Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.

[328246]

2. Name of Operator **[372417]**

9. API Well No. **30-025-50128**

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

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

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

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

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

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

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

25. Signature	Name *(Printed/Typed)*	Date

Title

Approved by *(Signature)*	Name *(Printed/Typed)*	Date

Title	Office

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

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

NGMP Rec 04/29/2022

KZ
05/11/2022

SL

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 04/19/2022

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.

Additional Operator Remarks

Location of Well

0. SHL: NENE / 460 FNL / 675 FEL / TWSP: 21S / RANGE: 32E / SECTION: 13 / LAT: 32.484914 / LONG: -103.622055 (TVD: 0 feet, MD: 0 feet)

PPP: NESE / 2640 FSL / 330 FEL / TWSP: 21S / RANGE: 32E / SECTION: 24 / LAT: 32.464404 / LONG: -103.620965 (TVD: 11900 feet, MD: 18900 feet)

PPP: NENE / 0 FNL / 330 FEL / TWSP: 21S / RANGE: 32E / SECTION: 24 / LAT: 32.471777 / LONG: -103.620943 (TVD: 11900 feet, MD: 16244 feet)

PPP: SESE / 1320 FSL / 330 FEL / TWSP: 21S / RANGE: 32E / SECTION: 13 / LAT: 32.475295 / LONG: -103.620951 (TVD: 11900 feet, MD: 14934 feet)

PPP: NESE / 2640 FSL / 330 FEL / TWSP: 21S / RANGE: 32E / SECTION: 13 / LAT: 32.478905 / LONG: -103.620886 (TVD: 11900 feet, MD: 13630 feet)

PPP: NENE / 948 FNL / 602 FEL / TWSP: 21S / RANGE: 32E / SECTION: 13 / LAT: 32.4835778 / LONG: -103.6218182 (TVD: 11781 feet, MD: 11859 feet)

BHL: SENE / 2540 FNL / 330 FEL / TWSP: 21S / RANGE: 32E / SECTION: 25 / LAT: 32.450181 / LONG: -103.620981 (TVD: 11900 feet, MD: 24072 feet)

BLM Point of Contact

Name: Priscilla Perez
Title: Legal Instruments Examiner
Phone: (575) 234-5934
Email: pperez@blm.gov

Review and Appeal Rights

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

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos 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) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 4, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-50128	98033	WC-025 G-10 S213328O; WOLFCAMP

Property Code	Property Name	Well Number
328246	MARGARITA 13 FEDERAL COM	20H

OGRID No.	Operator Name	Elevation
372417	Advance Energy Partners Hat Mesa, LLC	3906'

Surface Location

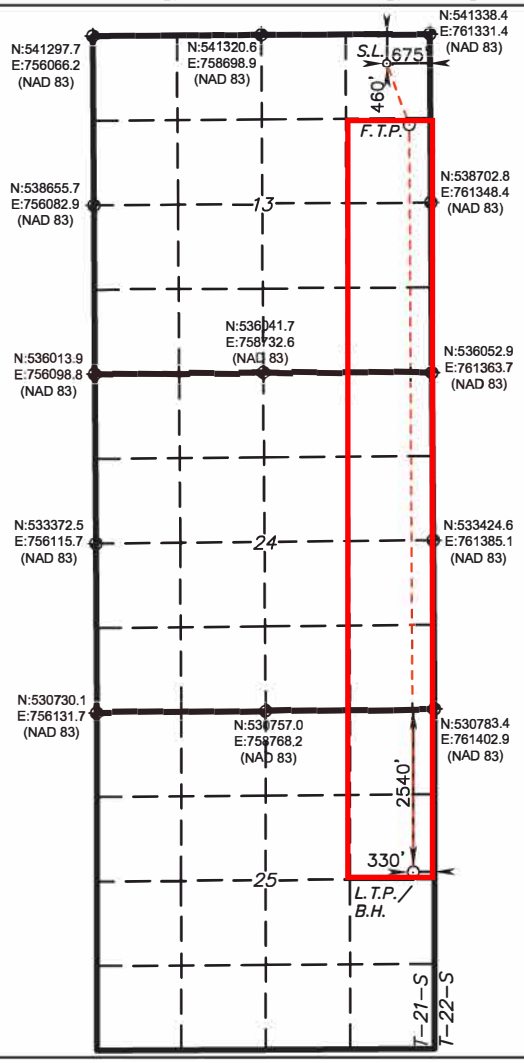
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
A	13	21 S	32 E		460	NORTH	675	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
H	25	21 S	32 E		2540	NORTH	330	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
360			

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



SURFACE LOCATION
Lat – N 32.484914°
Long – W 103.622055°
NMSPCE– N 540873.7
E 760659.4
(NAD-83)

FIRST TAKE POINT
1420 FNL & 330 FEL
Lat – N 32.482276°
Long – W 103.620937°
NMSPCE– N 539916.2
E 761010.6
(NAD-83)

LAST TAKE POINT/ BOTTOM HOLE
Lat – N 32.450181°
Long – W 103.620981°
NMSPCE– N 528239.9
E 761074.9
(NAD-83)

OPERATOR CERTIFICATION

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

Cory Walk — 10-16-20
Signature — Date

Cory Walk
Printed Name

cory@permitswest.com
Email Address

SURVEYOR CERTIFICATION

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

APRIL 15, 2020
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate No. Gary L. Jones 7977
BASIN SURVEYS

0' 1500' 3000' 4500' 6000' N
SCALE: 1" = 3000'
WO Num.: 35093

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: _Advance Energy Partners Hat Mesa, LLC___ **OGRID:** __372417_____ **Date:** 4/29/2022

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Margarita Federal Com 13 20H	30-025-50128	A-13-21S-32E	460 FNL & 675 FEL	1465	1801	3611

IV. Central Delivery Point Name: ___Margarita Federal Com 13 Pad A_____ [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Margarita Federal Com 13 20H	30-025-50128	8/23/2022	9/23/2021	11/8/2022	12/11/2022	12/13/2022

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

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

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

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

Section 4 - Notices

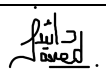
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

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

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

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

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

Signature: 
Printed Name: Dayeed Khan
Title: Engineer
E-mail Address: dkhan@ameredev.com
Date: 4/29/2022
Phone: 737-300-4700

OIL CONSERVATION DIVISION **(Only applicable when submitted as a standalone form)**
Approved By:
Title:
Approval Date:
Conditions of Approval:

Natural Gas Management Plan

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

• Separation equipment is sized to allow for retention time and velocity to adequately separate oil, gas, and water at anticipated peak rates.
• All central tank battery equipment is designed to efficiently capture the remaining gas from the liquid phase.
• Valves and meters are designed to service without flow interruption or venting of gas.

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

19.15.27.8 (A)

Advanced Energy Partners field operations are designed with the goal of minimizing flaring and preventing venting of natural gas. If capturing the gas is not possible then the gas is combusted/flared using properly sized flares or combustors in accordance with state air permit rules.

19.15.27.8 (B) Venting and Flaring during drilling operations

• A properly-sized flare stack will be located at a minimum 100’ from the nearest surface hole location on the pad.
• All natural gas produced during drilling operations will be flared. Venting will only occur if there is an equipment malfunction and/or to avoid risk of an immediate and substantial adverse impact on safety, public health, or the environment.

19.15.27.8 (C) Venting and Flaring during completions or recompletions operations.

