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

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

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

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

2. Name of Operator

9. API Well No. 30 015 48961

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory

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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 09/09/2021

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	[2] Pool Code	[3] Pool Name
30-015-	97565	N. SEVEN RIVERS; GLORIETA-YESO

[4] Property Code	[5] Property Name	[6] Well Number
	ALTO AMM 21-16 FEDERAL	70H

[7] OGRID NO.	[8] Operator Name	[9] Elevation
328947	SPUR ENERGY PARTNERS LLC.	3488'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
B	28	19S	25E		311	NORTH	2076	EAST	EDDY

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	16	19S	25E		1270	SOUTH	1465	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
400			

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

[16]

GEODETIC DATA
NAD 83 GRID – NM EAST

SURFACE LOCATION (SL)
N: 595971.2 – E: 493766.0

LAT: 32.6382785° N
LONG: 104.4878759° W

FIRST TAKE POINT (FTP)
100' FSL & 1465' FEL SEC.21
N: 596380.6 – E: 494377.0

LAT: 32.6394062° N
LON: 104.4858927° W

LAST TAKE POINT (LTP)
1220' FSL & 1465' FEL SEC.16
N: 602840.5 – E: 494368.6

LAT: 32.6571626° N
LON: 104.4859503° W

BOTTOM HOLE (BH)
N: 602890.5 – E: 494368.6

LAT: 32.6573000° N
LON: 104.4859505° W

CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND 1/2" REBAR
N: 590950.1 – E: 490511.8

B: FOUND 10"X8"2.5" LIMESTONE ROCK
N: 596289.2 – E: 490540.3

C: FOUND SPIKE NAIL
N: 601644.8 – E: 490542.7

D: FOUND 3/8" REBAR
N: 606907.6 – E: 490582.5

E: FOUND 3/8" REBAR
N: 606875.7 – E: 495832.6

F: FOUND 1/2" REBAR
N: 601611.6 – E: 495833.4

G: FOUND 1" IRON PIPE
N: 598944.5 – E: 495837.1

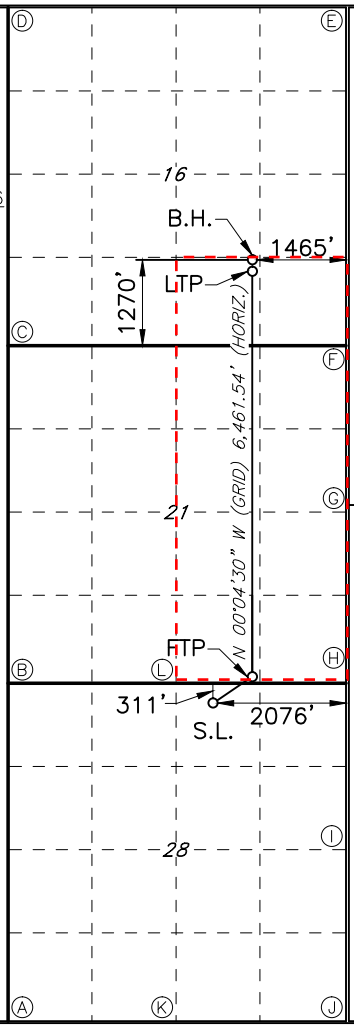
H: FOUND 1" IRON PIPE
N: 596277.3 – E: 495841.8

I: FOUND 60D NAIL
N: 593638.2 – E: 495840.9

J: FOUND 1/2" REBAR
N: 590944.6 – E: 495839.1

K: FOUND 1/2" REBAR
N: 590947.0 – E: 493175.7

L: FOUND 1/2" REBAR
N: 596283.3 – E: 493191.2



[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 01/20/2021
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.

11/23/2020
Date of Survey

Signature and Seal of Professional Surveyor

ROBERT M. HOWETT NEW MEXICO 19680 PROFESSIONAL SURVEYOR

19680
Certificate Number

LS20110718

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: SPUR ENERGY PARTNERS LLC **OGRID:** 328947 **Date:** 09 / 14 / 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
ALTO AMM 21-16 FEDERAL 1H	30-015-PENDING	B-28-19S-25E	311' FNL 2096' FEL	392 BBL/D	549 MCF/D	1176 BBL/D
ALTO AMM 21-16 FEDERAL 21H	30-015-PENDING	B-28-19S-25E	311' FNL 2136' FEL	342 BBL/D	479 MCF/D	1710 BBL/D
ALTO AMM 21-16 FEDERAL 61H	30-015-PENDING	B-28-19S-25E	311' FNL 2116' FEL	367 BBL/D	550 MCF/D	2566 BBL/D
ALTO AMM 21-16 FEDERAL 70H	30-015-PENDING	B-28-19S-25E	311' FNL 2076' FEL	349 BBL/D	524 MCF/D	2792 BBL/D

IV. Central Delivery Point Name: ALTO AMM 21-16 FEDERAL 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
ALTO AMM 21-16 FEDERAL 1H	30-015-PENDING	11/08/2022	11/15/2022	12/28/2022	01/21/2023	01/21/2023
ALTO AMM 21-16 FEDERAL 21H	30-015-PENDING	10/23/2022	10/30/2022	12/28/2022	01/21/2023	01/21/2023
ALTO AMM 21-16 FEDERAL 61H	30-015-PENDING	10/30/2022	1/08/2022	12/28/2022	01/21/2023	01/21/2023
ALTO AMM 21-16 FEDERAL 70H	30-015-PENDING	11/15/2022	11/24/2022	12/28/2022	01/21/2023	01/21/2023

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

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

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

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

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

Signature:	Sarah Chapman
Printed Name:	SARAH CHAPMAN
Title:	REGULATORY DIRECTOR
E-mail Address:	SCHAPMAN@SPUREPLLC.COM
Date:	09/14/2021
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 ignitor or continuous pilot. Spur will conduct AVO inspections as described in 19.15.27.8(E)(5)(a) with frequencies specified in 19.15.27.8(E)(5)(b) and (c). All emergencies or malfunctions will be resolved as quickly and safely as possible to minimize waste.

F. The volume of natural gas that is vented or flared as the result of an emergency or malfunction during drilling and/or completion operations will be estimated and reported accordingly. The volume of natural gas that is vented, flared or beneficially used during production operations, will be measured and reported accordingly. Spur will install equipment to measure the volume of natural gas flared from existing piping or a flowline piped from equipment such as high-pressure separators, heater treaters, or VRUs associated with a well or facility associated with a well authorized by an APD after May 25, 2021 that has an average daily production of less than 60,000 cubic feet of natural gas. If metering is not practicable due to circumstances such as low flow rate or low pressure venting or flaring, Spur will estimate the volume of flared or vented natural gas. Measuring equipment will conform to industry standards and will not be equipped with a manifold

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

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

Spur Energy Partners LLC – Alto Amm 21-16 Federal 70H

1. Geologic Formations

TVD of target	3500'
MD at TD	10787'

Formation	Depth	Lithology	Expected Fluids
Grayburg	350'	Dolomite	Sand
San Andres	695'	Dolomite	Sand
Glorieta	2250'	Sandstone, Shale, Anhydrite	Oil, gas
Yeso	2375'	Dolomite	Oil, gas
Lower Yeso	3775'	Dolomite	Oil, gas
Bone Spring	4750'	Sandstone, Silstone, Limestone	Oil, gas
Drinkard	4820'	Dolomite	Oil, gas

*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 Collapse	SF Burst	Body SF Tension	Joint SF Tension
	From (ft)	To (ft)								
12.25	0	1200	9.625	36	J-55	BTC	1.125	1.2	1.4	1.4
8.75	0	4000	7	32	L-80	BK-HT	1.125	1.2	1.4	1.4
8.75	4000	10787	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 – Alto Amm 21-16 Federal 70H

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

3. Cementing Program

Primary Plan:

Casing String	Top (ft)	Bottom (ft)	% Excess
Surface (Lead)	0	950	100%
Surface (Tail)	950	1200	165%
Production (Lead)	0	3000	0%
Production (Tail)	3000	10787	50%

Casing String	# Sks	Wt. (lb/gal)	Yld (ft3/sack)	H20 (gal/sk)	500# Comp. Strength (hours)	Slurry Description
Surface (Lead)	270	12.2	2.31	13.48	8:12	Clas C Premium Plus Cement
Surface (Tail)	123	13.2	1.84	9.92	6:59	Clas C Premium Plus Cement
Production (Lead)	186	11.8	2.54	15.29	N/A	Clas C Premium Plus Cement
Production (Tail)	1549	13.2	1.81	9.81	N/A	Clas C Premium Plus Cement

Spur Energy Partners LLC – Alto Amm 21-16 Federal 70H

4. Pressure Control Equipment

Spur Energy Partners LLC variance for flex hose

1. Spur requests a variance to use a flex line from the BOP to the choke manifold. Documentation will be attached in the APD and be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no bends).

