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Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM086024

6. If Indian, Allotee or Tribe Name

1a. Type of work: [✓] DRILL [ ] REENTER
1b. Type of Well: [ ] Oil Well [✓] Gas Well [ ] Other
1c. Type of Completion: [ ] Hydraulic Fracturing [✓] Single Zone [ ] Multiple Zone

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

8. Lease Name and Well No.
CYPRESS 34 FEDERAL
212H 319943

2. Name of Operator
TAP ROCK OPERATING LLC

9. API Well No.
30-015-46824

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
602 Park Point Drive Suite 200, Golden, CO 80401	(720) 460-3316	PURPLE SAGE/WOLFCAMP

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface NWNE / 646 FNL / 2579 FEL / LAT 32.2668149 / LONG -103.9723453
At proposed prod. zone SESW / 30 FSL / 1650 FWL / LAT 32.2541034 / LONG -103.9756375

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 34/T23S/R29E/NMP

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
6.5 miles	EDDY	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
646 feet	1440	320.0

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
25 feet	10445 feet / 15474 feet	FED: NMB001443

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3047 feet	02/01/2020	90 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Brian Wood / Ph: (720) 460-3316	11/05/2019

Title
President

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575) 234-5959	02/27/2020

Title	Office
Assistant Field Manager Lands & Minerals	Carlsbad Field Office

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

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

APPROVED WITH CONDITIONS

NSL Required.

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 02/27/2020 RMP 3-12-20

INSTRUCTIONS

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

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

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

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

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

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

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

NOTICES

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

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

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

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

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

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

(Continued on page 3)

Additional Operator Remarks

Location of Well

0. SHL: NWNE / 646 FNL / 2579 FEL / TWSP: 23S / RANGE: 29E / SECTION: 34 / LAT: 32.2668149 / LONG: -103.9723453 (TVD: 0 feet, MD: 0 feet)

PPP: NENW / 139 FNL / 1622 FWL / TWSP: 23S / RANGE: 29E / SECTION: 34 / LAT: 32.268203 / LONG: -103.9758496 (TVD: 10073 feet, MD: 10181 feet)

BHL: SESW / 30 FSL / 1650 FWL / TWSP: 23S / RANGE: 29E / SECTION: 34 / LAT: 32.2541034 / LONG: -103.9756375 (TVD: 10445 feet, MD: 15474 feet)

BLM Point of Contact

Name: Candy Vigil

Title: LIE

Phone: (575) 234-5982

Email: cvigil@blm.gov

Review and Appeal Rights

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

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Tap Rock Operating LLC
LEASE NO.:	NMNM086024
COUNTY:	Eddy

Wells:

Cypress 34 Federal 207H
Surface Hole Location: 521' FNL & 2579' FEL, Section 34, T. 23 S., R. 29 E.
Bottom Hole Location: 30' FSL & 2310' FWL, Section 34, T. 23 S., R. 29 E.

Cypress 34 Federal 212H
Surface Hole Location: 646' FNL & 2579' FEL, Section 34, T. 23 S., R. 29 E.
Bottom Hole Location: 30' FSL & 1650' FWL, Section 34, T. 23 S., R. 29 E.

Cypress 34 Federal 232H
Surface Hole Location: 546' FNL & 2578' FEL, Section 34, T. 23 S., R. 29 E.
Bottom Hole Location: 200' FSL & 2430' FWL, Section 34, T. 23 S., R. 29 E.

Cypress 34 Federal 242H
Surface Hole Location: 571' FNL & 2578' FEL, Section 34, T. 23 S., R. 29 E.
Bottom Hole Location: 200' FSL & 2010' FWL, Section 34, T. 23 S., R. 29 E.

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Application Data Report
02/27/2020

APD ID: 10400050038 **Submission Date:** 11/05/2019

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400050038 **Tie to previous NOS?** N **Submission Date:** 11/05/2019

BLM Office: CARLSBAD **User:** Brian Wood **Title:** President

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM086024 **Lease Acres:** 1440

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? N

Permitting Agent? YES **APD Operator:** TAP ROCK OPERATING LLC

Operator letter of designation:

Operator Info

Operator Organization Name: TAP ROCK OPERATING LLC

Operator Address: 602 Park Point Drive Suite 200 **Zip:** 80401

Operator PO Box:

Operator City: Golden **State:** CO

Operator Phone: (720)460-3316

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO **Master Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** PURPLE SAGE **Pool Name:** WOLFCAMP

Is the proposed well in an area containing other mineral resources? USEABLE WATER,POTASH

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Is the proposed well in an area containing other mineral resources? USEABLE WATER,POTASH

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** CYPRESS 34 FEDERAL **Number:** Slot 2

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: CONVENTIONAL GAS WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 6.5 Miles **Distance to nearest well:** 25 FT **Distance to lease line:** 646 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: Cypress_212H_C102_GCP_20191024123853.pdf

Well work start Date: 02/01/2020 **Duration:** 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 11401 **Reference Datum:** KELLY BUSHING

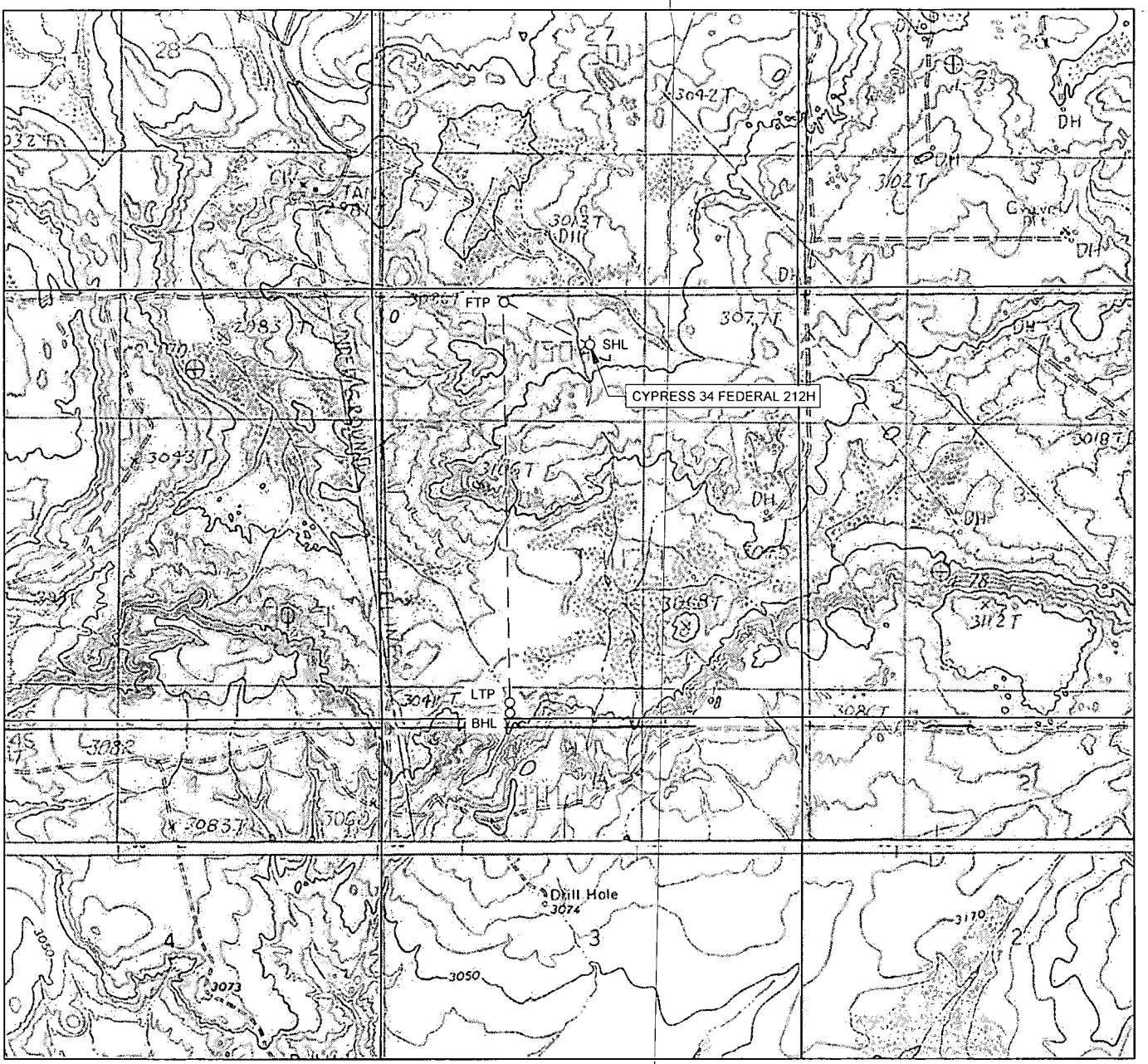
Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	646	FNL	2579	FEL	23S	29E	34	Aliquot NWNE	32.2668149	-103.9723453	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 086024	3047	0	0	Y
KOP Leg #1	100	FNL	1622	FWL	23S	29E	34	Aliquot NENW	32.2683016	-103.9758529	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 086024	-6825	9975	9872	Y
PPP Leg #1-1	139	FNL	1622	FWL	23S	29E	34	Aliquot NENW	32.2682023	-103.9758496	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 086024	-7026	10181	10073	Y

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
EXIT Leg #1	30	FSL	1650	FWL	23S	29E	34	Aliquot SESW	32.2541034	-103.9756375	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 086024	-7398	15474	10445	Y
BHL Leg #1	30	FSL	1650	FWL	23S	29E	34	Aliquot SESW	32.2541034	-103.9756375	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 086024	-7398	15474	10445	Y

LOCATION & ELEVATION VERIFICATION MAP



TAP ROCK

LEASE NAME & WELL NO.: CYPRESS 34 FEDERAL 212H

SECTION 34 TWP 23-S RGE 29-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM ELEVATION 3047'
DESCRIPTION 646' FNL & 2579' FEL

LATITUDE N 32.2668149 LONGITUDE W 103.9723453

-N-

SCALE: 1" = 2000'
0' 1000' 2000'

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

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TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
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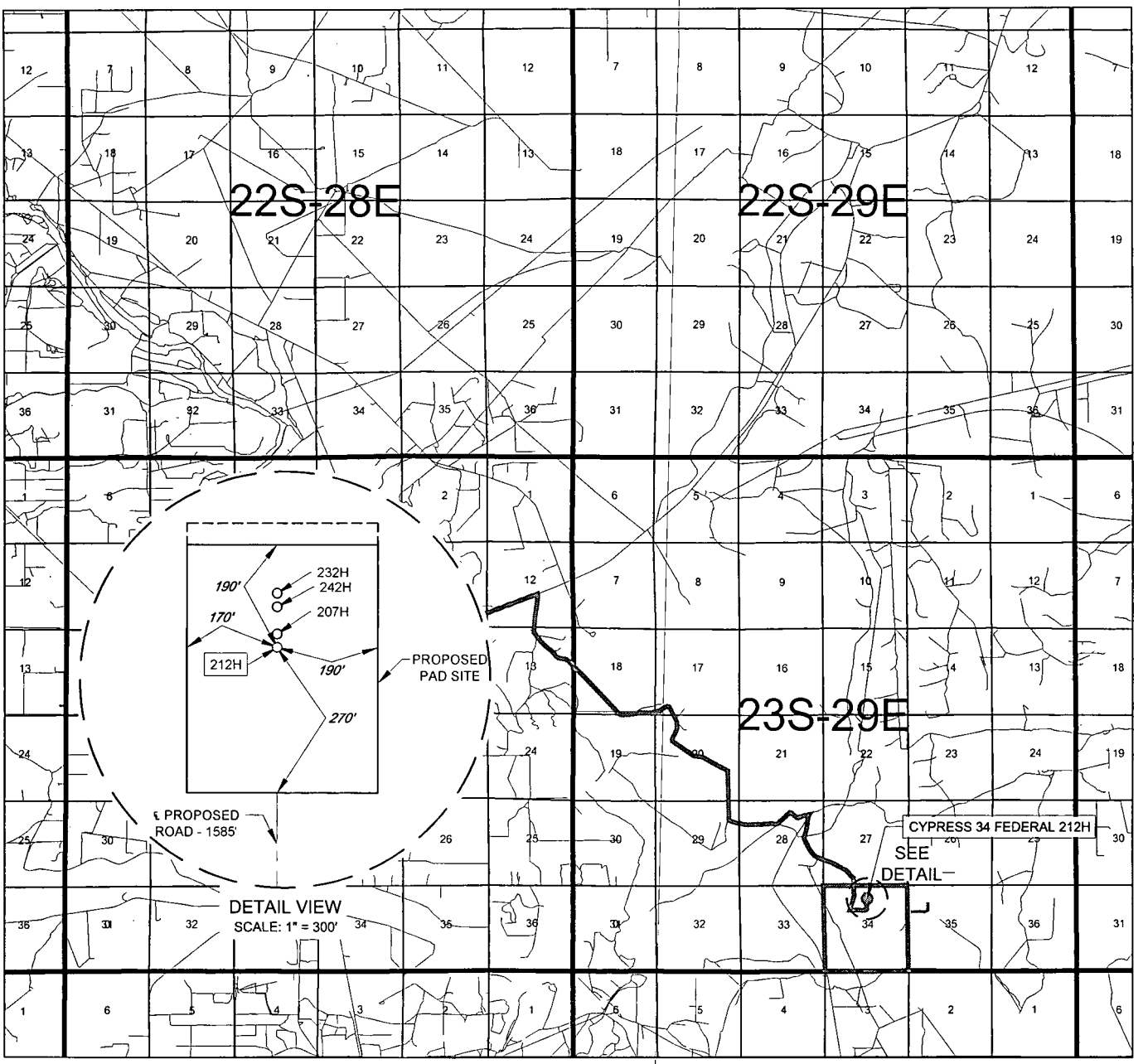
EXHIBIT 2

VICINITY MAP



TAP ROCK

LEASE NAME & WELL NO.: CYPRESS 34 FEDERAL 212H

SECTION 34 TWP 23-S RGE 29-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 646' FNL & 2579' FEL

DISTANCE & DIRECTION

FROM INT. OF NM-31, & STATE HWY 387, GO EAST ON NM-31 ±1.7 MILES, THENCE SOUTH (RIGHT) ON FISHERMANS LN. ±0.5 MILES, THENCE CONTINUE STRAIGHT ON A LEASE RD. ±4.8 MILES, THENCE SOUTH (RIGHT) ON A LEASE RD. ± 0.6 MILES, THENCE EAST (LEFT) ON A LEASE RD. ±0.3 MILES, THENCE SOUTH (RIGHT) ON A LEASE RD. ±0.6 MILES, THENCE EAST (LEFT) ON A PROPOSED RD. ±1585 FEET TO A POINT ±270 FEET SOUTH OF THE LOCATION.

