Form 3160-3 FORM APPROVED OMB No. 1004-0137 (June 2015) Expires: January 31, 2018 **UNITED STATES** DEPARTMENT OF THE INTERIOR 5. Lease Serial No. NMNM0048344 **BUREAU OF LAND MANAGEMENT** APPLICATION FOR PERMIT TO DRILL OR REENTER 6. If Indian, Allotee or Tribe Name 7. If Unit or CA Agreement, Name and No. **✓** DRILL REENTER 1a. Type of work: 1b. Type of Well: Oil Well Gas Well Other 8. Lease Name and Well No. 1c. Type of Completion: Hydraulic Fracturing ✓ Single Zone Multiple Zone WELCH B 28 FEDERAL 1H 2. Name of Operator 9. API Well No. SPUR ENERGY PARTNERS LLC 30-015-49233 3a. Address 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory 9655 KATY FREEWAY, SUITE 500, Houston, TX 77024 (832) 930-8548 ARTESIA/GLORIETA YESO 11. Sec., T. R. M. or Blk. and Survey or Area 4. Location of Well (Report location clearly and in accordance with any State requirements.*) SEC 27/T17S/R28E/NMP At surface SWNW / 1745 FNL / 792 FWL / LAT 32.8079832 / LONG -104.1698383 At proposed prod. zone SWNW / 1705 FNL / 50 FWL / LAT 32.8076748 / LONG -104.1891605 14. Distance in miles and direction from nearest town or post office* 12. County or Parish 13. State **EDDY** NM 15. Distance from proposed* 16. No of acres in lease 17. Spacing Unit dedicated to this well 1 feet location to nearest property or lease line, ft. 160.0 (Also to nearest drig. unit line, if any) 18. Distance from proposed location* 19. Proposed Depth 20. BLM/BIA Bond No. in file to nearest well, drilling, completed, 20 feet 3515 feet / 9098 feet FED: NMB001783 applied for, on this lease, ft. 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start* 23. Estimated duration 3659 feet 02/21/2022 10 days 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. 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 2. A Drilling Plan. 3. A Surface Use Plan (if the location is on National Forest System Lands, the 5. Operator certification. SUPO must be filed with the appropriate Forest Service Office). 6. Such other site specific information and/or plans as may be requested by the Name (Printed/Typed) Date 25. Signature (Electronic Submission) SARAH CHAPMAN / Ph: (832) 930-8548 12/07/2020 Title Regulatory Directory Approved by (Signature) Date Name (Printed/Typed) (Electronic Submission) Cody Layton / Ph: (575) 234-5959 11/26/2021 Title Office Carlsbad Field Office Assistant Field Manager Lands & Minerals 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.



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

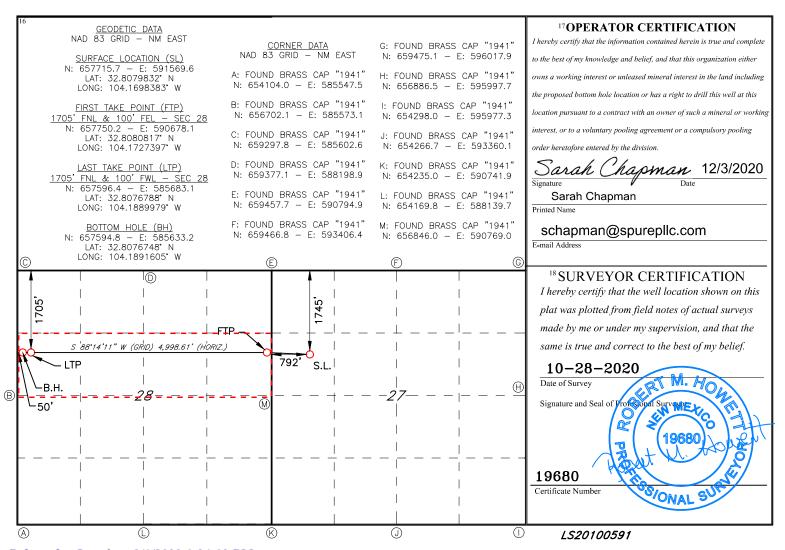
■ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