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12.25" Hole	13-5/8”	5M	Annular	✓	70% of working pressure
		5M	Blind Ram	✓	250 psi / 3000 psi
			Pipe Ram	✓	
			Double Ram		
			Other*		
8.75" Hole	13-5/8”	5M	Annular	✓	70% of working pressure
		5M	Blind Ram	✓	250 psi / 3000 psi
			Pipe Ram	✓	
			Double Ram		
			Other*		

Spur Energy Partners LLC will be utilizing a 5M BOP

Condition	Specify what type and where?
BH Pressure at deepest TVD	1713 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	110°F

*Specify if additional ram is utilized.

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

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

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

	A conventional wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. See attached schematics.

5. BOP Break Testing Request

Spur Energy Partners LLC requests permission to adjust the BOP break testing requirements as 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	1200	Water-Based Mud	8.6-8.9	32-36	N/C
1200	10787	Water-Based Mud	8.6-8.9	32-36	N/C

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

Spur Energy Partners LLC – Alto Amm 21-16 Federal 70H

7. Logging and Testing Procedures

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

Additional logs planned		Interval
No	Resistivity	
No	Density	
No	CBL	
Yes	Mud log	ICP - TD
No	PEX	

8. Drilling Conditions

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

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

Total estimated cuttings volume: 977 bbls**.**

Spur Energy Partners LLC – Alto Amm 21-16 Federal 70H

9. Other facets of operation

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

Attachments
_x__ Directional Plan
_x__ H2S Contingency Plan
_x__ Akita 57 Attachment
_x__ BOP Schematics
_x__ Spudder Rig Attachment

10. Company Personnel

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

Spur Energy Partners, LLC

Eddy County, NM (NAD 83 - NME)
ALTO AMM 21-16 FEDERAL
#70H

Wellbore #1

Plan: Plan #1

Standard Planning Report

11 January, 2021

Planning Report

Database:	WBDS_SQL_2	**Local Co-ordinate Reference:**	Well #70H
Company:	Spur Energy Partners, LLC	**TVD Reference:**	RKB = 20' @ 3508.00usft
Project:	Eddy County, NM (NAD 83 - NME)	**MD Reference:**	RKB = 20' @ 3508.00usft
Site:	ALTO AMM 21-16 FEDERAL	**North Reference:**	Grid
Well:	#70H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project Eddy County, NM (NAD 83 - NME)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site ALTO AMM 21-16 FEDERAL

Site Position:		**Northing:**	595,971.20 usft	**Latitude:**	32.6382785
From:	Map	**Easting:**	493,766.00 usft	**Longitude:**	-104.4878758
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.200 in	**Grid Convergence:**	-0.083 °

Well #70H

Well Position	**+N/-S**	0.00 usft	**Northing:**	595,971.20 usft	**Latitude:**	32.6382785
	+E/-W	0.00 usft	**Easting:**	493,766.00 usft	**Longitude:**	-104.4878758
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,488.00 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	1/8/2021	7.050	60.152	47,686.67154518

Design Plan #1

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	359.93

Plan Survey Tool Program **Date** 1/10/2021

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	10,787.00	Plan #1 (Wellbore #1)	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	
851.26	16.54	129.94	843.63	-50.72	60.57	3.00	3.00	0.00	129.943	
2,865.32	16.54	129.94	2,774.38	-418.79	500.11	0.00	0.00	0.00	0.000	
3,756.42	60.00	359.93	3,523.51	-67.88	611.62	8.00	4.88	-14.59	-135.552	
3,956.42	60.00	359.93	3,623.51	105.33	611.39	0.00	0.00	0.00	0.000	
4,274.02	91.76	359.93	3,700.00	409.40	611.00	10.00	10.00	0.00	0.000	ALTO#70H: FTP/ LI
10,736.97	91.76	359.93	3,501.54	6,869.30	602.66	0.00	0.00	0.00	0.000	ALTO#70H: LTP
10,787.00	91.76	359.93	3,500.00	6,919.30	602.60	0.00	0.00	0.00	0.000	ALTO#70H: PBHL (

Planning Report

Database:	WBDS_SQL_2	**Local Co-ordinate Reference:**	Well #70H
Company:	Spur Energy Partners, LLC	**TVD Reference:**	RKB = 20' @ 3508.00usft
Project:	Eddy County, NM (NAD 83 - NME)	**MD Reference:**	RKB = 20' @ 3508.00usft
Site:	ALTO AMM 21-16 FEDERAL	**North Reference:**	Grid
Well:	#70H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

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
ALTO#70H: SHL (311' FNL & 2076' FEL)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	3.00	129.94	399.95	-1.68	2.01	-1.68	3.00	3.00	0.00
500.00	6.00	129.94	499.63	-6.72	8.02	-6.73	3.00	3.00	0.00
600.00	9.00	129.94	598.77	-15.10	18.03	-15.12	3.00	3.00	0.00
700.00	12.00	129.94	697.08	-26.79	32.00	-26.83	3.00	3.00	0.00
800.00	15.00	129.94	794.31	-41.78	49.89	-41.84	3.00	3.00	0.00
851.26	16.54	129.94	843.63	-50.72	60.57	-50.80	3.00	3.00	0.00
900.00	16.54	129.94	890.36	-59.63	71.21	-59.72	0.00	0.00	0.00
1,000.00	16.54	129.94	986.22	-77.91	93.03	-78.02	0.00	0.00	0.00
1,100.00	16.54	129.94	1,082.09	-96.18	114.86	-96.32	0.00	0.00	0.00
1,200.00	16.54	129.94	1,177.95	-114.46	136.68	-114.62	0.00	0.00	0.00
1,300.00	16.54	129.94	1,273.81	-132.73	158.50	-132.93	0.00	0.00	0.00
1,400.00	16.54	129.94	1,369.68	-151.01	180.33	-151.23	0.00	0.00	0.00
1,500.00	16.54	129.94	1,465.54	-169.28	202.15	-169.53	0.00	0.00	0.00
1,600.00	16.54	129.94	1,561.40	-187.56	223.97	-187.83	0.00	0.00	0.00
1,700.00	16.54	129.94	1,657.27	-205.83	245.80	-206.13	0.00	0.00	0.00
1,800.00	16.54	129.94	1,753.13	-224.11	267.62	-224.43	0.00	0.00	0.00
1,900.00	16.54	129.94	1,848.99	-242.38	289.44	-242.74	0.00	0.00	0.00
2,000.00	16.54	129.94	1,944.86	-260.66	311.27	-261.04	0.00	0.00	0.00
2,100.00	16.54	129.94	2,040.72	-278.93	333.09	-279.34	0.00	0.00	0.00
2,200.00	16.54	129.94	2,136.58	-297.21	354.91	-297.64	0.00	0.00	0.00
2,300.00	16.54	129.94	2,232.45	-315.48	376.74	-315.94	0.00	0.00	0.00
2,400.00	16.54	129.94	2,328.31	-333.76	398.56	-334.24	0.00	0.00	0.00
2,500.00	16.54	129.94	2,424.17	-352.03	420.38	-352.55	0.00	0.00	0.00
2,600.00	16.54	129.94	2,520.04	-370.31	442.21	-370.85	0.00	0.00	0.00
2,700.00	16.54	129.94	2,615.90	-388.58	464.03	-389.15	0.00	0.00	0.00
2,800.00	16.54	129.94	2,711.76	-406.86	485.85	-407.45	0.00	0.00	0.00
2,865.32	16.54	129.94	2,774.38	-418.79	500.11	-419.40	0.00	0.00	0.00
ALTO#70H: KOP @ 2865.32' MD									
2,900.00	14.68	122.26	2,807.78	-424.31	507.61	-424.93	8.00	-5.35	-22.16
2,950.00	12.60	107.70	2,856.39	-429.35	518.17	-429.98	8.00	-4.16	-29.12
3,000.00	11.56	89.15	2,905.30	-430.94	528.38	-431.58	8.00	-2.09	-37.09
3,050.00	11.83	69.37	2,954.28	-429.05	538.19	-429.71	8.00	0.54	-39.57
3,100.00	13.34	52.27	3,003.09	-423.72	547.55	-424.39	8.00	3.01	-34.19
3,150.00	15.73	39.42	3,051.50	-414.95	556.42	-415.63	8.00	4.78	-25.69
3,200.00	18.67	30.20	3,099.27	-402.79	564.75	-403.48	8.00	5.88	-18.44
3,250.00	21.93	23.52	3,146.16	-387.31	572.51	-388.01	8.00	6.53	-13.36
3,300.00	25.40	18.54	3,191.96	-368.57	579.65	-369.28	8.00	6.94	-9.96
3,350.00	29.00	14.71	3,236.42	-346.67	586.14	-347.39	8.00	7.20	-7.67
3,400.00	32.68	11.67	3,279.35	-321.72	591.95	-322.44	8.00	7.37	-6.09
3,450.00	36.43	9.18	3,320.52	-293.83	597.05	-294.56	8.00	7.49	-4.97
3,500.00	40.21	7.10	3,359.74	-263.15	601.41	-263.88	8.00	7.57	-4.16
3,550.00	44.03	5.33	3,396.82	-229.81	605.03	-230.55	8.00	7.64	-3.55
3,600.00	47.88	3.78	3,431.58	-194.00	607.86	-194.74	8.00	7.69	-3.09
3,650.00	51.74	2.41	3,463.84	-155.87	609.91	-156.61	8.00	7.72	-2.74
3,700.00	55.61	1.18	3,493.45	-115.61	611.17	-116.36	8.00	7.75	-2.46
3,750.00	59.50	0.06	3,520.27	-73.43	611.62	-74.17	8.00	7.77	-2.24
3,756.42	60.00	359.93	3,523.51	-67.88	611.62	-68.62	8.00	7.78	-2.14
3,800.00	60.00	359.93	3,545.30	-30.14	611.57	-30.89	0.00	0.00	0.00