-N-

SCALE: 1" = 10000'

0' 5000' 10000'

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

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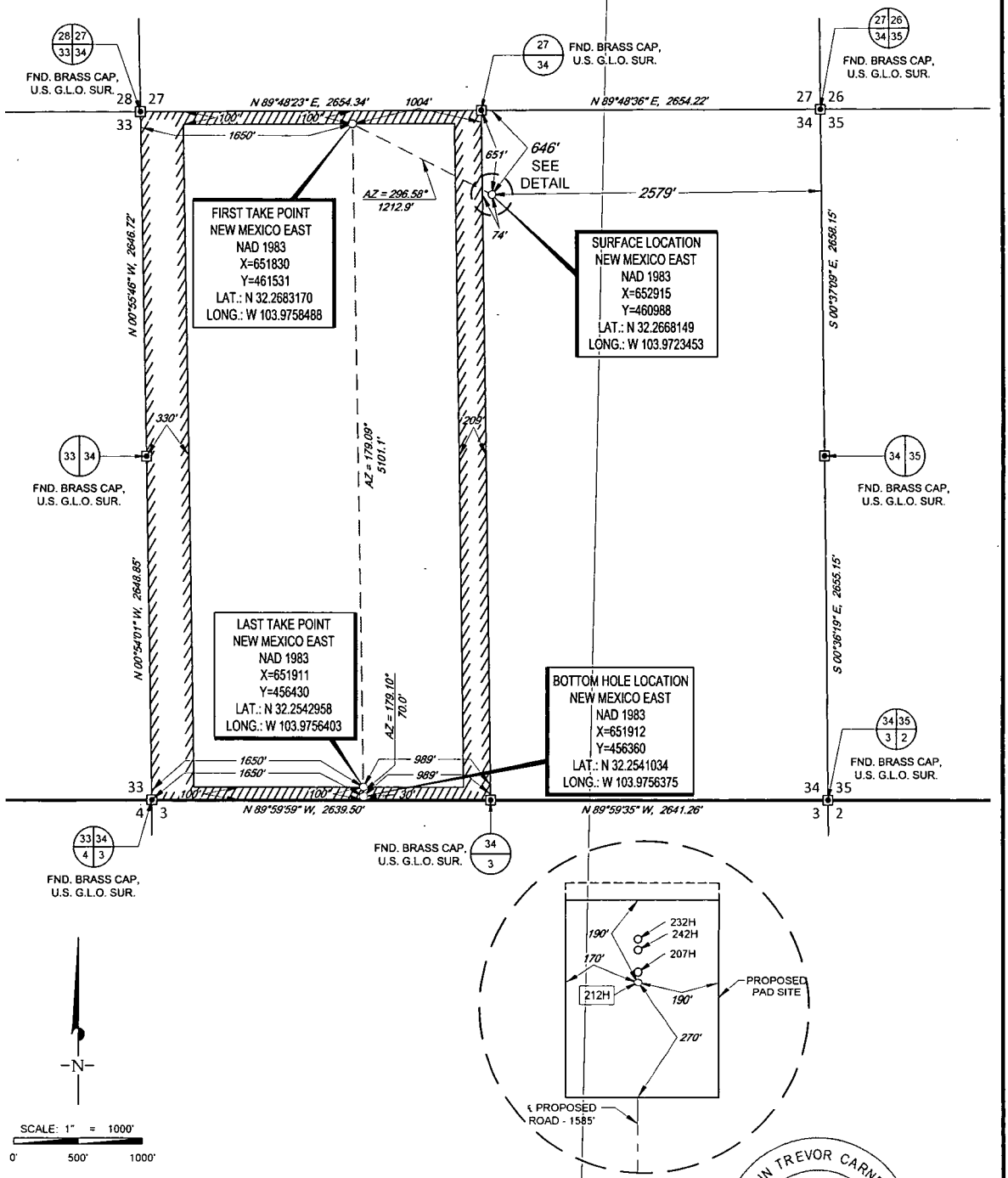
TAP ROCK

EXHIBIT 2A

SECTION 34, TOWNSHIP 23-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



DETAIL VIEW
SCALE: 1" = 300'

LEASE NAME & WELL NO.: CYPRESS 34 FEDERAL 212H

SECTION 34 TWP 23-S RGE 29-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 646' FNL & 2579' FEL

DISTANCE & DIRECTION

FROM INT. OF NM-31, & STATE HWY 387, GO EAST ON NM-31 ±1.7 MILES, THENCE SOUTH (RIGHT) ON FISHERMANS LN. ±0.5 MILES, THENCE CONTINUE STRAIGHT ON A LEASE RD. ±4.8 MILES, THENCE SOUTH (RIGHT) ON A LEASE RD. ± 0.6 MILES, THENCE EAST (LEFT) ON A LEASE RD. ±0.3 MILES, THENCE SOUTH (RIGHT) ON A LEASE RD. ±0.6 MILES, THENCE EAST (LEFT) ON A PROPOSED RD. ±1585 FEET TO A POINT ±270 FEET SOUTH OF THE LOCATION.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

JOHN TREVOR CARNEGIE
NEW MEXICO
11401
REGISTERED PROFESSIONAL SURVEYOR

John Trevor Carnegie, P.S. No. 11401
AUGUST 15, 2019

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 · FT. WORTH, TEXAS 76140
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2903 NORTH BIG SPRING · MIDLAND, TEXAS 79705
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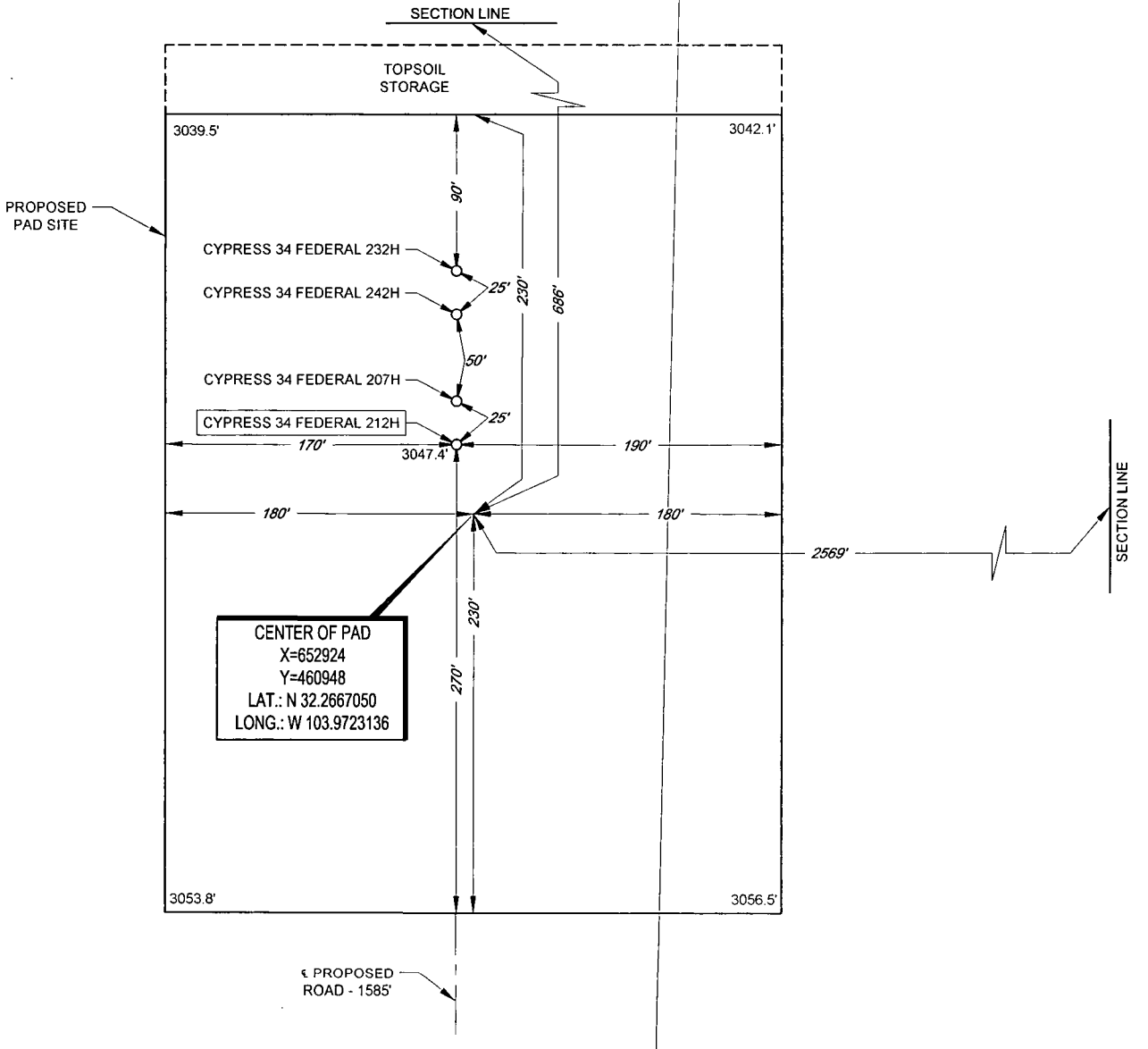
EXHIBIT 2B

TAP ROCK

SECTION 34, TOWNSHIP 23-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'

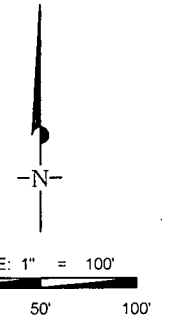


LEASE NAME & WELL NO.: CYPRESS 34 FEDERAL 212H

212H LATITUDE N 32.2668149 212H LONGITUDE W 103.9723453

CENTER OF PAD IS 686' FNL & 2569' FEL

John Trevor Carnegie, P.S. No. 11401



ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET. ELEVATIONS USED ARE NAVD88, OBTAINED THROUGH AN OPUS SOLUTION.

THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

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AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report

02/27/2020

APD ID: 10400050038 **Submission Date:** 11/05/2019

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
571182	QUATERNARY	3047	0	0	OTHER : None	NONE, OTHER, USEABLE WATER	N
571189	RUSTLER	2774	273	273	ANHYDRITE	OTHER : SALT	N
571184	SALADO	2414	633	633	SALT	OTHER : SALT	N
571190	BASE OF SALT	179	2868	2879	SALT	OTHER : SALT	N
571191	LAMAR	-36	3083	3097	LIMESTONE	NATURAL GAS, OIL	N
571188	BELL CANYON	-76	3123	3138	SANDSTONE	NATURAL GAS, OIL	N
571192	CHERRY CANYON	-961	4008	4037	SANDSTONE	NATURAL GAS, OIL	N
571185	BRUSHY CANYON	-2116	5163	5210	SANDSTONE	NATURAL GAS, OIL	N
571186	BONE SPRING	-2796	5843	5900	LIMESTONE	NATURAL GAS, OIL	N
571193	BONE SPRING 1ST	-4776	7823	7910	SANDSTONE	NATURAL GAS, OIL	N
571183	BONE SPRING 2ND	-5061	8108	8200	SANDSTONE	NATURAL GAS, OIL	N
571187	BONE SPRING 3RD	-5916	8963	9066	SANDSTONE	NATURAL GAS, OIL	N
571194	WOLFCAMP	-7026	10073	10181	OTHER : Shale	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Pressure Rating (PSI): 5M **Rating Depth:** 15000

Equipment: A 15,000, 5,000 psi 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.