• During all phases of flowback, wells will flow through a sand separator, or other appropriate flowback separation equipment, and the well stream will be directed to a central tank battery (CTB) through properly sized flowlines
• The CTB will have properly sized separation equipment for maximum anticipated flowrates
• Multiple stages of separation will be used to separate gas from liquids. All gas will be routed to a sales outlet. Fluids will be routed to tanks equipped with a closed loop system that will recover any residual gas from the tanks and route such gas to a sales outlet.

19.15.27.8 (D) Venting and Flaring during production operations.

• During production, the well stream will be routed to the CTB where multiple stages of separation will separate gas from liquids. All gas will be routed to a sales outlet. Fluids will be routed to tanks with a closed

loop system that will recover any residual gas from the tanks and route such gas to a sales outlet, minimizing tank emissions.
• Flares are equipped with auto-ignition systems and continuous pilot operations.
• Automatic gauging equipment is installed on all tanks.

19.15.27.8 (E) Performance Standards

• Production equipment will be designed to handle maximum anticipated rates and pressure.
• Automatic gauging equipment is installed on all tanks to minimize venting
• All flared gas will be combusted in a flare stack that is properly sized and designed to ensure proper combustion.
•Flares are equipped with continuous pilots and auto-ignitors along with remote monitoring of the pilot status
• Weekly AVOs and monthly LDAR inspections will be performed on all wells and facilities that produce more than 60 Mcfd.
• Gas/H2S detectors will be installed throughout the facilities and wellheads to detect leaks and enable timely repairs.

19.15.27.8 (F) Measurement or estimation of vented and flared natural gas

• All high pressure flared gas is measured by equipment conforming to API 14.10.
• No meter bypasses are installed.
• When metering is not practical due to low pressure/low rate, the vented or flared volume will be estimated through flare flow curves with the assistance of air emissions consultants, as necessary.

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

• Advanced Energy Partners will use best management practices to vent as minimally as possible during well intervention operations and downhole well maintenance
• All natural gas is routed into the gas gathering system and directed to one of Advanced Energy Partners multiple gas sales outlets.
• All venting events will be recorded and all start-up, shutdown, maintenance logs will be kept for control equipment
• All control equipment will be maintained to provide highest run-time possible
• All procedures are drafted to keep venting and flaring to the absolute minimum

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

Drilling Plan Data Report
04/20/2022

APD ID: 10400064255 **Submission Date:** 10/26/2020

Operator Name: ADVANCE ENERGY PARTNERS HAT MESA LLC

Well Name: MARGARITA FEDRAL COM 13 **Well Number:** 20H

Well Type: OIL 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
1098745	QUATERNARY	3906	0	0	OTHER : Caliche	USEABLE WATER	N
1098746	RUSTLER ANHYDRITE	2166	1740	1740	ANHYDRITE	NONE	N
1098747	TANSILL	538	3368	3368	DOLOMITE	NONE	N
1098748	YATES	495	3411	3411	SANDSTONE	NONE	N
1098749	SEVEN RIVERS	291	3615	3615	GYPSUM	NONE	N
1098750	CAPITAN REEF	150	3756	3756	OTHER : None	USEABLE WATER	N
1098751	BELL CANYON	-1795	5701	5701	LIMESTONE	NATURAL GAS, OIL	N
1098752	CHERRY CANYON	-3084	6990	6990	SHALE	NATURAL GAS, OIL	N
1098753	LOWER BRUSHY CANYON 8A	-4732	8638	8644	SANDSTONE	NATURAL GAS, OIL	N
1098754	AVALON SAND	-5156	9062	9069	SHALE	NATURAL GAS, OIL	N
1098755	BONE SPRING 1ST	-6105	10011	10019	SANDSTONE	NATURAL GAS, OIL	N
1098756	BONE SPRING 2ND	-6652	10558	10566	SANDSTONE	NATURAL GAS, OIL	N
1098757	BONE SPRING 3RD	-7174	11080	11088	OTHER, SANDSTONE : Carbonate	NATURAL GAS, OIL	N
1098758	BONE SPRING 3RD	-7663	11569	11585	SANDSTONE	NATURAL GAS, OIL	N
1098759	WOLFCAMP	-7875	11781	11859	OTHER : A Carbonate	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: ADVANCE ENERGY PARTNERS HAT MESA LLC

Well Name: MARGARITA FEDRAL COM 13 **Well Number:** 20H

Pressure Rating (PSI): 5M **Rating Depth:** 10000

Equipment: See attached Helmerich & Payne BOP Testing BLM manual for equipment and procedures for a 5000-psi system.

Requesting Variance? YES

Variance request: Variance is requested to use a co-flex hose between the BOP and choke instead of a steel line. See attached 3" I. D. x 10K test certificate. If this hose is unavailable, then a hose of equal or higher-pressure rating will be used. Variance is requested to use a speed head (aka, multi-bowl wellhead) after setting intermediate 1. Advance has drilled >50 wells in immediate area to depths >5,000' and never encountered any type of flows. This will allow Advance to land the intermediate 1 and use the current proposed wellhead design. Advance will then NU BOPE on the 13.375" and continue using the BOPE to the completion of the well. Variance is requested to use a sacrificial wellhead instead of a diverter. Advance will run surface casing with a sacrificial head so BOPE can be nippled up and tested as required by Onshore Order 2 before drilling out the surface casing. Once the intermediate 1 hole is drilled, cased, and cemented; then the sacrificial wellhead will be cut off and the 13.625" 5K MN-DS WH will be installed. BOPE will then be nippled up and tested as required by Onshore Order 2 before drilling out the intermediate 1 casing.

Testing Procedure: See attached Helmerich & Payne BOP Testing BLM manual for equipment and procedures for a 5000-psi system.

Choke Diagram Attachment:

Choke_Diagram_20201024112537.pdf

BOP Diagram Attachment:

BOP_Diagram_20201024112551.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	24	20.0	NEW	API	N	0	1765	0	1765	3906	2141	1765	K-55	133	BUTT	1.125	1.125	DRY	1.6	DRY	1.6
2	INTERMEDIATE	17.5	13.375	NEW	API	N	0	3495	0	3495	3907	411	3495	HCL-80	68	BUTT	1.125	1.125	DRY	1.6	DRY	1.6
3	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4000	0	4000	3907	-94	4000	J-55	40	BUTT	1.125	1.125	DRY	1.6	DRY	1.6
4	INTERMEDIATE	12.25	9.625	NEW	API	N	4000	10511	4000	10500	-93	-6594	6511	HCP-110	40	LT&C	1.125	1.125	DRY	1.6	DRY	1.6
5	PRODUCTION	8.75	5.5	NEW	NON API	N	0	12235	0	11900	3907	-7994	12235	HCP-110	20	OTHER - GBCD	1.125	1.125	DRY	1.6	DRY	1.6
6	PRODUCTION	8.5	5.5	NEW	API	N	12235	24072	11900	11900	-7994	-7994	11837	HCP-110	20	OTHER - GBCD	1.125	1.125	DRY	1.6	DRY	1.6

Operator Name: ADVANCE ENERGY PARTNERS HAT MESA LLC

Well Name: MARGARITA FEDRAL COM 13 **Well Number:** 20H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20201024112724.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20201024112812.pdf

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20201024112839.pdf

Operator Name: ADVANCE ENERGY PARTNERS HAT MESA LLC

Well Name: MARGARITA FEDRAL COM 13 **Well Number:** 20H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20201024112915.pdf

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

Inspection Document:

Spec Document:

5.5in_Casing_Specs_P110_HC_GBCD_20211209134141.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20201024112958.pdf