SPUR ENERGY PARTNERS

Planning Report

WELLBENDERS DIRECTIONAL SERVICES

Database:	WBDS_SQL_2	**Local Co-ordinate Reference:**	Well #70H
Company:	Spur Energy Partners, LLC	**TVD Reference:**	RKB = 20' @ 3508.00usft
Project:	Eddy County, NM (NAD 83 - NME)	**MD Reference:**	RKB = 20' @ 3508.00usft
Site:	ALTO AMM 21-16 FEDERAL	**North Reference:**	Grid
Well:	#70H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

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)
3,900.00	60.00	359.93	3,595.30	56.46	611.46	55.72	0.00	0.00	0.00
3,956.42	60.00	359.93	3,623.51	105.33	611.39	104.58	0.00	0.00	0.00
4,000.00	64.36	359.93	3,643.84	143.86	611.34	143.11	10.00	10.00	0.00
4,050.00	69.36	359.93	3,663.49	189.82	611.28	189.07	10.00	10.00	0.00
4,100.00	74.36	359.93	3,679.05	237.32	611.22	236.57	10.00	10.00	0.00
4,150.00	79.36	359.93	3,690.41	285.99	611.16	285.25	10.00	10.00	0.00
4,200.00	84.36	359.93	3,697.49	335.47	611.10	334.73	10.00	10.00	0.00
4,250.00	89.36	359.93	3,700.23	385.38	611.03	384.64	10.00	10.00	0.00
4,274.02	91.76	359.93	3,700.00	409.40	611.00	408.65	10.00	10.00	0.00
ALTO#70H: FTP/ LP (100' FSL)									
4,300.00	91.76	359.93	3,699.20	435.37	610.97	434.62	0.00	0.00	0.00
4,400.00	91.76	359.93	3,696.13	535.32	610.84	534.57	0.00	0.00	0.00
4,500.00	91.76	359.93	3,693.06	635.27	610.71	634.53	0.00	0.00	0.00
4,600.00	91.76	359.93	3,689.99	735.23	610.58	734.48	0.00	0.00	0.00
4,700.00	91.76	359.93	3,686.92	835.18	610.45	834.43	0.00	0.00	0.00
4,800.00	91.76	359.93	3,683.85	935.13	610.32	934.39	0.00	0.00	0.00
4,900.00	91.76	359.93	3,680.78	1,035.08	610.19	1,034.34	0.00	0.00	0.00
5,000.00	91.76	359.93	3,677.71	1,135.04	610.06	1,134.29	0.00	0.00	0.00
5,100.00	91.76	359.93	3,674.64	1,234.99	609.93	1,234.24	0.00	0.00	0.00
5,200.00	91.76	359.93	3,671.57	1,334.94	609.81	1,334.20	0.00	0.00	0.00
5,300.00	91.76	359.93	3,668.49	1,434.90	609.68	1,434.15	0.00	0.00	0.00
5,400.00	91.76	359.93	3,665.42	1,534.85	609.55	1,534.10	0.00	0.00	0.00
5,500.00	91.76	359.93	3,662.35	1,634.80	609.42	1,634.05	0.00	0.00	0.00
5,600.00	91.76	359.93	3,659.28	1,734.75	609.29	1,734.01	0.00	0.00	0.00
5,700.00	91.76	359.93	3,656.21	1,834.71	609.16	1,833.96	0.00	0.00	0.00
5,800.00	91.76	359.93	3,653.14	1,934.66	609.03	1,933.91	0.00	0.00	0.00
5,900.00	91.76	359.93	3,650.07	2,034.61	608.90	2,033.87	0.00	0.00	0.00
6,000.00	91.76	359.93	3,647.00	2,134.56	608.77	2,133.82	0.00	0.00	0.00
6,100.00	91.76	359.93	3,643.93	2,234.52	608.64	2,233.77	0.00	0.00	0.00
6,200.00	91.76	359.93	3,640.86	2,334.47	608.52	2,333.72	0.00	0.00	0.00
6,300.00	91.76	359.93	3,637.79	2,434.42	608.39	2,433.68	0.00	0.00	0.00
6,400.00	91.76	359.93	3,634.72	2,534.38	608.26	2,533.63	0.00	0.00	0.00
6,500.00	91.76	359.93	3,631.64	2,634.33	608.13	2,633.58	0.00	0.00	0.00
6,600.00	91.76	359.93	3,628.57	2,734.28	608.00	2,733.54	0.00	0.00	0.00
6,700.00	91.76	359.93	3,625.50	2,834.23	607.87	2,833.49	0.00	0.00	0.00
6,800.00	91.76	359.93	3,622.43	2,934.19	607.74	2,933.44	0.00	0.00	0.00
6,900.00	91.76	359.93	3,619.36	3,034.14	607.61	3,033.39	0.00	0.00	0.00
7,000.00	91.76	359.93	3,616.29	3,134.09	607.48	3,133.35	0.00	0.00	0.00
7,100.00	91.76	359.93	3,613.22	3,234.04	607.36	3,233.30	0.00	0.00	0.00
7,200.00	91.76	359.93	3,610.15	3,334.00	607.23	3,333.25	0.00	0.00	0.00
7,300.00	91.76	359.93	3,607.08	3,433.95	607.10	3,433.21	0.00	0.00	0.00
7,400.00	91.76	359.93	3,604.01	3,533.90	606.97	3,533.16	0.00	0.00	0.00
7,500.00	91.76	359.93	3,600.94	3,633.86	606.84	3,633.11	0.00	0.00	0.00
7,600.00	91.76	359.93	3,597.87	3,733.81	606.71	3,733.06	0.00	0.00	0.00
7,700.00	91.76	359.93	3,594.80	3,833.76	606.58	3,833.02	0.00	0.00	0.00
7,800.00	91.76	359.93	3,591.72	3,933.71	606.45	3,932.97	0.00	0.00	0.00
7,900.00	91.76	359.93	3,588.65	4,033.67	606.32	4,032.92	0.00	0.00	0.00
8,000.00	91.76	359.93	3,585.58	4,133.62	606.19	4,132.88	0.00	0.00	0.00
8,100.00	91.76	359.93	3,582.51	4,233.57	606.07	4,232.83	0.00	0.00	0.00
8,200.00	91.76	359.93	3,579.44	4,333.53	605.94	4,332.78	0.00	0.00	0.00
8,300.00	91.76	359.93	3,576.37	4,433.48	605.81	4,432.73	0.00	0.00	0.00
8,400.00	91.76	359.93	3,573.30	4,533.43	605.68	4,532.69	0.00	0.00	0.00
8,500.00	91.76	359.93	3,570.23	4,633.38	605.55	4,632.64	0.00	0.00	0.00
8,600.00	91.76	359.93	3,567.16	4,733.34	605.42	4,732.59	0.00	0.00	0.00

Planning Report

Database:	WBDS_SQL_2	**Local Co-ordinate Reference:**	Well #70H
Company:	Spur Energy Partners, LLC	**TVD Reference:**	RKB = 20' @ 3508.00usft
Project:	Eddy County, NM (NAD 83 - NME)	**MD Reference:**	RKB = 20' @ 3508.00usft
Site:	ALTO AMM 21-16 FEDERAL	**North Reference:**	Grid
Well:	#70H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