	API Numbe	er 2 Pool Code				³ Pool Name				
3	80-015-	49233		96830	96830 Artesia; Glorieta-Yeso (O)					
⁴ Property Co	de	5 Property Name				(6 Well Number			
332213			WELCH B 28 FED					1H		
7 OGRID	NO.		8 Operator Name						Elevation	
3289	47	SPUR ENERGY PARTNERS LLC.					3659'			
	¹⁰ Surface Location									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/W	est line	County
_	l	l			l					

E	27	17S	28E		1745	NORTH	792	WEST	EDDY
	¹¹ Bottom Hole Location If Different From Surface								
UL or lot no.	Section	Townsh	ip Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	28	17S	28E		1705	NORTH	50	WEST	EDDY
12 Dedicated Acres	13 Joint	or Infill	14 Consolidation	Code 1:	Order No.				
160									

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.



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 PA	ARTNERS LLC	OGRID:	328947		_ Date: <u>0</u>	<u>1 / 27 / 2022</u>
II. Type: ☒ Or	iginal Amendment	due to □ 19.15.27.	9.D(6)(a) NMAC	C □ 19.15.27.9.D	(6)(b) NN	⁄IAC □ Otl	her.
If Other, please	describe:						
	ovide the following inform a single well pad				wells pro	posed to be	e drilled or proposed to
Well Nam	e API	ULSTR	Footages	Anticipated Oil BBL/D		ipated ICF/D	Anticipated Produced Water BBL/D
WELCH B 28 FEDERAL 1H	30-015-PENDING	E-27-17S-28E	1745' FNL 792' FWL	264 BBL/D	299 N	MCF/D	1318 BBL/D
WELCH B 28 FEDERAL 10	H 30-015-PENDING	E-27-17S-28E	1735' FNL 809' FWL	339 BBL/D	384 N	MCF/D	1693 BBL/D
WELCH B 28 FEDERAL 50	H 30-015-PENDING	E-27-17S-28E	1756' FNL 775' FWL	283 BBL/D	468 N	MCF/D	1695 BBL/D
WELCH B 28 FEDERAL 7	OH 30-015-PENDING	E-27-17S-28E	1725' FNL 826' FWL	283 BBL/D	468 N	MCF/D	1695 BBL/D
WELCH B 28 FEDERAL 9	OH 30-015-PENDING	E-27-17S-28E	1766' FML 758' FWL	283 BBL/D	468 N	MCF/D	1695 BBL/D
V. Anticipated	ivery Point Name: Schedule: Provide the ecompleted from a sing				vell or set		15.27.9(D)(1) NMAC] roposed to be drilled o
Well Nam	e API	Spud Date	TD Reached	Completion	ı	Initial Flo	w First Production
		1	Date	Commencement		Back Dat	
WELCH B 28 FEDERAL 1H	30-015-PENDING	08/29/2023	09/05/2023	10/11/2023		10/29/2023	10/29/2023
WELCH B 28 FEDERAL 10		09/24/2023	10/01/2023	10/11/2023		10/29/2023	10/29/2023
WELCH B 28 FEDERAL 50		09/15/2023	09/23/2023	10/11/2023		10/29/2023	İ
WELCH B 28 FEDERAL 7	0H 30-015-PENDING	08/20/2023	08/28/2023	10/11/2023		10/29/2023	10/29/2023
WELCH B 28 FEDERAL 9	0H 30-015-PENDING	09/06/2023	09/14/2023	10/11/223		10/29/2023	10/29/2023
-	Equipment: ☒ Attach al Practices: ☒ Attaci			-			

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

Subsection A through F of 19.15.27.8 NMAC.

Section 2 – Enhanced Plan <u>EFFECTIVE APRIL 1, 2022</u>

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:

	Natural Gas Rate MCF/D	Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

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

XI. Map. \square 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 \square will \square 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 \square does \square	does not anticipate that its exis	sting well(s) connected to the	e same segment, c	or portion, o	of the
natural gas gathering system(s) described	above will continue to meet ant	ticipated increases in line pro	essure caused by t	he new wel	ll(s).

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

XIV. Confidentiality: \square 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; compression on lease; (c) (d) liquids removal on lease; reinjection for underground storage; (e) **(f)** reinjection for temporary storage; **(g)** reinjection for enhanced oil recovery; fuel cell production; and (h)

Section 4 - Notices

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

other alternative beneficial uses approved by the division.