Casing ID: 6 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20201024113036.pdf

5.5in_Casing_Specs_P110_HC_GBCD_20201024113042.pdf

Section 4 - Cement

Operator Name: ADVANCE ENERGY PARTNERS HAT MESA LLC

Well Name: MARGARITA FEDRAL COM 13 **Well Number:** 20H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1412	1055	1.99	12.8	2099	50	Class C	2% Gypsum + 2% SMS + 0.25PPS Pol-EFlake + 0.005GPS NoFoam V1A
SURFACE	Tail		1412	1765	365	1.34	14.8	489	20	Class C	1% CaCl2 + 0.005GPS NoFoam V1A
INTERMEDIATE	Lead	2800	0	2610	800	3.5	11	2800	95	PowerCem	5PPS Plexcrete STE + 8% Gypsum + 1.5% SMS + 0.25% R-1300 + 0.25PPS Pol-E-Flake + 0.005GPS NoFoam V1A
INTERMEDIATE	Tail		2610	2800	100	1.33	14.8	133	0	Class C	0.005GPS NoFoam V1A
INTERMEDIATE	Lead	2800	2800	3200	299	1.83	12.8	547	97	Di Poz + C	2% Gel + 5% SALT + 0.25PPS Pol-EFlake + 0.005GPS NoFoam V1A
INTERMEDIATE	Tail		3200	3495	220	1.33	14.8	293	20	Class C	0.005GPS NoFoam V1A
INTERMEDIATE	Lead		0	8406	745	4.27	10.6	3181	50	PowerCem	5PPS Plexcrete STE + 11% Gypsum + 3% SMS + 0.1% SuspendaCem 6302 + 0.4% R-1300 + 0.005GPS NoFoam
INTERMEDIATE	Tail		8406	10511	670	1.21	14.5	811	20	Di Poz + H	5% SALT + 0.2% C-20 + 0.2% C-47B + 0.005GPS NoFoam
PRODUCTION	Lead		3706	11335	1170	1.76	12.8	2059	35	DI Poz + H	3% Gel + 5% SALT + 0.25% SMS + 0.5% C-20 + 0.005GPS NoFoam V1A
PRODUCTION	Tail		11335	24072	2655	1.33	14.8	3531	20	Class H	0.1% SuspendaCem 6302 + 0.3% C-20 + 0.4% C-47B + 0.005GPS NoFoam

Operator Name: ADVANCE ENERGY PARTNERS HAT MESA LLC

Well Name: MARGARITA FEDRAL COM 13 **Well Number:** 20H

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: All necessary additives (e. g., barite, bentonite, LCM) to maintain mud properties and meet minimum lost circulation and weight increase needs will be on site at all times. Mud program may change due to hole conditions.
Describe the mud monitoring system utilized: An electronic pit volume totalizer (PVT) will be used to monitor volume, flow rate, pump pressure, and stroke rate.

Circulating Medium Table

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
0	1765	OTHER : Fresh Water Spud Mud	8.4	10							
1765	3495	OTHER : Brine Water	8.4	10							
3495	5651	OTHER : Fresh Water	8.4	10							
5651	10508	OTHER : Cut Brine	8.9	9.1							
10508	12235	OTHER : Cut Brine	9	9.2							
12235	24072	OIL-BASED MUD	9	9.5							

Operator Name: ADVANCE ENERGY PARTNERS HAT MESA LLC

Well Name: MARGARITA FEDRAL COM 13 **Well Number:** 20H

Section 6 - Test, Logging, Coring

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

None

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

OTHER,

Other log type(s):

None

Coring operation description for the well:

No core, drill stem test, or open hole log is planned.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5880 **Anticipated Surface Pressure:** 3262

Anticipated Bottom Hole Temperature(F): 245

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:

Margarita_PadA_H2S_Plan_20201024114000.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Margarita_20H_Horizontal_Plan_20201024114446.pdf

Other proposed operations facets description:

Bow spring centralizers will be installed on the surface (13.5 centralizers), intermediate 1 (37.5), and intermediate 2 (31) casing strings.

Approximately 8 single bow centralizers will be installed on the production casing from 10,408' to 11,135' (TVD). Approximately 31 double bow centralizers will be installed from 11,135' to 12,435'. Approximately 141 solid body centralizers will be installed from 12,435' to TD.

Other proposed operations facets attachment:

CoFlex_Certs_20201024114139.pdf

Margarita_20H_Anticollision_Report_20201024114146.pdf

Sacrificial_Wellhead_20201024114156.pdf

Speedhead_Specs_20201024114157.pdf

Margarita_20H_Drill_Plan_v4.1_20211209133912.pdf

Operator Name: ADVANCE ENERGY PARTNERS HAT MESA LLC

Well Name: MARGARITA FEDRAL COM 13 **Well Number:** 20H

Other Variance attachment:

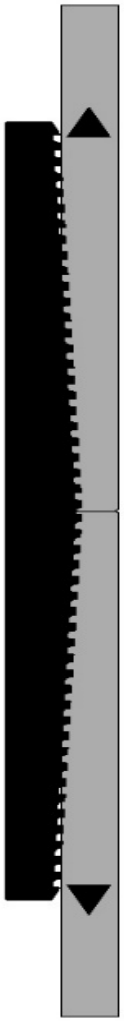
Casing_Cementing_Variance_Request_20201024114206.pdf

GB connections
Engineering the Right Connections

GB Connection Performance Properties Sheet

Rev. 0 (08/03/2017)

ENGINEERING THE RIGHT CONNECTIONS ™



Casing: 5.5 OD, 20 ppf
Casing Grade:** Benteler P110HC

Connection: GB CD Butt 6.300
Coupling Grade: API P-110

PIPE BODY GEOMETRY					
Nominal OD (in.)	5 1/2	Wall Thickness (in.)	0.361	Drift Diameter (in.)	4.653
Nominal Weight (ppf)	20.00	Nominal ID (in.)	4.778	API Alternate Drift Dia. (in.)	N/A
Plain End Weight (ppf)	19.83	Plain End Area (in.^{2})	5.828		

PIPE BODY PERFORMANCE					
Material Specification	Benteler P110HC	Min. Yield Str. (psi)	110,000	Min. Ultimate Str. (psi)	125,000
Collapse		**Tension**		**Pressure**	
API (psi)	11,100	Pl. End Yield Str. (kips)	641	Min. Int. Yield Press. (psi)	12,640
High Collapse** (psi)	12,200	**Torque**		**Bending**	
		Yield Torque (ft-lbs)	74,420	Build Rate to Yield (°/100 ft)	91.7

GB CD Butt 6.300 COUPLING GEOMETRY			
Coupling OD (in.)	6.300	Makeup Loss (in.)	4.2500
Coupling Length (in.)	8.500	Critical Cross-Sect. (in.^{2})	8.527

GB CD Butt 6.300 CONNECTION PERFORMANCE RATINGS/EFFICIENCIES					
Material Specification	API P-110	Min. Yield Str. (psi)	110,000	Min. Ultimate Str. (psi)	125,000
Tension		**Efficiency**		**Bending**	
Thread Str. (kips)	667	Internal Pressure (%)	100%	Build Rate to Yield (°/100 ft)	80.0
Min. Tension Yield (kips)	891	External Pressure (%)	100%	**Yield Torque**	
Min. Tension Ult. (kips)	1,013	Tension (%)	100%	Yield Torque (ft-lbs)	31,180
Joint Str. (kips)	667	Compression (%)	100%		
		Ratio of Areas (Cplg/Pipe)	1.46		

MAKEUP TORQUE					
Min. MU Tq. (ft-lbs)	10,000	Max. MU Tq. (ft-lbs)	20,000	Running Tq. (ft-lbs)	See GBT RP
				Max. Operating Tq. (ft-lbs)*	29,620

Units: US Customary (lbm, in., °F, lbf)
1 kip = 1,000 lbs
* See Running Procedure for description and limitations.
See attached: Notes for GB Connection Performance Properties.
GBT Running Procedure (GBT RP): www.gbtubulars.com/pdf/RP-GB-DWC-Connections.pdf
Blanking Dimensions: www.gbtubulars.com/pdf/GB-DWC-Blanking-Dimensions.pdf
Connection yield torque rating based on physical testing or extrapolation therefrom
** Casing properties applicable to Benteler P110 HC grade.