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)
8,700.00	91.76	359.93	3,564.09	4,833.29	605.29	4,832.55	0.00	0.00	0.00
8,800.00	91.76	359.93	3,561.02	4,933.24	605.16	4,932.50	0.00	0.00	0.00
8,900.00	91.76	359.93	3,557.95	5,033.19	605.03	5,032.45	0.00	0.00	0.00
9,000.00	91.76	359.93	3,554.88	5,133.15	604.90	5,132.40	0.00	0.00	0.00
9,100.00	91.76	359.93	3,551.80	5,233.10	604.78	5,232.36	0.00	0.00	0.00
9,200.00	91.76	359.93	3,548.73	5,333.05	604.65	5,332.31	0.00	0.00	0.00
9,300.00	91.76	359.93	3,545.66	5,433.01	604.52	5,432.26	0.00	0.00	0.00
9,400.00	91.76	359.93	3,542.59	5,532.96	604.39	5,532.22	0.00	0.00	0.00
9,500.00	91.76	359.93	3,539.52	5,632.91	604.26	5,632.17	0.00	0.00	0.00
9,600.00	91.76	359.93	3,536.45	5,732.86	604.13	5,732.12	0.00	0.00	0.00
9,700.00	91.76	359.93	3,533.38	5,832.82	604.00	5,832.07	0.00	0.00	0.00
9,800.00	91.76	359.93	3,530.31	5,932.77	603.87	5,932.03	0.00	0.00	0.00
9,900.00	91.76	359.93	3,527.24	6,032.72	603.74	6,031.98	0.00	0.00	0.00
10,000.00	91.76	359.93	3,524.17	6,132.67	603.62	6,131.93	0.00	0.00	0.00
10,100.00	91.76	359.93	3,521.10	6,232.63	603.49	6,231.89	0.00	0.00	0.00
10,200.00	91.76	359.93	3,518.03	6,332.58	603.36	6,331.84	0.00	0.00	0.00
10,300.00	91.76	359.93	3,514.95	6,432.53	603.23	6,431.79	0.00	0.00	0.00
10,400.00	91.76	359.93	3,511.88	6,532.49	603.10	6,531.74	0.00	0.00	0.00
10,500.00	91.76	359.93	3,508.81	6,632.44	602.97	6,631.70	0.00	0.00	0.00
10,600.00	91.76	359.93	3,505.74	6,732.39	602.84	6,731.65	0.00	0.00	0.00
10,700.00	91.76	359.93	3,502.67	6,832.34	602.71	6,831.60	0.00	0.00	0.00
10,736.97	91.76	359.93	3,501.54	6,869.30	602.66	6,868.56	0.00	0.00	0.00
ALTO#70H: LTP									
10,787.00	91.76	359.93	3,500.00	6,919.30	602.60	6,918.56	0.00	0.00	0.00
ALTO#70H: PBHL (1270' FSL & 1465' FEL)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
ALTO#70H: SHL (311'	0.00	360.00	0.00	0.00	0.00	595,971.20	493,766.00	32.6382785	-104.4878758
- plan hits target center									
- Point									
ALTO#70H: KOP @ 2	0.00	360.00	2,774.38	-418.79	500.11	595,552.41	494,266.11	32.6371293	-104.4862491
- plan hits target center									
- Point									
ALTO#70H: PBHL (12	0.00	360.00	3,500.00	6,919.30	602.60	602,890.50	494,368.60	32.6573001	-104.4859504
- plan hits target center									
- Point									
ALTO#70H: LTP	0.00	360.00	3,501.54	6,869.30	602.60	602,840.50	494,368.60	32.6571626	-104.4859502
- plan misses target center by 0.06usft at 10736.97usft MD (3501.54 TVD, 6869.30 N, 602.66 E)									
- Point									
ALTO#70H: FTP/ LP (	0.00	360.00	3,700.00	409.40	611.00	596,380.60	494,377.00	32.6394063	-104.4858928
- plan hits target center									
- Point									

SPUR ENERGY PARTNERS

Company: Spur Energy Partners, LLC
Project: Eddy County, NM (NAD 83 - NME)
Site: ALTO AMM 21-16 FEDERAL
Well: #70H
Wellbore: Wellbore #1
Rig:
Design: Plan #1 / 11:13, January 11 2021

WELL DETAILS: #70H

RKB = 20' @ 3508.00usft
3488.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	595971.20	493766.00	32.6382785	-104.4878758

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	851.26	16.54	129.94	843.63	-50.72	60.57	3.00	-50.80	
4	2865.32	16.54	129.94	2774.38	-418.79	500.11	0.00	-419.40	
5	3756.42	60.00	359.93	3523.51	-67.88	611.62	8.00	-68.62	
6	3956.42	60.00	359.93	3623.51	105.33	611.39	0.00	104.58	
7	4274.02	91.76	359.93	3700.00	409.40	611.00	10.00	408.65	ALTO#70H: FTP/ LP (100' FSL)
8	10736.97	91.76	359.93	3501.54	6869.30	602.66	0.00	6868.56	ALTO#70H: LTP
9	10787.00	91.76	359.93	3500.00	6919.30	602.60	0.00	6918.56	ALTO#70H: PBHL (1270' FSL & 1465' FEL)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
ALTO#70H: SHL (311' FNL & 2076' FEL)	0.00	0.00	0.00	595971.20	493766.00	32.6382785	-104.4878758
ALTO#70H: KOP @ 2865.32' MD	2774.38	-418.79	500.11	595552.41	494266.11	32.6371293	-104.4862492
ALTO#70H: PBHL (1270' FSL & 1465' FEL)	3500.00	6919.30	602.60	602890.50	494368.60	32.6573000	-104.4859505
ALTO#70H: LTP	3501.54	6869.30	602.60	602840.50	494368.60	32.6571626	-104.4859502
ALTO#70H: FTP/ LP (100' FSL)	3700.00	409.40	611.00	596380.60	494377.00	32.6394062	-104.4858928

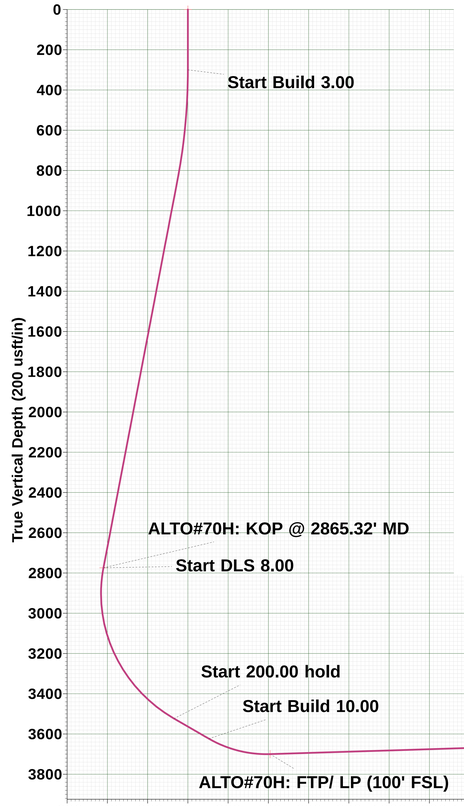
CORRECTION REFERENCE DATA:

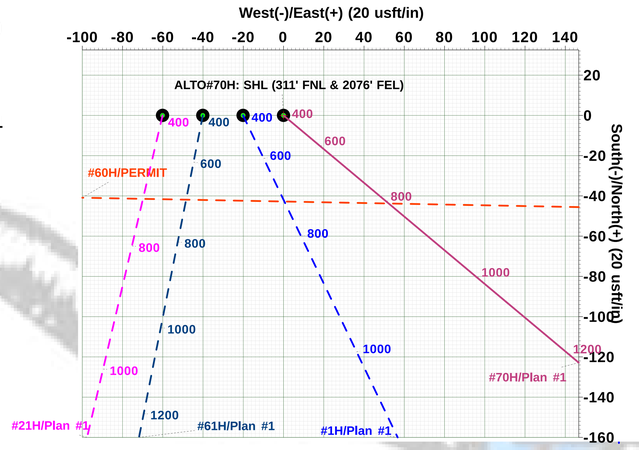
To convert a Magnetic Direction to a Grid Direction, Add 7.134°
To convert a True Direction to a Grid Direction, Add 0.083°
To convert a Magnetic Direction to a True Direction, Add 7.050° East
Magnetic Declination: 7.050°
Magnetic Dip Angle: 60.152°
Magnetic Field Strength: 47686.67154517nT

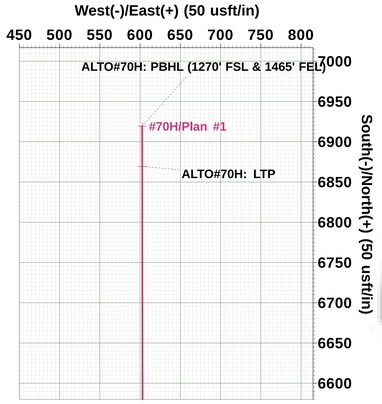
Azimuths to Grid North
True North: 0.08°
Magnetic North: 7.13°

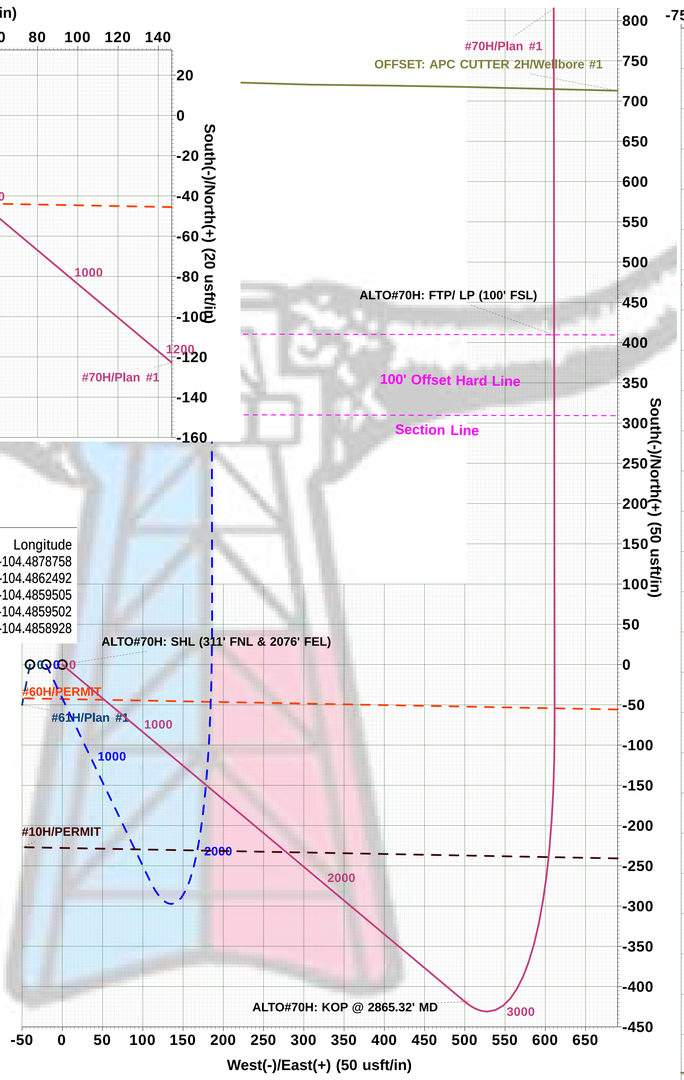
Magnetic Field
Strength: 47686.7snT
Dip Angle: 60.15°
Date: 1/8/2021
Model: IGRF2020

