Form 3160-3 (June 2015) UNITED STATES DEPARTMENT OF THE I BUREAU OF LAND MAN APPLICATION FOR PERMIT TO D			FORM APPROVED OMB No. 1004-0137 Expires: January 31, 2018 5. Lease Serial No. 6. If Indian, Allotee or Tribe Name				
	EENTER			7. If Unit or CA Agre	ement, Na	ime and No.	
	other ingle Zone	Multiple Zone		8. Lease Name and W	Vell No.		
2. Name of Operator				9. API Well No. 30	-015-5	54532	
3a. Address	3b. Phone N	o. (include area coa	le)	10. Field and Pool, or	r Explorate	ory	
 4. Location of Well (<i>Report location clearly and in accordance</i>) At surface At proposed prod. zone 	with any State	requirements.*)		11. Sec., T. R. M. or I	Blk. and S	urvey or Area	
14. Distance in miles and direction from nearest town or post off	fice*			12. County or Parish	1	3. State	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of ac	res in lease	17. Spacir	ng Unit dedicated to the	is well		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 20.			BIA Bond No. in file			
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approxi	mate date work will	start*	23. Estimated duratio	n		
	24. Attac	hments					
The following, completed in accordance with the requirements o (as applicable)	f Onshore Oil	and Gas Order No.	1, and the H	Iydraulic Fracturing ru	le per 43 (CFR 3162.3-3	
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest Syste SUPO must be filed with the appropriate Forest Service Office 		Item 20 above). 5. Operator certifie	cation.	s unless covered by an mation and/or plans as r			
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 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, r							
of the United States any false, fictitious or fraudulent statements	or representati		r within its j	urisdiction.		s on page 2)	

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 District I

 1625 N. French Dr., Hobbs, NM 88240

 Phone: (575) 393-6161 Fax: (575) 393-0720

 District III

 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

WELL LOCATION AND A OPEA OF DEDICATION DI AT

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

AMENDED REPORT

			WELL LU	JUAITO	IN AND ACK	EAGE DEDIC	ATION PLA	1					
	API Number			² Pool Code			³ Pool Na	ame					
30-0	15- 54	532		98220	20 Purple Sage; Wolfcamp (Gas)								
⁴ Property C	ode				⁵ Property N		⁶ Well Number						
33506	4			H	HGH LIFE	FED COM				231H			
⁷ OGRID N	lo.		⁸ Operator Name ⁹ Elevation										
37204	3	TAP ROCK OPERATING, LLC. 3512'											
	¹⁰ Surface Location												
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	Ea	East/West line				
Н	10	25-S	25-E	-	1804'	NORTH	380'	EAS	ST	EDDY			
			. 11	Bottom Ho	ole Location If D	Different From Su	rface						
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	Ea	st/West line	County			
A	12	25-S	25–E	-	610'	NORTH	5'	EAS	ST	EDDY			
¹² Dedicated Acres	¹³ Joint or 1	Infill ¹⁴ (¹⁴ Consolidation Code ¹⁵ Order No.										
640													

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

16	 X=53900 Y=4189:			<=539031.11 ≤=416353.63			NEW MEXICO EAST NAD 1983 SURFACE LOCATION (SHL) 1804' FNL - SEC. 10 380' FEL - SEC. 10 X=527989 Y=417089 LAT.: N 32.1466497 LONG.: W 104.3764640	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and compl to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land include 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.
1_6		BHL LTP 	<u></u>	T-25-S,		13 18	KICK OFF POINT (KOP) 613' FNL - SEC. 10 100' FEL - SEC. 10 X=528257 Y=418280 LAT.: N 32.1499221 LONG.: W 104.3755993 FIRST TAKE POINT (FTP)(FPP1)	Gy Walk 06-26-23 Signature Date Cory Walk Printed Name Cory@permitswest.com E-mail Address
	330, 11, 11, 11, 11, 11, 11, 11, 11, 11, 1	$AZ = 89.43^{\circ}, 10009.6$		376////////PROJECT/AREA INM USA NMMM 104661			604' FNL - SEC. 11 330' FWL - SEC. 11 X=528687 Y=418284 LAT.: N 32.1499344 LONG.: W 104.3742099 <u>FED PERF POINT (FPP2)</u> 548' FNL - SEC. 11	¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on thi plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief.
X=5		 FPP2 		X=533700.01 Y=416245.19		14 13	0' FEL - SEC. 11 X=533689 Y=418334 LAT.: N 32.1500759 LONG.: W 104.3580477 <u>LAST TAKE POINT (LTP)</u> 607' FNL - SEC. 12 330' FEL - SEC. 12 X=538696 Y=418384 LAT.: N 32.1502154 LONG.: W 104.3418686	03/18/2023 Date of Survey Signature and Seal of Professional Surveyor DOM/ DOM/ DOM/ DOM/ DOM/ DOM/ DOM/ DOM/ Control of Surveyor DOM/ DOM/ DOM/ DOM/ DOM/ DOM/ DOM/ Control of Surveyor DOM/
$2\int \frac{AZ = 89.43^{\circ}}{430.0'}$		 FTP/ FPP1	AZ = 12.69	330'		14	BOTTOM HOLE LOCATION (BHL) 610' FNL - SEC. 12 5' FEL - SEC. 12 X=539021 Y=418387 LAT.: N 32.1502244 LONG.: W 104.3408184	7/6/2023 10:10:55 AM ////// Certificate Number
Y=41	9 K 8350.69 8891.81	USA NMNM		X=528377.58 Y=416251.89	10	15		HIGH LIFE FED COM 231H REV1.DWG 7/6/2023 10:10:55 AM craig

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ived by OCD: 11/28/20	23 2:10:	:08 P.	M								Page 3
		E	Stat nergy, Minerals a		New Me atural Res		nent		Subn Via I	nit El E-peri	ectronically nitting
			1220 S	South	vation D 1 St. Fran e, NM 87	cis Dr.					
		N	ATURAL GA	AS I	MANA	GEMENT P	PLAN				
This Natural Gas Manag	gement P	lan m	ust be submitted wi	th ea	ch Applica	tion for Permit to	Drill (Al	PD) for	r a new or	reco	mpleted well.
					Plan D ve May 25	<u>escription</u> , <u>2021</u>					
I. Operator:Ta	p Rock (Opera	ting LLC	0)GRID: _	372043		Da	te: _11/6	/2023	3
II. Type: 🛛 Original 🛛	□ Amend	dment	t due to □ 19.15.27	.9.D(6)(a) NMA	.C 🗆 19.15.27.9.I	D(6)(b) N	IMAC	□ Other.		
If Other, please describe	:										
III. Well(s): Provide the be recompleted from a s							wells pr	oposed	l to be dri	lled (or proposed to
Well Name		API	ULSTR		F	ootages		nticipated Anticipa Dil BBL/D Gas MCF/			Anticipated Produced Water
High Life Fed Com 23	IH		Sec 10, T25S R 25	5E	1804 FN	L, 380 FEL	1040		9750		5750
IV. Central Delivery P	oint Nan	ne: _	_High Life Fed Co	om CI	OP[See 19.15.27.9(D))(1) NMA	AC]			
V. Anticipated Schedul proposed to be recomple								et of w	ells propo	sed t	o be drilled o
Well Name	AP	I	Spud Date		Reached Date	Completio Commencemen			al Flow k Date	Fir	st Production Date
High Life Fed Com 231H			4/1/23	5/1/	/22	6/1/23		6/30/2	23	7/5	/23
VI. Separation Equipm	nent: 🛛 .	Attac	h a complete descri	ption	of how Op	erator will size se	paration	equipn	nent to op	timiz	ze gas capture
VII. Operational Pract Subsection A through F				riptio	n of the ac	tions Operator w	ill take to	o comp	oly with the	he re	quirements of
VIII. Best Managemen during active and planne			-	te des	scription o	f Operator's best	manager	nent pi	ractices to	o min	imize venting

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. \Box 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 \Box will \Box 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 \Box does \Box 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: \Box 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.

<u>Section 3 - Certifications</u> <u>Effective May 25, 2021</u>

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

 \Box 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

 \Box 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. \Box 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. \Box 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:
Printed Name: Jeff Trlica
Title: Regulatory Specialist
E-mail Address: jtrlica@taprk.com
Date: 11/7/2023
Phone: 720-772-5910
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Title: Approval Date:
Approval Date:
Approval Date:
Approval Date:

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

Each surface facility design includes the following process equipment: 3-phase separators (1 separator per well), a sales gas scrubber, one or two 3-phase heater treaters, a vapor recovery tower (VRT), a VRU compressor, multiple water and oil tanks, as well as flare knockouts (HP & LP), and flares (HP & LP). All process vessels will be sized to separate oil, water, gas based upon typical/historical & predicted well performance. Each process vessel will be fitted with an appropriately sized PSV as per ASME code requirements to mitigate vessel rupture and loss of containment. Additionally, the process vessels will be fitted with pressure transmitters tied to the facility control system which will allow operations to monitor pressures and when necessary, shut-in the facility to avoid vessel over-pressure and the potential vent of natural gas. Natural gas will preferentially be sold to pipeline, and only during upset/emergency conditions will gas be directed to the HP flare system. Flash gas from both the 3-phase heater treater and the VRT will be recompressed using a VRU compressor and this gas will also preferentially be directed to the gas sales pipeline. Oil tanks & water tanks will be fitted with 16 oz thief hatches as well as PVRVs to protect the tanks from rupture/collapse. Additionally, the tank vapor outlets and tank vapor capture system will be sized to keep tank pressures below 12 oz. The tank vapor capture system will include a tank vapor blower & knockout as well as a lowpressure flare and knockout. Tank vapors will preferentially be directed to the VRU and the sales gas pipeline. Only during process upsets/emergency conditions will tank vapors be directed to the LP flare system.

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. ← See attached reg for requirements.

- During drilling operations- Gas meters will be installed at the shakers and Volume Totalizers will be installed on the pits. In the event that elevated gas levels, or a pit gain are observed, returns will be diverted to a gas buster. Gas coming off the gas buster will be combusted at the flare stack. A 10' or taller flare will be located at least 100' from the SHL.
- During completions operations, including stimulation and frac plug drill out operations, hydrocarbon production to surface is minimized. When gas production does occur, gas will be combusted at a flare stack. A 10' or taller flare will be located at least 100' from the SHL.
- During production operations, all process vessels (separators, heater treaters, VRTs, Tanks) will recompress (where necessary) and route gas outlets into the natural gas gathering pipeline. Gas will preferentially be routed to natural gas gathering pipeline and the flare system will be used only during emergency, malfunction, or if the gas does not meet pipeline specifications. In the event of flaring off-specification gas, operations will pull gas samples twice a week and will also route gas back to pipeline as soon as the gas meets specification. Exceptions to this will include only those qualified exceptions per the regulation 19.15.27.8 Subsection D.

To comply with state performance standards, separation and storage equipment will be designed to handle the maximum anticipated throughput and pressure to minimize waste and reduce the likelihood of venting gas to atmosphere. Additionally, each storage atmospheric tank (Oil & Water) will be fitted with a level transmitter to facilitate gauging of the tank without opening of the thief hatch. Any gas collected through the tank vent system is expected to be recompressed and routed to sales. However, in the event of an emergency, the tank vapor capture system will be designed to combust the gas using a flare stack fitted with a continuous or automatic ignitor. The flare stack will be properly anchored and will be located a minimum of 100 feet from the well and storage tanks. Operators will conduct weekly AVO inspections. These AVO inspection records will be stored for the required 5-year period and will be made available upon Division request.

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

• When performing routine or preventive maintenance on a vessel or tank, initially all inlet valves are closed, and the vessel or tank is allowed to depressurize through the normal outlet connections to gas sales and/or liquid tanks. Once the vessel or tank is depressurized to lowest acceptable sales outlet pressure, usually around 20 psig, a temporary low-pressure flowline is connected from the vessel or tank to the Vapor Recovery Unit (VRU) for further pressure reduction. Once depressurized to less than 1-2 psig, the remaining natural gas in the vessel or tank is vented to atmosphere through a controlled pressure relief valve. Once the vessel or tank is depressurized to atmosphere.



Elevation above Sea Level: 3512'

DRILLING PROGRAM

1. Estimated Tops

Formation	TVD	MD	Lithologies	Bearing
Quaternary Deposits	0	0	Surface	None
Rustler	37	37	Anhydrite	None
Top Salt	337	337	Salt	Salt
Base Salt	1,236	1,236	Salt	Salt
DMG	1,462	1,462	Sandstone	None
Lamar	1,463	1,463	Sandstone	Hydrocarbons
Bell Canyon	1,492	1,492	Sandstone	Hydrocarbons
Ramsey Sand	1,585	1,586	Sandstone	Hydrocarbons
Cherry Canyon	2,410	2,419	Limestone	Hydrocarbons
Brushy Canyon	3,330	3,350	Sandstone	Hydrocarbons
Bone Spring Lime	5,020	5,061	Carbonate	Hydrocarbons
Upper Avalon	5,080	5,122	Carbonate	Hydrocarbons
Middle Avalon	5,385	5,430	Carbonate	Hydrocarbons
1st BS Sand	5,875	5,926	Sandstone	Hydrocarbons
2nd BS Carb	6,085	6,139	Carbonate	Hydrocarbons
2nd BS Sand	6,455	6,513	Sandstone	Hydrocarbons
3rd BS Sand	7,720	7,794	Sandstone	Hydrocarbons
Wolfcamp A	8,065	8,143	Sandstone	Hydrocarbons
Wolfcam B	8,310	8,391	Sandstone	Hydrocarbons
Wolfcamp C	8,800	8,984	Sandstone	Hydrocarbons
КОР	8,380	8,462	Carbonate	Hydrocarbons
TD	9,134	19,513	Carbonate	Hydrocarbons

2. Notable Zones

Wolfcamp C is the formation target.

3. Pressure Control

Pressure Control Equipment (See Schematics):

At 19,513', a 5M pressure control system is required. The BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and 1 annular preventer will be used below surface casing to TD. See attachments for BOP and choke manifold diagrams. Also present will be an accumulator that meets the requirements of Onshore Order #2 for the pressure rating of the BOP stack. A rotating head will also be installed as needed. BOP will be inspected and operated as recommended in Onshore Order #2. A top drive check valve and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. The wellhead will be a multi-bowl speed head.



BOP Test procedure will be as follows:

After surface casing is set and the BOP is nippled up, the BOP pressure tests will be made with a third party tester to 250 psi low, 5000 psi high, and the annular preventer will be tested to 250 psi low, 2500 psi high.