Requesting Variance? YES

Variance request: Tap Rock requests a variance to run a multi-bowl speed head for setting the Intermediate 1, Intermediate 2, 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. In the event that this well is batch drilled, after drilling surface, 1st intermediate, and 2nd intermediate hole sections and cementing 2nd intermediate casing, a 10M dry hole cap with bleed off valve will be installed. The rig will then walk to another well on the pad. When the rig returns to this well and BOPs are installed, the operator will perform a full BOP test. Due to the Potash, Tap Rock will cement the 7-5/8" string to surface. Tap Rock requests approval to possibly utilize a spudder rig to drill and set casing for the surface interval on this well. The spudder rig will be possibly utilized in order to reduce cost and save time. The wellhead will be installed and tested as soon as the surface casing is cut off per the existing COAs. A blind flange with the same pressure rating as the wellhead will be installed on the well. Once the spudder rig is removed, Tap Rock will secure the wellhead area by placing a guard rail around the cellar. Pressure will be monitored and a means for intervention will be maintained while the drilling rig is not over the well. Spudder rig operations are expected to take 2-3 days per well. Three wells on the pad will have surface casing set by the spudder rig as a part of this operation. The BLM will be notified 24 hours prior to commencing spudder rig operations. Within 90 days of the departure of the spudder rig, drilling operations will recommence on these wells. This rig will have a BOP stack equal or greater to the pressure rating required in the COAs. The BLM will be notified 24 hours before the larger rig moves on the pre-set wells. Tap Rock will have supervision on the spudder rig to ensure compliance with all BLM and NMOCD regulations.

Testing Procedure: 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 2,500 psi. The BOP will be tested in this manner after nipple-up if any break of the stack occurs.

Choke Diagram Attachment:

Cypress_Choke_032918_20191024125120.pdf

BOP Diagram Attachment:

Cypress_BOP_Diagram_101619_20191024125128.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	350	0	350	3047	2697	350	J-55	54.5	BUTT	1.13	1.15	DRY	1.6	DRY	1.6

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	3150	0	3137		-90	3150	J-55	40	BUTT	1.13	1.15	DRY	1.6	DRY	1.6
3	PRODUCTION	6.75	5.5	NEW	API	N	0	9675	0	9572		-6525	9675	P-110	20	OTHER - TXP	1.13	1.15	DRY	1.6	DRY	1.6
4	INTERMEDIATE	8.75	7.625	NEW	API	Y	0	9875	0	9772		-6725	9875	P-110	29.7	OTHER - W-513	1.13	1.15	DRY	1.6	DRY	1.6
5	PRODUCTION	6.75	5.0	NEW	API	Y	9675	15475	9572	10445	-6525	-7398	5800	P-110	18	OTHER - W-521	1.13	1.15	DRY	1.6	DRY	1.6

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Cypress_Casing_Design_Assumptions_20191024125219.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Cypress_Casing_Design_Assumptions_20191024125340.pdf

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Casing Attachments

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Cypress_5.5in_TXP_Casing_Spec_20191024125458.PDF

Cypress_Casing_Design_Assumptions_20191024125506.pdf

Casing ID: 4 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Cypress_7.625in_W513_Casing_Spec_20191024125420.pdf

Casing Design Assumptions and Worksheet(s):

Cypress_Casing_Design_Assumptions_20191024125429.pdf

Casing ID: 5 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Cypress_5in_W521_Casing_Spec_20191024125533.pdf

Casing Design Assumptions and Worksheet(s):

Cypress_Casing_Design_Assumptions_20191024125539.pdf

Section 4 - Cement

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	0	0	0	0	0	0	None	None
SURFACE	Lead		0	350	360	1.35	14.8	486	100	C	5% NCl +LCM
INTERMEDIATE	Lead		0	2363	560	2.18	12.7	1221	65	Class C	Bentonite + 1% CaCL2 + 8% NaCl + LCM
INTERMEDIATE	Tail		2363	3150	306	1.33	14.8	407	65	Class C	5% NaCl + LCM
INTERMEDIATE	Lead		0	8875	419	2.87	11.5	1204	35	TXI	Fluid Loss + Dispersant + Retarder + LCM
INTERMEDIATE	Tail		8875	9875	107	1.27	15	136	35	Class H	Fluid Loss + Dispersant + Retarder + LCM
PRODUCTION	Lead		9175	15475	516	1.71	14.2	883	25	Class H	Fluid Loss + Dispersant + Retarder + LCM

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Electronic Pason mud monitor system complying with Onshore Order 1 will be used.

Describe the mud monitoring system utilized: All necessary mud products (e. g., barite, cedar bark) 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.

Circulating Medium Table

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
3150	9875	OTHER : FW and Cut Brine	9	9							
0	350	OTHER : FW Spud Mud	8.3	8.3							
350	3150	OTHER : Brine Water	10	10							
9875	15475	OIL-BASED MUD	11.5	11.5							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Electric Logging Program: No open-hole logs are planned at this time for the pilot hole. GR will be collected while drilling through the MWD tools from 9.625 casing shoe to TD. A 2-person mud logging program will be used from 9.625 casing shoe to TD. CBL w/ CCL from as far as gravity will let it fall to TOC

List of open and cased hole logs run in the well:

CEMENT BOND LOG,GAMMA RAY LOG,

Coring operation description for the well:

No DSTs or cores are planned at this time.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6245 **Anticipated Surface Pressure:** 3947

Anticipated Bottom Hole Temperature(F): 170

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Cypress_H2S_Plan_20191024130142.pdf

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

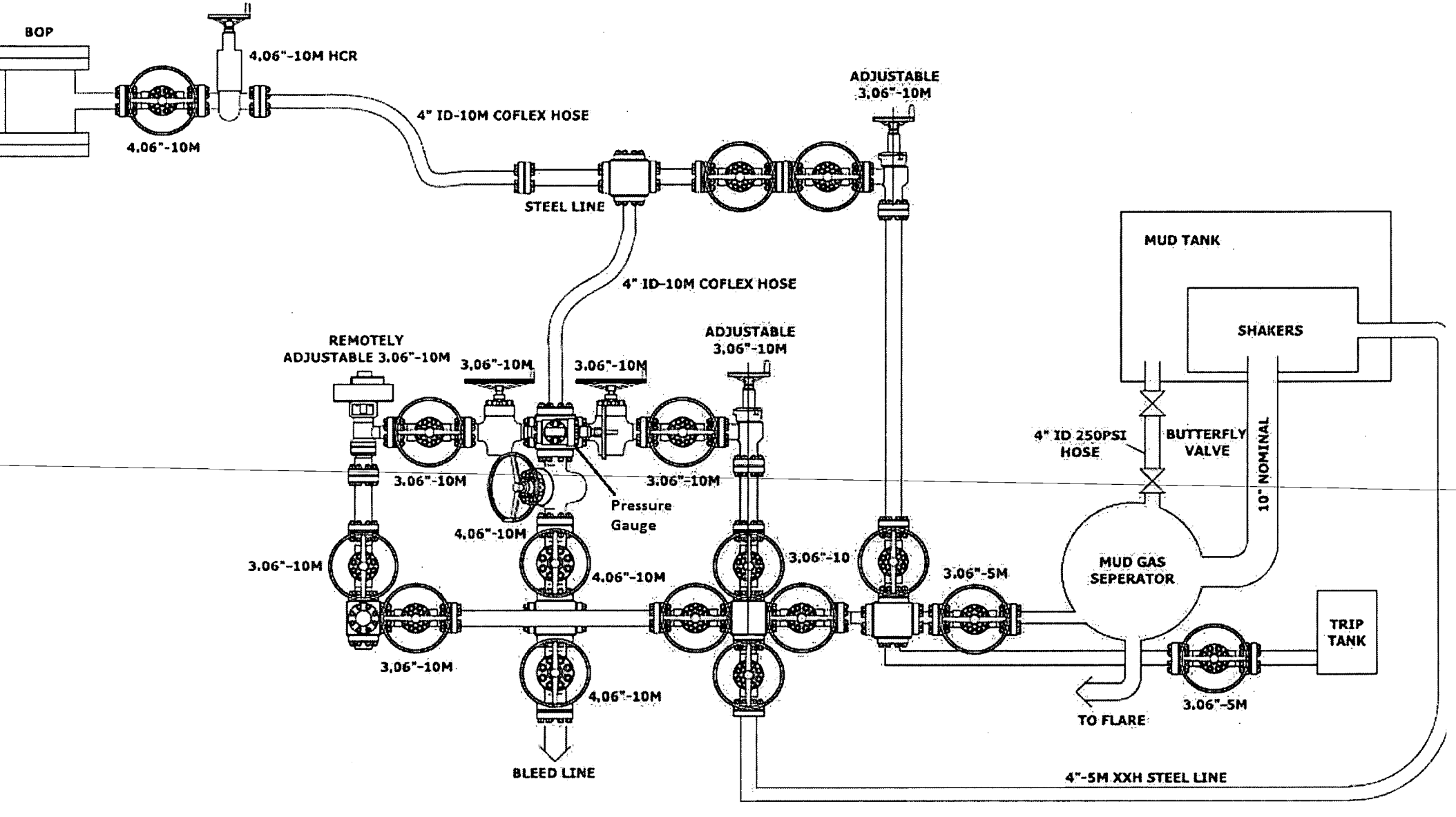
Cypress_212H_Horizontal_Plan_20191024130156.pdf

Other proposed operations facets description:

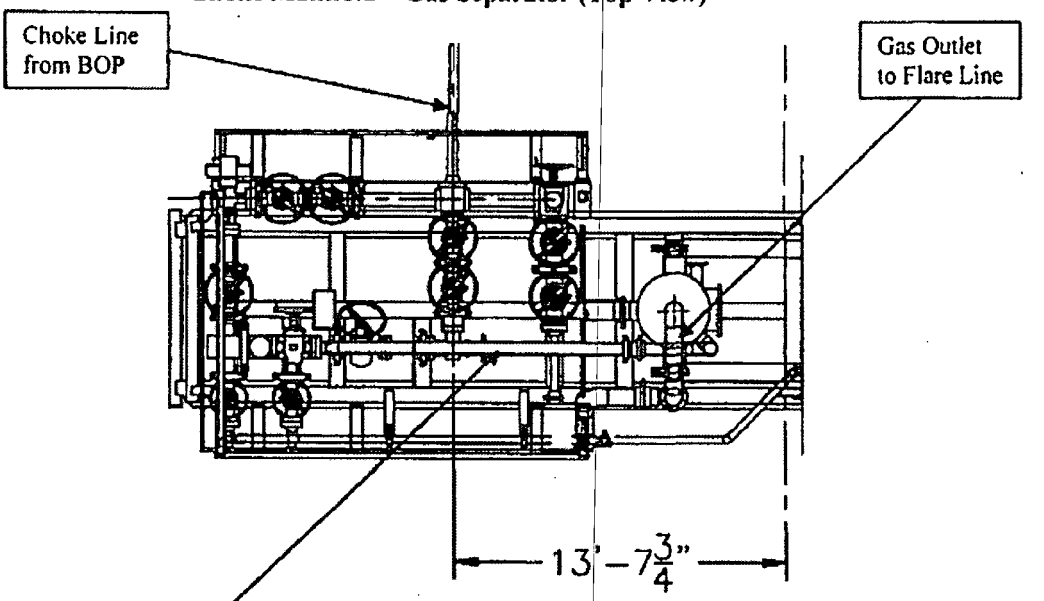
Other proposed operations facets attachment:

Cypress_212H_Drill_Plan_101619_20191024130218.pdf
CoFlex_Certs_20191024130245.pdf
Cypress_Speedhead_Specs_033018_20191024130258.pdf
Cypress_212H_Anticollision_Report_20191024130306.pdf