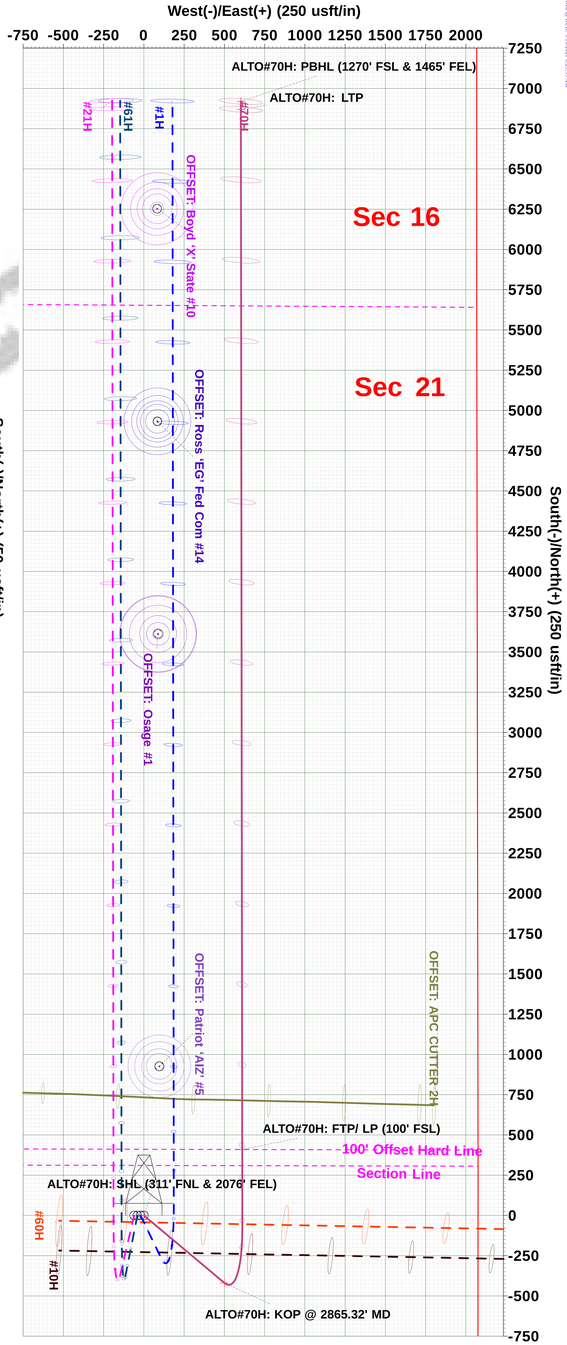
Disclaimer:
All Plan Details, boundary lines and offset well location/ survey data is provided by customer and subject to customer approval.











PROJECT DETAILS: Eddy County, NM (NAD 83 - NME)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

WELLBENDERS DIRECTIONAL SERVICES LLC

Plan: Plan #1 (#70H/Wellbore #1)

Created By: Matthew May Date: 11:13, January 11 2021

Pecos District

Application for Permit to Drill

Conditions of Approval

Geology Concerns

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

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

Additional Engineering Requirements

Surface casing must be set at: 1,200 feet

General Requirements

1. Changes to the approved APD casing program need prior approval.

2. The Bureau of Land Management (BLM) will be notified in advance to witness:
   a. Well spudding (minimum 24 hours notice)
   b. Setting and cementing of all casing strings (minimum 4 hours notice)
   c. BOPE tests (minimum 4 hours notice)

   Eddy County
   620 East Greene Street, Carlsbad, NM 88220
   (575) 361-2822

   Lea County
   414 West Taylor, Hobbs, NM 88240
   (575) 393-3612

3. The initial wellhead installed on the well will remain on the well with spools used as needed.

4. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig:

i. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).

b. When the operator proposes to set surface casing with a Spudder Rig:
   i. Notify the BLM when moving in and removing the Spudder Rig.
   ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
   iii. BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

5. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller, and will always be operational during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the doghouse or stairway area.

6. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

Pressure Control

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. 5M or higher system requires an HCR valve, remote kill line, and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
   a. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE, and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
   b. The results of the test shall be reported to the appropriate BLM office.
   c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.
f. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
g. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, no tests shall commence until the cement has had a minimum of 24 hours setup time.
h. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

4. If the operator has proposed using a 5,000 (5M) Annular on a 10M BOP:
   a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 10,000 (10M) psi.

5. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
   a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
   b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.

c. Manufacturer representative shall install the test plug for the initial BOP test.
d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

6. If a variance is approved for break testing the BOPE, the following requirements apply:
   a. BOPE break testing is only approved for a BOP rated at 5M or less.
   b. A full BOP test shall be performed every 21 days (at a minimum).
   c. A full BOP test is required prior to drilling the first intermediate hole section (if applicable). If any subsequent intermediate hole interval is deeper than the first, a full BOP test shall be required.
   d. A full BOP test is required prior to drilling the first production hole section. If any subsequent production hole interval is deeper than the first, a full BOP test shall be required.
   e. While in transfer, the BOP shall be secured by the hydraulic carrier or cradle.
   f. Pressure tests shall be performed on any BOPE components that have been disconnected. A low pressure (250-300 psi) and a high pressure (BOP max pressure rating) test are required.
   g. If a testing plug is used, pressure shall be maintained for at least 10 minutes. If there is any bleed off in pressure, the test shall be considered to have failed.
   h. If no testing plug is used, pressure shall be maintained for at least 30 minutes. If there is a decline in pressure of more than 10 percent, the test shall be considered to have failed.
   i. The appropriate Bureau of Land Management (BLM) office shall be notified a minimum of 4 hours before testing occurs.

7. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply:
   a. The flex line must meet the requirements of API 16C.
   b. Check condition of flexible line from BOP to choke manifold (replace if exterior is damaged or if line fails test).
   c. Line is to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements.
   d. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating.
   e. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

Approval Date: 09/09/2021

Casing and Cement

1. Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

2. On any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. The formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

3. Provide compressive strengths (including hours to reach required 500 pounds compressive strength) prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

4. The surface casing shall be set at a minimum of 25 feet into the Rustler Anhydrite and 80 feet above the salt and cemented to the surface.
    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of 8 hours (or 24 hours in the Potash Area) or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

5. Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

6. Intermediate casing must be cemented to surface. For medium/high cave/karst, potash, and Capitan Reef, wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

7. The production cement should tie-back at least 200 feet (500 feet in Secretary Potash, surface in R-111-P potash) into previous casing string. Operator shall provide method of verification.

8. Production liner cement should tie-back at least 100 feet into previous casing string. Operator shall provide verification of cement top.

9. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

10. No pea gravel permitted for remedial cement or fall back remedial cement without prior authorization from a BLM petroleum engineer.

11. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

12. DV tools:
    a. First stage to DV tool (The DV tool may be cancelled if cement circulates to surface on the first stage):
        i. Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
    b. Second stage above DV tool:
        i. For intermediate casing, cement to surface.
        ii. For production casing, cement should tie-back at least 200 feet (500 feet in Secretary Potash, surface in R-111-P potash) into previous casing string. Operator shall provide method of verification.
        iii. If cement does not circulate, contact the appropriate BLM office.

13. Wait on cement (WOC) for Potash Areas:
    a. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
    b. After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met:
        i. Cement reaches a minimum compressive strength of 500 psi for all cement blends
        ii. Until cement has been in place at least 24 hours.
    c. WOC time will be recorded in the driller's log.
    d. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

14. Wait on cement (WOC) for Water Basin:
    a. After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met:

i. Cement reaches a minimum compressive strength of 500 psi at the shoe
ii. Until cement has been in place at least 8 hours.

b. WOC time will be recorded in the driller's log.

15. Wait on cement (WOC) for Medium and High Cave/Karst Areas:
    a. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

16. If cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Drilling Mud

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

Waste Material and Fluids

1. All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

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

Special Requirements

1. Communitization Agreement
    a. The operator will submit a Communitization Agreement to the Carlsbad Field Office (620 E Greene St. Carlsbad, New Mexico 88220), at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division.
    b. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
        i. If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
    c. In addition, the well sign shall include the surface and bottom hole lease numbers.
        i. When the Communitization Agreement number is known, it shall also be on the sign.