CASING DESIGN CRITERIA & LOAD CASE ASSUMPTIONS

SURFACE CASING:

SIZE (in)	SURFACE CASING	ID (in)	DRIFT (in)	BURST (psi)	COLLAPSE (psi)	TENSION (k-lbs)	CONN OD (in)	JOINT STRENGTH (k-lbs)	DEPTHS
20 "	94.0# J-55 BTC	19.124	18.937	2110	520	1480	21.000	1402	0' – 1785'

Collapse: $DF_C = 1.25$

- Full internal evacuation: Collapse force equal to the mud gradient in which the casing will be ran.
- Cementing: Collapse force equal to the gradient of the planned cement slurries to planned depths and an internal force equal to the fluid gradient of displacement fluid.

Burst: $DF_B = 1.25$

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the gradient in which the casing will be ran.

Tension: $DF_T = 1.6$

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string, without considering buoyancy.

INTERMEDIATE 1 CASING:

SIZE (in)	INTERMEDIATE 1 CASING	ID (in)	DRIFT (in)	BURST (psi)	COLLAPSE (psi)	TENSION (k-lbs)	CONN OD (in)	JOINT STRENGTH (k-lbs)	DEPTHS
13-3/8"	54.4# J-55 BTC	12.615	12.459	2740	1130	853	14.375	909	0' – 3600'

Collapse: $DF_C = 1.25$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be ran.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to fluid gradient of displacement fluid.

Burst: $DF_B = 1.25$

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be ran.
- Gas Kick Profile: Internal burst force at the shoe will be fracture pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be ran above that. External force will be equal to the mud gradient in which the casing will be ran.

- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be fracture pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be ran.

Tension: $DF_T = 1.6$

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string, without considering buoyancy.

INTERMEIDATE 2 CASING:

SIZE (in)	INTERMEDIATE 2 CASING	ID (in)	DRIFT (in)	BURST (psi)	COLLAPSE (psi)	TENSION (k-lbs)	CONN OD (in)	JOINT STRENGTH (k-lbs)	DEPTHS
9-5/8"	40# J-55 LTC	8.835	8.679	3950	2570	630	10.625	520	0' – 4000'
9-5/8"	40# HCL-80 LTC	8.835	8.679	5750	3870	630	10.625	520	4000' – 5500'

Collapse: $DF_C = 1.25$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be ran.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to fluid gradient of displacement fluid.

Burst: $DF_B = 1.25$

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be ran.
- Gas Kick Profile: Internal burst force at the shoe will be fracture pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be ran above that. External force will be equal to the mud gradient in which the casing will be ran.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be fracture pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be ran.

Tension: $DF_T = 1.6$

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string, without considering buoyancy.

PRODUCTION CASING:

SIZE (in)	PRODUCTION CASING	ID (in)	DRIFT (in)	BURST (psi)	COLLAPSE (psi)	TENSION (k-lbs)	CONN OD (in)	JOINT TENSION (k-lbs)	DEPTHS
5-1/2"	20# HCP-110 CDC HTQ	4.778	4.653	12,640	12,200	641	6.300	641	0' – 24,000'

Collapse: $DF_C = 1.25$

- Partial Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be ran. Internal force equal to gas gradient over one-third of setting depth and mud gradient with which the next hole section will be ran below that.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be ran above that and an internal force equal to the fluid gradient of displacement fluid.

Burst: $DF_B = 1.25$

- Pressure Test: 80% of burst casing test with an external force equal to the mud gradient in which the casing will be ran.
- Injection Down Casing: 9800 psi surface injection pressure plus an internal pressure gradient of with an external force equal to the mud gradient in which the casing will be ran.

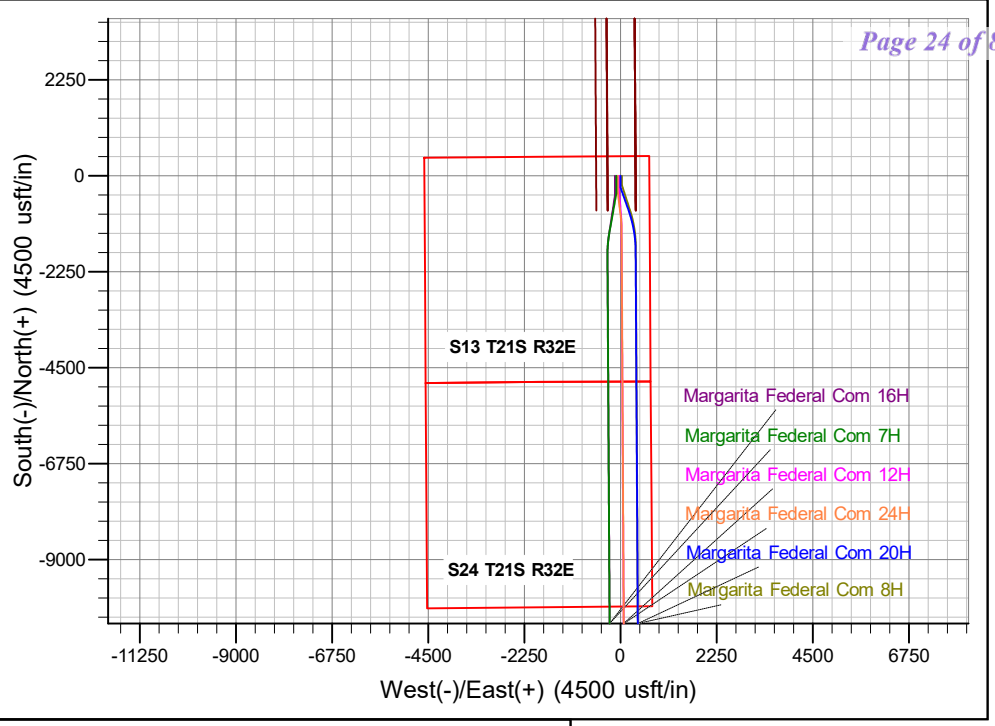
Tension: $DF_T = 1.6$

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string, without considering buoyancy.