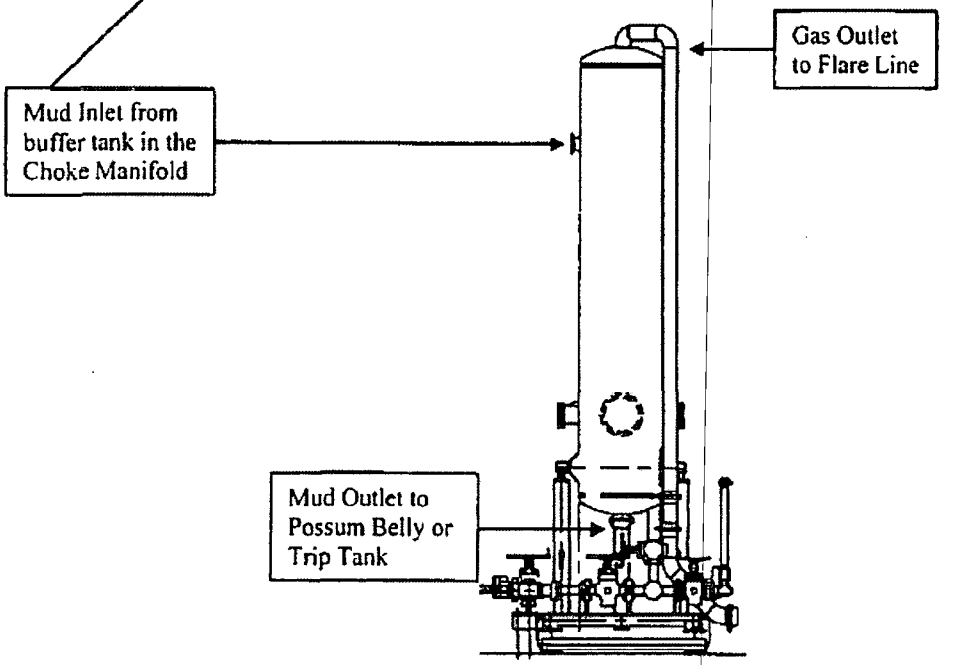
Other Variance attachment:


BOP
4.06"-10M HCR
4.06"-10M
4" ID-10M COFLEX HOSE
ADJUSTABLE
3.06"-10M
STEEL LINE
4" ID-10M COFLEX HOSE
MUD TANK
SHAKERS
REMOTELY
ADJUSTABLE 3.06"-10M
3.06"-10M
3.06"-10M
ADJUSTABLE
3.06"-10M
4" ID 250PSI
HOSE
BUTTERFLY
VALVE
10" NOMINAL
3.06"-10M
3.06"-10M
Pressure
Gauge
4.06"-10M
3.06"-10M
4.06"-10M
3.06"-10
3.06"-5M
MUD GAS
SEPERATOR
TRIP
TANK
3.06"-10M
4.06"-10M
3.06"-5M
TO FLARE
BLEED LINE
4"-5M XXH STEEL LINE

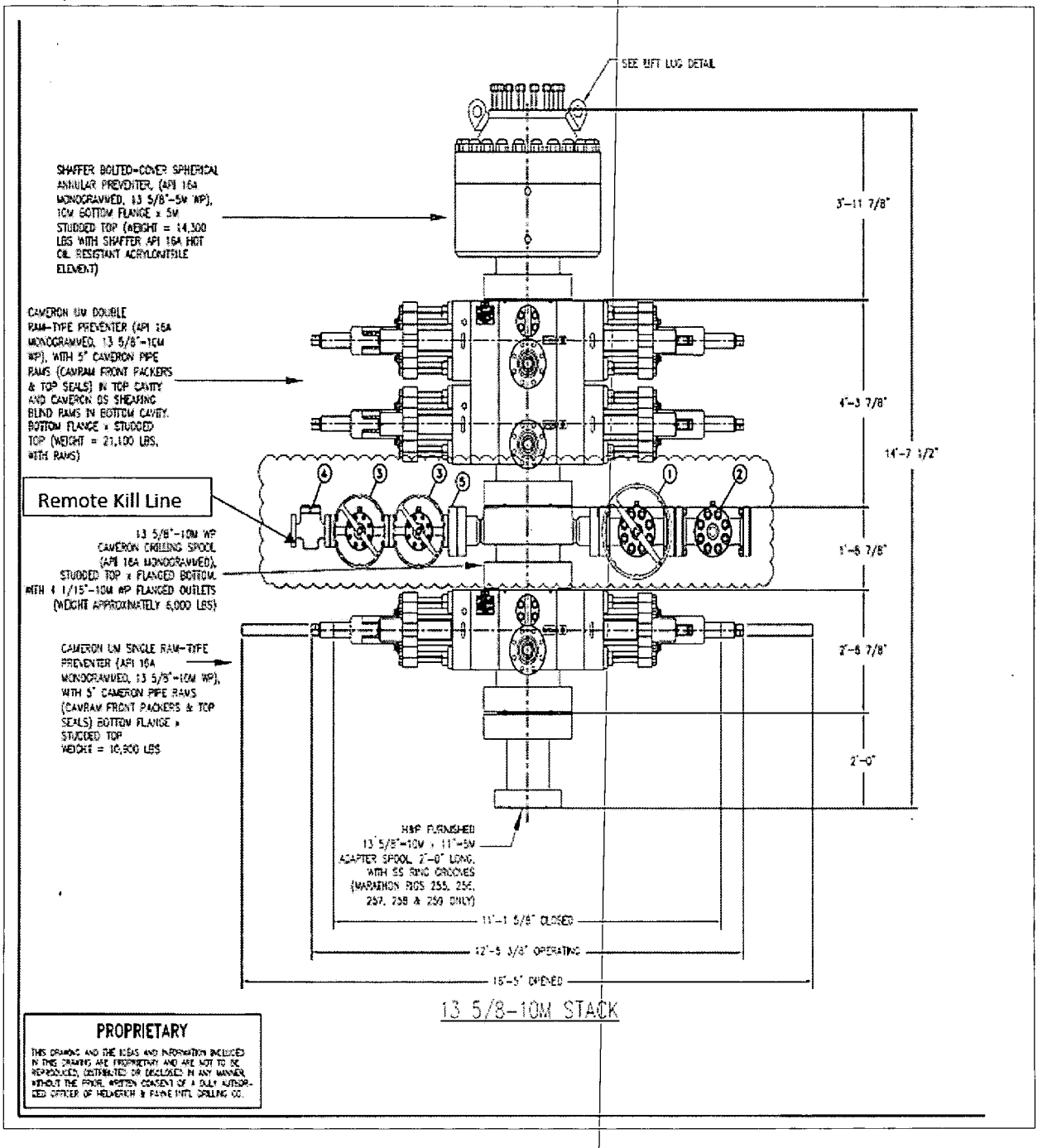
Choke Manifold – Gas Separator (Top View)



Choke Manifold – Gas Separator (Side View)

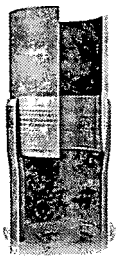


5,000 psi BOP Stack



Wedge 521®

Printed on: 05/22/2018



Outside Diameter	**5.000** in.	**Min. Wall Thickness**	**87.5%**	**(*) Grade P110-IC**	
Wall Thickness	**0.362** in.	**Connection OD Option**	**REGULAR**	COUPLING	PIPE BODY
Grade	**P110-IC***	**Drift**	**API Standard**	Body: **White** 1st Band: - 2nd Band: -	1st Band: **White** 2nd Band: **Pale Green** 3rd Band: -
		Type	**Casing**	3rd Band: -	4th Band: -

GEOMETRY					
Nominal OD	**5.000** in.	Nominal Weight	**18.00** lbs/ft	Drift	**4.151** in.
Nominal ID	**4.276** in.	Wall Thickness	**0.362** in.	Plain End Weight	**17.95** lbs/ft
OD Tolerance	**API**				
PERFORMANCE					
Body Yield Strength	**580** x1000 lbs	Internal Yield	**13940** psi	SMYS	**110000** psi
Collapse	**14840** psi				
GEOMETRY					
Connection OD	**5.359** in.	Connection ID	**4.226** in.	Make-up Loss	**3.620** in.
Threads per in	**3.36**	Connection OD Option	**REGULAR**		
PERFORMANCE					
Tension Efficiency	**73.8** %	Joint Yield Strength	**428.040** x1000 lbs	Internal Pressure Capacity	**13940.000** psi
Compression Efficiency	**88.7** %	Compression Strength	**514.460** x1000 lbs	Max. Allowable Bending	**74.5** °/100 ft
External Pressure Capacity	**14840.000** psi				
MAKE-UP TORQUES					
Minimum	**6100** ft-lbs	Optimum	**7300** ft-lbs	Maximum	**10700** ft-lbs
OPERATION LIMIT TORQUES					
Operating Torque	**17300** ft-lbs	Yield Torque	**26000** ft-lbs		

Notes

This connection is fully interchangeable with:

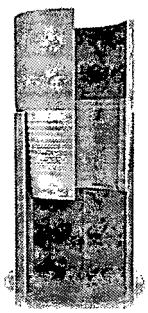
Wedge 521® - 5 in. - 13 / 15 lbs/ft

Connections with Dopeless® Technology are fully compatible with the same connection in its Standard version

For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

Wedge 513®

Printed on: 01/30/2018



Outside Diameter	**7.625** in.	**Min. Wall Thickness**	**87.5%**	**(*) Grade P110**	
Wall Thickness	**0.375** in.	**Connection OD Option**	**REGULAR**	**COUPLING**	**PIPE BODY**
Grade	**P110***	**Drift**	**API Standard**	Body: **White** 1st Band: - 2nd Band: -	1st Band: **White** 2nd Band: - 3rd Band: -
		Type	**Casing**	3rd Band: -	4th Band: -

GEOMETRY					
Nominal OD	**7.625** in.	Nominal Weight	**29.70** lbs/ft	Drift	**6.75** in.
Nominal ID	**6.875** in.	Wall Thickness	**0.375** in.	Plain End Weight	**29.06** lbs/ft
OD Tolerance	**API**				
PERFORMANCE					
Body Yield Strength	**940** x1000 lbs	Internal Yield	**9470** psi	SMYS	**110000** psi
Collapse	**5350** psi				
GEOMETRY					
Connection OD	**7.625** in.	Connection ID	**6.800** in.	Make-up Loss	**4.420** in.
Threads per in	**3.29**	Connection OD Option	**REGULAR**		
PERFORMANCE					
Tension Efficiency	**60.0** %	Joint Yield Strength	**564.000** x1000 lbs	Internal Pressure Capacity	**9470.000** psi
Compression Efficiency	**75.2** %	Compression Strength	**706.880** x1000 lbs	Max. Allowable Bending	**39.6** °/100 ft
External Pressure Capacity	**5350.000** psi				
MAKE-UP TORQUES					
Minimum	**9000** ft-lbs	Optimum	**10800** ft-lbs	Maximum	**15800** ft-lbs
OPERATION LIMIT TORQUES					
Operating Torque	**47000** ft-lbs	Yield Torque	**70000** ft-lbs		

Notes

This connection is fully interchangeable with:

Wedge 523® - 7.625 in. - 29.7 lbs/ft

Connections with Dopeless® Technology are fully compatible with the same connection in its Standard version

For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

Casing Design Assumptions

- Gas gravity 0.7
- Pore pressure gradient .468 psi/ft above the Wolfcamp, .676 psi/ft Wolfcamp and below
- .676 psi/ft fracture gradient above the Wolfcamp, .832 psi/ft Wolfcamp and below.
- 60°F average surface temperature and 1.5°/100ft temperature gradient
- Cementing loads based on slurries listed in Cement table, and post cement static loading
- Strings landed at neutral weight
- Gas kicks assumed at each casing shoe
- External pressure calculated with fluid gradients and pore pressure
- Production string load tested with completion fluid density and rate
- Tubing leak tested in production scenario

5.5”, 20#, P-110, TXP connection (modified buttress connection that provides a torque rating of nearly 24000ft-lbs)

TXP® BTC

SHARE | EXPORT DATA | PRINT

Outside Diameter	5.500 in.	Min. Wall Thickness	87.5%
Wall Thickness	0.361 in.	Drift	API Standard
Grade	P110	Type	Casing
		Connection OD Option	REGULAR

Clear Filters | Compare | Request Info

CONNECTION INFORMATION

- Blanking Dimensions
- Connection's Page
- Brochure
- Datasheet Manual

PIPE BODY DATA

GEOMETRY

Nominal OD	5.500 in.	Nominal Weight	20 lbs/ft	Drift	4.653 in.
Nominal ID	4.778 in.	Wall Thickness	0.361 in.	Plain End Weight	19.83 lbs/ft
OD Tolerance	API				

PERFORMANCE

Body Yield Strength	641 x1000 lbs	Internal Yield	12640 psi	SMYS	110000 psi
Collapse	11100 psi				

CONNECTION DATA

GEOMETRY

Connection OD	6.100 in.	Coupling Length	9.450 in.	Connection ID	4.766 in.
Make-up Loss	4.204 in.	Threads per in	5	Connection OD Option	REGULAR

PERFORMANCE

Tension Efficiency	100.0 %	Joint Yield Strength	641.000 x1000 lbs	Internal Pressure Capacity [1]	12640.000 psi
Compression Efficiency	100 %	Compression Strength	641.000 x1000 lbs	Max. Allowable Bending	92 °/100 ft
External Pressure Capacity	11100.000 psi				