Variance Requests:

Tap Rock requests a variance to run a multi-bowl speed head for setting the Intermediate and Production Strings. Tap Rock requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Tap Rock requests a variance to have the option of batch drilling this well with other wells on the same pad. If this well is batch drilled, after cementing a casing string, a 5M dry hole cap with bleed off valve will be installed. The rig will then walk to another well on the pad. Tap Rock Operating requests to only test BOP connection breaks after rig walks per the procedures and stipulations set forth in the "BOP Shell Test Procedure" document emailed to the BLM on 8/11/22.

4. Casing & Cement

All Casing will be new.

Casing Design:

0															
Dr	illed Interv	al	Casing	Chan daud	Standard Tananad		Casing Set Depths			Casing Details					
Hole Size	Тор	Btm	Size	Standard	rapered	Top MD	Bottom MD	Top TVD	BTM TVD	Grade	Weight	Thread	Collapse	Burst	Tension
14 3/4	0	250	10 3/4	API	No	0	250	0	250	J-55	45.5	BTC	1.13	1.15	1.6
9 7/8	250	8362	7 5/8	API	No	0	8362	0	8280	P-110	29.7	BTC	1.13	1.15	1.6
62/4	8262	10510	5 1/2	NON API	No	0	8162	0	8080	P-110	20	ТХР	1.13	1.15	1.6
0 3/4	8302	19213	5 1/2	NON API	No	8162	19513	8080	9134	P-110	20	W441	1.13	1.15	1.6
	Dr Hole Size 14 3/4	Drilled Interv Hole Size Top 14 3/4 0 9 7/8 250	Drilled Interval Hole Size Top Btm 14 3/4 0 250 9 7/8 250 8362	Drilled Interval Casing Hole Size Top Btm Size 14 3/4 0 250 10 3/4 9 7/8 250 8362 7 5/8 6 3/4 8362 19513 5 1/2	Drilled Interval Casing Size Standard Hole Size Top Btm Size 14 3/4 0 250 10 3/4 API 9 7/8 250 8362 7 5/8 API 6 3/4 8362 19513 5 1/2 NON API	Drilled Interval Casing Size Standard Tapered 14 3/4 0 250 10 3/4 API No 9 7/8 250 8362 7 5/8 API No 6 3/4 8362 19513 5 1/2 NON API No	Drilled Interval Casing Tapered Top MD Hole Size Top Btm Size Tapered Top MD 14 3/4 0 250 10 3/4 API No 0 9 7/8 250 8362 7 5/8 API No 0 6 3/4 8362 19513 5 1/2 NON API No 0	Drilled Interval Casing Size Standard Tapered Casing Set Casing Set 14 3/4 0 250 10 3/4 API No 0 250 9 7/8 250 8362 7 5/8 API No 0 8362 6 3/4 8362 19513 5 1/2 NON API No 0 8162	Drilled Interval Casing Size Standard Tapered Casing Set Depths Hole Size Top Btm Size Top MD Bottom MD Top VD 14 3/4 0 250 10 3/4 API No 0 250 0 9 7/8 250 8362 7 5/8 API No 0 8362 0 6 3/4 8362 19513 51/2 NON API No 0 8162 0	Drilled Interval Casing Size Standard Tapered Casing Set Depths Hole Size Top Btm Size Top MD Bottom MD Top TVD BTM TVD 14 3/4 0 250 10 3/4 API No 0 250 0 250 9 7/8 250 8362 7 5/8 API No 0 8362 0 8280 6 3/4 8362 19513 5 1/2 NON API No 0 8162 0 8080	Drilled Interval Casing Size Standard Tapered Casing Set Depths Standard Top MD Bottom MD Top TVD BTM TVD Grade 14 3/4 0 250 10 3/4 API No 0 250 0 250 J-55 9 7/8 250 8362 7 5/8 API No 0 8362 0 8280 P-110 6 3/4 8362 19513 51/2 NON API No 0 8162 0 8080 P-110	Drilled Interval Casing Size Standard Tapered Casing Set Depths Control of the set Depths Control of the set Depths Hole Size Top Btm Size Top MD Bottom MD Top TVD BTM TVD Grade Weight 14 3/4 0 250 10 3/4 API No 0 250 0 250 J-55 45.5 9 7/8 250 8362 7 5/8 API No 0 8362 0 8280 P-110 29.7 6 3/4 8362 19513 5 1/2 NON API No 0 8162 0 8080 P-110 20.7	Drilled Interval Casing Size Standard Tapered Casing Set Depths Control Set Depths Casing Set Depths Hole Size Top Btm Size Top MD Bottom MD Top TVD BTM VD Grade Weight Thread 14 3/4 0 250 10 3/4 API No 0 250 0 250 J-55 45.5 BTC 9 7/8 250 8362 75/8 API No 0 8362 0 8280 P-110 29.7 BTC 6 3/4 8362 19513 51/2 NON API No 0 8162 0 8080 P-110 20 TXP	Drilled Interval Casing Size Standard Tapered Casing Set Depths Collapse Casing Depths Casing Depths Hole Size Top Btm Size Top MD Bottom MD Top TVD BTM TVD Grade Weight Thread Collapse 14 3/4 0 250 10 3/4 API No 0 250 0 250 J-55 45.5 BTC 1.13 9 7/8 250 8362 7 5/8 API No 0 8362 0 8280 P-110 29.7 BTC 1.13 6 3/4 8362 19513 5 1/2 NON API No 0 8162 0 8080 P-110 20 TXP 1.13	Drilled Interval Casing Standard Tapered Casing Set Depths Casing Set Depths Casing Set Depths Casing Set Depths Hole Size Top Btm Size Tapered Top MD Bottom MD Top VD BTM TVD Grade Weight Thread Collapse Burst 14 3/4 0 250 10 3/4 API No 0 250 0 250 J-55 BTC 1.13 1.15 9 7/8 250 8362 7 5/8 API No 0 8362 0 8280 P-110 29.7 BTC 1.13 1.15 6 3/4 8362 19513 5 1/2 NON API No 0 8162 0 8080 P-110 20 TXP 1.13 1.15

Cement Volumes:

Name	Туре	Top MD	Sacks	Yield	Cu. Ft	Weight	Excess	Cement	Additives
Surface	Tail	0	209	1.33	278	14.8	100%	С	5% NCI + LCM
Intermediate	Lead	0	600	4.29	2573	10.5	65%	С	Bentonite + 1% CaCL2 + 8% NaCl + LCM
Intermediate	Tail	7362	167	1.67	279	13.2	30%	С	5% NaCl + LCM
Production	Tail	8162	862	1.32	1138	14.5	20%	Н	Fluid Loss + Dispersant + Retarder + LCM

5. Mud Program

Mud Design:

Name	Тор	Bottom	Туре	Mud Weight	Visc	Fluid Loss
Surface	0	250	FW Spud Mud	8.40	27 - 30	NC
Intermediate	250	8362	DBE	9.20	35 - 42	~60
Production	8362	19513	OBM	11.80	55-65	< 16

Electronic Pason mud monitor system complying with Onshore Order 1 will be used. All necessary mud products (i.e., barite, pac) for weight addition and fluid loss control will always be on site. Mud program is subject to change due to hole conditions. A closed loop system will be used.



6. Cores, Tests, & Logs

- Electric Logging Program: No open-hole logs are planned at this time.
- GR will be collected while drilling through the MWD tools from KOP to TD.
- A 2-person mud logging program will be used from KOP to TD.
- No DSTs or cores are planned at this time.
- CBL w/ CCL from as far as gravity will let it fall to TOC.

7. Down Hole Conditions

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is \approx 5,604 psi. Expected bottom hole temperature is \approx 160° F.

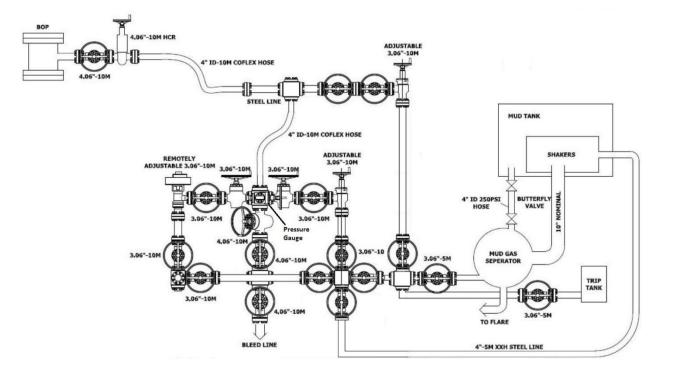
Tap Rock does not anticipate that there will be enough H2S from the surface to the Wolfcamp C formations to meet the BLM's Onshore Order 6 requirements for the submission of an "H2S Drilling Operation Plan" or "Public Protection Plan" for drilling and completing this well. Tap Rock has an H2S safety package on all wells and an "H2S Drilling Operations Plan" is attached. Adequate flare lines will be installed off the mud/gas separator where gas may be safely flared. All personnel will be familiar with all aspects of safe operation of equipment being used.

8. Other Information

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 15 days. If production casing is run an additional 60 days will be required to complete and construct surface facilities.

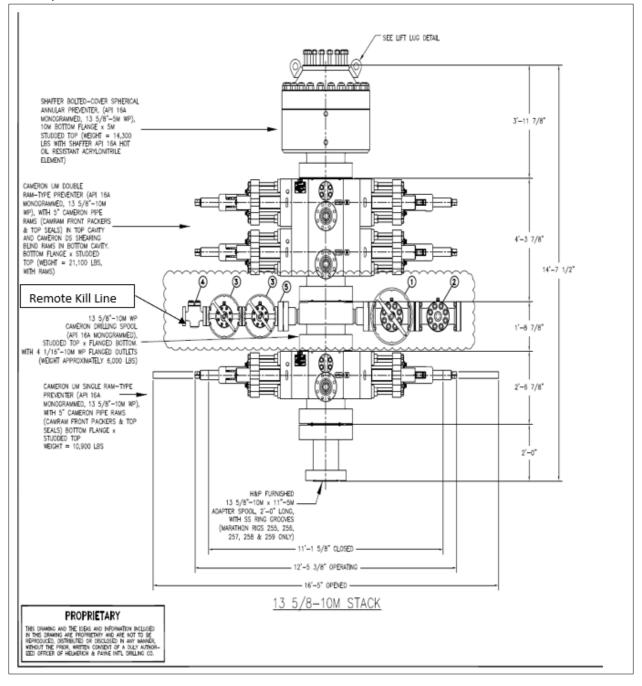


10M Choke Layout





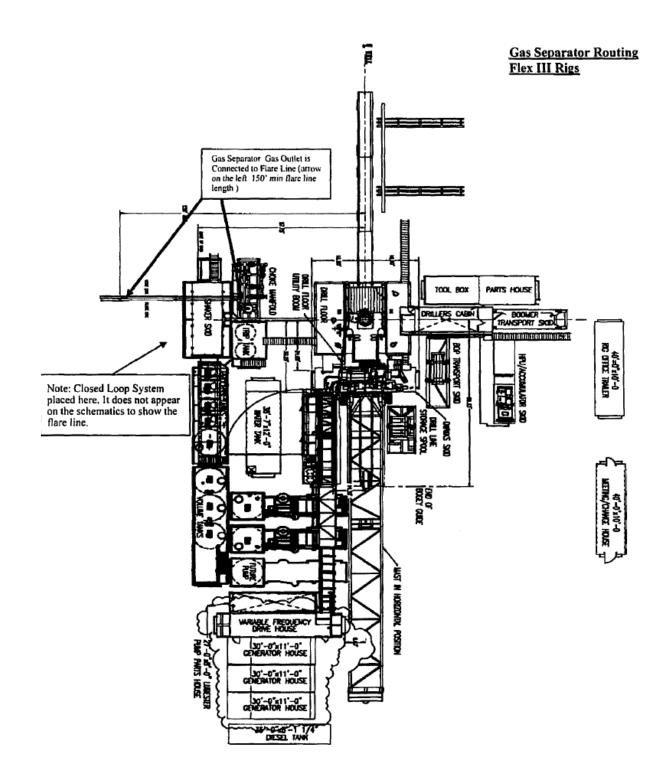
10,000 psi BOP Stack



Page 14 of 38

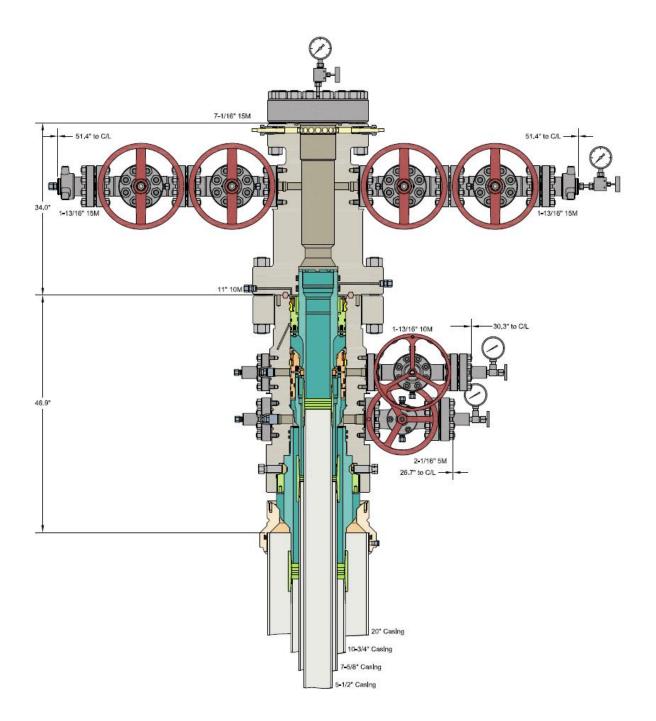


Drilling Operations Plan High Life Fed Com #231H Tap Rock Operating, LLC SHL 1,804' FNL & 380' FEL, Sec. 10 BHL 610' FNL & 5' FEL, Sec. 12 T. 25S., R. 25E Eddy County, NM





Multi-bowl Wellhead Design



Tap Rock Resources, LLC

Eddy County, NM (NAD 83 NME) Sec-10-25S-25E(High Life N) High Life Fed Com #231H

Wellbore #1

Plan: Plan 1



Standard Survey Report

10 May, 2023

Total Report Version 1.10

COMPASS 5000.16 Build 97

.