ADVANCE ENERGY PARTNERS

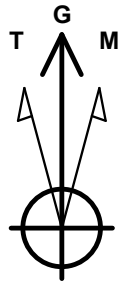
WELL DETAILS: Margarita Federal Com 20H					
Ground Elev: 3906.0		KB: 3942.0			
+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.0	0.0	540873.70	760659.39	32° 29' 5.690 N	103° 37' 19.398 W

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



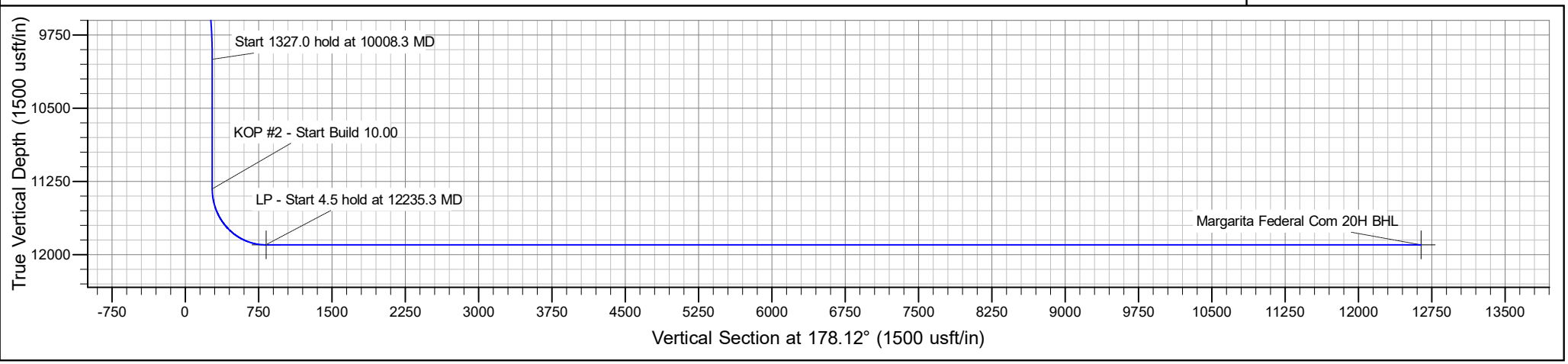
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5200.0	0.00	0.00	5200.0	0.0	0.0	0.00	0.00	0.0	KOP - Start Build 1.00
3	5553.9	3.54	180.00	5553.7	-10.9	0.0	1.00	180.00	10.9	Start 4100.4 hold at 5553.9 MD
4	9654.3	3.54	180.00	9646.3	-264.1	0.0	0.00	0.00	263.9	Start Drop -1.00
5	10008.3	0.00	0.00	10000.0	-275.0	0.0	1.00	180.00	274.9	Start 1327.0 hold at 10008.3 MD
6	11335.3	0.00	0.00	11327.0	-275.0	0.0	0.00	0.00	274.9	KOP #2 - Start Build 10.00
7	12235.3	90.00	160.69	11900.0	-815.7	189.5	10.00	160.69	821.5	LP - Start 4.5 hold at 12235.3 MD
8	12239.9	90.00	160.69	11900.0	-820.0	191.0	0.00	0.00	825.8	Start DLS 2.00 TFO 90.00
9	13188.9	90.00	179.67	11900.0	-1750.8	352.2	2.00	90.00	1761.4	Start 10883.3 hold at 13188.9 MD
10	24072.1	90.00	179.67	11900.0	-12633.9	415.5	0.00	0.00	12640.7	TD at 24072.1



Azimuths to Grid North
True North: -0.38°
Magnetic North: 6.30°

Magnetic Field
Strength: 47790.5nT
Dip Angle: 60.26°
Date: 4/21/2020
Model: IGRF2015



Advance Energy Partners

Hat Mesa
Margarita Federal Com - Pad A
Margarita Federal Com 20H

Margarita Federal Com 20H

Plan: Margarita Federal Com 20H - Prelim 1

Standard Planning Report

23 April, 2020

ADVANCE ENERGY PARTNERS

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Margarita Federal Com 20H
Company:	Advance Energy Partners	**TVD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Project:	Hat Mesa	**MD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Site:	Margarita Federal Com - Pad A	**North Reference:**	Grid
Well:	Margarita Federal Com 20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Margarita Federal Com 20H		
Design:	Margarita Federal Com 20H - Prelim 1		

Project Hat Mesa, Lea County, NM

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

Site Margarita Federal Com - Pad A

Site Position:		**Northing:**	540,873.26 usft	**Latitude:**	32° 29' 5.690 N
From:	Lat/Long	**Easting:**	760,593.40 usft	**Longitude:**	103° 37' 20.168 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well Margarita Federal Com 20H

Well Position	**+N/-S**	0.0 usft	**Northing:**	540,873.70 usft	**Latitude:**	32° 29' 5.690 N
	+E/-W	0.0 usft	**Easting:**	760,659.38 usft	**Longitude:**	103° 37' 19.398 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,906.0 usft
Grid Convergence:		0.38 °				

Wellbore Margarita Federal Com 20H

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	4/21/2020	6.69	60.26	47,790.46748556

Design Margarita Federal Com 20H - Prelim 1

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	178.12

Plan Survey Tool Program **Date** 4/23/2020

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	24,071.2	Margarita Federal Com 20H - Pre	MWD+HRGM	
				OWSG MWD + HRGM	

ADVANCE ENERGY PARTNERS

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Margarita Federal Com 20H
Company:	Advance Energy Partners	**TVD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Project:	Hat Mesa	**MD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Site:	Margarita Federal Com - Pad A	**North Reference:**	Grid
Well:	Margarita Federal Com 20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Margarita Federal Com 20H		
Design:	Margarita Federal Com 20H - Prelim 1		

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	
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,553.9	3.54	180.00	5,553.7	-10.9	0.0	1.00	1.00	0.00	180.00	
9,654.3	3.54	180.00	9,646.3	-264.1	0.0	0.00	0.00	0.00	0.00	
10,008.3	0.00	0.00	10,000.0	-275.0	0.0	1.00	-1.00	0.00	180.00	
11,335.3	0.00	0.00	11,327.0	-275.0	0.0	0.00	0.00	0.00	0.00	
12,235.3	90.00	160.69	11,900.0	-815.7	189.5	10.00	10.00	0.00	160.69	
12,239.9	90.00	160.69	11,900.0	-820.0	191.0	0.00	0.00	0.00	0.00	Margarita Federal Co
13,188.9	90.00	179.67	11,900.0	-1,750.8	352.2	2.00	0.00	2.00	90.00	
24,072.1	90.00	179.67	11,900.0	-12,633.9	415.5	0.00	0.00	0.00	0.00	Margarita Federal Co

ADVANCE ENERGY PARTNERS

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Margarita Federal Com 20H
Company:	Advance Energy Partners	**TVD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Project:	Hat Mesa	**MD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Site:	Margarita Federal Com - Pad A	**North Reference:**	Grid
Well:	Margarita Federal Com 20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Margarita Federal Com 20H		
Design:	Margarita Federal Com 20H - Prelim 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
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
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
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.00									