- (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@SPURENERGY.COM
Date: 01/27/2022
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.

1. Geologic Formations

TVD of target	3515'
MD at TD	9098'

Formation	Depth	Lithology	Expected Fluids
Quaternary	0'	Dolomite, other: Caliche	Useable Water
Tansill	395'	Limestone, Dolomite	None
Yates	475'	Sandstone	Natural Gas, Oil
Seven Rivers	735'	Sandstone, Dolomite	Natural Gas, Oil
Queen	1300'	Sandstone, Dolomite	Natural Gas, Oil
Grayburg	1715'	Limestone, Dolomite	Natural Gas, Oil
San Andres	1995'	Limestone, Dolomite	Natural Gas, Oil
Lower San Andres	2955'	Limestone, Dolomite	Natural Gas, Oil
Glorieta	3425'	Siltstone, Dolomite	Natural Gas, Oil
Top Yeso	3545'	Dolomite	Natural Gas, Oil
Base Yeso	5525'	Dolomite	Natural Gas, Oil

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

2. Casing Program

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

Primary Plan:

Holo Sizo (in)	Casing	Interval	Csg. Size	Weight	Grade	Conn	SF	SF Burst	Body SF	Joint SF
Hole Size (in)	From (ft)	To (ft)	(in)	(lbs)	Grade	Conn.	Collapse		Tension	Tension
12.25	0	1200	9.625	36	J-55	BTC	1.125	1.2	1.4	1.4
8.75	0	3800	7	32	L-80	BK-HT	1.125	1.2	1.4	1.4
8.75	3800	9098	5.5	20	L-80	BK-HT	1.125	1.2	1.4	1.4
								SF Values will i	meet or Exceed	1

	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 (Lead)	0	950	100%
Surface (Tail)	950	1200	165%
Production (Lead)	0	2800	0%
Production (Tail)	2800	9098	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)	174	11.8	2.54	15.29	N/A	Clas C Premium Plus Cement
Production (Tail)	1237	13.2	1.81	9.81	N/A	Clas C Premium Plus Cement

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	Туре		✓	Tested to:	
		5M	Annula	r	~	70% of working pressure	
12.25" Hole	13-5/8"		Blind Ra	m	✓	70% of working	
12.25 Hole	13-3/8	5M	Pipe Ram ✓ Double Ram		250 psi / 3000 psi		
		JIVI					
			Other*				
		5M	Annula	r	√	C	
8.75" Hole	13-5/8"		Double Ram Other* Annular Blind Ram Pine Ram Double Ram 250 psi / 30 70% of wo pressur				
	13-3/8	514			250: / 2000:		
		5M	Double R	am		250 psi / 3000 psi	
			Other*				

^{*}Spur Energy Partners LLC will be utilizing a 5M BOP*

Condition	Specify what type and where?
BH Pressure at deepest TVD	1643 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	109°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 con	ventional 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 in	nstallation on the surface casing which will cover testing requirements for a maximum
of 30 d	days.
See at	tached 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		Trmo	Weight Viscosity		Wotan Logg	
From (ft)	To (ft)	Туре	(ppg)	viscosity	Water Loss	
0	1200	Water-Based Mud	8.6-8.9	32-36	N/C	
1200	9098	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
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7. Logging and Testing Procedures

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

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

Total estimated cuttings volume: 851 bbls.

9. Other facets of operation

_	Yes/No
Will more than one drilling rig be used for drilling operations? If yes, describe.	Yes
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.	

Attachments

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

10. Company Personnel

<u>Name</u>	<u>Title</u>	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

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: 400 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.

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.

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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.