MAKE-UP TORQUES

Minimum	11270 ft-lbs	Optimum	12520 ft-lbs	Maximum	13770 ft-lbs

OPERATION LIMIT TORQUES

Operating Torque	21500 ft-lbs	Yield Torque	23900 ft-lbs		

Casing Design Assumptions

- Gas gravity 0.7
- Pore pressure gradient .468 psi/ft above the Wolfcamp, .676 psi/ft Wolfcamp and below
- .676 psi/ft fracture gradient above the Wolfcamp, .832 psi/ft Wolfcamp and below.
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- Strings landed at neutral weight
- Gas kicks assumed at each casing shoe
- External pressure calculated with fluid gradients and pore pressure
- Production string load tested with completion fluid density and rate
- Tubing leak tested in production scenario

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- Gas gravity 0.7
- Pore pressure gradient .468 psi/ft above the Wolfcamp, .676 psi/ft Wolfcamp and below
- .676 psi/ft fracture gradient above the Wolfcamp, .832 psi/ft Wolfcamp and below.
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Casing Design Assumptions

- Gas gravity 0.7
- Pore pressure gradient .468 psi/ft above the Wolfcamp, .676 psi/ft Wolfcamp and below
- .676 psi/ft fracture gradient above the Wolfcamp, .832 psi/ft Wolfcamp and below.
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- External pressure calculated with fluid gradients and pore pressure
- Production string load tested with completion fluid density and rate
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Casing Design Assumptions

- Gas gravity 0.7
- Pore pressure gradient .468 psi/ft above the Wolfcamp, .676 psi/ft Wolfcamp and below
- .676 psi/ft fracture gradient above the Wolfcamp, .832 psi/ft Wolfcamp and below.
- 60°F average surface temperature and 1.5°/100ft temperature gradient
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- Strings landed at neutral weight
- Gas kicks assumed at each casing shoe
- External pressure calculated with fluid gradients and pore pressure
- Production string load tested with completion fluid density and rate
- Tubing leak tested in production scenario

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
    - 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 Well Control Equipment:

- 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

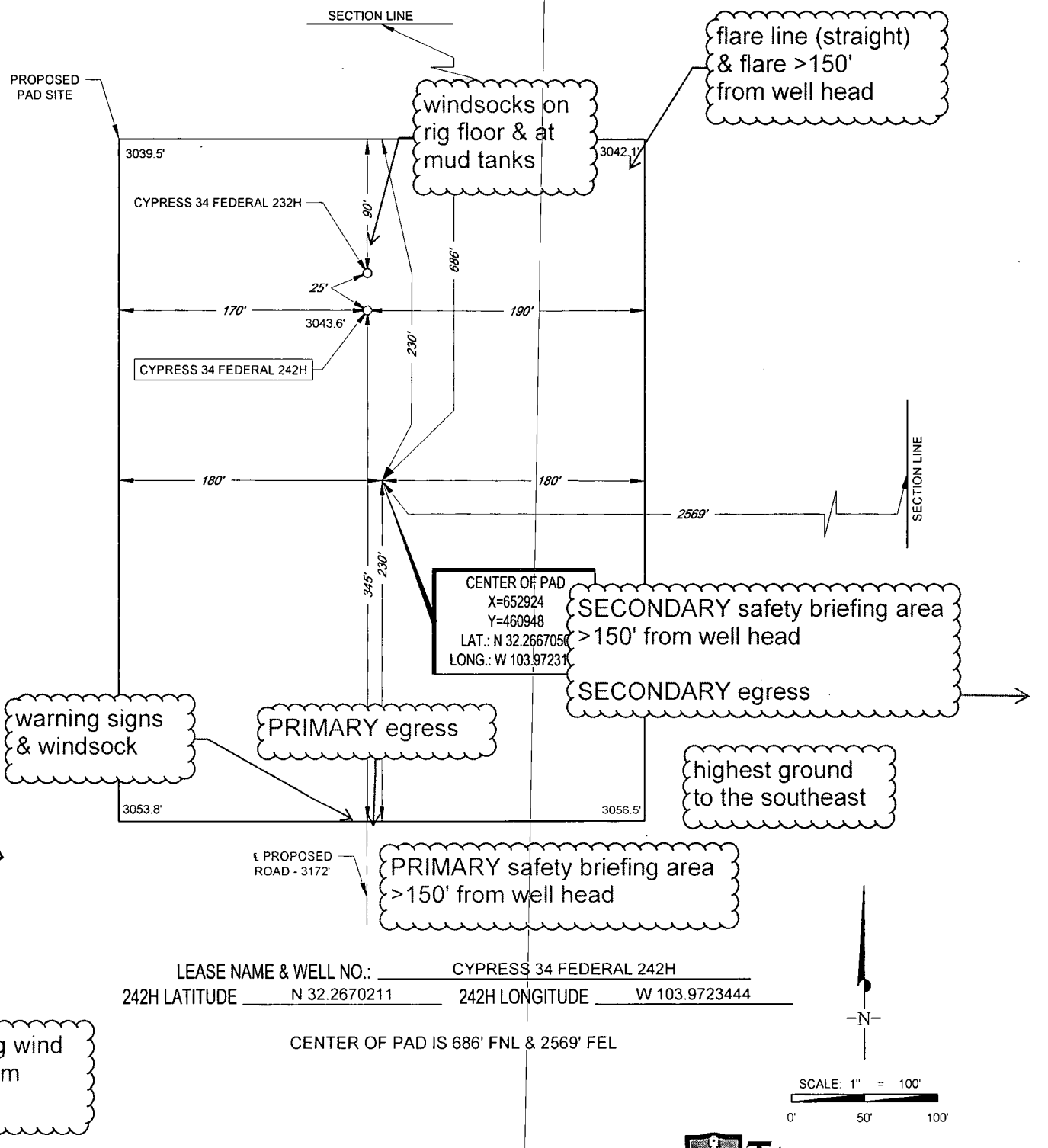
Emergency Contacts		
Carlsbad Police Department	575.887.7551	911
Carlsbad Medical Center	575.887.4100	911
Eddy County Fire Service	575.628.5450	911
Eddy County Sherriff	575.887.7551	911
Lea County Fire Service	575.391.2983	911
Lea County Sherriff	575.396.3611	911
Jal Police Department	575.395.2121	911
Jal Fire Department	575.395.2221	911
Tap Rock - Doug Sproul - Drilling	303-653-3518	

EXHIBIT 2B

TAP ROCK

SECTION 34, TOWNSHIP 23-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: CYPRESS 34 FEDERAL 242H

242H LATITUDE N 32.2670211 242H LONGITUDE W 103.9723444

CENTER OF PAD IS 686' FNL & 2569' FEL

SCALE: 1" = 100'

0' 50' 100'

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET

THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

Tap Rock Resources, LLC

Eddy County, NM (NAD 83 NME)
(Cypress) Sec-3_T-24-S_R-29-E
Cypress 34 Federal #212H

OWB

Plan: Plan #1

Standard Planning Report

16 September, 2019

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Cypress 34 Federal #212H
Company:	Tap Rock Resources, LLC	**TVD Reference:**	KB @ 3073.0usft
Project:	Eddy County, NM (NAD 83 NME)	**MD Reference:**	KB @ 3073.0usft
Site:	(Cypress) Sec-3_T-24-S_R-29-E	**North Reference:**	Grid
Well:	Cypress 34 Federal #212H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Project Eddy County, NM (NAD 83 NME)

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

Site (Cypress) Sec-3_T-24-S_R-29-E

Site Position:		**Northing:**	456,089.00 usft	**Latitude:**	32° 15' 12.005 N
From:	Map	**Easting:**	654,400.00 usft	**Longitude:**	103° 58' 3.336 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.20 °

Well Cypress 34 Federal #212H

Well Position	**+N/-S**	4,899.0 usft	**Northing:**	460,988.00 usft	**Latitude:**	32° 16' 0.534 N
	+E/-W	-1,485.0 usft	**Easting:**	652,915.00 usft	**Longitude:**	103° 58' 20.438 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,047.0 usft

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2019/09/12	6.90	60.01	47,693.91323258

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.09

Plan Survey Tool Program **Date** 2019/09/16

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	15,474.4	Plan #1 (OWB)	MWD OWSG MWD - Standard	

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Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,300.0	10.00	299.00	2,297.5	21.1	-38.1	2.00	2.00	0.00	299.00	
3,900.0	10.00	299.00	3,873.2	155.8	-281.1	0.00	0.00	0.00	0.00	
3,928.6	10.01	295.71	3,901.3	158.1	-285.5	2.00	0.03	-11.51	-90.72	
8,783.3	10.01	295.71	8,682.1	524.1	-1,045.7	0.00	0.00	0.00	0.00	
9,283.7	0.00	0.00	9,180.0	543.0	-1,085.0	2.00	-2.00	0.00	180.00	
9,975.7	0.00	0.00	9,872.0	543.0	-1,085.0	0.00	0.00	0.00	0.00	
10,875.7	90.00	179.09	10,445.0	-29.9	-1,075.9	10.00	10.00	19.90	179.09	
15,474.4	90.00	179.09	10,445.0	-4,628.0	-1,003.0	0.00	0.00	0.00	0.00	PBHL (Cypress 34

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Wellbore:	OWB		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
273.0	0.00	0.00	273.0	0.0	0.0	0.0	0.00	0.00	0.00
Rustler Anhydrite									
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
633.0	0.00	0.00	633.0	0.0	0.0	0.0	0.00	0.00	0.00
Top Salt									
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
NUDGE - Build 2.00									
1,900.0	2.00	299.00	1,900.0	0.8	-1.5	-0.9	2.00	2.00	0.00
2,000.0	4.00	299.00	1,999.8	3.4	-6.1	-3.5	2.00	2.00	0.00
2,100.0	6.00	299.00	2,099.5	7.6	-13.7	-7.8	2.00	2.00	0.00
2,200.0	8.00	299.00	2,198.7	13.5	-24.4	-13.9	2.00	2.00	0.00
2,300.0	10.00	299.00	2,297.5	21.1	-38.1	-21.7	2.00	2.00	0.00
HOLD - 1600.0 hold at 2300.0 MD									
2,400.0	10.00	299.00	2,395.9	29.5	-53.3	-30.4	0.00	0.00	0.00
2,500.0	10.00	299.00	2,494.4	37.9	-68.4	-39.0	0.00	0.00	0.00
2,600.0	10.00	299.00	2,592.9	46.4	-83.6	-47.7	0.00	0.00	0.00
2,700.0	10.00	299.00	2,691.4	54.8	-98.8	-56.3	0.00	0.00	0.00
2,800.0	10.00	299.00	2,789.9	63.2	-114.0	-65.0	0.00	0.00	0.00
2,879.3	10.00	299.00	2,868.0	69.9	-126.1	-71.9	0.00	0.00	0.00
Base Salt									
2,900.0	10.00	299.00	2,888.3	71.6	-129.2	-73.7	0.00	0.00	0.00
3,000.0	10.00	299.00	2,986.8	80.0	-144.4	-82.3	0.00	0.00	0.00
3,092.6	10.00	299.00	3,078.0	87.8	-158.4	-90.3	0.00	0.00	0.00
Delaware Mountain Gp									
3,097.7	10.00	299.00	3,083.0	88.3	-159.2	-90.8	0.00	0.00	0.00
Lamar									
3,100.0	10.00	299.00	3,085.3	88.4	-159.6	-91.0	0.00	0.00	0.00
3,138.3	10.00	299.00	3,123.0	91.7	-165.4	-94.3	0.00	0.00	0.00
Bell Canyon									
3,168.7	10.00	299.00	3,153.0	94.2	-170.0	-96.9	0.00	0.00	0.00
Ramsey Sand									
3,200.0	10.00	299.00	3,183.8	96.9	-174.8	-99.6	0.00	0.00	0.00
3,300.0	10.00	299.00	3,282.3	105.3	-189.9	-108.3	0.00	0.00	0.00
3,400.0	10.00	299.00	3,380.8	113.7	-205.1	-116.9	0.00	0.00	0.00
3,500.0	10.00	299.00	3,479.2	122.1	-220.3	-125.6	0.00	0.00	0.00
3,600.0	10.00	299.00	3,577.7	130.5	-235.5	-134.3	0.00	0.00	0.00