Survey Report

Company: Project: Site: Well: Wellbore: Design:	ject:Eddy County, NM (NAD 83 NME)e:Sec-10-25S-25E(High Life N)II:High Life Fed Com #231HIIbore:Wellbore #1sign:Plan 1				Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:			Well High Life Fed Com #231H GE 3512' + KB 26' @ 3538.00usft GE 3512' + KB 26' @ 3538.00usft Grid Minimum Curvature EDM 5000.1 Single User Db					
Project Map System: Geo Datum: Map Zone:	l	US State Pl North Ameri		983		System Da	ıtum:	Me	ean Sea Level				
Site Site Position: From: Position Unce		Sec-10-25 Map	S-25E(High L 0.00 us	North	-	528	,091.00 usft ,199.00 usft 13-3/16 "	Latitude: Longitude:				32.14 -104.37	466546 757849
Well Well Position Position Unce Grid Converg	ertainty	High Life F +N/-S +E/-W	0.00) usft N) usft E) usft W	orthing: asting: /ellhead Elev	vation:	417,089.00 527,989.00	usft Lon	tude: gitude: und Level:			-104.37	466489 764634 00 usft
Wellbore Magnetics			#1 Name IDGM2023	Samp	le Date 5/8/2023	Declin: (°)		Dip A (°	-		Strengt (nT) 7,347.800		
Design Audit Notes: Version: Vertical Secti	on:	Plan 1	De	Phas pth From (T (usft)		PLAN +N/-S (usft) 0.00	+E (U	• On Depth: E/-W Isft) 0.00		ction °)	9.43		0.00
Survey Tool F From (usft)	Program 0.00	To (usft) 19,513	Date Survey (V Survey (V			Τα	ool Name WD+HRGM	De	escription WSG MWD + HR				
Planned Surv Measured Depth (usft)	ey INC (°)	AZI (°)	Vertical Depth (usft)	Local Cool +N/-S (usft)	rdinates +E/-W (usft)	Map Coord Northing (usft)	linates Easting _(usft)	Geo Coord Latitude (°)	inates Longituge (°)	Section	Dogleg Rate °/100usft)	Build Rate (°/100usft)('	Turn Rate (°/100usft)
0.00 37.00	0.00 0.00	0.00 0.00	0.00 37.00	0.00 0.00	0.00	417,089.00 417,089.00	527,989.00 527,989.00	32.1466489 32.1466489	-104.3764634 -104.3764634	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
Rus 100.00	tler 0.00	0.00	100.00	0.00	0.00	417,089.00	527,989.00	32.1466489	-104.3764634	0.00	0.00	0.00	0.00

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well High Life Fed Com #231H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	GE 3512' + KB 26' @ 3538.00usft
Site:	Sec-10-25S-25E(High Life N)	MD Reference:	GE 3512' + KB 26' @ 3538.00usft
Well:	High Life Fed Com #231H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDM 5000.1 Single User Db

Planned Survey

Measured Depth _(usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coor +N/-S (usft)	dinates +E/-W (usft)	Map Coord Northing (usft)	inates Easting (usft)	Geo Coordi Latitude (°)	nates Longituge (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
337.00	0.00	0.00	337.00	0.00	0.00	417,089.00	527,989.00	32.1466489	-104.3764634	0.00	0.00	0.00	0.00
Тор	Salt												
400.00	0.00	0.00	400.00	0.00	0.00	417,089.00	527,989.00	32.1466489	-104.3764634	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	417,089.00	527,989.00	32.1466489	-104.3764634	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	417,089.00	527,989.00	32.1466489	-104.3764634	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	417,089.00	527,989.00	32.1466489	-104.3764634	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	417,089.00	527,989.00	32.1466489	-104.3764634	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	417,089.00	527,989.00	32.1466489	-104.3764634	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	417,089.00	527,989.00	32.1466489	-104.3764634	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	417,089.00	527,989.00	32.1466489	-104.3764634	0.00	0.00	0.00	0.00
Beg	in Nudge												
1,200.00	1.00	14.40	1,199.99	0.85	0.22	417,089.85	527,989.22	32.1466512	-104.3764627	0.23	1.00	1.00	0.00
1,236.01	1.36	14.40	1,236.00	1.56	0.40	417,090.56	527,989.40	32.1466532	-104.3764621	0.42	1.00	1.00	0.00
Base	e Salt												
1,300.00	2.00	14.40	1,299.96	3.38	0.87	417,092.38	527,989.87	32.1466582	-104.3764606	0.90	1.00	1.00	0.00
1,400.00	3.00	14.40	1,399.86	7.61	1.95	417,096.61	527,990.95	32.1466698	-104.3764571	2.03	1.00	1.00	0.00
1,462.24	3.62	14.40	1,462.00	11.09	2.85	417,100.09	527,991.85	32.1466794	-104.3764543	2.96	1.00	1.00	0.00
Dela	aware												
1,463.24	3.63	14.40	1,463.00	11.15	2.86	417,100.15	527,991.86	32.1466795	-104.3764542	2.97	1.00	1.00	0.00
Lam	ar												
1,492.31	3.92	14.40	1,492.00	13.00	3.34	417,102.00	527,992.34	32.1466846	-104.3764527	3.47	1.00	1.00	0.00
Bell													
1,500.00	4.00	14.40	1,499.68	13.52	3.47	417,102.52	527,992.47	32.1466861	-104.3764522	3.60	1.00	1.00	0.00
1,585.58	4.86	14.40	1,585.00	19.92	5.11	417,108.92	527,994.11	32.1467037	-104.3764469	5.31	1.00	1.00	0.00
Ram	isey												
1,600.00	5.00	14.40	1,599.37	21.12	5.42	417,110.12	527,994.42	32.1467070	-104.3764459	5.63	1.00	1.00	0.00
1,700.00	6.00	14.40	1,698.90	30.40	7.80	417,119.40	527,996.80	32.1467325	-104.3764383	8.11	1.00	1.00	0.00
1,800.00	7.00	14.40	1,798.26	41.37	10.62	417,130.37	527,999.62	32.1467626	-104.3764292	11.03	1.00	1.00	0.00
1,900.00	8.00	14.40	1,897.40	54.01	13.87	417,143.01	528,002.87	32.1467974	-104.3764187	14.40	1.00	1.00	0.00
1,993.09	8.93	14.40	1,989.48	67.28	17.27	417,156.28	528,006.27	32.1468339	-104.3764077	17.94	1.00	1.00	0.00
EOE	3 / Hold												
2,000.00	8.93	14.40	1,996.30	68.32	17.54	417,157.32	528,006.54	32.1468367	-104.3764069	18.22	0.00	0.00	0.00
2,100.00	8.93	14.40	2,095.09	83.36	21.40	417,172.36	528,010.40	32.1468781	-104.3763944	22.23	0.00	0.00	0.00
2,200.00	8.93	14.40	2,193.88	98.39	25.26	417,187.39	528,014.26	32.1469194	-104.3763819	26.24	0.00	0.00	0.00
2,300.00	8.93	14.40	2,292.67	113.43	29.12	417,202.43	528,018.12	32.1469607	-104.3763695	30.25	0.00	0.00	0.00
2,400.00	8.93	14.40	2,391.45	128.47	32.98	417,217.47	528,021.98	32.1470021	-104.3763570	34.26	0.00	0.00	0.00
2,418.77	8.93	14.40	2,410.00	131.29	33.71	417,220.29	528,022.71	32.1470098	-104.3763547	35.01	0.00	0.00	0.00
Che	rry												
2,500.00	8.93	14.40	2,490.24	143.50	36.84	417,232.50	528,025.84	32.1470434	-104.3763446	38.27	0.00	0.00	0.00

.

Survey Report

Planned Sur	vey													
Design:	ign: Plan 1				Database:		EDI	M 5000.1 Single	User Db					
Wellbore:					Survey Calc	ulation Method	: Min	imum Curvature	•					
Well:	High Life Fed Com #231H e: Wellbore #1				North Reference: Grid			b						
Site:	Sec-10-25	S-25E(High Life	N)		MD Reference	ce:	GE	GE 3512' + KB 26' @ 3538.00usft						
Project:	Eddy Cou	nty, NM (NAD 83	NME)		TVD Referer	ice:	GE	GE 3512' + KB 26' @ 3538.00usft						
Company:	Tup Hook	Tap Rock Resources, LLC Eddy County, NM (NAD 83 NME)				Local Co-ordinate Reference: Well High Li				ed Com #231H				

(usit)	(*)	0	(usit)	(usit)	(usit)	(usit)	(usit)	()	()	() (((
2,600.00	8.93	14.40	2,589.03	158.54	40.70	417,247.54	528,029.70	32.1470848	-104.3763321	42.28	0.00	0.00	0.00
2,700.00	8.93	14.40	2,687.82	173.58	44.56	417,262.58	528,033.56	32.1471261	-104.3763197	46.29	0.00	0.00	0.00
2,800.00	8.93	14.40	2,786.61	188.61	48.42	417,277.61	528,037.42	32.1471674	-104.3763072	50.30	0.00	0.00	0.00
2,900.00	8.93	14.40	2,885.39	203.65	52.28	417,292.65	528,041.28	32.1472088	-104.3762948	54.31	0.00	0.00	0.00
3,000.00	8.93	14.40	2,984.18	218.69	56.14	417,307.69	528,045.14	32.1472501	-104.3762823	58.32	0.00	0.00	0.00
3,100.00	8.93	14.40	3,082.97	233.72	60.00	417,322.72	528,049.00	32.1472915	-104.3762699	62.33	0.00	0.00	0.00
3,200.00	8.93	14.40	3,181.76	248.76	63.86	417,337.76	528,052.86	32.1473328	-104.3762574	66.34	0.00	0.00	0.00
3,300.00	8.93	14.40	3,280.54	263.80	67.73	417,352.80	528,056.73	32.1473741	-104.3762450	70.35	0.00	0.00	0.00
3,350.06	8.93	14.40	3,330.00	271.33	69.66	417,360.33	528,058.66	32.1473948	-104.3762387	72.35	0.00	0.00	0.00
Brush	ıy												
3,400.00	8.93	14.40	3,379.33	278.84	71.59	417,367.84	528,060.59	32.1474155	-104.3762325	74.36	0.00	0.00	0.00
3,500.00	8.93	14.40	3,478.12	293.87	75.45	417,382.87	528,064.45	32.1474568	-104.3762200	78.37	0.00	0.00	0.00
3,600.00	8.93	14.40	3,576.91	308.91	79.31	417,397.91	528,068.31	32.1474982	-104.3762076	82.38	0.00	0.00	0.00
3,700.00	8.93	14.40	3,675.69	323.95	83.17	417,412.95	528,072.17	32.1475395	-104.3761951	86.39	0.00	0.00	0.00
3,800.00	8.93	14.40	3,774.48	338.98	87.03	417,427.98	528,076.03	32.1475808	-104.3761827	90.40	0.00	0.00	0.00
3,900.00	8.93	14.40	3,873.27	354.02	90.89	417,443.02	528,079.89	32.1476222	-104.3761702	94.40	0.00	0.00	0.00
4,000.00	8.93	14.40	3,972.06	369.06	94.75	417,458.06	528,083.75	32.1476635	-104.3761578	98.41	0.00	0.00	0.00
4,100.00	8.93	14.40	4,070.84	384.09	98.61	417,473.09	528,087.61	32.1477049	-104.3761453	102.42	0.00	0.00	0.00
4,200.00	8.93	14.40	4,169.63	399.13	102.47	417,488.13	528,091.47	32.1477462	-104.3761329	106.43	0.00	0.00	0.00
4,300.00	8.93	14.40	4,268.42	414.17	106.33	417,503.17	528,095.33	32.1477875	-104.3761204	110.44	0.00	0.00	0.00
4,400.00	8.93	14.40	4,367.21	429.20	110.19	417,518.20	528,099.19	32.1478289	-104.3761080	114.45	0.00	0.00	0.00
4,500.00	8.93	14.40	4,465.99	444.24	114.05	417,533.24	528,103.05	32.1478702	-104.3760955	118.46	0.00	0.00	0.00
4,600.00	8.93	14.40	4,564.78	459.28	117.91	417,548.28	528,106.91	32.1479115	-104.3760830	122.47	0.00	0.00	0.00
4,700.00	8.93	14.40	4,663.57	474.31	121.77	417,563.31	528,110.77	32.1479529	-104.3760706	126.48	0.00	0.00	0.00
4,800.00	8.93	14.40	4,762.36	489.35	125.63	417,578.35	528,114.63	32.1479942	-104.3760581	130.49	0.00	0.00	0.00
4,900.00	8.93	14.40	4,861.15	504.39	129.49	417,593.39	528,118.49	32.1480356	-104.3760457	134.50	0.00	0.00	0.00
5,000.00	8.93	14.40	4,959.93	519.42	133.35	417,608.42	528,122.35	32.1480769	-104.3760332	138.51	0.00	0.00	0.00
5,060.80	8.93	14.40	5,020.00	528.57	135.70	417,617.57	528,124.70	32.1481020	-104.3760257	140.95	0.00	0.00	0.00
Bone	Spring												
5,100.00	8.93	14.40	5,058.72	534.46	137.21	417,623.46	528,126.21	32.1481182	-104.3760208	142.52	0.00	0.00	0.00
5,121.54	8.93	14.40	5,080.00	537.70	138.04	417,626.70	528,127.04	32.1481271	-104.3760181	143.39	0.00	0.00	0.00
Avalo				540.50		447 000 50	500 400 07	00 4404500	404 0700000	4.40.50			
5,200.00	8.93	14.40	5,157.51	549.50	141.07	417,638.50	528,130.07		-104.3760083	146.53		0.00	0.00
5,300.00	8.93	14.40	5,256.30	564.53	144.93	417,653.53	528,133.93		-104.3759959	150.54	0.00	0.00	0.00
5,400.00	8.93	14.40	5,355.08	579.57	148.79	417,668.57	528,137.79		-104.3759834	154.55	0.00	0.00	0.00
5,430.28	8.93	14.40	5,385.00	584.12	149.96	417,673.12	528,138.96	32.1482548	-104.3759796	155.77	0.00	0.00	0.00
	n Middle		E 450.07	504.04	450.05	447.000.04	500 444 05	00 4 40005 5	404 0750745	450.55	0.00		
5,500.00	8.93	14.40	5,453.87	594.61	152.65	417,683.61	528,141.65		-104.3759710	158.56	0.00	0.00	0.00
5,600.00	8.93	14.40	5,552.66	609.64	156.51	417,698.64	528,145.51	32.1483249	-104.3759585	162.57	0.00	0.00	0.00

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well High Life Fed Com #231H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	GE 3512' + KB 26' @ 3538.00usft
Site:	Sec-10-25S-25E(High Life N)	MD Reference:	GE 3512' + KB 26' @ 3538.00usft
Well:	High Life Fed Com #231H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDM 5000.1 Single User Db