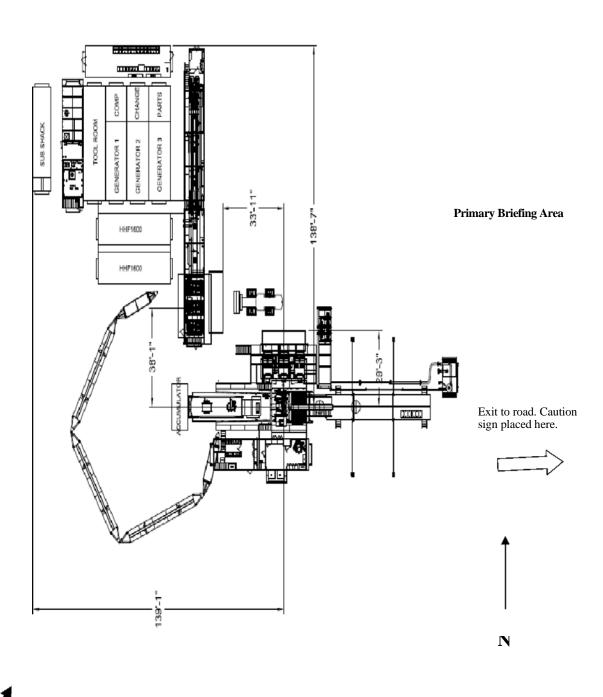
Permian Drilling Hydrogen Sulfide Drilling Operations Plan Welch B 28 Fed 1H

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

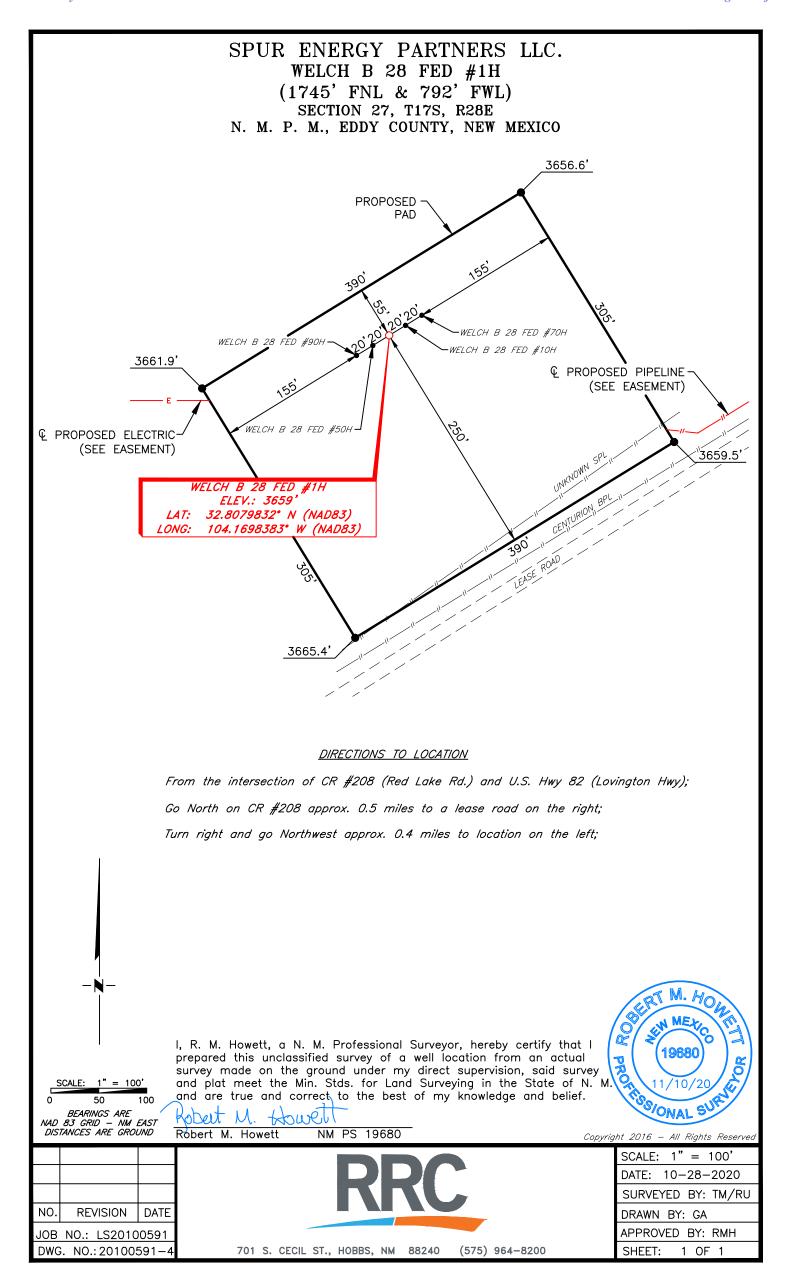
1. Escape

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.

