021