Planned Survey

Measured			Vertical	Local Cool	rdinates	Map Coord	linates	Geo Coord	inates	Vertical	Dogleg	Build	Turn
Depth (usft)	INC	AZI	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude (°)	Longituge (°)	Section (usft)	Rate (°/100usft)	Rate (°/100usft)	Rate
(usit)	(°)	(°)	(usit)	(usit)	(usit)	(usit)	(usit)	()	()	(uon)	() 10000010)	(() Toouon()
5,700.00	8.93	14.40	5,651.45	624.68	160.37	417,713.68	528,149.37	32.1483663	-104.3759461	166.58	0.00	0.00	0.00
5,800.00	8.93	14.40	5,750.23	639.72	164.23	417,728.72	528,153.23	32.1484076	-104.3759336	170.59	0.00	0.00	0.00
5,900.00	8.93	14.40	5,849.02	654.75	168.10	417,743.75	528,157.10	32.1484490	-104.3759211	174.60	0.00	0.00	0.00
5,926.30	8.93	14.40	5,875.00	658.71	169.11	417,747.71	528,158.11	32.1484598	-104.3759179	175.66	0.00	0.00	0.00
1st I	Bone Spri	ing											
6,000.00	8.93	14.40	5,947.81	669.79	171.96	417,758.79	528,160.96	32.1484903	-104.3759087	178.61	0.00	0.00	0.00
6,100.00	8.93	14.40	6,046.60	684.83	175.82	417,773.83	528,164.82	32.1485316	-104.3758962	182.62	0.00	0.00	0.00
6,138.87	8.93	14.40	6,085.00	690.67	177.32	417,779.67	528,166.32	32.1485477	-104.3758914	184.18	0.00	0.00	0.00
2nd	Bone Spi	ring FS											
6,200.00	8.93	14.40	6,145.38	699.86	179.68	417,788.86	528,168.68	32.1485730	-104.3758838	186.63	0.00	0.00	0.00
6,300.00	8.93	14.40	6,244.17	714.90	183.54	417,803.90	528,172.54	32.1486143	-104.3758713	190.64	0.00	0.00	0.00
6,400.00	8.93	14.40	6,342.96	729.94	187.40	417,818.94	528,176.40	32.1486557	-104.3758589	194.65	0.00	0.00	0.00
6,500.00	8.93	14.40	6,441.75	744.97	191.26	417,833.97	528,180.26	32.1486970	-104.3758464	198.66	0.00	0.00	0.00
6,513.42	8.93	14.40	6,455.00	746.99	191.78	417,835.99	528,180.78	32.1487025	-104.3758447	199.20	0.00	0.00	0.00
2nd	Bone Spi	ring Sand											
6,600.00	8.93	14.40	6,540.53	760.01	195.12	417,849.01	528,184.12	32.1487383	-104.3758340	202.67	0.00	0.00	0.00
6,700.00	8.93	14.40	6,639.32	775.05	198.98	417,864.05	528,187.98	32.1487797	-104.3758215	206.68	0.00	0.00	0.00
6,800.00	8.93	14.40	6,738.11	790.08	202.84	417,879.08	528,191.84	32.1488210	-104.3758091	210.69	0.00	0.00	0.00
6,900.00	8.93	14.40	6,836.90	805.12	206.70	417,894.12	528,195.70	32.1488624	-104.3757966	214.70	0.00	0.00	0.00
7,000.00	8.93	14.40	6,935.69	820.16	210.56	417,909.16	528,199.56	32.1489037	-104.3757841	218.71	0.00	0.00	0.00
7,100.00	8.93	14.40	7,034.47	835.19	214.42	417,924.19	528,203.42	32.1489450	-104.3757717	222.72	0.00	0.00	0.00
7,191.64	8.93	14.40	7,125.00	848.97	217.96	417,937.97	528,206.96	32.1489829	-104.3757603	226.39	0.00	0.00	0.00
Brea	ak Sand												
7,200.00	8.93	14.40	7,133.26	850.23	218.28	417,939.23	528,207.28	32.1489864	-104.3757592	226.73	0.00	0.00	0.00
7,300.00	8.93	14.40	7,232.05	865.27	222.14	417,954.27	528,211.14	32.1490277	-104.3757468	230.74	0.00	0.00	0.00
7,400.00	8.93	14.40	7,330.84	880.30	226.00	417,969.30	528,215.00	32.1490690	-104.3757343	234.75	0.00	0.00	0.00
7,500.00	8.93	14.40	7,429.62	895.34	229.86	417,984.34	528,218.86	32.1491104	-104.3757219	238.76	0.00	0.00	0.00
7,600.00	8.93	14.40	7,528.41	910.38	233.72	417,999.38	528,222.72	32.1491517	-104.3757094	242.77	0.00	0.00	0.00
7,700.00	8.93	14.40	7,627.20	925.41	237.58	418,014.41	528,226.58	32.1491931	-104.3756970	246.78	0.00	0.00	0.00
7,793.94	8.93	14.40	7,720.00	939.54	241.21	418,028.54	528,230.21	32.1492319	-104.3756853	250.54	0.00	0.00	0.00
	Bone Spr	-											
7,800.00	8.93	14.40	7,725.99	940.45	241.44	418,029.45	528,230.44		-104.3756845	250.79		0.00	0.00
7,900.00	8.93	14.40	7,824.77	955.49	245.30	418,044.49	528,234.30		-104.3756721	254.80		0.00	0.00
8,000.00	8.93	14.40	7,923.56	970.52	249.16	418,059.52	528,238.16		-104.3756596	258.81		0.00	0.00
8,026.76	8.93	14.40	7,950.00	974.55	250.20	418,063.55	528,239.20	32.1493281	-104.3756563	259.88	0.00	0.00	0.00
3rd	Bone Spr	ing W San	ld										
8,100.00	8.93	14.40	8,022.35	985.56	253.02	418,074.56	528,242.02	32.1493584	-104.3756471	262.82	0.00	0.00	0.00
8,143.17	8.93	14.40	8,065.00	992.05	254.69	418,081.05	528,243.69	32.1493763	-104.3756418	264.55	0.00	0.00	0.00
						•							

Company:	Тар
Project:	Edd
Site:	Sec
Well:	Higł
Wellbore:	Wel
Design:	Plar

Tap Rock Resources, LLC Eddy County, NM (NAD 83 NME) Sec-10-25S-25E(High Life N) High Life Fed Com #231H Wellbore #1 Plan 1

Planned Survey

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database: Well High Life Fed Com #231H GE 3512' + KB 26' @ 3538.00usft GE 3512' + KB 26' @ 3538.00usft Grid Minimum Curvature EDM 5000.1 Single User Db

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coor +N/-S (usft)	rdinates +E/-W _(usft)	Map Coord Northing (usft)	inates Easting (usft)	Geo Coordi Latitude (°)	nates Longituge (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)(°	Turn Rate %100usft)
Wol	fcamp A X	(
8,200.00	8.93	14.40	8,121.14	1,000.60	256.88	418,089.60	528,245.88	32.1493998	-104.3756347	266.83	0.00	0.00	0.00
8,208.97	8.93	14.40	8,130.00	1,001.95	257.23	418,090.95	528,246.23	32.1494035	-104.3756336	267.19	0.00	0.00	0.00
Wol	fcamp A Y	,											
8,269.71	8.93	14.40	8,190.00	1,011.08	259.58	418,100.08	528,248.58	32.1494286	-104.3756260	269.62	0.00	0.00	0.00
Wol	fcamp A L	.ower											
8,300.00	8.93	14.40	8,219.92	1,015.63	260.74	418,104.63	528,249.74	32.1494411	-104.3756222	270.84	0.00	0.00	0.00
8,391.18	8.93	14.40	8,310.00	1,029.35	264.26	418,118.35	528,253.26	32.1494788	-104.3756109	274.49	0.00	0.00	0.00
	fcamp B												
8,400.00	8.93	14.40	8,318.71	1,030.67	264.61	418,119.67	528,253.61	32.1494824	-104.3756098	274.85	0.00	0.00	0.00
8,462.04	8.93	14.40	8,380.00	1,040.00	267.00	418,129.00	528,256.00	32.1495081	-104.3756021	277.33	0.00	0.00	0.00
KO	P; 11° DLS	;											
8,500.00	11.15	34.91	8,417.39	1,045.87	269.83	418,134.87	528,258.83	32.1495242	-104.3755929	280.23	11.00	5.85	54.04
8,550.00	15.36	50.60	8,466.06	1,054.04	277.72	418,143.04	528,266.72	32.1495467	-104.3755674	288.20	11.00	8.42	31.37
8,600.00	20.19	59.32	8,513.67	1,062.65	290.27	418,151.65	528,279.27	32.1495704	-104.3755269	300.83	11.00	9.66	17.43
8,650.00	25.28	64.71	8,559.77	1,071.62	307.36	418,160.62	528,296.36	32.1495951	-104.3754717	318.00	11.00	10.19	10.78
8,700.00	30.51	68.37	8,603.95	1,080.87	328.83	418,169.87	528,317.83	32.1496205	-104.3754023	339.56	11.00	10.46	7.32
8,749.02	35.71	71.00	8,645.00	1,090.12	353.94	418,179.12	528,342.94	32.1496460	-104.3753212	364.77	11.00	10.61	5.36
Wol	fcamp B1												
8,750.00	35.81	71.04	8,645.79	1,090.31	354.48	418,179.31	528,343.48	32.1496465	-104.3753195	365.31	11.00	10.66	4.65
8,800.00	41.16	73.10	8,684.92	1,099.85	384.08	418,188.85	528,373.08	32.1496727	-104.3752238	395.01	11.00	10.70	4.12
8,850.00	46.54	74.77	8,720.96	1,109.41	417.36	418,198.41	528,406.36	32.1496990	-104.3751163	428.38	11.00	10.76	3.32
8,900.00	51.94	76.15	8,753.60	1,118.89	454.01	418,207.89	528,443.01	32.1497252	-104.3749979	465.12	11.00	10.80	2.78
8,950.00	57.35	77.35	8,782.52	1,128.22	493.69	418,217.22	528,482.69	32.1497508	-104.3748697	504.89	11.00	10.83	2.39
8,984.16	61.06	78.09	8,800.00	1,134.46	522.36	418,223.46	528,511.36	32.1497680	-104.3747771	533.62	11.00	10.84	2.16
Wol	fcamp C												
9,000.00	62.78	78.41	8,807.46	1,137.30	536.04	418,226.30	528,525.04	32.1497759	-104.3747328	547.33	11.00	10.85	2.04
9,050.00	68.21	79.37	8,828.19	1,146.06	580.67	418,235.06	528,569.67	32.1498000	-104.3745887	592.04	11.00	10.86	1.92
9,100.00	73.64	80.26	8,844.53	1,154.40	627.16	418,243.40	528,616.16	32.1498230	-104.3744384	638.62	11.00	10.87	1.78
9,150.00	79.08	81.10	8,856.31	1,162.26	675.09	418,251.26	528,664.09	32.1498446	-104.3742836	686.62	11.00	10.88	1.68
9,178.25	82.15	81.57	8,860.92	1,166.46	702.65	418,255.46	528,691.65	32.1498562	-104.3741945	714.22	11.00	10.88	1.63
FTP	- High Lif	e Fed Co	m #231H										
9,200.00	84.52	81.92	8,863.44	1,169.56	724.02	418,258.56	528,713.02	32.1498647	-104.3741255		11.00	10.88	1.61
9,236.55	88.50	82.50	8,865.67	1,174.51	760.16	418,263.51	528,749.16	32.1498784	-104.3740087	771.81	11.00	10.88	1.60
	Begin Tu												
9,300.00	88.50	83.77	8,867.33	1,182.09	823.13	418,271.09	528,812.13		-104.3738053	834.85		0.00	2.00
9,400.00	88.50	85.77	8,869.95	1,191.20	922.68	418,280.20	528,911.68		-104.3734836		2.00	0.00	2.00
9,500.00	88.50	87.77	8,872.57	1,196.83	1,022.48	418,285.83	529,011.48		-104.3731612	1,034.33		0.00	2.00
9,582.82	88.50	89.43	8,874.73	1,198.86	1,105.25	418,287.86	529,094.25	32.1499457	-104.3728937	1,117.12	2.00	0.00	2.00
EOT	۲ / Hold												

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:
Site:	Sec-10-25S-25E(High Life N)	MD Reference:
Well:	High Life Fed Com #231H	North Reference:
Wellbore:	Wellbore #1	Survey Calculation Method:
Design:	Plan 1	Database:

Planned Survey

Well High Life Fed Com #231H GE 3512' + KB 26' @ 3538.00usft GE 3512' + KB 26' @ 3538.00usft Grid Minimum Curvature EDM 5000.1 Single User Db