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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,700.0	10.00	299.00	3,676.2	139.0	-250.7	-142.9	0.00	0.00	0.00
3,800.0	10.00	299.00	3,774.7	147.4	-265.9	-151.6	0.00	0.00	0.00
3,900.0	10.00	299.00	3,873.2	155.8	-281.1	-160.2	0.00	0.00	0.00
TRN - DLS 2.00 TFO -90.72									
3,928.6	10.01	295.71	3,901.3	158.1	-285.5	-162.6	2.00	0.03	-11.51
HOLD - 4854.7 at 3928.6 MD									
4,000.0	10.01	295.71	3,971.6	163.5	-296.7	-168.2	0.00	0.00	0.00
4,036.9	10.01	295.71	4,008.0	166.2	-302.4	-171.0	0.00	0.00	0.00
Cherry Canyon									
4,100.0	10.01	295.71	4,070.1	171.0	-312.3	-175.9	0.00	0.00	0.00
4,200.0	10.01	295.71	4,168.6	178.5	-328.0	-183.7	0.00	0.00	0.00
4,300.0	10.01	295.71	4,267.1	186.1	-343.6	-191.5	0.00	0.00	0.00
4,400.0	10.01	295.71	4,365.5	193.6	-359.3	-199.3	0.00	0.00	0.00
4,500.0	10.01	295.71	4,464.0	201.2	-375.0	-207.1	0.00	0.00	0.00
4,600.0	10.01	295.71	4,562.5	208.7	-390.6	-214.9	0.00	0.00	0.00
4,700.0	10.01	295.71	4,661.0	216.2	-406.3	-222.7	0.00	0.00	0.00
4,800.0	10.01	295.71	4,759.5	223.8	-421.9	-230.5	0.00	0.00	0.00
4,900.0	10.01	295.71	4,857.9	231.3	-437.6	-238.2	0.00	0.00	0.00
5,000.0	10.01	295.71	4,956.4	238.9	-453.3	-246.0	0.00	0.00	0.00
5,100.0	10.01	295.71	5,054.9	246.4	-468.9	-253.8	0.00	0.00	0.00
5,200.0	10.01	295.71	5,153.4	253.9	-484.6	-261.6	0.00	0.00	0.00
5,209.8	10.01	295.71	5,163.0	254.7	-486.1	-262.4	0.00	0.00	0.00
Brushy Canyon									
5,300.0	10.01	295.71	5,251.9	261.5	-500.2	-269.4	0.00	0.00	0.00
5,400.0	10.01	295.71	5,350.3	269.0	-515.9	-277.2	0.00	0.00	0.00
5,500.0	10.01	295.71	5,448.8	276.6	-531.6	-285.0	0.00	0.00	0.00
5,600.0	10.01	295.71	5,547.3	284.1	-547.2	-292.7	0.00	0.00	0.00
5,700.0	10.01	295.71	5,645.8	291.6	-562.9	-300.5	0.00	0.00	0.00
5,800.0	10.01	295.71	5,744.2	299.2	-578.5	-308.3	0.00	0.00	0.00
5,900.0	10.01	295.71	5,842.7	306.7	-594.2	-316.1	0.00	0.00	0.00
5,900.3	10.01	295.71	5,843.0	306.7	-594.2	-316.1	0.00	0.00	0.00
Bone Spring Lime									
6,000.0	10.01	295.71	5,941.2	314.2	-609.9	-323.9	0.00	0.00	0.00
6,100.0	10.01	295.71	6,039.7	321.8	-625.5	-331.7	0.00	0.00	0.00
6,200.0	10.01	295.71	6,138.2	329.3	-641.2	-339.5	0.00	0.00	0.00
6,300.0	10.01	295.71	6,236.6	336.9	-656.8	-347.3	0.00	0.00	0.00
6,400.0	10.01	295.71	6,335.1	344.4	-672.5	-355.0	0.00	0.00	0.00
6,500.0	10.01	295.71	6,433.6	351.9	-688.2	-362.8	0.00	0.00	0.00
6,600.0	10.01	295.71	6,532.1	359.5	-703.8	-370.6	0.00	0.00	0.00
6,700.0	10.01	295.71	6,630.5	367.0	-719.5	-378.4	0.00	0.00	0.00
6,800.0	10.01	295.71	6,729.0	374.6	-735.1	-386.2	0.00	0.00	0.00
6,900.0	10.01	295.71	6,827.5	382.1	-750.8	-394.0	0.00	0.00	0.00
6,986.8	10.01	295.71	6,913.0	388.6	-764.4	-400.7	0.00	0.00	0.00
Upper Avalon									
7,000.0	10.01	295.71	6,926.0	389.6	-766.5	-401.8	0.00	0.00	0.00
7,100.0	10.01	295.71	7,024.5	397.2	-782.1	-409.6	0.00	0.00	0.00
7,200.0	10.01	295.71	7,122.9	404.7	-797.8	-417.3	0.00	0.00	0.00
7,300.0	10.01	295.71	7,221.4	412.3	-813.4	-425.1	0.00	0.00	0.00
7,362.5	10.01	295.71	7,283.0	417.0	-823.2	-430.0	0.00	0.00	0.00
Middle Avalon									
7,400.0	10.01	295.71	7,319.9	419.8	-829.1	-432.9	0.00	0.00	0.00
7,500.0	10.01	295.71	7,418.4	427.3	-844.8	-440.7	0.00	0.00	0.00
7,600.0	10.01	295.71	7,516.8	434.9	-860.4	-448.5	0.00	0.00	0.00

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7,700.0	10.01	295.71	7,615.3	442.4	-876.1	-456.3	0.00	0.00	0.00
7,748.4	10.01	295.71	7,663.0	446.1	-883.7	-460.0	0.00	0.00	0.00
Lower Avalon									
7,800.0	10.01	295.71	7,713.8	450.0	-891.7	-464.1	0.00	0.00	0.00
7,900.0	10.01	295.71	7,812.3	457.5	-907.4	-471.8	0.00	0.00	0.00
7,910.9	10.01	295.71	7,823.0	458.3	-909.1	-472.7	0.00	0.00	0.00
1st Bone Spring Sand									
8,000.0	10.01	295.71	7,910.8	465.0	-923.1	-479.6	0.00	0.00	0.00
8,100.0	10.01	295.71	8,009.2	472.6	-938.7	-487.4	0.00	0.00	0.00
8,200.0	10.01	295.71	8,107.7	480.1	-954.4	-495.2	0.00	0.00	0.00
8,200.3	10.01	295.71	8,108.0	480.1	-954.4	-495.2	0.00	0.00	0.00
2nd Bone Spring Carb									
8,300.0	10.01	295.71	8,206.2	487.7	-970.0	-503.0	0.00	0.00	0.00
8,400.0	10.01	295.71	8,304.7	495.2	-985.7	-510.8	0.00	0.00	0.00
8,500.0	10.01	295.71	8,403.1	502.7	-1,001.4	-518.6	0.00	0.00	0.00
8,515.1	10.01	295.71	8,418.0	503.9	-1,003.7	-519.7	0.00	0.00	0.00
2nd Bone Spring Sand									
8,600.0	10.01	295.71	8,501.6	510.3	-1,017.0	-526.4	0.00	0.00	0.00
8,700.0	10.01	295.71	8,600.1	517.8	-1,032.7	-534.1	0.00	0.00	0.00
8,783.3	10.01	295.71	8,682.1	524.1	-1,045.7	-540.6	0.00	0.00	0.00
DROP - -2.00									
8,800.0	9.67	295.71	8,698.6	525.3	-1,048.3	-541.9	2.00	-2.00	0.00
8,900.0	7.67	295.71	8,797.4	531.9	-1,061.9	-548.7	2.00	-2.00	0.00
9,000.0	5.67	295.71	8,896.8	536.9	-1,072.4	-553.9	2.00	-2.00	0.00
9,066.5	4.34	295.71	8,963.0	539.4	-1,077.6	-556.5	2.00	-2.00	0.00
3rd Bone Spring Carb									
9,100.0	3.67	295.71	8,996.4	540.4	-1,079.7	-557.5	2.00	-2.00	0.00
9,200.0	1.67	295.71	9,096.3	542.5	-1,083.9	-559.6	2.00	-2.00	0.00
9,283.7	0.00	0.00	9,180.0	543.0	-1,085.0	-560.2	2.00	-2.00	0.00
HOLD - 692.0 at 9283.7 MD									
9,300.0	0.00	0.00	9,196.3	543.0	-1,085.0	-560.2	0.00	0.00	0.00
9,400.0	0.00	0.00	9,296.3	543.0	-1,085.0	-560.2	0.00	0.00	0.00
9,500.0	0.00	0.00	9,396.3	543.0	-1,085.0	-560.2	0.00	0.00	0.00
9,600.0	0.00	0.00	9,496.3	543.0	-1,085.0	-560.2	0.00	0.00	0.00
9,700.0	0.00	0.00	9,596.3	543.0	-1,085.0	-560.2	0.00	0.00	0.00
9,800.0	0.00	0.00	9,696.3	543.0	-1,085.0	-560.2	0.00	0.00	0.00
9,866.7	0.00	0.00	9,763.0	543.0	-1,085.0	-560.2	0.00	0.00	0.00
3rd Bone Spring Sand									
9,900.0	0.00	0.00	9,796.3	543.0	-1,085.0	-560.2	0.00	0.00	0.00
9,975.7	0.00	0.00	9,872.0	543.0	-1,085.0	-560.2	0.00	0.00	0.00
KOP - DLS 10.00 TFO 179.09									
10,000.0	2.43	179.09	9,896.3	542.5	-1,085.0	-559.6	10.00	10.00	0.00
10,050.0	7.43	179.09	9,946.1	538.2	-1,084.9	-555.4	10.00	10.00	0.00
10,100.0	12.43	179.09	9,995.3	529.6	-1,084.8	-546.7	10.00	10.00	0.00
10,144.1	16.84	179.09	10,038.0	518.4	-1,084.6	-535.6	10.00	10.00	0.00
3rd BS W Sand									
10,150.0	17.43	179.09	10,043.6	516.7	-1,084.6	-533.9	10.00	10.00	0.00
10,181.1	20.54	179.09	10,073.0	506.6	-1,084.4	-523.7	10.00	10.00	0.00
Wolfcamp A X Sand									
10,200.0	22.43	179.09	10,090.6	499.7	-1,084.3	-516.8	10.00	10.00	0.00
10,250.0	27.43	179.09	10,135.9	478.6	-1,084.0	-495.7	10.00	10.00	0.00
10,300.0	32.43	179.09	10,179.3	453.7	-1,083.6	-470.8	10.00	10.00	0.00
10,304.4	32.87	179.09	10,183.0	451.3	-1,083.5	-468.4	10.00	10.00	0.00