ADVANCE ENERGY PARTNERS

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Margarita Federal Com 20H
Company:	Advance Energy Partners	**TVD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Project:	Hat Mesa	**MD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Site:	Margarita Federal Com - Pad A	**North Reference:**	Grid
Well:	Margarita Federal Com 20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Margarita Federal Com 20H		
Design:	Margarita Federal Com 20H - Prelim 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)
5,300.0	1.00	180.00	5,300.0	-0.9	0.0	0.9	1.00	1.00	0.00
5,400.0	2.00	180.00	5,400.0	-3.5	0.0	3.5	1.00	1.00	0.00
5,500.0	3.00	180.00	5,499.9	-7.9	0.0	7.8	1.00	1.00	0.00
5,553.9	3.54	180.00	5,553.7	-10.9	0.0	10.9	1.00	1.00	0.00
Start 4100.4 hold at 5553.9 MD									
5,600.0	3.54	180.00	5,599.7	-13.8	0.0	13.8	0.00	0.00	0.00
5,700.0	3.54	180.00	5,699.5	-19.9	0.0	19.9	0.00	0.00	0.00
5,800.0	3.54	180.00	5,799.3	-26.1	0.0	26.1	0.00	0.00	0.00
5,900.0	3.54	180.00	5,899.1	-32.3	0.0	32.3	0.00	0.00	0.00
6,000.0	3.54	180.00	5,998.9	-38.5	0.0	38.4	0.00	0.00	0.00
6,100.0	3.54	180.00	6,098.7	-44.6	0.0	44.6	0.00	0.00	0.00
6,200.0	3.54	180.00	6,198.5	-50.8	0.0	50.8	0.00	0.00	0.00
6,300.0	3.54	180.00	6,298.4	-57.0	0.0	57.0	0.00	0.00	0.00
6,400.0	3.54	180.00	6,398.2	-63.2	0.0	63.1	0.00	0.00	0.00
6,500.0	3.54	180.00	6,498.0	-69.3	0.0	69.3	0.00	0.00	0.00
6,600.0	3.54	180.00	6,597.8	-75.5	0.0	75.5	0.00	0.00	0.00
6,700.0	3.54	180.00	6,697.6	-81.7	0.0	81.6	0.00	0.00	0.00
6,800.0	3.54	180.00	6,797.4	-87.9	0.0	87.8	0.00	0.00	0.00
6,900.0	3.54	180.00	6,897.2	-94.0	0.0	94.0	0.00	0.00	0.00
7,000.0	3.54	180.00	6,997.0	-100.2	0.0	100.1	0.00	0.00	0.00
7,100.0	3.54	180.00	7,096.8	-106.4	0.0	106.3	0.00	0.00	0.00
7,200.0	3.54	180.00	7,196.6	-112.6	0.0	112.5	0.00	0.00	0.00
7,300.0	3.54	180.00	7,296.4	-118.7	0.0	118.7	0.00	0.00	0.00
7,400.0	3.54	180.00	7,396.3	-124.9	0.0	124.8	0.00	0.00	0.00
7,500.0	3.54	180.00	7,496.1	-131.1	0.0	131.0	0.00	0.00	0.00
7,600.0	3.54	180.00	7,595.9	-137.2	0.0	137.2	0.00	0.00	0.00
7,700.0	3.54	180.00	7,695.7	-143.4	0.0	143.3	0.00	0.00	0.00
7,800.0	3.54	180.00	7,795.5	-149.6	0.0	149.5	0.00	0.00	0.00
7,900.0	3.54	180.00	7,895.3	-155.8	0.0	155.7	0.00	0.00	0.00
8,000.0	3.54	180.00	7,995.1	-161.9	0.0	161.9	0.00	0.00	0.00
8,100.0	3.54	180.00	8,094.9	-168.1	0.0	168.0	0.00	0.00	0.00
8,200.0	3.54	180.00	8,194.7	-174.3	0.0	174.2	0.00	0.00	0.00
8,300.0	3.54	180.00	8,294.5	-180.5	0.0	180.4	0.00	0.00	0.00
8,400.0	3.54	180.00	8,394.3	-186.6	0.0	186.5	0.00	0.00	0.00
8,500.0	3.54	180.00	8,494.2	-192.8	0.0	192.7	0.00	0.00	0.00
8,600.0	3.54	180.00	8,594.0	-199.0	0.0	198.9	0.00	0.00	0.00
8,700.0	3.54	180.00	8,693.8	-205.2	0.0	205.0	0.00	0.00	0.00
8,800.0	3.54	180.00	8,793.6	-211.3	0.0	211.2	0.00	0.00	0.00
8,900.0	3.54	180.00	8,893.4	-217.5	0.0	217.4	0.00	0.00	0.00
9,000.0	3.54	180.00	8,993.2	-223.7	0.0	223.6	0.00	0.00	0.00
9,100.0	3.54	180.00	9,093.0	-229.8	0.0	229.7	0.00	0.00	0.00
9,200.0	3.54	180.00	9,192.8	-236.0	0.0	235.9	0.00	0.00	0.00
9,300.0	3.54	180.00	9,292.6	-242.2	0.0	242.1	0.00	0.00	0.00
9,400.0	3.54	180.00	9,392.4	-248.4	0.0	248.2	0.00	0.00	0.00
9,500.0	3.54	180.00	9,492.2	-254.5	0.0	254.4	0.00	0.00	0.00
9,600.0	3.54	180.00	9,592.1	-260.7	0.0	260.6	0.00	0.00	0.00
9,654.3	3.54	180.00	9,646.3	-264.1	0.0	263.9	0.00	0.00	0.00
Start Drop -1.00									
9,700.0	3.08	180.00	9,691.9	-266.7	0.0	266.6	1.00	-1.00	0.00
9,800.0	2.08	180.00	9,791.8	-271.2	0.0	271.1	1.00	-1.00	0.00
9,900.0	1.08	180.00	9,891.7	-274.0	0.0	273.8	1.00	-1.00	0.00
10,000.0	0.08	180.00	9,991.7	-275.0	0.0	274.8	1.00	-1.00	0.00
10,008.3	0.00	0.00	10,000.0	-275.0	0.0	274.9	1.00	-1.00	0.00