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coo +N/-S (usft)	rdinates +E/-W _(usft)	Map Coorc Northing (usft)	linates Easting (usft)	Geo Coordi Latitude (°)	nates Longituge (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,600.00	88.50	89.43	8,875.18	1,199.03	1,122.42	418,288.03	529,111.42	32.1499461	-104.3728382	1,134.29	0.00	0.00	0.00
9,700.00	88.50	89.43	8,877.79	1,200.03	1,222.38	418,289.03	529,211.38	32.1499490	-104.3725152	1,234.26	0.00	0.00	0.00
9,800.00	88.50	89.43	8,880.41	1,201.03	1,322.34	418,290.03	529,311.34	32.1499518	-104.3721923	1,334.22	2 0.00	0.00	0.00
9,900.00	88.50	89.43	8,883.02	1,202.02	1,422.30	418,291.02	529,411.30	32.1499547	-104.3718693	1,434.19		0.00	0.00
10,000.00	88.50	89.43	8,885.63	1,203.02	1,522.26	418,292.02	529,511.26		-104.3715463	1,534.15		0.00	0.00
10,100.00	88.50	89.43	8,888.25	1,204.02	1,622.22	418,293.02	529,611.22	32.1499604	-104.3712233	1,634.12		0.00	0.00
10,200.00	88.50	89.43	8,890.86	1,205.02	1,722.18	418,294.02	529,711.18	32.1499632	-104.3709003	1,734.08		0.00	0.00
10,300.00	88.50	89.43	8,893.47	1,206.02	1,822.14	418,295.02	529,811.14	32.1499660	-104.3705773	1,834.05	5 0.00	0.00	0.00
10,400.00	88.50	89.43	8,896.08	1,207.02	1,922.10	418,296.02	529,911.10	32.1499689	-104.3702543	1,934.02	2 0.00	0.00	0.00
10,500.00	88.50	89.43	8,898.70	1,208.01	2,022.06	418,297.01	530,011.06	32.1499717	-104.3699313	2,033.98	0.00	0.00	0.00
10,600.00	88.50	89.43	8,901.31	1,209.01	2,122.03	418,298.01	530,111.03	32.1499746	-104.3696083	2,133.95	5 0.00	0.00	0.00
10,700.00	88.50	89.43	8,903.92	1,210.01	2,221.99	418,299.01	530,210.99	32.1499774	-104.3692853	2,233.91	0.00	0.00	0.00
10,800.00	88.50	89.43	8,906.54	1,211.01	2,321.95	418,300.01	530,310.95	32.1499802	-104.3689623	2,333.88	8 0.00	0.00	0.00
10,900.00	88.50	89.43	8,909.15	1,212.01	2,421.91	418,301.01	530,410.91	32.1499831	-104.3686393	2,433.85	5 0.00	0.00	0.00
11,000.00	88.50	89.43	8,911.76	1,213.01	2,521.87	418,302.01	530,510.87	32.1499859	-104.3683163	2,533.81		0.00	0.00
11,100.00	88.50	89.43	8,914.38	1,214.00	2,621.83	418,303.00	530,610.83	32.1499887	-104.3679933	2,633.78		0.00	0.00
11,200.00	88.50	89.43	8,916.99	1,215.00	2,721.79	418,304.00	530,710.79	32.1499916	-104.3676704	2,733.74		0.00	0.00
11,300.00	88.50	89.43	8,919.60	1,216.00	2,821.75	418,305.00	530,810.75		-104.3673474	2,833.71		0.00	0.00
11,400.00	88.50	89.43	8,922.21	1,217.00	2,921.71	418,306.00	530,910.71	32.1499972	-104.3670244	2,933.67	0.00	0.00	0.00
11,500.00	88.50	89.43	8,924.83	1,218.00	3,021.67	418,307.00	531,010.67	32.1500000	-104.3667014	3,033.64	0.00	0.00	0.00
11,600.00	88.50	89.43	8,927.44	1,219.00	3,121.63	418,308.00	531,110.63	32.1500029	-104.3663784	3,133.61	0.00	0.00	0.00
11,700.00	88.50	89.43	8,930.05	1,219.99	3,221.59	418,308.99	531,210.59	32.1500057	-104.3660554	3,233.57	0.00	0.00	0.00
11,800.00	88.50	89.43	8,932.67	1,220.99	3,321.56	418,309.99	531,310.56	32.1500085	-104.3657324	3,333.54	0.00	0.00	0.00
11,900.00	88.50	89.43	8,935.28	1,221.99	3,421.52	418,310.99	531,410.52	32.1500114	-104.3654094	3,433.50	0.00	0.00	0.00
12,000.00	88.50	89.43	8,937.89	1,222.99	3,521.48	418,311.99	531,510.48	32.1500142	-104.3650864	3,533.47	0.00	0.00	0.00
12,100.00	88.50	89.43	8,940.50	1,223.99	3,621.44	418,312.99	531,610.44	32.1500170	-104.3647634	3,633.44	0.00	0.00	0.00
12,200.00	88.50	89.43	8,943.12	1,224.99	3,721.40	418,313.99	531,710.40	32.1500198	-104.3644404	3,733.40	0.00	0.00	0.00
12,300.00	88.50	89.43	8,945.73	1,225.98	3,821.36	418,314.98	531,810.36	32.1500227	-104.3641174	3,833.37	0.00	0.00	0.00
12,400.00	88.50	89.43	8,948.34	1,226.98	3,921.32	418,315.98	531,910.32	32 1500255	-104.3637944	3,933.33	8 0.00	0.00	0.00
12,500.00	88.50	89.43	8,950.96	1,227.98	4,021.28	418,316.98	532,010.28		-104.3634714	4,033.30		0.00	0.00
12,600.00	88.50	89.43	8,953.57	1,228.98	4,121.24	418,317.98	532,110.24		-104.3631485	4,133.26		0.00	0.00
12,700.00	88.50	89.43	8,956.18	1,229.98	4,221.20	418,318.98	532,210.20		-104.3628255	4,233.23		0.00	0.00
12,800.00	88.50	89.43	8,958.79	1,230.98	4,321.16	418,319.98	532,310.16		-104.3625025	4,333.20		0.00	0.00
,			0,000.10	.,			332,310.10	52		.,000.20	0.00	0.00	0.00
12,900.00	88.50	89.43	8,961.41	1,231.97	4,421.13	418,320.97	532,410.13	32.1500396	-104.3621795	4,433.16	6 0.00	0.00	0.00
13,000.00	88.50	89.43	8,964.02	1,232.97	4,521.09	418,321.97	532,510.09	32.1500424	-104.3618565	4,533.13	8 0.00	0.00	0.00
13,100.00	88.50	89.43	8,966.63	1,233.97	4,621.05	418,322.97	532,610.05	32.1500452	-104.3615335	4,633.09	0.00	0.00	0.00
13,200.00	88.50	89.43	8,969.25	1,234.97	4,721.01	418,323.97	532,710.01	32.1500480	-104.3612105	4,733.06	6 0.00	0.00	0.00
13,300.00	88.50	89.43	8,971.86	1,235.97	4,820.97	418,324.97	532,809.97	32.1500508	-104.3608875	4,833.03	3 0.00	0.00	0.00

Well High Life Fed Com #231H

GE 3512' + KB 26' @ 3538.00usft

GE 3512' + KB 26' @ 3538.00usft

EDM 5000.1 Single User Db

Grid

Minimum Curvature

Survey Report

TVD Reference:

MD Reference:

Database:

North Reference:

Local Co-ordinate Reference:

Survey Calculation Method:

Company:Tap Rock Resources, LLCProject:Eddy County, NM (NAD 83 NME)Site:Sec-10-25S-25E(High Life N)Well:High Life Fed Com #231HWellbore:Wellbore #1Design:Plan 1

Planned Survey

Measured			Vertical	Local Coo	rdinates	Map Coord	linates	Geo Coord	inates	Vertical	Dogleg	Build	Turn
Depth	INC	AZI	Depth	+N/-S	+E/-W	Northing	Easting	Latitude	Longituge	Section (usft)	Rate	Rate (°/100usft)	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(°)	(usit)	(/ lousit)	(/ loousit)	Tiousity
13,400.00	88.50	89.43	8,974.47	1,236.97	4,920.93	418,325.97	532,909.93	32.1500537	-104.3605645	4,932.99	0.00	0.00	0.00
13,500.00	88.50	89.43	8,977.08	1,237.96	5,020.89	418,326.96	533,009.89	32.1500565	-104.3602415	5,032.96	0.00	0.00	0.00
13,600.00	88.50	89.43	8,979.70	1,238.96	5,120.85	418,327.96	533,109.85	32.1500593	-104.3599185	5,132.92	0.00	0.00	0.00
13,700.00	88.50	89.43	8,982.31	1,239.96	5,220.81	418,328.96	533,209.81	32.1500621	-104.3595955	5,232.89	0.00	0.00	0.00
13,800.00	88.50	89.43	8,984.92	1,240.96	5,320.77	418,329.96	533,309.77	32.1500649	-104.3592725	5,332.86	0.00	0.00	0.00
12 000 00	88.50	90.42	8,987.54	1 2/1 06	5 420 72	419 220 06	522 400 72	22 1500677	-104.3589495	5,432.82	0.00	0.00	0.00
13,900.00		89.43	,	1,241.96	5,420.73	418,330.96	533,409.73			5,532.79			0.00
14,000.00	88.50	89.43	8,990.15	1,242.96	5,520.69	418,331.96	533,509.69	32.1500705	-104.3586266			0.00	0.00
14,100.00	88.50	89.43	8,992.76	1,243.95	5,620.66	418,332.95	533,609.66	32.1500733	-104.3583036	5,632.75		0.00	0.00
14,200.00	88.50	89.43	8,995.37	1,244.95	5,720.62	418,333.95	533,709.62		-104.3579806	5,732.72		0.00	0.00
14,300.00	88.50	89.43	8,997.99	1,245.95	5,820.58	418,334.95	533,809.58	32.1500790	-104.3576576	5,832.68	0.00	0.00	0.00
14,400.00	88.50	89.43	9,000.60	1,246.95	5,920.54	418,335.95	533,909.54	32.1500818	-104.3573346	5,932.65	0.00	0.00	0.00
14,500.00	88.50	89.43	9,003.21	1,247.95	6,020.50	418,336.95	534,009.50	32.1500846	-104.3570116	6,032.62	0.00	0.00	0.00
14,600.00	88.50	89.43	9,005.83	1,248.95	6,120.46	418,337.95	534,109.46	32.1500874	-104.3566886	6,132.58	0.00	0.00	0.00
14,700.00	88.50	89.43	9,008.44	1,249.94	6,220.42	418,338.94	534,209.42	32.1500902	-104.3563656	6,232.55	0.00	0.00	0.00
14,800.00	88.50	89.43	9,011.05	1,250.94	6,320.38	418,339.94	534,309.38	32.1500930	-104.3560426	6,332.51	0.00	0.00	0.00
14,900.00	88.50	89.43	9,013.67	1,251.94	6,420.34	418,340.94	534,409.34	32.1500958	-104.3557196	6,432.48	0.00	0.00	0.00
15,000.00	88.50	89.43	9,016.28	1,252.94	6,520.30	418,341.94	534,509.30	32.1500986	-104.3553966	6,532.45	0.00	0.00	0.00
15,100.00	88.50	89.43	9,018.89	1,253.94	6,620.26	418,342.94	534,609.26	32.1501014	-104.3550736	6,632.41	0.00	0.00	0.00
15,200.00	88.50	89.43	9,021.50	1,254.94	6,720.23	418,343.94	534,709.23	32.1501042	-104.3547506	6,732.38	0.00	0.00	0.00
15,300.00	88.50	89.43	9,024.12	1,255.93	6,820.19	418,344.93	534,809.19	32.1501070	-104.3544276	6,832.34	0.00	0.00	0.00
15,400.00	88.50	89.43	9,026.73	1,256.93	6,920.15	418,345.93	534,909.15	32 1501098	-104.3541046	6,932.31	0.00	0.00	0.00
15,500.00	88.50	89.43	9,029.34	1,257.93	7,020.11	418,346.93	535,009.11		-104.3537817	7,032.27		0.00	0.00
15,600.00	88.50	89.43	9,031.96	1,258.93	7,120.07	418,347.93	535,109.07		-104.3534587	7,132.24		0.00	0.00
15,700.00	88.50	89.43	9,034.57	1,259.93	7,220.03	418,348.93	535,209.03		-104.3531357	7,232.21		0.00	0.00
15,800.00	88.50	89.43	9,037.18	1,260.93	7,319.99	418,349.93	535,308.99		-104.3528127	7,332.17		0.00	0.00
10,000.00	00.00	03.40	3,007.10	1,200.33	7,019.99	+10,0+9.95	555,500.55	52.1501210	-104.3320121	7,002.17	0.00	0.00	0.00
15,900.00	88.50	89.43	9,039.79	1,261.92	7,419.95	418,350.92	535,408.95	32.1501238	-104.3524897	7,432.14	0.00	0.00	0.00
16,000.00	88.50	89.43	9,042.41	1,262.92	7,519.91	418,351.92	535,508.91	32.1501265	-104.3521667	7,532.10	0.00	0.00	0.00
16,100.00	88.50	89.43	9,045.02	1,263.92	7,619.87	418,352.92	535,608.87	32.1501293	-104.3518437	7,632.07	0.00	0.00	0.00
16,200.00	88.50	89.43	9,047.63	1,264.92	7,719.83	418,353.92	535,708.83	32.1501321	-104.3515207	7,732.04	0.00	0.00	0.00
16,300.00	88.50	89.43	9,050.25	1,265.92	7,819.80	418,354.92	535,808.79	32.1501349	-104.3511977	7,832.00	0.00	0.00	0.00
10 100 00	00.50	00.40	0.050.00	4 000 00	7 0 1 0 7 0	110 055 00	505 000 70	00 4504077	1010500717				
16,400.00	88.50	89.43	9,052.86	1,266.92	7,919.76	418,355.92	535,908.76		-104.3508747	7,931.97		0.00	0.00
16,500.00	88.50	89.43	9,055.47	1,267.92	8,019.72	418,356.92	536,008.72		-104.3505517	8,031.93		0.00	0.00
16,600.00	88.50	89.43	9,058.08	1,268.91	8,119.68	418,357.91	536,108.68		-104.3502287	8,131.90		0.00	0.00
16,700.00	88.50	89.43	9,060.70	1,269.91	8,219.64	418,358.91	536,208.64		-104.3499057	8,231.87		0.00	0.00
16,800.00	88.50	89.43	9,063.31	1,270.91	8,319.60	418,359.91	536,308.60	32.1501489	-104.3495827	8,331.83	0.00	0.00	0.00
16,900.00	88.50	89.43	9,065.92	1,271.91	8,419.56	418,360.91	536,408.56	32,1501516	-104.3492597	8,431.80	0.00	0.00	0.00
17,000.00	88.50	89.43	9,068.54	1,272.91	8,519.52	418,361.91	536,508.52		-104.3489367	8,531.76		0.00	0.00
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Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well High Life Fed Com #231H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	GE 3512' + KB 26' @ 3538.00usft
Site:	Sec-10-25S-25E(High Life N)	MD Reference:	GE 3512' + KB 26' @ 3538.00usft
Well:	High Life Fed Com #231H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDM 5000.1 Single User Db