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Cypress 34 Federal #212H
Company:	Tap Rock Resources, LLC	**TVD Reference:**	KB @ 3073.0usft
Project:	Eddy County, NM (NAD 83 NME)	**MD Reference:**	KB @ 3073.0usft
Site:	(Cypress) Sec-3_T-24-S_R-29-E	**North Reference:**	Grid
Well:	Cypress 34 Federal #212H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Wolfcamp A Y Sand									
10,350.0	37.43	179.09	10,220.2	425.0	-1,083.1	-442.2	10.00	10.00	0.00
10,400.0	42.43	179.09	10,258.6	393.0	-1,082.6	-410.1	10.00	10.00	0.00
10,450.0	47.43	179.09	10,294.0	357.7	-1,082.1	-374.8	10.00	10.00	0.00
10,463.5	48.78	179.09	10,303.0	347.6	-1,081.9	-364.7	10.00	10.00	0.00
Wolfcamp A Lower									
10,500.0	52.43	179.09	10,326.1	319.4	-1,081.5	-336.6	10.00	10.00	0.00
10,550.0	57.43	179.09	10,354.8	278.5	-1,080.8	-295.6	10.00	10.00	0.00
10,600.0	62.43	179.09	10,379.9	235.3	-1,080.1	-252.4	10.00	10.00	0.00
10,650.0	67.43	179.09	10,401.1	190.0	-1,079.4	-207.1	10.00	10.00	0.00
10,700.0	72.43	179.09	10,418.2	143.1	-1,078.7	-160.2	10.00	10.00	0.00
10,750.0	77.43	179.09	10,431.2	94.8	-1,077.9	-111.9	10.00	10.00	0.00
10,786.3	81.06	179.09	10,438.0	59.1	-1,077.3	-76.2	10.00	10.00	0.00
Wolfcamp B									
10,800.0	82.43	179.09	10,440.0	45.6	-1,077.1	-62.7	10.00	10.00	0.00
10,850.0	87.43	179.09	10,444.4	-4.2	-1,076.3	-12.9	10.00	10.00	0.00
10,875.7	90.00	179.09	10,445.0	-29.9	-1,075.9	12.8	10.00	10.00	0.00
EOC - 4598.7 hold at 10875.7 MD									
10,900.0	90.00	179.09	10,445.0	-54.2	-1,075.5	37.1	0.00	0.00	0.00
11,000.0	90.00	179.09	10,445.0	-154.2	-1,073.9	137.1	0.00	0.00	0.00
11,100.0	90.00	179.09	10,445.0	-254.2	-1,072.4	237.1	0.00	0.00	0.00
11,200.0	90.00	179.09	10,445.0	-354.1	-1,070.8	337.1	0.00	0.00	0.00
11,300.0	90.00	179.09	10,445.0	-454.1	-1,069.2	437.1	0.00	0.00	0.00
11,400.0	90.00	179.09	10,445.0	-554.1	-1,067.6	537.1	0.00	0.00	0.00
11,500.0	90.00	179.09	10,445.0	-654.1	-1,066.0	637.1	0.00	0.00	0.00
11,600.0	90.00	179.09	10,445.0	-754.1	-1,064.4	737.1	0.00	0.00	0.00
11,700.0	90.00	179.09	10,445.0	-854.1	-1,062.8	837.1	0.00	0.00	0.00
11,800.0	90.00	179.09	10,445.0	-954.1	-1,061.3	937.1	0.00	0.00	0.00
11,900.0	90.00	179.09	10,445.0	-1,054.1	-1,059.7	1,037.1	0.00	0.00	0.00
12,000.0	90.00	179.09	10,445.0	-1,154.0	-1,058.1	1,137.1	0.00	0.00	0.00
12,100.0	90.00	179.09	10,445.0	-1,254.0	-1,056.5	1,237.1	0.00	0.00	0.00
12,200.0	90.00	179.09	10,445.0	-1,354.0	-1,054.9	1,337.1	0.00	0.00	0.00
12,300.0	90.00	179.09	10,445.0	-1,454.0	-1,053.3	1,437.1	0.00	0.00	0.00
12,400.0	90.00	179.09	10,445.0	-1,554.0	-1,051.7	1,537.1	0.00	0.00	0.00
12,500.0	90.00	179.09	10,445.0	-1,654.0	-1,050.2	1,637.1	0.00	0.00	0.00
12,600.0	90.00	179.09	10,445.0	-1,754.0	-1,048.6	1,737.1	0.00	0.00	0.00
12,700.0	90.00	179.09	10,445.0	-1,854.0	-1,047.0	1,837.1	0.00	0.00	0.00
12,800.0	90.00	179.09	10,445.0	-1,953.9	-1,045.4	1,937.1	0.00	0.00	0.00
12,900.0	90.00	179.09	10,445.0	-2,053.9	-1,043.8	2,037.1	0.00	0.00	0.00
13,000.0	90.00	179.09	10,445.0	-2,153.9	-1,042.2	2,137.1	0.00	0.00	0.00
13,100.0	90.00	179.09	10,445.0	-2,253.9	-1,040.6	2,237.1	0.00	0.00	0.00
13,200.0	90.00	179.09	10,445.0	-2,353.9	-1,039.1	2,337.1	0.00	0.00	0.00
13,300.0	90.00	179.09	10,445.0	-2,453.9	-1,037.5	2,437.1	0.00	0.00	0.00
13,400.0	90.00	179.09	10,445.0	-2,553.9	-1,035.9	2,537.1	0.00	0.00	0.00
13,500.0	90.00	179.09	10,445.0	-2,653.9	-1,034.3	2,637.1	0.00	0.00	0.00
13,600.0	90.00	179.09	10,445.0	-2,753.8	-1,032.7	2,737.1	0.00	0.00	0.00
13,700.0	90.00	179.09	10,445.0	-2,853.8	-1,031.1	2,837.1	0.00	0.00	0.00
13,800.0	90.00	179.09	10,445.0	-2,953.8	-1,029.5	2,937.1	0.00	0.00	0.00
13,900.0	90.00	179.09	10,445.0	-3,053.8	-1,028.0	3,037.1	0.00	0.00	0.00
14,000.0	90.00	179.09	10,445.0	-3,153.8	-1,026.4	3,137.1	0.00	0.00	0.00
14,100.0	90.00	179.09	10,445.0	-3,253.8	-1,024.8	3,237.1	0.00	0.00	0.00
14,200.0	90.00	179.09	10,445.0	-3,353.8	-1,023.2	3,337.1	0.00	0.00	0.00
14,300.0	90.00	179.09	10,445.0	-3,453.8	-1,021.6	3,437.1	0.00	0.00	0.00

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Cypress 34 Federal #212H
Company:	Tap Rock Resources, LLC	**TVD Reference:**	KB @ 3073.0usft
Project:	Eddy County, NM (NAD 83 NME)	**MD Reference:**	KB @ 3073.0usft
Site:	(Cypress) Sec-3_T-24-S_R-29-E	**North Reference:**	Grid
Well:	Cypress 34 Federal #212H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,400.0	90.00	179.09	10,445.0	-3,553.7	-1,020.0	3,537.1	0.00	0.00	0.00
14,500.0	90.00	179.09	10,445.0	-3,653.7	-1,018.4	3,637.1	0.00	0.00	0.00
14,600.0	90.00	179.09	10,445.0	-3,753.7	-1,016.9	3,737.1	0.00	0.00	0.00
14,700.0	90.00	179.09	10,445.0	-3,853.7	-1,015.3	3,837.1	0.00	0.00	0.00
14,800.0	90.00	179.09	10,445.0	-3,953.7	-1,013.7	3,937.1	0.00	0.00	0.00
14,900.0	90.00	179.09	10,445.0	-4,053.7	-1,012.1	4,037.1	0.00	0.00	0.00
15,000.0	90.00	179.09	10,445.0	-4,153.7	-1,010.5	4,137.1	0.00	0.00	0.00
15,100.0	90.00	179.09	10,445.0	-4,253.7	-1,008.9	4,237.1	0.00	0.00	0.00
15,200.0	90.00	179.09	10,445.0	-4,353.6	-1,007.4	4,337.1	0.00	0.00	0.00
15,300.0	90.00	179.09	10,445.0	-4,453.6	-1,005.8	4,437.1	0.00	0.00	0.00
15,400.0	90.00	179.09	10,445.0	-4,553.6	-1,004.2	4,537.1	0.00	0.00	0.00
15,474.4	90.00	179.09	10,445.0	-4,628.0	-1,003.0	4,611.5	0.00	0.00	0.00
TD at 15474.4									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (Cypress 34 Fed	0.00	0.00	10,445.0	543.0	-1,085.0	461,531.00	651,830.00	32° 16' 5.943 N	103° 58' 33.054 W
- plan misses target center by 237.4usft at 10426.0usft MD (10277.4 TVD, 375.0 N, -1082.3 E)									
- Point									
LTP (Cypress 34 Fed	0.00	0.00	10,445.0	-4,558.0	-1,004.0	456,430.00	651,911.00	32° 15' 15.462 N	103° 58' 32.308 W
- plan misses target center by 4.4usft at 15400.0usft MD (10445.0 TVD, -4553.6 N, -1004.2 E)									
- Point									
PBHL (Cypress 34 Fe	0.00	179.09	10,445.0	-4,628.0	-1,003.0	456,360.00	651,912.00	32° 15' 14.769 N	103° 58' 32.299 W
- plan hits target center									
- Rectangle (sides W100.0 H5,174.0 D20.0)									

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Site:	(Cypress) Sec-3_T-24-S_R-29-E	**North Reference:**	Grid
Well:	Cypress 34 Federal #212H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
273.0	273.0	Rustler Anhydrite			
633.0	633.0	Top Salt			
2,879.3	2,868.0	Base Salt			
3,092.6	3,078.0	Delaware Mountain Gp			
3,097.7	3,083.0	Lamar			
3,138.3	3,123.0	Bell Canyon			
3,168.7	3,153.0	Ramsey Sand			
4,036.9	4,008.0	Cherry Canyon			
5,209.8	5,163.0	Brushy Canyon			
5,900.3	5,843.0	Bone Spring Lime			
6,986.8	6,913.0	Upper Avalon			
7,362.5	7,283.0	Middle Avalon			
7,748.4	7,663.0	Lower Avalon			
7,910.9	7,823.0	1st Bone Spring Sand			
8,200.3	8,108.0	2nd Bone Spring Carb			
8,515.1	8,418.0	2nd Bone Spring Sand			
9,066.5	8,963.0	3rd Bone Spring Carb			
9,866.7	9,763.0	3rd Bone Spring Sand			
10,144.1	10,038.0	3rd BS W Sand			
10,181.1	10,073.0	Wolfcamp A X Sand			
10,304.4	10,183.0	Wolfcamp A Y Sand			
10,463.5	10,303.0	Wolfcamp A Lower			
10,786.3	10,438.0	Wolfcamp B			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,800.0	1,800.0	0.0	0.0	NUDGE - Build 2.00
2,300.0	2,297.5	21.1	-38.1	HOLD - 1600.0 hold at 2300.0 MD
3,900.0	3,873.2	155.8	-281.1	TRN - DLS 2.00 TFO -90.72
3,928.6	3,901.3	158.1	-285.5	HOLD - 4854.7 at 3928.6 MD
8,783.3	8,682.1	524.1	-1,045.7	DROP - -2.00
9,283.7	9,180.0	543.0	-1,085.0	HOLD - 692.0 at 9283.7 MD
9,975.7	9,872.0	543.0	-1,085.0	KOP - DLS 10.00 TFO 179.09
10,875.7	10,445.0	-29.9	-1,075.9	EOC - 4598.7 hold at 10875.7 MD
15,474.4	10,445.0	-4,628.0	-1,003.0	TD at 15474.4

Drilling Operations Plan
Cypress 34 Federal 212H
Tap Rock Operating, LLC
SHL 646' FNL & 2579' FEL, Sec. 34
BHL 30' FSL & 1650' FWL, Sec. 34
Sec. 34 T. 23S., R. 29E Eddy County, NM

Elevation above Sea Level: 3047'

DRILLING PROGRAM

1. Estimated Tops

Formation	TVD	MD	Lithologies	Bearing
Quaternary Deposits	0	0	Surface	None
Rustler Anhydrite	273	273		Salt
Salado	633	633	Salt	Salt
Base Salt	2868	2879		Salt
Lamar	3083	3097	Limestone	None
Bell Canyon	3123	3138	Sandstone	Hydrocarbons
Cherry Canyon	4008	4037	Sandstone	Hydrocarbons
Brushy Canyon	5163	5210	Sandstone	Hydrocarbons
Bone Spring	5843	5900	Limestone	Hydrocarbons
1st Bone Spring	7823	7910	Sandstone	Hydrocarbons
2nd Bone Spring	8108	8200	Sandstone	Hydrocarbons
3rd Bone Spring	8963	9066	Sandstone	Hydrocarbons
KOP	9872	9975	Sandstone	Hydrocarbons
Wolfcamp	10073	10181	Shale	Hydrocarbons
TD	10445	15475	Shale	Hydrocarbons

2. Notable Zones

Upper Wolfcamp is the target formation.

3. Pressure Control

Pressure Control Equipment (See Schematics):
A 15,000', 5,000 psi 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.

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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 2,500 psi. The BOP will be tested in this manner after nipple-up if any break of the stack occurs.

Variance Requests:
Tap Rock requests a variance to run a multi-bowl speed head for setting the Intermediate 1, Intermediate 2, 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. In the event that this well is batch drilled, after drilling surface, 1st intermediate, and 2nd intermediate hole sections and cementing 2nd intermediate casing, a 10M dry hole cap with bleed off valve will be installed. The rig will then walk to another well on the pad. When the rig returns to this well and BOPs are installed, the operator will perform a full BOP test. Due to the Potash, Tap Rock will cement the 7-5/8" string to surface.

Tap Rock requests approval to possibly utilize a spudder rig to drill and set casing for the surface interval on this well. The spudder rig will be possibly utilized in order to reduce cost and save time. The wellhead will be installed and tested as soon as the surface casing is cut off per the existing COAs. A blind flange with the same pressure rating as the wellhead will be installed on the well. Once the spudder rig is removed, Tap Rock will secure the wellhead area by placing a guard rail around the cellar. Pressure will be monitored and a means for intervention will be maintained while the drilling rig is not over the well. Spudder rig operations are expected to take 2-3 days per well. Three wells on the pad will have surface casing set by the spudder rig as a part of this operation. The BLM will be notified 24 hours prior to commencing spudder rig operations. Within 90 days of the departure of the spudder rig, drilling operations will recommence on these wells. This rig will have a BOP stack equal or greater to the pressure rating required in the COAs. The BLM will be notified 24 hours before the larger rig moves on the pre-set wells. Tap Rock will have supervision on the spudder rig to ensure compliance with all BLM and NMOCD regulations.

Drilling Operations Plan
Cypress 34 Federal 212H
Tap Rock Operating, LLC
SHL 646' FNL & 2579' FEL, Sec. 34
BHL 30' FSL & 1650' FWL, Sec. 34
Sec. 34 T. 23S., R. 29E Eddy County, NM

4. Casing & Cement

All Casing will be new.