ADVANCE ENERGY PARTNERS

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Margarita Federal Com 20H
Company:	Advance Energy Partners	**TVD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Project:	Hat Mesa	**MD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Site:	Margarita Federal Com - Pad A	**North Reference:**	Grid
Well:	Margarita Federal Com 20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Margarita Federal Com 20H		
Design:	Margarita Federal Com 20H - Prelim 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)
Start 1327.0 hold at 10008.3 MD									
10,100.0	0.00	0.00	10,091.7	-275.0	0.0	274.9	0.00	0.00	0.00
10,200.0	0.00	0.00	10,191.7	-275.0	0.0	274.9	0.00	0.00	0.00
10,300.0	0.00	0.00	10,291.7	-275.0	0.0	274.9	0.00	0.00	0.00
10,400.0	0.00	0.00	10,391.7	-275.0	0.0	274.9	0.00	0.00	0.00
10,500.0	0.00	0.00	10,491.7	-275.0	0.0	274.9	0.00	0.00	0.00
10,600.0	0.00	0.00	10,591.7	-275.0	0.0	274.9	0.00	0.00	0.00
10,700.0	0.00	0.00	10,691.7	-275.0	0.0	274.9	0.00	0.00	0.00
10,800.0	0.00	0.00	10,791.7	-275.0	0.0	274.9	0.00	0.00	0.00
10,900.0	0.00	0.00	10,891.7	-275.0	0.0	274.9	0.00	0.00	0.00
11,000.0	0.00	0.00	10,991.7	-275.0	0.0	274.9	0.00	0.00	0.00
11,100.0	0.00	0.00	11,091.7	-275.0	0.0	274.9	0.00	0.00	0.00
11,200.0	0.00	0.00	11,191.7	-275.0	0.0	274.9	0.00	0.00	0.00
11,300.0	0.00	0.00	11,291.7	-275.0	0.0	274.9	0.00	0.00	0.00
11,335.3	0.00	0.00	11,327.0	-275.0	0.0	274.9	0.00	0.00	0.00
KOP #2 - Start Build 10.00									
11,400.0	6.47	160.69	11,391.6	-278.4	1.2	278.3	10.00	10.00	0.00
11,500.0	16.47	160.69	11,489.5	-297.2	7.8	297.3	10.00	10.00	0.00
11,600.0	26.47	160.69	11,582.4	-331.7	19.9	332.2	10.00	10.00	0.00
11,700.0	36.47	160.69	11,667.6	-380.9	37.1	381.9	10.00	10.00	0.00
11,800.0	46.47	160.69	11,742.4	-443.3	59.0	445.0	10.00	10.00	0.00
11,900.0	56.47	160.69	11,804.7	-517.0	84.8	519.5	10.00	10.00	0.00
12,000.0	66.47	160.69	11,852.4	-599.8	113.8	603.3	10.00	10.00	0.00
12,100.0	76.47	160.69	11,884.1	-689.2	145.2	693.6	10.00	10.00	0.00
12,200.0	86.47	160.69	11,898.9	-782.4	177.8	787.8	10.00	10.00	0.00
12,235.3	90.00	160.69	11,900.0	-815.7	189.5	821.5	10.00	10.00	0.00
LP - Start 4.5 hold at 12235.3 MD									
12,239.9	90.00	160.69	11,900.0	-820.0	191.0	825.8	0.00	0.00	0.00
Start DLS 2.00 TFO 90.00 - Margarita Federal Com 20H LP									
12,300.0	90.00	161.89	11,900.0	-877.0	210.3	883.4	2.00	0.00	2.00
12,400.0	90.00	163.89	11,900.0	-972.5	239.7	979.9	2.00	0.00	2.00
12,500.0	90.00	165.89	11,900.0	-1,069.1	265.8	1,077.2	2.00	0.00	2.00
12,600.0	90.00	167.89	11,900.0	-1,166.5	288.5	1,175.3	2.00	0.00	2.00
12,700.0	90.00	169.89	11,900.0	-1,264.6	307.7	1,274.0	2.00	0.00	2.00
12,800.0	90.00	171.89	11,900.0	-1,363.3	323.6	1,373.2	2.00	0.00	2.00
12,900.0	90.00	173.89	11,900.0	-1,462.5	335.9	1,472.8	2.00	0.00	2.00
13,000.0	90.00	175.89	11,900.0	-1,562.1	344.9	1,572.6	2.00	0.00	2.00
13,100.0	90.00	177.89	11,900.0	-1,662.0	350.3	1,672.6	2.00	0.00	2.00
13,188.9	90.00	179.67	11,900.0	-1,750.8	352.2	1,761.4	2.00	0.00	2.00
Start 10883.3 hold at 13188.9 MD									
13,200.0	90.00	179.67	11,900.0	-1,762.0	352.2	1,772.6	0.00	0.00	0.00
13,300.0	90.00	179.67	11,900.0	-1,862.0	352.8	1,872.5	0.00	0.00	0.00
13,400.0	90.00	179.67	11,900.0	-1,962.0	353.4	1,972.5	0.00	0.00	0.00
13,500.0	90.00	179.67	11,900.0	-2,062.0	354.0	2,072.5	0.00	0.00	0.00
13,600.0	90.00	179.67	11,900.0	-2,162.0	354.6	2,172.4	0.00	0.00	0.00
13,700.0	90.00	179.67	11,900.0	-2,262.0	355.1	2,272.4	0.00	0.00	0.00
13,800.0	90.00	179.67	11,900.0	-2,362.0	355.7	2,372.4	0.00	0.00	0.00
13,900.0	90.00	179.67	11,900.0	-2,461.9	356.3	2,472.3	0.00	0.00	0.00
14,000.0	90.00	179.67	11,900.0	-2,561.9	356.9	2,572.3	0.00	0.00	0.00
14,100.0	90.00	179.67	11,900.0	-2,661.9	357.5	2,672.3	0.00	0.00	0.00
14,200.0	90.00	179.67	11,900.0	-2,761.9	358.1	2,772.2	0.00	0.00	0.00
14,300.0	90.00	179.67	11,900.0	-2,861.9	358.6	2,872.2	0.00	0.00	0.00
14,400.0	90.00	179.67	11,900.0	-2,961.9	359.2	2,972.1	0.00	0.00	0.00