Planned Survey

17.100.00 86.50 89.43 9.071.15 1.273.91 8.619.48 1418.362.91 536,608.44 32.1501572 -104.3486138 8.631.73 0.00 0.00 17.200.00 88.50 89.43 9.073.67 1.274.90 8.719.44 418,363.90 536,708.44 32.1501620 -104.3479678 8.831.66 0.00 0.00 0.00 17.400.00 88.50 89.43 9.078.37 1.275.90 8.819.40 418,364.90 536,808.40 32.1501683 -104.3479678 8.831.66 0.00 0.00 0.00 17.500.00 88.50 89.43 9.084.21 1.277.90 9.119.29 418,367.90 537,008.23 32.150173 -104.346678 9.231.52 0.00 0.00 0.00 17.700.00 88.50 89.43 9.098.41 1.288.89 9.191.21 418,370.89 537,008.23 2.150177 -104.346758 9.314.40 0.00 0.00 0.00 17.00.00 88.50 89.43 9.098.61 1.284.89 9.111.51 418,370.89 537,008.13 2.1501767 -104.346788 9.313.40 0.00 0.00	Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coc +N/-S _(usft)	ordinates +E/-W (usft)	Map Coord Northing (usft)	linates Easting (usft)	Geo Coordi Latitude (°)	nates Longituge (°)	Section	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,300.00 88.50 89.43 9,076.37 1,275.90 8,819.40 418,364.90 536,808.40 32,1501628 -104,3479678 8,831.66 0.00 0.00 17,400.00 88.50 89.43 9,078.99 1,276.90 8,919.36 418,365.90 536,008.36 32,1501683 -104,3476448 8,931.65 0.00 0.00 0.00 17,500.00 88.50 89.43 9,084.21 1,277.90 9,119.29 418,367.90 537,008.23 32,1501683 -104,3476448 8,931.65 0.00 0.00 0.00 17,700.00 88.50 89.43 9,086.83 1,277.90 9,119.29 418,369.90 537,008.23 32,1501683 -104,346578 9,231.52 0.00 0.0	17,100.00	88.50	89.43	9,071.15	1,273.91	8,619.48	418,362.91	536,608.48	32.1501572	-104.3486138	8,631.73	0.00	0.00	0.00
17,400.00 88.50 89.43 9,078.99 1,276.90 8,919.36 418,365.90 536,908.36 32.1501656 -104.3476448 8,931.63 0.00 0.00 17,500.00 88.50 89.43 9,084.20 1,277.90 9,019.33 418,366.90 537,008.33 32.1501683 -104.3473218 9,031.59 0.00 0.00 0.00 17,700.00 88.50 89.43 9,086.83 1,279.90 9,219.25 418,367.90 537,108.29 32.1501739 -104.3466758 9,231.52 0.00 0.00 0.00 17,900.00 88.50 89.43 9,086.44 1,280.89 9,319.21 418,370.89 537,080.21 32.1501795 -104.3460298 9,431.46 0.00 0.00 0.00 18,000.00 88.50 89.43 9,092.05 1,281.89 9,119.31 418,371.89 537,080.31 32.1501805 -104.3457088 9,631.39 0.00 0.00 0.00 18,000.00 88.50 89.43 9,097.28 1,288.89 9,119.05 418,373.89 537,608.01 32.150180 -104.3457088 9,531.30 0.00 0.00 <td>17,200.00</td> <td>88.50</td> <td>89.43</td> <td>9,073.76</td> <td>1,274.90</td> <td>8,719.44</td> <td>418,363.90</td> <td>536,708.44</td> <td>32.1501600</td> <td>-104.3482908</td> <td>8,731.69</td> <td>0.00</td> <td>0.00</td> <td>0.00</td>	17,200.00	88.50	89.43	9,073.76	1,274.90	8,719.44	418,363.90	536,708.44	32.1501600	-104.3482908	8,731.69	0.00	0.00	0.00
17,500.00 88.50 89.43 9.081.60 1.277.90 9.019.33 418,366.90 537,008.33 32.1501683 -104.3473218 9.031.59 0.00 0.00 17,600.00 88.50 89.43 9.084.21 1.278.90 9,119.29 418,367.90 537,108.29 32.1501711 -104.3466988 9,311.56 0.00 0.00 0.00 17,000.00 88.50 89.43 9.089.44 1.280.89 9,319.21 418,369.89 537,008.21 32.1501767 -104.3463528 9,311.40 0.00 0.00 0.00 18,000.00 88.50 89.43 9.092.05 1.281.89 9,119.17 418,371.89 537,608.13 32.1501765 -104.3463528 9,311.40 0.00 0.00 0.00 18,000.0 88.50 89.43 9.092.50 1.281.89 9,719.05 418,372.89 537,708.05 32.1501785 -104.3450788 9,31.40 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	17,300.00	88.50	89.43	9,076.37	1,275.90	8,819.40	418,364.90	536,808.40	32.1501628	-104.3479678	8,831.66	0.00	0.00	0.00
17,600.00 88.50 89.43 9,084.21 1,278.90 9,119.29 418,367.90 537,108.29 32.1501711 104.3469988 9,131.56 0.00 0.00 17,700.00 88.50 89.43 9,086.83 1,279.90 9,219.25 418,368.90 537,208.25 32.1501767 104.3466758 9,231.52 0.00 0.00 0.00 17,900.00 88.50 89.43 9,092.05 1,281.89 9,419.17 418,370.89 537,308.21 32.1501767 104.3460298 9,431.46 0.00 0.00 0.00 0.00 18,000.00 88.50 89.43 9,092.05 1,281.89 9,619.09 418,371.89 537,508.13 32.1501767 104.3460298 9,431.46 0.00 0.00 0.00 18,000.00 88.50 89.43 9,097.28 1,282.89 9,619.09 418,372.89 537,608.09 32.1501805 104.345608 9,731.35 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	17,400.00	88.50	89.43	9,078.99	1,276.90	8,919.36	418,365.90	536,908.36	32.1501656	-104.3476448	8,931.63	0.00	0.00	0.00
17,700.00 88.50 89.43 9,086.83 1,279.90 9,219.25 418,368.90 537,208.25 32.1501733 -104.3466758 9,231.52 0.00 0.00 0.00 17,900.00 88.50 89.43 9,089.44 1,280.89 9,319.21 418,369.89 537,308.21 32.1501767 -104.3463528 9,31.49 0.00 <td< td=""><td>17,500.00</td><td>88.50</td><td>89.43</td><td>9,081.60</td><td>1,277.90</td><td>9,019.33</td><td>418,366.90</td><td>537,008.33</td><td>32.1501683</td><td>-104.3473218</td><td>9,031.59</td><td>0.00</td><td>0.00</td><td>0.00</td></td<>	17,500.00	88.50	89.43	9,081.60	1,277.90	9,019.33	418,366.90	537,008.33	32.1501683	-104.3473218	9,031.59	0.00	0.00	0.00
17,800.0 88.50 89.43 9,089.44 1,280.89 9,319.21 418,376.89 537,308.21 32,1501767 -104.3460288 9,331.49 0.00 0.00 0.00 17,900.0 88.50 89.43 9,092.05 1,281.89 9,419.17 418,370.89 537,408.17 32,1501767 -104.3460288 9,431.46 0.00 0.00 0.00 18,000.00 88.50 89.43 9,092.05 1,283.89 9,619.09 418,372.89 537,608.09 32,1501765 -104.3450608 9,513.13 0.00 0.00 0.00 18,000.00 88.50 89.43 9,092.89 1,284.89 9,719.05 418,373.89 537,708.05 32,1501878 -104.3450608 9,731.35 0.00 0.00 0.00 18,000.00 88.50 89.43 9,101.21 1,286.88 9,918.97 418,375.88 537,907.97 32,150198 -104.3447148 9,931.22 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 <	17,600.00	88.50	89.43	9,084.21	1,278.90	9,119.29	418,367.90	537,108.29	32.1501711	-104.3469988	9,131.56	0.00	0.00	0.00
17,900 88.50 89.43 9,092.05 1,281.89 9,419.17 418,370.89 537,408.17 32,1501785 -104,346028 9,431.4 0.00 0.00 0.00 18,000.0 88.50 89.43 9,094.66 1,282.89 9,519.13 418,371.89 537,508.13 32,150182 -104,345028 9,631.39 0.00 0.00 18,000.0 88.50 89.43 9,097.28 1,283.89 9,619.09 418,372.89 537,608.09 32,1501820 -104,345086 9,731.35 0.00 0.00 0.00 18,200.00 88.50 89.43 9,102.50 1,286.88 9,918.97 418,375.88 537,907.97 32,1501933 -104,3447378 9,831.32 0.00 0.00 0.00 18,400.00 88.50 89.43 9,107.73 1,287.88 10,18.93 418,376.88 537,907.97 32,1501961 -104,344708 10,31.25 0.00<	17,700.00	88.50	89.43	9,086.83	1,279.90	9,219.25	418,368.90	537,208.25	32.1501739	-104.3466758	9,231.52	0.00	0.00	0.00
18,000.00 88.50 89.43 9,094.66 1,282.89 9,519.13 418,371.89 537,508.13 32.1501822 -104.3457068 9,531.42 0.00 0.00 18,100.00 88.50 89.43 9,097.28 1,283.89 9,619.09 418,372.89 537,508.09 32.1501850 -104.3453838 9,631.39 0.00 0.00 18,200.00 88.50 89.43 9,099.89 1,284.89 9,719.05 418,373.89 537,708.05 32.1501876 -104.3447378 9,831.32 0.00 0.00 0.00 18,400.00 88.50 89.43 9,105.12 1,286.88 9,918.97 418,375.88 537,907.97 32.1501935 -104.3444148 9,931.28 0.00 0.00 0.00 18,500.00 88.50 89.43 9,107.73 1,287.88 10,018.93 418,377.88 538,007.93 32.1501981 -104.3444148 9,931.28 0.00 0.00 0.00 18,600.00 88.50 89.43 9,110.34 1,288.88 10,318.82 418,378.88 538,077.83 32.1502016 -104.344458 10,311.5 0.00 0.00 0.00<	17,800.00	88.50	89.43	9,089.44	1,280.89	9,319.21	418,369.89	537,308.21	32.1501767	-104.3463528	9,331.49	0.00	0.00	0.00
18,100.00 88.50 89.43 9,097.28 1,283.89 9,619.09 418,372.89 537,608.09 32.1501850 -104.3453838 9,631.39 0.00 0.00 18,200.00 88.50 89.43 9,099.89 1,284.89 9,719.05 418,373.89 537,708.05 32.1501878 -104.3453838 9,631.39 0.00 0.00 18,400.00 88.50 89.43 9,102.50 1,285.89 9,819.01 418,375.88 537,907.97 32.1501933 -104.34447378 9,831.32 0.00 0.00 0.00 18,400.00 88.50 89.43 9,107.73 1,287.88 10,018.93 418,375.88 537,907.97 32.1501961 -104.3447378 9,31.28 0.00 0.00 0.00 18,600.00 88.50 89.43 9,110.34 1,288.88 10,118.90 418,377.88 538,007.93 32.1501961 -104.3447378 9,31.13 0.00 0.00 0.00 18,600.00 88.50 89.43 9,112.96 1,289.88 10,218.86 418,378.88 538,007.93 32.1502072 -104.342769 10,31.15 0.00 0.00 0.00<	17,900.00	88.50	89.43	9,092.05	1,281.89	9,419.17	418,370.89	537,408.17	32.1501795	-104.3460298	9,431.46	0.00	0.00	0.00
18,200.00 88.50 89.43 9,099.89 1,284.89 9,719.05 418,373.89 537,708.05 32,1501878 -104,3450608 9,713.35 0.00 0.00 18,300.00 88.50 89.43 9,102.50 1,285.89 9,819.01 418,374.89 537,808.01 32,1501906 -104,3447378 9,831.32 0.00 0.00 0.00 18,400.00 88.50 89.43 9,107.73 1,287.88 10,018.93 418,376.88 537,907.97 32,1501961 -104,3444148 9,931.22 0.00 0.00 0.00 18,600.00 88.50 89.43 9,110.34 1,288.88 10,118.90 418,377.88 538,107.90 32,1501961 -104,3444148 10,31.25 0.00 0.00 0.00 18,600.00 88.50 89.43 9,112.96 1,289.88 10,218.86 418,378.88 538,07.86 32,1501961 -104,3434458 10,31.15 0.00 0.00 0.00 18,600.00 88.50 89.43 9,112.91 1,291.88 10,218.86 418,378.88 538,07.82 32,1502016 -104,343458 10,231.15 0.00 0.00	18,000.00	88.50	89.43	9,094.66	1,282.89	9,519.13	418,371.89	537,508.13	32.1501822	-104.3457068	9,531.42	0.00	0.00	0.00
18,300.00 88.50 89.43 9,102.50 1,285.89 9,819.01 418,374.89 537,808.01 32.1501906 -104.3447378 9,831.32 0.00 0.00 0.00 18,400.00 88.50 89.43 9,105.12 1,286.88 9,918.97 418,375.88 537,907.97 32.1501903 -104.3444148 9,931.28 0.00 0.00 0.00 18,600.00 88.50 89.43 9,107.73 1,287.88 10,018.93 418,377.88 538,007.93 32.1501961 -104.3440918 10,011.25 0.00 0.00 0.00 18,600.00 88.50 89.43 9,112.96 1,288.88 10,118.90 418,377.88 538,107.90 32.1502016 -104.3437688 10,311.2 0.00 <td< td=""><td>18,100.00</td><td>88.50</td><td>89.43</td><td>9,097.28</td><td>1,283.89</td><td>9,619.09</td><td>418,372.89</td><td>537,608.09</td><td>32.1501850</td><td>-104.3453838</td><td>9,631.39</td><td>0.00</td><td>0.00</td><td>0.00</td></td<>	18,100.00	88.50	89.43	9,097.28	1,283.89	9,619.09	418,372.89	537,608.09	32.1501850	-104.3453838	9,631.39	0.00	0.00	0.00
18,400.00 88.50 89.43 9,105.12 1,286.88 9,918.97 418,375.88 537,907.97 32.1501933 -104.3444148 9,931.28 0.00 0.00 18,500.00 88.50 89.43 9,107.73 1,287.88 10,018.93 418,376.88 538,007.93 32.1501961 -104.3440918 10,031.25 0.00 0.00 0.00 18,600.00 88.50 89.43 9,110.34 1,288.88 10,118.90 418,377.88 538,107.90 32.1501961 -104.3440918 10,31.22 0.00 0.00 0.00 18,700.00 88.50 89.43 9,115.57 1,290.88 10,218.86 418,378.88 538,07.82 32.1502072 -104.342799 10,431.11 0.00 0.00 0.00 18,900.00 88.50 89.43 9,112.91 1,291.88 10,418.78 418,380.88 538,07.78 32.1502072 -104.342799 10,431.11 0.00 0.00 0.00 0.00 0.00 10,000 88.50 89.43 9,120.79 1,292.87 10,518.74 418,380.87 538,607.70 32.1502172 -104.3421799 10,431.11 0.0	18,200.00	88.50	89.43	9,099.89	1,284.89	9,719.05	418,373.89	537,708.05	32.1501878	-104.3450608	9,731.35	0.00	0.00	0.00
18,500.00 88,50 89,43 9,107.73 1,287.88 10,018.93 418,376.88 538,007.93 32.1501961 -104.3440918 10,031.25 0.00 0.00 18,600.00 88.50 89.43 9,110.34 1,288.88 10,118.90 418,377.88 538,107.90 32.1501989 -104.3437688 10,231.18 0.00 0.00 18,700.00 88.50 89.43 9,112.96 1,289.88 10,218.86 418,378.88 538,207.86 32.1502044 -104.3434458 10,231.18 0.00 0.00 0.00 18,900.00 88.50 89.43 9,115.57 1,290.88 10,318.82 418,379.88 538,307.82 32.1502044 -104.3431229 10,331.15 0.00 0.00 0.00 18,900.00 88.50 89.43 9,115.57 1,290.88 10,318.82 418,379.88 538,07.78 32.1502044 -104.3424769 10,331.15 0.00 0.00 0.00 19,000.00 88.50 89.43 9,123.41 1,293.87 10,518.74 418,382.87 538,607.70 32.1502127 -104.341865 10,719.35 0.00 0.00	18,300.00	88.50	89.43	9,102.50	1,285.89	9,819.01	418,374.89	537,808.01	32.1501906	-104.3447378	9,831.32	0.00	0.00	0.00
18,600.00 88.50 89.43 9,110.34 1,288.88 10,118.90 418,377.88 538,107.90 32.1501989 -104.3437688 10,131.22 0.00 0.00 0.00 18,700.00 88.50 89.43 9,112.96 1,289.88 10,218.86 418,378.88 538,207.86 32.1502016 -104.3434458 10,231.18 0.00 0.00 0.00 0.00 18,900.00 88.50 89.43 9,115.57 1,290.88 10,318.82 418,379.88 538,307.82 32.1502044 -104.3437299 10,431.11 0.00 0.00 0.00 18,900.00 88.50 89.43 9,118.18 1,291.88 10,518.74 418,380.88 538,507.74 32.1502072 -104.342799 10,431.11 0.00	18,400.00	88.50	89.43	9,105.12	1,286.88	9,918.97	418,375.88	537,907.97	32.1501933	-104.3444148	9,931.28	0.00	0.00	0.00
18,700.00 88.50 89.43 9,112.96 1,289.88 10,218.86 418,378.88 538,207.86 32.1502044 -104.3434458 10,231.18 0.00 0.00 0.00 18,800.00 88.50 89.43 9,115.57 1,290.88 10,318.82 418,379.88 538,307.82 32.1502044 -104.3431229 10,331.15 0.00 0.00 0.00 18,900.00 88.50 89.43 9,115.57 1,291.88 10,418.78 418,379.88 538,407.78 32.1502044 -104.3427999 10,431.11 0.00 0.00 0.00 19,000.00 88.50 89.43 9,120.79 1,292.87 10,518.74 418,381.87 538,607.70 32.1502127 -104.3421539 10,531.08 0.00 0.00 0.00 0.00 19,100.00 88.50 89.43 9,125.72 1,294.75 10,707.00 418,382.87 538,607.70 32.1502152 -104.341865 10,719.35 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00<	18,500.00	88.50	89.43	9,107.73	1,287.88	10,018.93	418,376.88	538,007.93	32.1501961	-104.3440918	10,031.25	0.00	0.00	0.00
18,800.00 88.50 89.43 9,115.57 1,290.88 10,318.82 418,379.88 538,307.82 32.1502044 -104.3431229 10,331.15 0.00 0.00 0.00 18,900.00 88.50 89.43 9,118.18 1,291.88 10,418.78 418,380.88 538,407.78 32.1502044 -104.3427999 10,431.11 0.00 0.00 0.00 19,000.00 88.50 89.43 9,120.79 1,292.87 10,518.74 418,381.87 538,607.70 32.1502127 -104.342769 10,531.08 0.00 0.00 0.00 19,100.00 88.50 89.43 9,123.41 1,293.87 10,618.70 418,382.87 538,607.70 32.1502127 -104.3421539 10,631.05 0.00 0.00 0.00 19,188.34 88.50 89.43 9,125.72 1,294.75 10,707.00 418,383.75 538,607.70 32.1502152 -104.341865 10,719.35 0.00 0.00 0.00 19,200.00 88.50 89.43 9,126.63 1,294.87 10,718.66 418,383.87 538,807.62 32.1502155 -104.3418309 10,731.01	18,600.00	88.50	89.43	9,110.34	1,288.88	10,118.90	418,377.88	538,107.90	32.1501989	-104.3437688	10,131.22	0.00	0.00	0.00
18,900.00 88.50 89.43 9,118.18 1,291.88 10,418.78 418,380.88 538,407.78 32.1502072 -104.3427999 10,431.11 0.00 0.00 0.00 19,000.00 88.50 89.43 9,120.79 1,292.87 10,518.74 418,381.87 538,507.74 32.1502099 -104.3424769 10,531.08 0.00 0.00 0.00 19,100.00 88.50 89.43 9,123.41 1,293.87 10,618.70 418,382.87 538,607.70 32.1502127 -104.3421539 10,631.05 0.00 0.00 0.00 19,188.34 88.50 89.43 9,125.72 1,294.75 10,707.00 418,383.75 538,696.00 32.1502152 -104.3418685 10,719.35 0.00 0.00 0.00 19,200.00 88.50 89.43 9,126.02 1,294.87 10,718.66 418,383.87 538,707.66 32.1502155 -104.3418309 10,731.01 0.00 0.00 0.00 19,300.00 88.50 89.43 9,128.63 1,295.87 10,818.62 418,385.87 538,907.58 32.1502210 -104.3415079 10,830.98	18,700.00	88.50	89.43	9,112.96	1,289.88	10,218.86	418,378.88	538,207.86	32.1502016	-104.3434458	10,231.18	0.00	0.00	0.00
19,000.00 88.50 89.43 9,120.79 1,292.87 10,518.74 418,381.87 538,507.74 32.1502099 -104.3424769 10,531.08 0.00 0.00 19,100.00 88.50 89.43 9,123.41 1,293.87 10,618.70 418,382.87 538,607.70 32.1502127 -104.3421539 10,631.05 0.00 0.00 0.00 19,188.34 88.50 89.43 9,125.72 1,294.75 10,707.00 418,383.75 538,696.00 32.1502152 -104.3418685 10,719.35 0.00 0.00 0.00 19,200.00 88.50 89.43 9,126.02 1,294.87 10,718.66 418,383.87 538,707.66 32.1502155 -104.3418309 10,731.01 0.00 0.00 19,300.00 88.50 89.43 9,128.63 1,295.87 10,818.62 418,384.87 538,807.62 32.1502155 -104.3415079 10,830.98 0.00 0.00 0.00 19,300.00 88.50 89.43 9,131.25 1,295.87 10,918.58 418,385.87 538,907.58 32.1502210 -104.341809 10,930.94 0.00 0.00	18,800.00	88.50	89.43	9,115.57	1,290.88	10,318.82	418,379.88	538,307.82	32.1502044	-104.3431229	10,331.15	0.00	0.00	0.00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	18,900.00	88.50	89.43	9,118.18	1,291.88	10,418.78	418,380.88	538,407.78	32.1502072	-104.3427999	10,431.11	0.00	0.00	0.00
19,188.34 88.50 89.43 9,125.72 1,294.75 10,707.00 418,383.75 538,696.00 32.1502152 -104.3418685 10,719.35 0.00	19,000.00	88.50	89.43	9,120.79	1,292.87	10,518.74	418,381.87	538,507.74	32.1502099	-104.3424769	10,531.08	0.00	0.00	0.00
LTP - High Life Fed Com #231H 19,200.00 88.50 89.43 9,126.02 1,294.87 10,718.66 418,383.87 538,707.66 32.1502155 -104.3418309 10,731.01 0.00 0.00 19,300.00 88.50 89.43 9,128.63 1,295.87 10,818.62 418,384.87 538,807.62 32.1502182 -104.3415079 10,830.98 0.00 0.00 0.00 19,400.00 88.50 89.43 9,131.25 1,296.87 10,918.58 418,385.87 538,907.58 32.1502210 -104.3411849 10,930.94 0.00 0.00 0.00 19,500.00 88.50 89.43 9,133.86 1,297.87 11,018.54 418,386.87 539,007.54 32.1502238 -104.3408619 11,030.91 0.00 0.00 0.00 19,513.46 88.50 89.43 9,134.21 1,298.00 11,032.00 418,387.00 539,021.00 32.1502238 -104.3408619 11,044.37 0.00 0.00 0.00 19,513.46 88.50 89.43 9,13	19,100.00	88.50	89.43	9,123.41	1,293.87	10,618.70	418,382.87	538,607.70	32.1502127	-104.3421539	10,631.05	0.00	0.00	0.00
19,200.00 88.50 89.43 9,126.02 1,294.87 10,718.66 418,383.87 538,707.66 32.1502155 -104.3418309 10,731.01 0.00 0.00 0.00 19,300.00 88.50 89.43 9,128.63 1,295.87 10,818.62 418,383.87 538,807.62 32.1502155 -104.3415079 10,830.98 0.00 0.00 0.00 19,400.00 88.50 89.43 9,131.25 1,296.87 10,918.58 418,385.87 538,907.58 32.1502210 -104.3411849 10,930.94 0.00 0.00 0.00 19,500.00 88.50 89.43 9,133.86 1,297.87 11,018.54 418,386.87 539,007.54 32.1502238 -104.3408619 11,030.91 0.00 0.00 0.00 19,503.04 89.43 9,134.21 1,298.00 11,032.00 418,387.00 539,021.00 32.1502238 -104.3408619 11,044.37 0.00 0.00 0.00 19,513.46 88.50 89.43 9,134.21 1,298.00 11,032.00 418,387.00 539,021.00 32.1502241 -104.3408184 11,044.37 0.00	19,188.34	88.50	89.43	9,125.72	1,294.75	10,707.00	418,383.75	538,696.00	32.1502152	-104.3418685	10,719.35	0.00	0.00	0.00
19,300.00 88.50 89.43 9,128.63 1,295.87 10,818.62 418,384.87 538,807.62 32.1502182 -104.3415079 10,830.98 0.00 0.00 0.00 19,400.00 88.50 89.43 9,131.25 1,296.87 10,918.58 418,385.87 538,907.58 32.1502210 -104.3411849 10,930.94 0.00 0.00 0.00 19,500.00 88.50 89.43 9,133.86 1,297.87 11,018.54 418,386.87 539,007.54 32.1502238 -104.3408619 11,030.91 0.00 0.00 0.00 19,513.46 88.50 89.43 9,134.21 1,298.00 11,032.00 418,387.00 539,021.00 32.1502241 -104.3408184 11,044.37 0.00 0.00 0.00	LTP	- High Lif	fe Fed Cor	n #231H										
19,400.00 88.50 89.43 9,131.25 1,296.87 10,918.58 418,385.87 538,907.58 32.1502210 -104.3411849 10,930.94 0.00 0.00 0.00 19,500.00 88.50 89.43 9,133.86 1,297.87 11,018.54 418,386.87 539,007.54 32.1502210 -104.3408619 11,030.91 0.00 0.00 0.00 19,513.46 88.50 89.43 9,134.21 1,298.00 11,032.00 418,387.00 539,021.00 32.1502241 -104.3408184 11,044.37 0.00 0.00 0.00	19,200.00	88.50	89.43	9,126.02	1,294.87	10,718.66	418,383.87	538,707.66	32.1502155	-104.3418309	10,731.01	0.00	0.00	0.00
19,500.00 88.50 89.43 9,133.86 1,297.87 11,018.54 418,386.87 539,007.54 32.1502238 -104.3408619 11,030.91 0.00 0.00 0.00 19,513.46 88.50 89.43 9,134.21 1,298.00 11,032.00 418,387.00 539,021.00 32.1502231 -104.3408184 11,044.37 0.00 0.00 0.00	19,300.00	88.50	89.43	9,128.63	1,295.87	10,818.62	418,384.87	538,807.62	32.1502182	-104.3415079	10,830.98	0.00	0.00	0.00
19,513.46 88.50 89.43 9,134.21 1,298.00 11,032.00 418,387.00 539,021.00 32.1502241 -104.3408184 11,044.37 0.00 0.00 0.00	19,400.00	88.50	89.43	9,131.25	1,296.87	10,918.58	418,385.87	538,907.58	32.1502210	-104.3411849	10,930.94	0.00	0.00	0.00
	19,500.00	88.50	89.43	9,133.86	1,297.87	11,018.54	418,386.87	539,007.54	32.1502238	-104.3408619	11,030.91	0.00	0.00	0.00
BBUL BBUL Life Fod Com #221U	19,513.46	88.50	89.43	9,134.21	1,298.00	11,032.00	418,387.00	539,021.00	32.1502241	-104.3408184	11,044.37	0.00	0.00	0.00
FBRL - FBRL - Right Life Fed Colli #23 IN	PBH	IL - PBHL	- High Lif	e Fed Com #	231H									