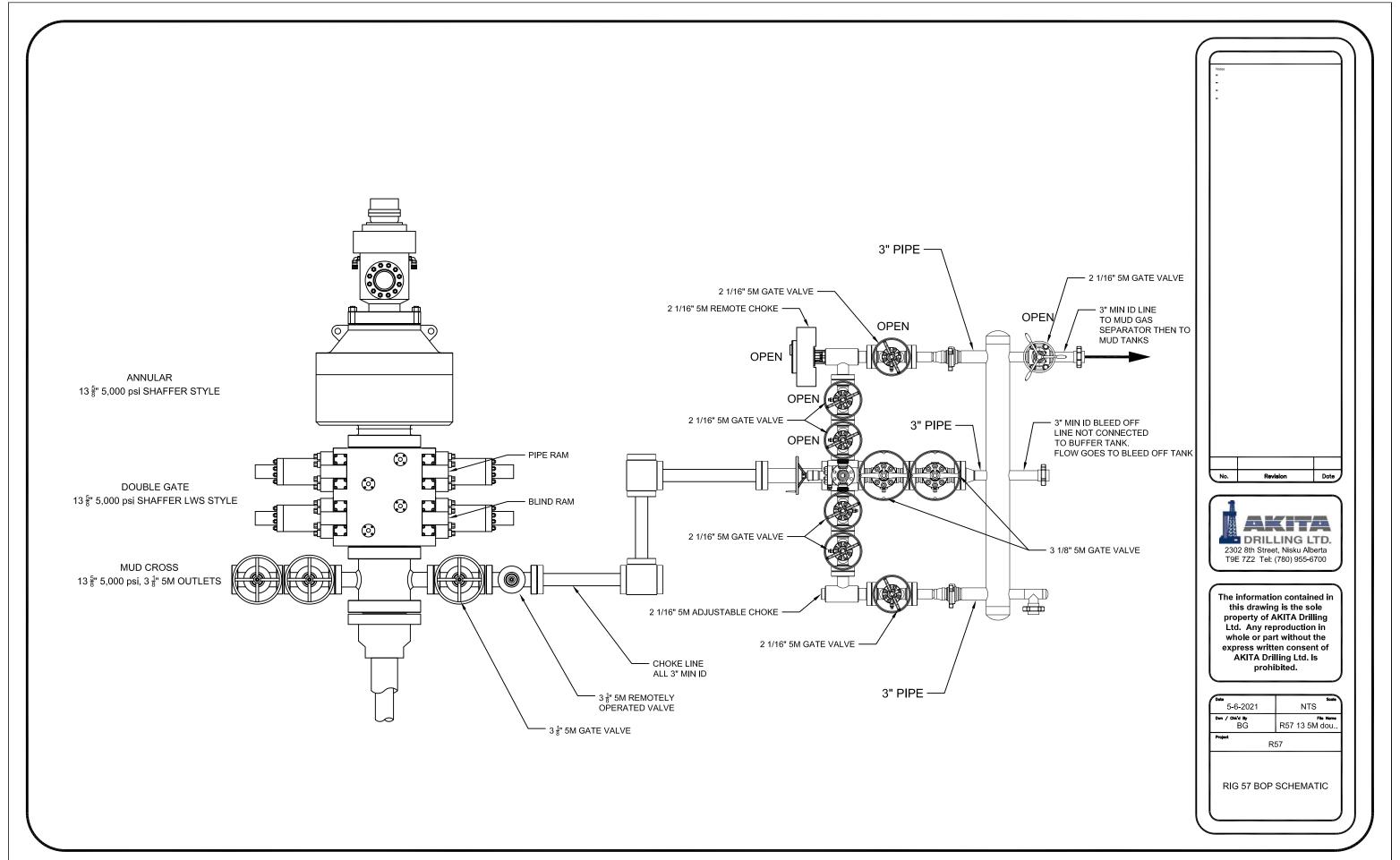
Secondary Briefing Area







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

CONDITIONS

Action 75935

CONDITIONS

Operator:	OGRID:
Spur Energy Partners LLC	328947
9655 Katy Freeway	Action Number:
Houston, TX 77024	75935
	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	2/1/2022
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	2/1/2022
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	2/1/2022
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	2/1/2022
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	2/1/2022