2. Unit Wells
    a. The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers.
        i. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.
    b. Commercial Well Determination
        i. A commercial well determination shall be submitted after production has been established for at least six months (this is not necessary for secondary recovery unit wells).

3. Hydrogen Sulfide (H2S)
    a. If H2S is encountered, provide measured values and formations to the BLM.
    b. An H2S area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items.
    c. An H2S Drilling Plan shall be activated 500 feet prior to drilling into the any formation designated as having H2S.
    d. Hydrogen Sulfide monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items.

4. Capitan Reef
    a. If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following (Use this for 3 string wells in the Capitan Reef, if 4 string well ensure fresh water based mud used across the Capitan interval):
        i. Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
        ii. Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports.
        iii. The daily drilling report should show mud volume per shift/tour.
        iv. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval.
        v. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

5. Salt Water Disposal Wells
    a. The operator shall supply the BLM with a copy of a mudlog over the permitted disposal interval and estimated in situ water salinity based on open-hole logs.
    b. If hydrocarbons are encountered while drilling, the operator shall notify the BLM.
    c. The operator shall provide to the BLM a summary of formation depth picks based on mudlog and geophysical logs along with a copy of the mudlog and open-hole logs from total depth to top of Devonian.
    d. An NOI sundry with the completion procedure for this well shall be submitted and approved prior to commencing completion work. The procedure will be reviewed to verify that the completion proposal will allow the operator to:
        i. Properly evaluate the injection zone utilizing open-hole logs, swab testing and/or any other method to confirm that hydrocarbons cannot be produced in paying quantities. This evaluation shall be reviewed by the BLM prior to injection commencing.
        ii. Restrict the injection fluid to the approved formation.
        iii. If a step rate test will be run, an NOI sundry shall be submitted to the BLM for approval.
    e. If off-lease water will be disposed in this well, the operator shall provide proof of right-of-way approval.

Approval Date: 09/09/2021

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			
Burea of Land Management	Carlsbad	575-886-6544	
Burea of Land Management	Hobbs	575-393-3612	
Burea of Land Management	Roswell	575-622-5335	
Burea of Land Management	Santa Fe	505-954-2000	
DOT Judicial Pipelnes - 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 Qulaity 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	
Carslbad 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	
Carslbad	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	
Carslbad 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	

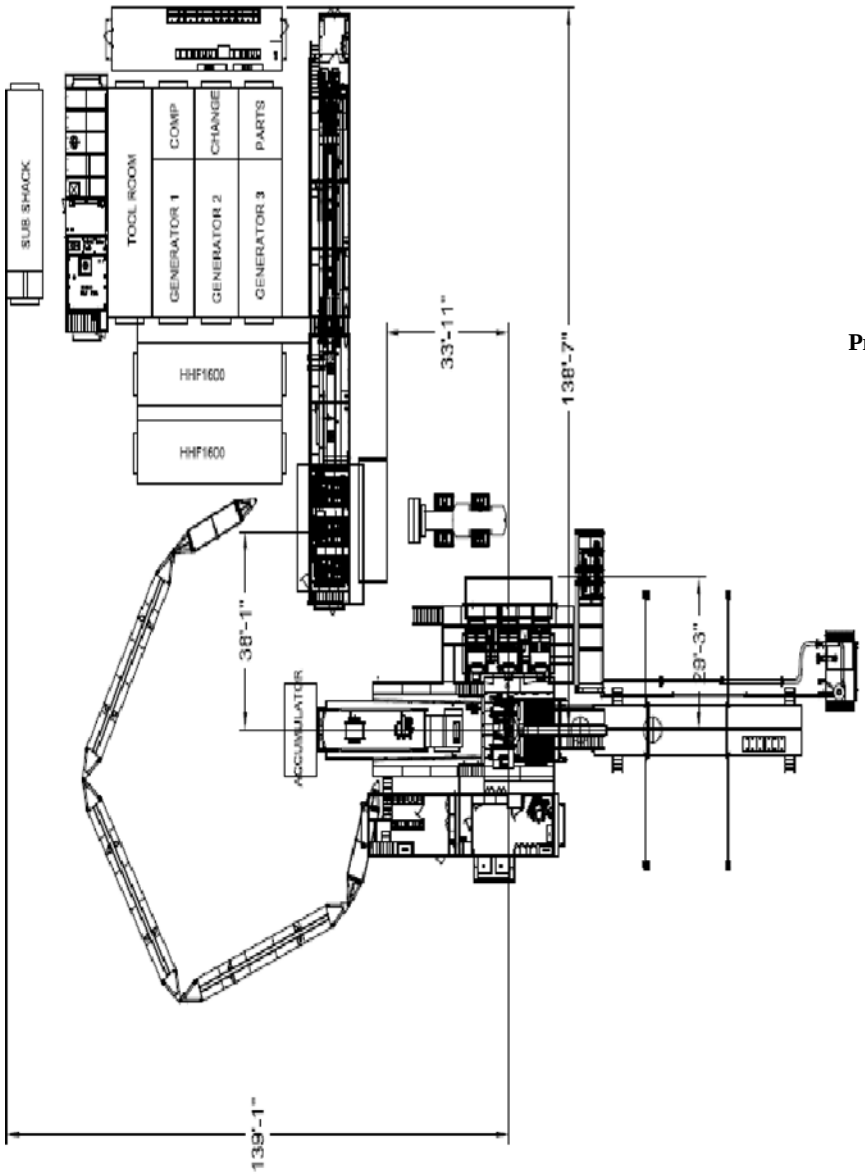
Permian Drilling
Hydrogen Sulfide Drilling Operations Plan
Alto Amm 21-16 Federal 70H

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



Primary Briefing Area

Exit to road. Caution sign placed here.

N

Secondary Egress

WIND: Prevailing winds are from the Southwest

RIG # 57 1,150 HP Double Mast Drilling Rig

SUBSTRUCTURE
One Piece Step Down
Floor Height: 18' 9" (on 4' pony sub moving system)
Clear Height (beneath rotary beams): 15' 5"
Rotary Capacity: 400,000 lbf
Max Pipe Setback: 400,000 lbf
Note: All floor heights above are based on the substructure sitting on 6" mats & 4' pony sub moving system

MAST
106' telescoping, Drill Line: 1-1/8"
Static Hook Load: 440,000 lbf
Racking Capacity: 18,000' of 4" DP, 12,500' of 5" DP

DRAWWORKS
TSM 850 425,000lbs w/ 10 Lines
Input Power: 1,150 hp AC traction motor
Main Brake: 1,150 hp AC traction motor (Dynamic)
Aux Parking Brake: Eaton brake & drum / band brake system

TOP DRIVE
Tesco EXI 600 AC 350 Ton: Max speed 220 rpm,
Continuous Drill Torque: 30,000 ft-lbs
Max Torque (Make / Break): 45,000 ft-lbs
600 hp AC induction motor & drive system with PLC
250 Ton 5 x 36" Becket Block Assembly

IRON ROUGHNECK
NOV ST-80C Conn Range: 4 ½" to 8 ½"
Spin Speed: 75 rpm nominal on 5" drill pipe
Spin Torque: 1,750 ft-lbs
Maximum Make-up torque: 60,000 ft-lbs
Maximum Break-out torque: 80,000 ft-lbs

ROTARY TABLE
National 27 ½" 500 Ton with hydraulic drive to position tools only
27 ½" Diameter opening

POWER SYSTEM
VFD, MCC, Eaton Drives, Current Power Systems Controls, three Caterpillar C32 gen sets, 1220 BHP.

MUD PUMP #1
HHF1600 Triplex Rated Power: 1600 hp
Stroke: 12"
Input Power: 1500 hp AC traction motor
Pressure Rating: 5000 psi

MUD PUMP #2
HHF1600 Triplex Rated Power: 1600 hp
Stroke: 12"
Input Power: 1500 hp AC traction motor
Pressure Rating: 5000 psi

MUD TANKS
Two Tank system w/ 1200 bbls total capacity
Shakers: Three MI Swaco Mongoose 4 panel dual motion
Mud Gas Separator: MI Swaco 4' OD x 12' tall
Pill Tank: 54 bbls

MUD SYSTEM
5000 psi Max Pressure
5" Main plumbing and standpipe

SCALPING TANK
Main Tank: 186 bbls capacity
Trip Tank: 24 bbls capacity
Shakers: Three NOV Venom shakers dual motion

BOP (NACE)
11" x 5000 psi WP Spherical Annular
11" x 5000 psi WP Double Ram
11" x 5000 psi WP Single Ram (Optional)

MANIFOLD
3-1/8" 5,000 psi c/w two 3 1/8" manual chokes

ACCUMULATOR
CTI: 160 gal 6 station 3000 psi, c/w N2 Backup & electric triplex pump