Company:	Tap Roo	k Resources	s, LLC		L	ocal Co-ordin	ate Reference:	Well High Life	Fed Com #231H	
Project:	Eddy Co	ounty, NM (N	AD 83 NME	.)	т	VD Reference):	GE 3512' + KB 26' @ 3538.00usft		
Site:	Sec-10-	25S-25E(Hig	jh Life N)		м	ID Reference:		GE 3512' + KB 26' @ 3538.00usft		
Well:	High Life Fed Com #231H				N	orth Reference	ce:	Grid		
Wellbore:	Wellbore	e #1			S	urvey Calcula	ation Method:	Minimum Cur	vature	
Design:	Plan 1				D	atabase:		EDM 5000.1 \$	Single User Db	
Target Name										
Target Name - hit/miss ta - Shape	ırget I	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss tar - Shape FTP - High Life	e Fed Con	(°) 0.00	(°) 0.00	(usft) 8,863.59	(usft) 1,195.00		(usft) 418,284.00	•	Latitude 32.1499346	Longitude -104.374209

- plan misses target center by 0.25usft at 19188.34usft MD (9125.71 TVD, 1294.75 N, 10707.00 E)
 - Point
 PBHL - High Life Fed Cc 91.50 89.43 9,134.21 1,298.00 11,032.00 418,387.00 539,021.00 32.1502241 -104.3408184
 - plan hits target center

- Rectangle (sides W100.00 H20.00 D10,560.00)

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
37.00	37.00	Rustler	Linerogy	()	
337.00	337.00	Top Salt			
1,236.01	1,236.00	Base Salt			
1,462.24	1,462.00	Delaware			
1,463.24	1,463.00	Lamar			
1,492.31	1,492.00	Bell			
1,585.58	1,585.00	Ramsey			
2,418.77	2,410.00	Cherry			
3,350.06	3,330.00	Brushy			
5,060.80	5,020.00	Bone Spring			
5,121.54	5,080.00	Avalon			
5,430.28	5,385.00	Avalon Middle			
5,926.30	5,875.00	1st Bone Spring			
6,138.87	6,085.00	2nd Bone Spring FS			
6,513.42	6,455.00	2nd Bone Spring Sand			
7,191.64	7,125.00	Break Sand			
7,793.94	7,720.00	3rd Bone Spring Sand			
8,026.76	7,950.00	3rd Bone Spring W Sand			
8,143.17	8,065.00	Wolfcamp A X			
8,208.97	8,130.00	Wolfcamp A Y			
8,269.71	8,190.00	Wolfcamp A Lower			
8,391.18	8,310.00	Wolfcamp B			
8,749.02	8,645.00	Wolfcamp B1			
8,984.16	8,800.00	Wolfcamp C			