Name	Hole Size	Casing Size	Standard	Tapered	Top MD	Bottom MD	Top TVD	BTM TVD	Grade	Weight	Thread	Collapse	Burst	Tension
Surface	17 1/2	13 3/8	API	No	0	350	0	350	J-55	54.5	BUTT	1.13	1.15	1.6
1st Intermediate	12 1/4	9 5/8	API	No	0	3150	0	3137	J-55	40	BUTT	1.13	1.15	1.6
2nd Intermediate	8 3/4	7 5/8	NON API	Yes	0	9875	0	9772	P-110	29.7	W-513	1.13	1.15	1.6
Production	6 3/4	5 1/2	NON API	No	0	9675	0	9572	P-110	20	TXP	1.13	1.15	1.6
Production	6 3/4	5	NON API	Yes	9675	15475	9572	10445	P-110	18	W-521	1.13	1.15	1.6

Name	Type	Top MD	Sacks	Yield	Cu. Ft	Weight	Excess	Cement	Additives
Surface	Tail	0	360	1.35	486	14.8	100%	C	5% NCl + LCM
1st Intermediate	Lead	0	560	2.18	1221	12.7	65%	C	Bentonite + 1% CaCL2 + 8% NaCl + LCM
	Tail	2363	306	1.33	407	14.8	65%	C	5% NaCl + LCM
2nd Intermediate	Lead	0	419	2.87	1204	11.5	35%	TXI	Fluid Loss + Dispersant + Retarder + LCM
	Tail	8875	107	1.27	136	15	35%	H	Fluid Loss + Dispersant + Retarder + LCM
Production	Tail	9175	516	1.71	883	14.2	25%	H	Fluid Loss + Dispersant + Retarder + LCM

5. Mud Program

Electronic Pason mud monitor system complying with Onshore Order 1 will be used. All necessary mud products (e. g., barite, cedar bark) 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.

Name	Top	Bottom	Type	Mud Weight	Visc	Fluid Loss
Surface	0	350	FW Spud Mud	8.30	28	NC
Intermediate	350	3150	Brine Water	10.00	30-32	NC
Intermediate 2	3150	9875	FW/Cut Brine	9.00	30-32	NC
Production	9875	15475	Oil Base Mud	11.50	15-20	<10

6. Cores, Tests, & Logs

- Electric Logging Program: No open-hole logs are planned at this time for the pilot hole.
- GR will be collected while drilling through the MWD tools from 9.625" casing shoe to TD.
- A 2-person mud logging program will be used from 9.625" casing shoe 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 ≈6,245 psi. Expected bottom hole temperature is ≈170° F.

Tap Rock does not anticipate that there will be enough H2S from the surface to the Wolfcamp 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

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 30 days. If production casing is run an additional 60 days will be required to complete and construct surface facilities.

APD ID: 10400050038 **Submission Date:** 11/05/2019

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Cypress_Existing_Roads_Map_20191024130321.pdf

Existing Road Purpose: ACCESS **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Cypress_New_Road_Map_Plat_v2_012920_20200130083356.pdf

New road type: RESOURCE

Length: 1642.26 Feet **Width (ft.):** 30

Max slope (%): 1 **Max grade (%):** 1

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 24

New road access erosion control: Crowned and ditched

New road access plan or profile prepared? N

New road access plan attachment:

Access road engineering design? N

Access road engineering design attachment:

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: Grader

Access other construction information: 1,069.28 shared common road + 557.98 well pad road + 15.0 CTB road = 1642.26 total; Pipelines that are crossed will be padded.
Access miscellaneous information:

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: Roads will be crowned and ditched.

Road Drainage Control Structures (DCS) description: Crowned and ditched

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Cypress_212H_1mi_Well_Map_v1_102219_20191024130359.pdf

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: A 400 x 400 central tank battery (CTB) will be built 20 south of the well pad. Topsoil will be piled east of the CTB. Flare and/or CBU will be set on the northeast corner of the CTB. Tank battery and process equipment (e. g., separators, heater-treaters) will be on the east side of the CTB. The CTB and its associated infrastructure (road, SWD lines, and flowlines) are located entirely on the producing lease in Section 34, 23S 29E. Two (2) buried 4 O. D. steel flow lines will be laid from the well pad 201.20 to the CTB in one (1) trench. No power line is planned at this time. Four (4) surface 4 O.D. poly SWD lines will be laid 4,460.29 from the proposed CTB southwest to the existing Mesquite Facility Pad.
Production Facilities map:

Cypress_Production_Facilities_v2_012920_20200130082804.pdf

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: GW WELL

Water source use type: STIMULATION

SURFACE CASING

INTERMEDIATE/PRODUCTION CASING

Source latitude: **Source longitude:**

Source datum:

Water source permit type: PRIVATE CONTRACT

Water source transport method: TRUCKING

Source land ownership: PRIVATE

Source transportation land ownership: FEDERAL

Water source volume (barrels): 16000 **Source volume (acre-feet):** 2.0622895

Source volume (gal): 672000

Water source and transportation map:

Cypress_Water_Gravel_Map4_v1_062619_20191024130426.pdf

Water source comments: This well will be drilled using a combination of water mud systems. Fresh water will be trucked from a private water well (C 03662) on private land in NWNE 23-24s-33e.
New water well? N

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: NM One Call (811) will be notified before construction starts. Top 6 inches of soil and brush will be stockpiled north of the well pad. V-door will face east. Caliche will be hauled from existing caliche pits on state land in NW/4 18-23s-30e.
Construction Materials source location attachment:

Cypress_Construction_Methods_20191024130439.pdf

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drill cuttings, mud, salts, and other chemicals

Amount of waste: 660 barrels

Waste disposal frequency : Daily

Safe containment description: Steel mud tanks

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE
Disposal type description:

Disposal location description: Mud tanks will be hauled to R360s state approved (NM1 -6-0) disposal site at Halfway, NM.

Waste type: SEWAGE

Waste content description: Black and grey water

Amount of waste: 5 barrels

Waste disposal frequency : Daily

Safe containment description: Plastic holding tanks and Chemical toilets

Safe containmant attachment:

Waste disposal type: OTHER **Disposal location ownership:** OTHER

Disposal type description: Public

Disposal location description: Carlsbad wastewater treatment plant.

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Waste type: GARBAGE

Waste content description: Trash

Amount of waste: 10 barrels

Waste disposal frequency : Daily

Safe containment description: Portable trash cage

Safe containmant attachment:

Waste disposal type: OTHER **Disposal location ownership:** OTHER

Disposal type description: County

Disposal location description: Portable trash cage will be hauled to Eddy County Landfill

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? Y

Description of cuttings location Steel tanks on pad

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Cypress_Well_Site_Layout_102219_20191024130507.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: CYPRESS 34 FEDERAL

Multiple Well Pad Number: Slot 2

Recontouring attachment:

Cypress_Recontour_Plats_20191024130520.pdf

Cypress_Interim_Rec_20191024130527.pdf

Drainage/Erosion control construction: Crowned and ditched

Drainage/Erosion control reclamation: Harrowed on the contour

Well pad proposed disturbance (acres): 4.05

Road proposed disturbance (acres): 1.13

Powerline proposed disturbance (acres): 0

Pipeline proposed disturbance (acres): 3.21

Other proposed disturbance (acres): 3.95

Total proposed disturbance: 12.34

Well pad interim reclamation (acres): 0

Road interim reclamation (acres): 0

Powerline interim reclamation (acres): 0

Pipeline interim reclamation (acres): 0.14

Other interim reclamation (acres): 0

Total interim reclamation: 0.14

Well pad long term disturbance (acres): 4.05

Road long term disturbance (acres): 1.13

Powerline long term disturbance (acres): 0

Pipeline long term disturbance (acres): 3.07

Other long term disturbance (acres): 3.95

Total long term disturbance: 12.2

Disturbance Comments:

Reconstruction method: Unused areas of the pad will not be reclaimed due to its location on a potash drill island.

Topsoil redistribution: Unused areas of the pad will not be reclaimed due to its location on a potash drill island.

Soil treatment: None

Existing Vegetation at the well pad: Mesquite and/or Creosote bush

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Mesquite and/or Creosote bush

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Mesquite and/or Creosote bush

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: Mesquite and/or Creosote bush

Existing Vegetation Community at other disturbances attachment:

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: **Last Name:**

Phone: **Email:**

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: To BLM Gold Book standards

Weed treatment plan attachment:

Monitoring plan description: To BLM Gold Book standards

Monitoring plan attachment:

Success standards: To BLM satisfaction

Pit closure description: No pit

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Disturbance type: OTHER

Describe: Central Tank Battery

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: PIPELINE

Describe: Flowlines, SWD Lines

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: TAP ROCK OPERATING LLC

Well Name: CYPRESS 34 FEDERAL **Well Number:** 212H

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other Information

Right of Way needed? N **Use APD as ROW?**

ROW Type(s):

ROW Applications

SUPO Additional Information:

Use a previously conducted onsite? Y

Previous Onsite information: On-site inspection for the pad, CTB, and associated infrastructure was held with MattWirth (BLM) on February 21st, 2019. Cultural Resources Examination Lone Mountain Archaeological Services, Inc. is performing a block survey covering the entirety of this project and will file the report with BLM upon completion.

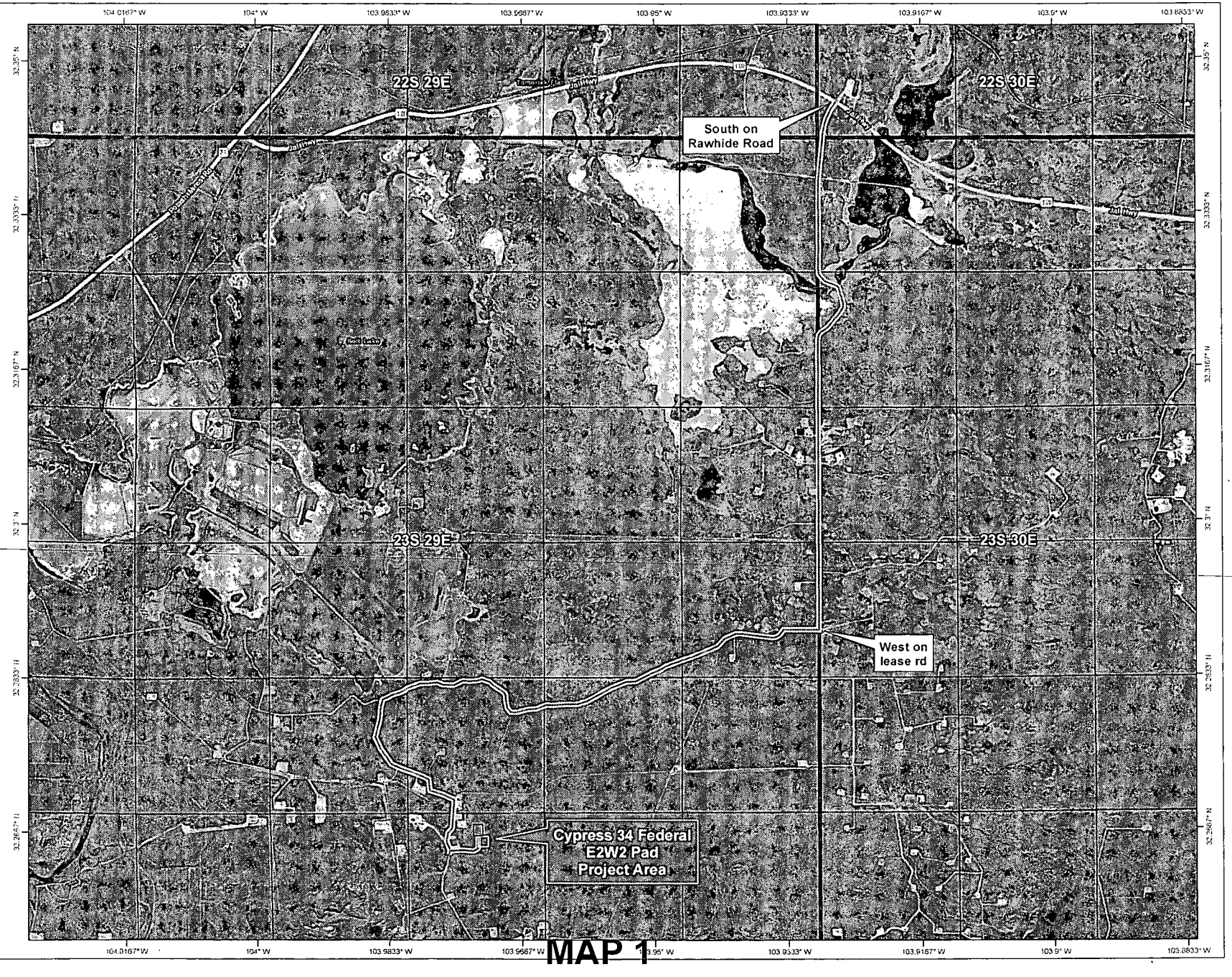
Other SUPO Attachment

Cypress_212H_SUPO_v2_012920_20200130083241.pdf

Tap Rock Operating LLC

Cypress 34 Federal
E2W2 Pad
Drive Map

Eddy County, New Mexico



Existing Access Road

Proposed Access Road

1:42,000

0 0.5 1

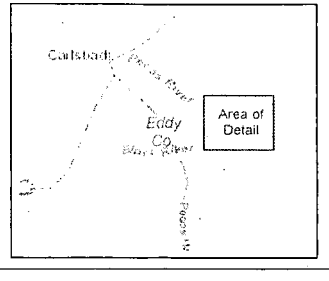
Miles

N

NAD 1983 New Mexico State Plane East
FIPS 3001 Feet

PERMITS WEST, Inc.

Prepared by Permits West, Inc., June 25, 2019
for Tap Rock Operating, LLC



MAP 1