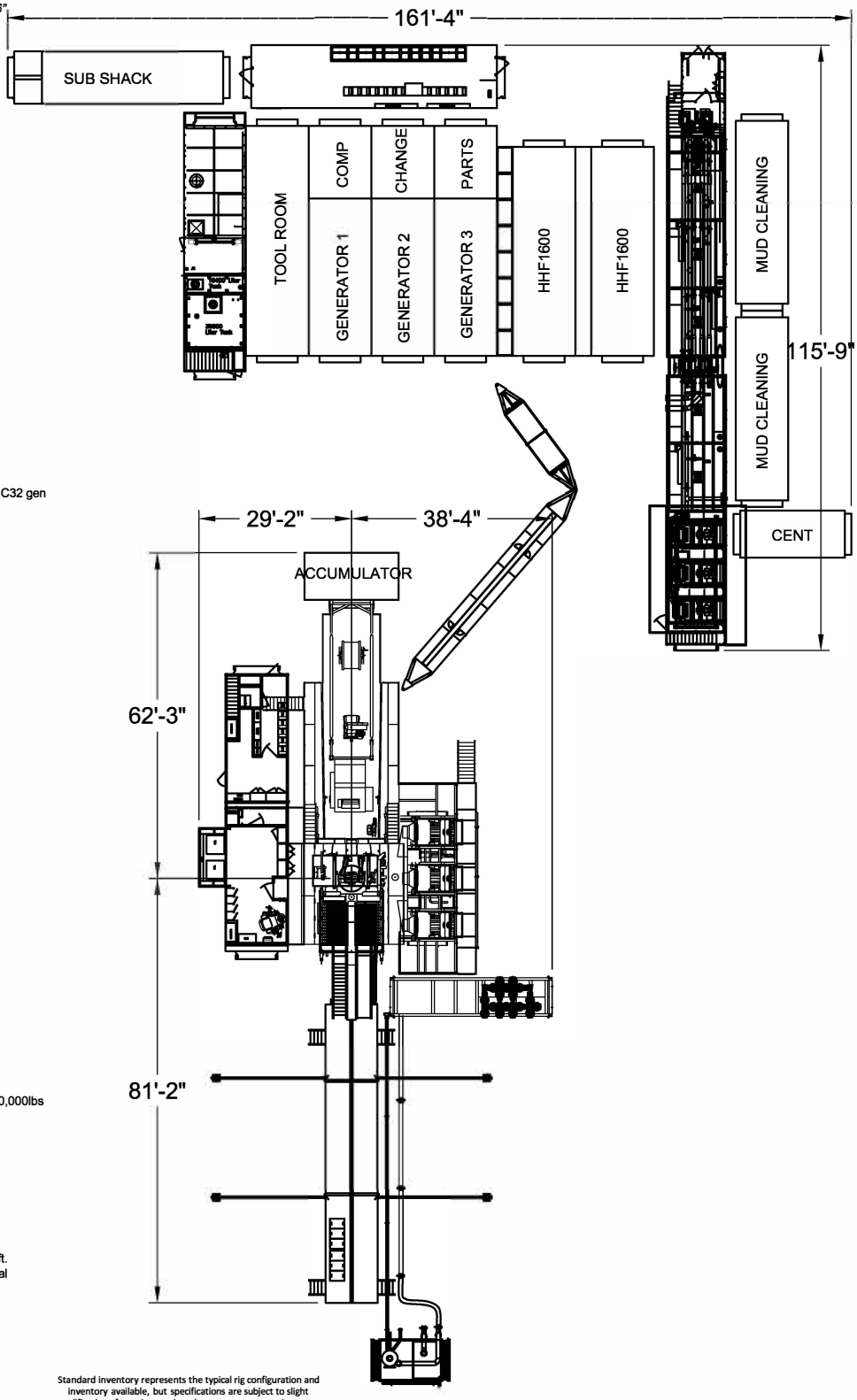
CATWALK
Ja-co Power Catwalk, tubular max length 47' 6", max OD 13 ⅝", max weight 10,000lbs

TUBULARS
Drill Pipe: Supplied as needed, per availability
Drill Collars & heaviwate: Supplied as needed, per availability

MISC.
Water Tank: 409 bbls; Fuel Tank 189 bbls; Screw Compressor
Boiler: 125 hp with Full Winterization

MOVING SYSTEM:
Walking beam hydraulic pony sub moving system for linear motion & side shift. 350' of Utility Suitcase style [50' lengths] connection for hydraulic and electrical supply.

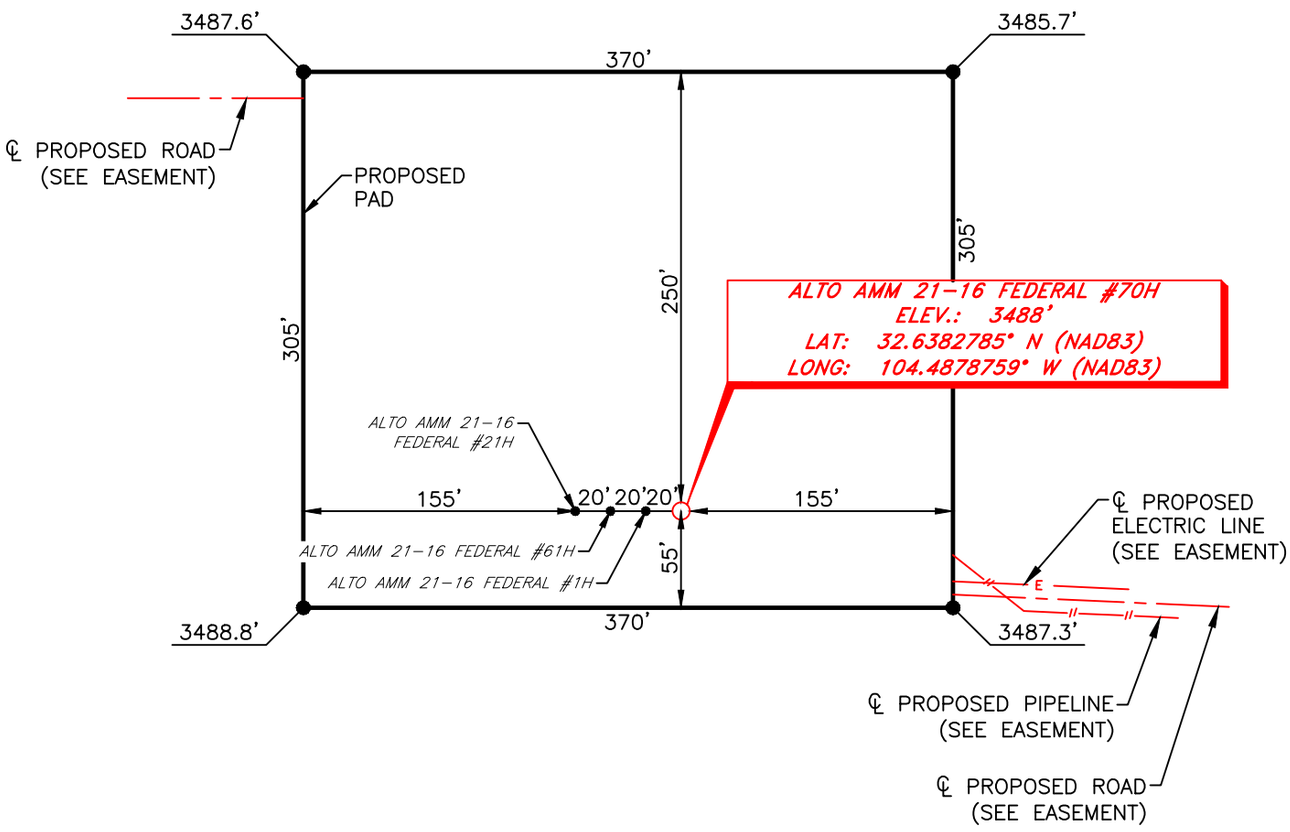
TOOL/ STORAGE/ CAMP
Parts Storage Room and Tool House Room
Rig Manage Trailer: 14' x 44' skid mounted



Standard inventory represents the typical rig configuration and inventory available, but specifications are subject to slight modifications from time to time due to customer requirements.

All ratings quoted herin are manufacturer specifications. AKITA's normal operating parameters are 90% of manufacturer mast ratings and 80% of mud pump manufacturer pressure rating. Operation of rig equipment beyond these parameters requires approval from AKITA field office management.

SPUR ENERGY PARTNERS LLC.
ALTO AMM 21–16 FEDERAL #70H
(311' FNL & 2076' FEL)
SECTION 28, T19S, R25E
N. M. P. M., EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of U.S. Hwy 285 (Seven Rivers Hwy) and CR–#21 (Rocking R Red Rd.);

Go West on CR–#21 approx. 5.4 miles to a lease road on the left;

Turn left and go South approx. 1.0 miles to a proposed road on the left;

Turn left and go East approx. 0.1 miles to location on the right.