Company:	Tap Rock Re	sources, LLC		Local Co-ord	dinate Reference:	Well High Life Fed Com #231H		
Project:	Eddy County	, NM (NAD 83 NM	IE)	TVD Referen	ice:	GE 3512' + KB 26' @ 3538.00usft		
Site:	Sec-10-25S-2	-10-25S-25E(High Life N)			ce:	GE 3512' + KB 26' @ 3538.00usft		
Well:	High Life Fed	d Com #231H		North Refere	ence:	Grid		
Wellbore:	Wellbore #1			Survey Calc	ulation Method:	Minimum Curvature		
Design:	Plan 1			Database:		EDM 5000.1 Single User Db		
	Depth (usft)	Depth (usft)	+N/-S (usft)	+E/-W	Comment			
	(usft)	(usft)	(usft)	(usft)	Comment Begin Nudge			
		•			Comment Begin Nudge EOB / Hold			
	(usft) 1100	(usft) 1100	(usft) 0	(usft) 0	Begin Nudge			
	(usft) 1100 1993 8462 9237	(usft) 1100 1989 8380 8866	(usft) 0 67 1040 1175	(usft) 0 17 267 760	Begin Nudge EOB / Hold KOP; 11° DLS LP / Begin Turn			
	(usft) 1100 1993 8462 9237 9583	(usft) 1100 1989 8380 8866 8875	(usft) 0 67 1040 1175 1199	(usft) 0 17 267 760 1105	Begin Nudge EOB / Hold KOP; 11° DLS LP / Begin Turn EOT / Hold			
	(usft) 1100 1993 8462 9237	(usft) 1100 1989 8380 8866	(usft) 0 67 1040 1175	(usft) 0 17 267 760	Begin Nudge EOB / Hold KOP; 11° DLS LP / Begin Turn			

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Tap Rock Operating LLC
WELL NAME & NO.:	High Life Fed Com 231H
LOCATION:	Sec 11-25S-25E-NMP
COUNTY:	Eddy County, New Mexico

COA

H ₂ S	💿 No	C Yes		
Potash / WIPP	None	C Secretary	C R-111-P	□ WIPP
Cave / Karst	C Low	C Medium	🗘 High	Critical
Wellhead	Conventional	Multibowl	C Both	C Diverter
Cementing	Primary Squeeze	🗖 Cont. Squeeze	EchoMeter	DV Tool
Special Req	□ Break Testing	🗖 Water Disposal	COM	🗖 Unit
Variance	Flex Hose	Casing Clearance	🗖 Pilot Hole	🗆 Capitan Reef
Variance	□ Four-String	□ Offline Cementing	🗖 Fluid-Filled	Open Annulus
	Γ	Batch APD / Sundry		

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) 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. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

- 1. The **10-3/4** inch surface casing shall be set at approximately 350 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. *Set depth adjusted per BLM geologist.*
 - 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 $\underline{8}$ <u>hours</u> 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

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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.
- 2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.
 - In <u>Critical Cave/Karst Areas</u> cement must come to surface on the first three casing strings.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.
 - **Current cement volumes are inadequate to reach surface.** Please adjust volumes to reach surface as well is within critical karst area and that is a requirement.

C. PRESSURE CONTROL

- 1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2. Operator has proposed a multi-bowl wellhead assembly. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000** (**5M**) psi.
 - 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. 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.
 - e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. 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.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- 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.
- In addition, the well sign shall include the surface and bottom hole lease numbers. <u>When the Communitization Agreement number is known, it shall also be on the sign.</u>

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Eddy County

Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, BLM_NM_CFO_DrillingNotifications@BLM.GOV (575) 361-2822

Lea County Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

- 1. 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. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure

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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 Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - 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.
 - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
- 2. 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 be operational at all times 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 dog house or stairway area.
- 3. 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.

A. CASING

- 1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). 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.). The initial wellhead installed on the well will remain on the well with spools used as needed.
- <u>Wait on cement (WOC) for Potash Areas:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least <u>24 hours</u>. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. <u>Wait on cement (WOC) for Water Basin:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least <u>8 hours</u>. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

- 4. 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.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. 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. 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.
- 7. 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.
- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

- All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3.
- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. 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.
- 3. 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.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

- a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. Whenever any seal subject to test pressure is broken, all the tests in 43
 CFR part 3170 Subpart 3172 must be followed.
- e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. 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 cement), 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).
 - b. 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 cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
 - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to 43 CFR part 3170 Subpart 3172 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - d. 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.

- e. The results of the test shall be reported to the appropriate BLM office.
- f. 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.
- g. 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.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per 43 CFR part 3170 Subpart 3172.

C. DRILLING MUD

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.

D. WASTE MATERIAL AND FLUIDS

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.

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



Hydrogen Sulfide Drilling

Operations Plan

Tap Rock Resources

1 H2S safety instructions to the following:

- Characteristics of H2S
- Physical effects and hazards
- Principal and operation of H2S detectors, warning system and briefing areas
- Evacuation procedures, routes and first aid
- Proper use of safety equipment & life support systems
- Essential personnel meeting medical evaluation criteria will receive additional training on the proper use of 30min pressure demand air packs

2 H2S Detection and Alarm Systems:

- H2S sensor/detectors to be located on the drilling rig floor, in the base of the sub structure / cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary
- An audio alarm system will be installed on the derrick floor and in the doghouse

3 Windsocks and / Wind Streamers:

- Windsocks at mud pit area should be high enough to be visible
- Windsock on the rig floor and / top of doghouse should be high enough to be visible

4 Condition Flags and Signs:

- Warning sign on access road to location
- Flags to be displayed on sign at entrance to location
 - o Green Flag Normal Safe Operation Condition
 - Yellow Flag Potential Pressure and Danger
 - Red Flag Danger (H2S present in dangerous concentrations) Only H2S trained personnel admitted on location

5 <u>Well Control Equipment:</u>

• See Drilling Operations Plan Schematics

6 Communication:

- While working under masks chalkboards will be used for communications
- Hand signals will be used where chalk board is inappropriate
- Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.



7 Drilling Stem Testing:

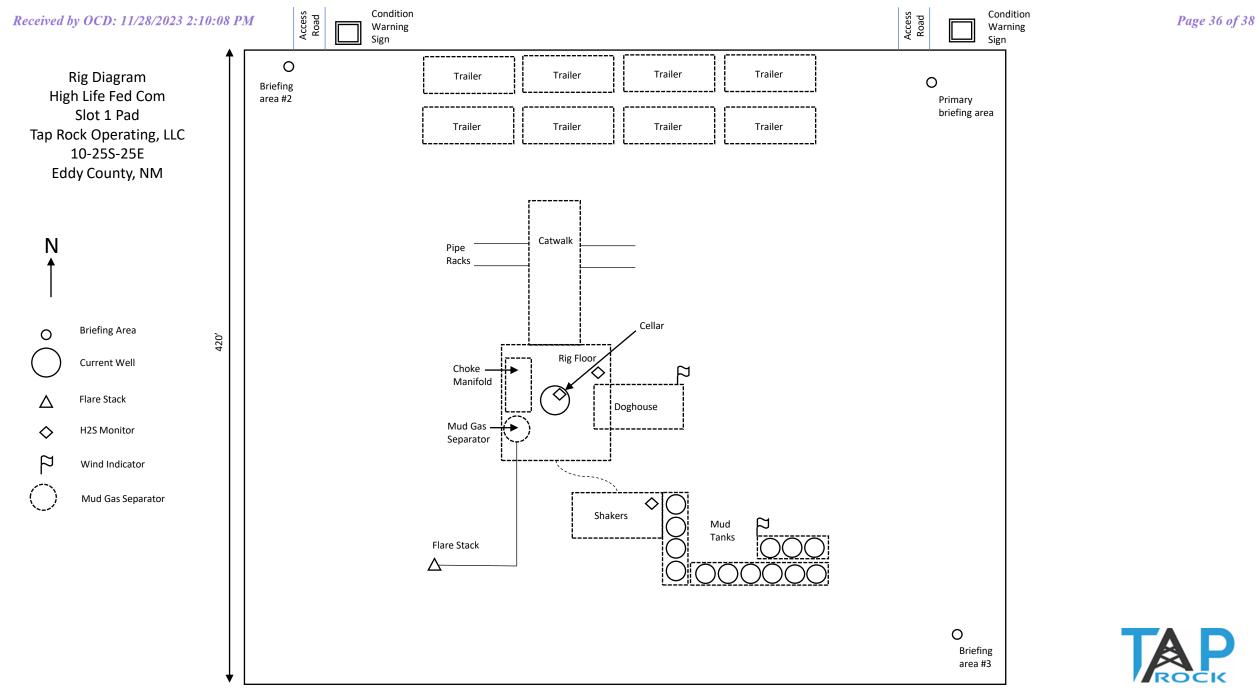
• No DST cores are planned at this time

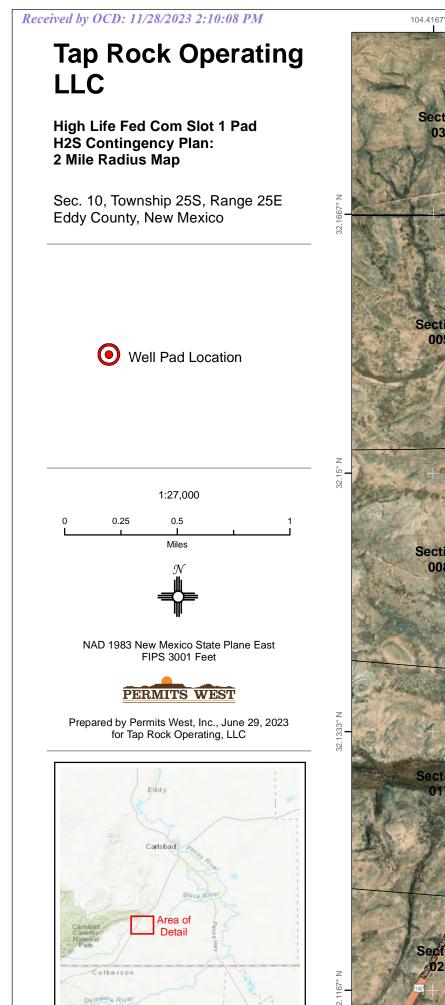
8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubulars good and other mechanical equipment

9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary

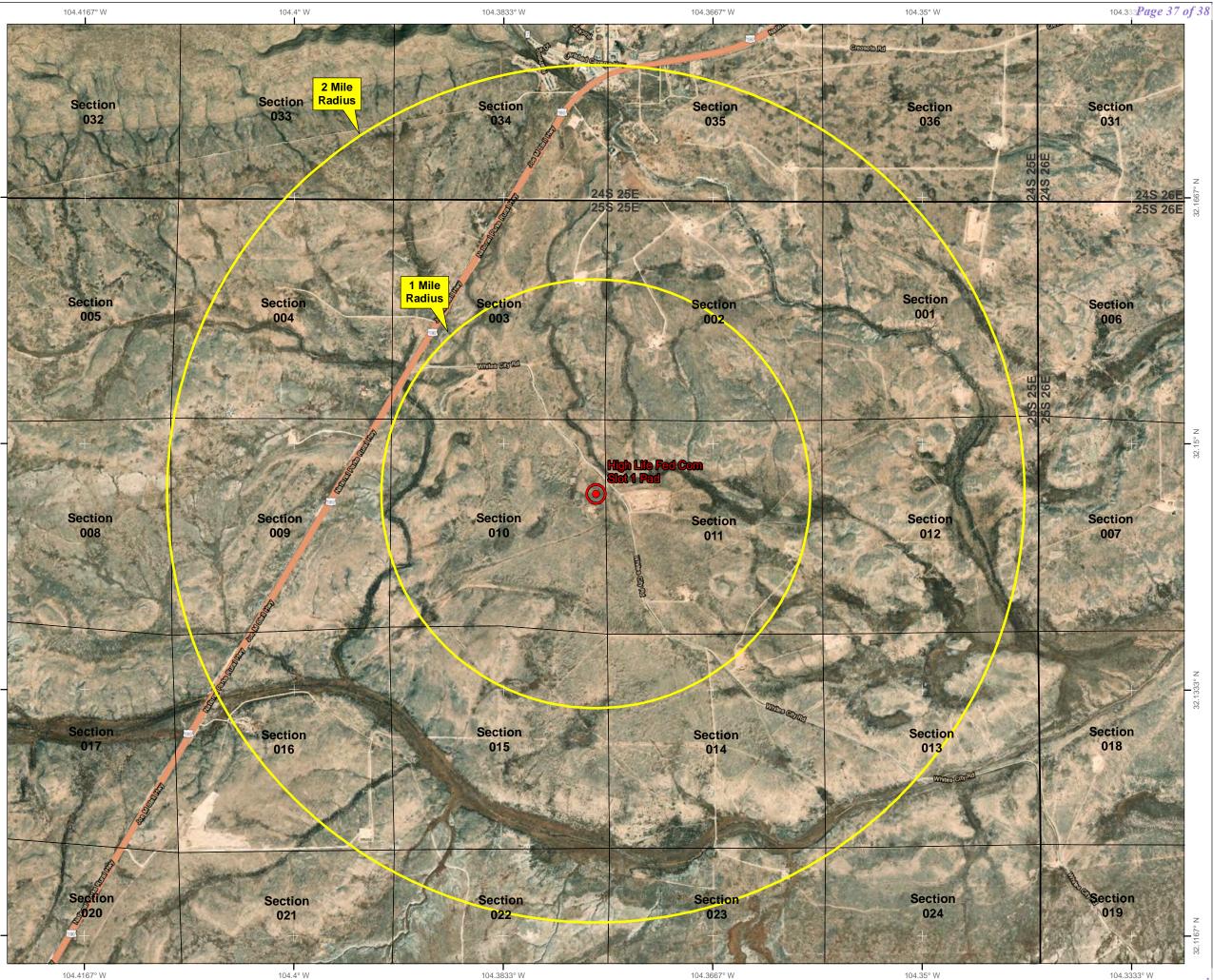
11 Emergency Contacts

Emergency Contacts						
Carlsbad Police Department	575.887.7551	911				
Carlsbad Medical Center	575.887.4100	911				
Eddy County Fire Service	575.628.5450	911				
Eddy County Sherriff	575.887.7551	911				
Lea County Fire Service	575.391.2983	911				
Lea County Sherriff	575.396.3611	911				
Jal Police Department	575.395.2121	911				
Jal Fire Department	575.395.2221	911				
Tap Rock Resources	720.772.5090					





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

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

District III

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

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

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

CONDITIONS

Operator:	OGRID:
TAP ROCK OPERATING, LLC	372043
523 Park Point Drive	Action Number:
Golden, CO 80401	289092
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	12/21/2023
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	12/21/2023
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	12/21/2023
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	12/21/2023
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	12/21/2023
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	12/21/2023

CONDITIONS

Action 289092

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