SCALE: 1" = 100'
0 50 100

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

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

NO.	REVISION	DATE

JOB NO.: LS20110718
DWG. NO.: 20110718–4

RRC

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

SCALE: 1" = 100'
DATE: 11–23–2020
SURVEYED BY: TM/RU
DRAWN BY: GA
APPROVED BY: RMH
SHEET: 1 OF 1

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

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

First Take Point (FTP)

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

Last Take Point (LTP)

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

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

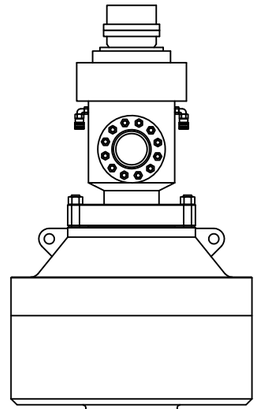
Is this well an infill well? ☐

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

ANNULAR
13 5/8" 5,000 psi SHAFFER STYLE



DOUBLE GATE
13 5/8" 5,000 psi SHAFFER LWS STYLE

PIPE RAM

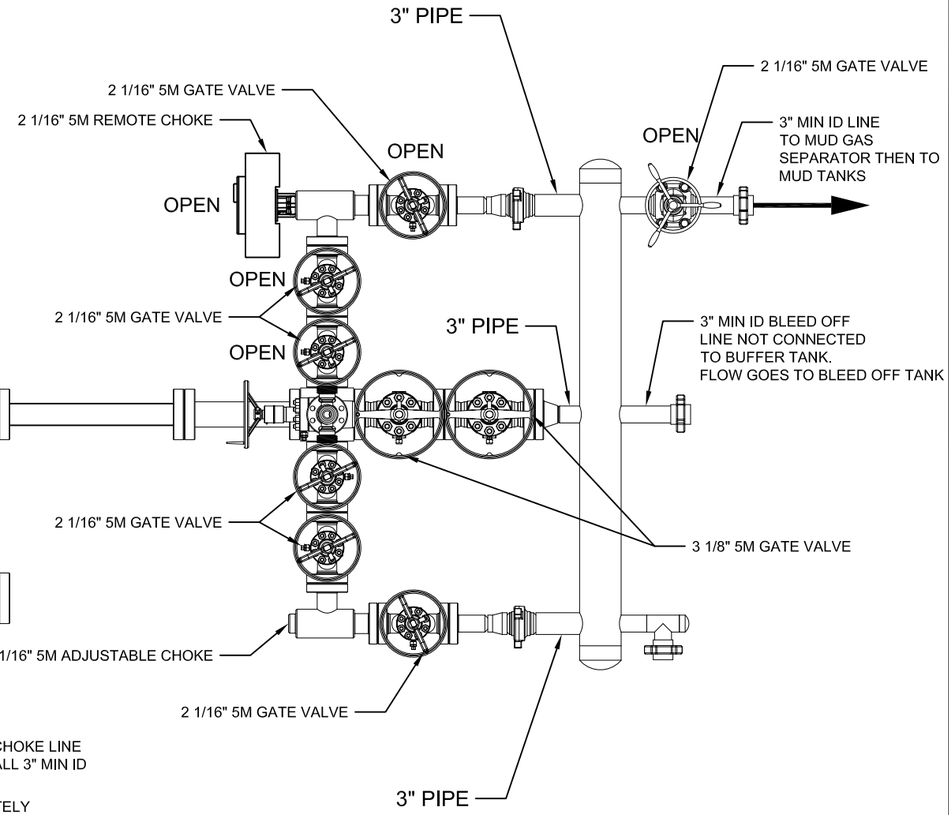
BLIND RAM

MUD CROSS
13 5/8" 5,000 psi, 3 1/8" 5M OUTLETS

CHOKE LINE
ALL 3" MIN ID

3 1/8" 5M REMOTELY
OPERATED VALVE

3 1/8" 5M GATE VALVE



Notes
-
-
-
-

No.	Revision	Date

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

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

RIG 57 BOP SCHEMATIC

POWERING PROGRESS™

MTR DATA BOOK

CL2013

CUSTOMER: GATES CANADA INC
DATE: 12/19/2017
Purchase Order: D235455 (PO 45750)
Sales Order #: 509128
Product Description: 5K 3 1/2 in. 17 FT. Fire Rated Choke & Kill Gates Hose Assembly c/w 3 1/8 5K Flange with Safety Clamps & Slings Attached

Hose S/N: H-121917-14
PART NUMBER: FR5K3.517.0CK31/85KFLG S/C

CONTENTS INCLUDED

GMCO FITTINGS

17-309-1	INSERT STEM
15-095-1A	FERRULE

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

V4131	FIXED FLANGE
V5054	FLOAT FLANGE

WELDING SPECIFICATIONS
Certification and Procedure for welding

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

Safey 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/oilandgas

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

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/oilandgas

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: O Rivera

TITLE: QUALITY ASSURANCE

DATE: 8/5/2021

Gates E&S

North America

7603 Prairie Oak dr.

Houston,TX

Hydrostatic Test

Customer= GATES CANADA

Date of test= 12/19/17

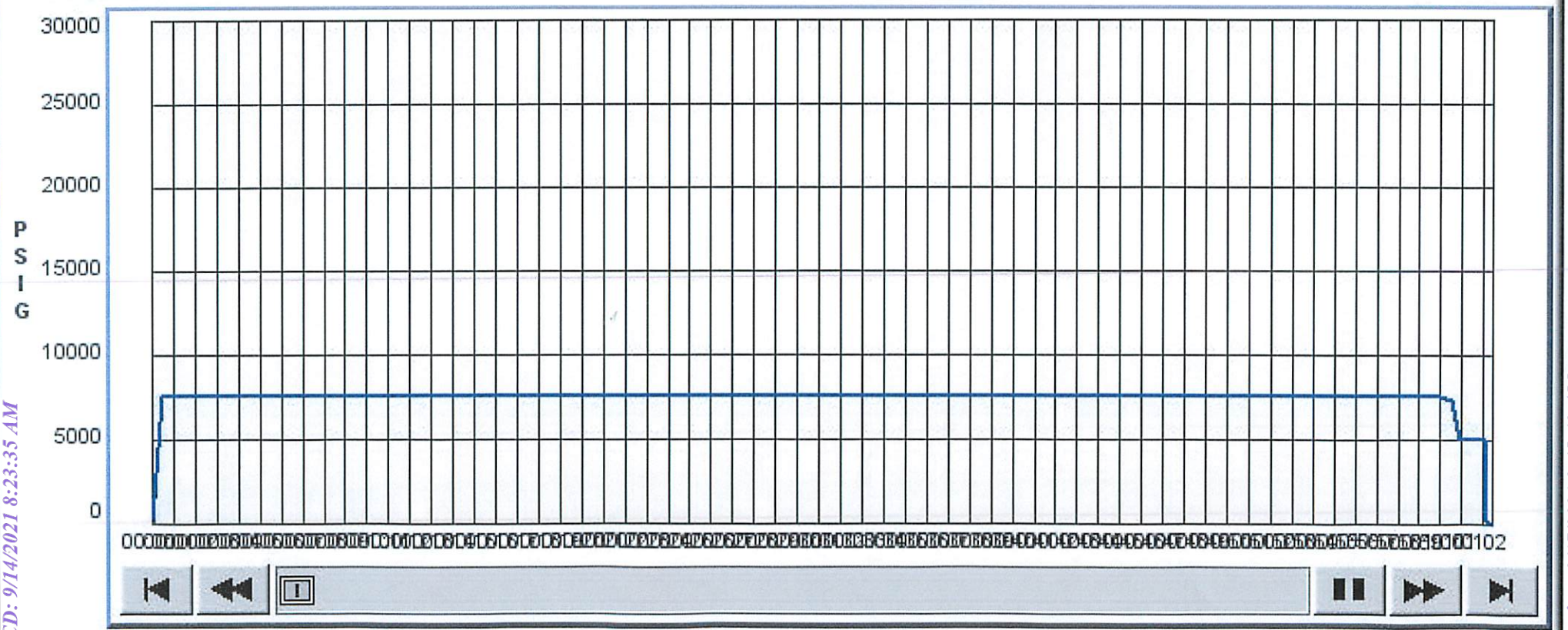
Serial # = H-121917-13,-14

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

Technician= CHRIS OLIVO

12/19/2017 16:53:26

17:55:52



Edwards Fabrication

1385 Hwy. 35 Bypass S.
P.O. Box 2350
Rockport, TX 78381

O: (361) 790-7910
F: (361) 790-7927

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.

ISO 9001:2008
BUREAU VERITAS
Certification

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

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

Edwards Fabrication LLC

1385 Hwy. 35 Bypass S.
P.O. Box 2350
Rockport, TX 78381

O: (361) 790-7910
F: (361) 790-7927

tedwards@edwardsfabrication.com
www.edwardsfabrication.com

CERTIFICATE OF TEST

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

Purchase Order: 1592198/0

Certificate Number				Date of Examination
34144				04/27/17
ID#	**Part Number**	**Description**	**SWL***	**Proofload**
34144	E3.5S	3.5" E Safety Clamp	6014 lbs.	12027 lbs.

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

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ISO 9001:2008
BUREAU VERITAS
Certification

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

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

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

COMMENTS

Action 48279

COMMENTS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 48279
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

COMMENTS

Created By	Comment	Comment Date
kpickford	KP GEO Review 9/16/2021	9/16/2021

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

Operator:	OGRID:
Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	328947
	Action Number: 48279
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Notify OCD 24 hours prior to casing & cement	9/16/2021
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	9/16/2021
kpickford	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	9/16/2021
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	9/16/2021
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	9/16/2021