ADVANCE ENERGY PARTNERS

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Margarita Federal Com 20H
Company:	Advance Energy Partners	**TVD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Project:	Hat Mesa	**MD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Site:	Margarita Federal Com - Pad A	**North Reference:**	Grid
Well:	Margarita Federal Com 20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Margarita Federal Com 20H		
Design:	Margarita Federal Com 20H - Prelim 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)
14,500.0	90.00	179.67	11,900.0	-3,061.9	359.8	3,072.1	0.00	0.00	0.00
14,600.0	90.00	179.67	11,900.0	-3,161.9	360.4	3,172.1	0.00	0.00	0.00
14,700.0	90.00	179.67	11,900.0	-3,261.9	361.0	3,272.0	0.00	0.00	0.00
14,800.0	90.00	179.67	11,900.0	-3,361.9	361.5	3,372.0	0.00	0.00	0.00
14,900.0	90.00	179.67	11,900.0	-3,461.9	362.1	3,472.0	0.00	0.00	0.00
15,000.0	90.00	179.67	11,900.0	-3,561.9	362.7	3,571.9	0.00	0.00	0.00
15,100.0	90.00	179.67	11,900.0	-3,661.9	363.3	3,671.9	0.00	0.00	0.00
15,200.0	90.00	179.67	11,900.0	-3,761.9	363.9	3,771.9	0.00	0.00	0.00
15,300.0	90.00	179.67	11,900.0	-3,861.9	364.5	3,871.8	0.00	0.00	0.00
15,400.0	90.00	179.67	11,900.0	-3,961.9	365.0	3,971.8	0.00	0.00	0.00
15,500.0	90.00	179.67	11,900.0	-4,061.9	365.6	4,071.7	0.00	0.00	0.00
15,600.0	90.00	179.67	11,900.0	-4,161.9	366.2	4,171.7	0.00	0.00	0.00
15,700.0	90.00	179.67	11,900.0	-4,261.9	366.8	4,271.7	0.00	0.00	0.00
15,800.0	90.00	179.67	11,900.0	-4,361.9	367.4	4,371.6	0.00	0.00	0.00
15,900.0	90.00	179.67	11,900.0	-4,461.9	368.0	4,471.6	0.00	0.00	0.00
16,000.0	90.00	179.67	11,900.0	-4,561.9	368.5	4,571.6	0.00	0.00	0.00
16,100.0	90.00	179.67	11,900.0	-4,661.9	369.1	4,671.5	0.00	0.00	0.00
16,200.0	90.00	179.67	11,900.0	-4,761.9	369.7	4,771.5	0.00	0.00	0.00
16,300.0	90.00	179.67	11,900.0	-4,861.9	370.3	4,871.5	0.00	0.00	0.00
16,400.0	90.00	179.67	11,900.0	-4,961.9	370.9	4,971.4	0.00	0.00	0.00
16,500.0	90.00	179.67	11,900.0	-5,061.9	371.4	5,071.4	0.00	0.00	0.00
16,600.0	90.00	179.67	11,900.0	-5,161.9	372.0	5,171.3	0.00	0.00	0.00
16,700.0	90.00	179.67	11,900.0	-5,261.9	372.6	5,271.3	0.00	0.00	0.00
16,800.0	90.00	179.67	11,900.0	-5,361.9	373.2	5,371.3	0.00	0.00	0.00
16,900.0	90.00	179.67	11,900.0	-5,461.9	373.8	5,471.2	0.00	0.00	0.00
17,000.0	90.00	179.67	11,900.0	-5,561.9	374.4	5,571.2	0.00	0.00	0.00
17,100.0	90.00	179.67	11,900.0	-5,661.9	374.9	5,671.2	0.00	0.00	0.00
17,200.0	90.00	179.67	11,900.0	-5,761.9	375.5	5,771.1	0.00	0.00	0.00
17,300.0	90.00	179.67	11,900.0	-5,861.9	376.1	5,871.1	0.00	0.00	0.00
17,400.0	90.00	179.67	11,900.0	-5,961.9	376.7	5,971.0	0.00	0.00	0.00
17,500.0	90.00	179.67	11,900.0	-6,061.9	377.3	6,071.0	0.00	0.00	0.00
17,600.0	90.00	179.67	11,900.0	-6,161.9	377.8	6,171.0	0.00	0.00	0.00
17,700.0	90.00	179.67	11,900.0	-6,261.9	378.4	6,270.9	0.00	0.00	0.00
17,800.0	90.00	179.67	11,900.0	-6,361.9	379.0	6,370.9	0.00	0.00	0.00
17,900.0	90.00	179.67	11,900.0	-6,461.9	379.6	6,470.9	0.00	0.00	0.00
18,000.0	90.00	179.67	11,900.0	-6,561.9	380.2	6,570.8	0.00	0.00	0.00
18,100.0	90.00	179.67	11,900.0	-6,661.9	380.8	6,670.8	0.00	0.00	0.00
18,200.0	90.00	179.67	11,900.0	-6,761.9	381.3	6,770.8	0.00	0.00	0.00
18,300.0	90.00	179.67	11,900.0	-6,861.9	381.9	6,870.7	0.00	0.00	0.00
18,400.0	90.00	179.67	11,900.0	-6,961.9	382.5	6,970.7	0.00	0.00	0.00
18,500.0	90.00	179.67	11,900.0	-7,061.9	383.1	7,070.6	0.00	0.00	0.00
18,600.0	90.00	179.67	11,900.0	-7,161.9	383.7	7,170.6	0.00	0.00	0.00
18,700.0	90.00	179.67	11,900.0	-7,261.9	384.2	7,270.6	0.00	0.00	0.00
18,800.0	90.00	179.67	11,900.0	-7,361.9	384.8	7,370.5	0.00	0.00	0.00
18,900.0	90.00	179.67	11,900.0	-7,461.9	385.4	7,470.5	0.00	0.00	0.00
19,000.0	90.00	179.67	11,900.0	-7,561.9	386.0	7,570.5	0.00	0.00	0.00
19,100.0	90.00	179.67	11,900.0	-7,661.9	386.6	7,670.4	0.00	0.00	0.00
19,200.0	90.00	179.67	11,900.0	-7,761.9	387.2	7,770.4	0.00	0.00	0.00
19,300.0	90.00	179.67	11,900.0	-7,861.9	387.7	7,870.4	0.00	0.00	0.00
19,400.0	90.00	179.67	11,900.0	-7,961.9	388.3	7,970.3	0.00	0.00	0.00
19,500.0	90.00	179.67	11,900.0	-8,061.9	388.9	8,070.3	0.00	0.00	0.00
19,600.0	90.00	179.67	11,900.0	-8,161.9	389.5	8,170.2	0.00	0.00	0.00
19,700.0	90.00	179.67	11,900.0	-8,261.9	390.1	8,270.2	0.00	0.00	0.00
19,800.0	90.00	179.67	11,900.0	-8,361.8	390.7	8,370.2	0.00	0.00	0.00

ADVANCE ENERGY PARTNERS

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Margarita Federal Com 20H
Company:	Advance Energy Partners	**TVD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Project:	Hat Mesa	**MD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Site:	Margarita Federal Com - Pad A	**North Reference:**	Grid
Well:	Margarita Federal Com 20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Margarita Federal Com 20H		
Design:	Margarita Federal Com 20H - Prelim 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)
19,900.0	90.00	179.67	11,900.0	-8,461.8	391.2	8,470.1	0.00	0.00	0.00
20,000.0	90.00	179.67	11,900.0	-8,561.8	391.8	8,570.1	0.00	0.00	0.00
20,100.0	90.00	179.67	11,900.0	-8,661.8	392.4	8,670.1	0.00	0.00	0.00
20,200.0	90.00	179.67	11,900.0	-8,761.8	393.0	8,770.0	0.00	0.00	0.00
20,300.0	90.00	179.67	11,900.0	-8,861.8	393.6	8,870.0	0.00	0.00	0.00
20,400.0	90.00	179.67	11,900.0	-8,961.8	394.1	8,970.0	0.00	0.00	0.00
20,500.0	90.00	179.67	11,900.0	-9,061.8	394.7	9,069.9	0.00	0.00	0.00
20,600.0	90.00	179.67	11,900.0	-9,161.8	395.3	9,169.9	0.00	0.00	0.00
20,700.0	90.00	179.67	11,900.0	-9,261.8	395.9	9,269.8	0.00	0.00	0.00
20,800.0	90.00	179.67	11,900.0	-9,361.8	396.5	9,369.8	0.00	0.00	0.00
20,900.0	90.00	179.67	11,900.0	-9,461.8	397.1	9,469.8	0.00	0.00	0.00
21,000.0	90.00	179.67	11,900.0	-9,561.8	397.6	9,569.7	0.00	0.00	0.00
21,100.0	90.00	179.67	11,900.0	-9,661.8	398.2	9,669.7	0.00	0.00	0.00
21,200.0	90.00	179.67	11,900.0	-9,761.8	398.8	9,769.7	0.00	0.00	0.00
21,300.0	90.00	179.67	11,900.0	-9,861.8	399.4	9,869.6	0.00	0.00	0.00
21,400.0	90.00	179.67	11,900.0	-9,961.8	400.0	9,969.6	0.00	0.00	0.00
21,500.0	90.00	179.67	11,900.0	-10,061.8	400.5	10,069.5	0.00	0.00	0.00
21,600.0	90.00	179.67	11,900.0	-10,161.8	401.1	10,169.5	0.00	0.00	0.00
21,700.0	90.00	179.67	11,900.0	-10,261.8	401.7	10,269.5	0.00	0.00	0.00
21,800.0	90.00	179.67	11,900.0	-10,361.8	402.3	10,369.4	0.00	0.00	0.00
21,900.0	90.00	179.67	11,900.0	-10,461.8	402.9	10,469.4	0.00	0.00	0.00
22,000.0	90.00	179.67	11,900.0	-10,561.8	403.5	10,569.4	0.00	0.00	0.00
22,100.0	90.00	179.67	11,900.0	-10,661.8	404.0	10,669.3	0.00	0.00	0.00
22,200.0	90.00	179.67	11,900.0	-10,761.8	404.6	10,769.3	0.00	0.00	0.00
22,300.0	90.00	179.67	11,900.0	-10,861.8	405.2	10,869.3	0.00	0.00	0.00
22,400.0	90.00	179.67	11,900.0	-10,961.8	405.8	10,969.2	0.00	0.00	0.00
22,500.0	90.00	179.67	11,900.0	-11,061.8	406.4	11,069.2	0.00	0.00	0.00
22,600.0	90.00	179.67	11,900.0	-11,161.8	406.9	11,169.1	0.00	0.00	0.00
22,700.0	90.00	179.67	11,900.0	-11,261.8	407.5	11,269.1	0.00	0.00	0.00
22,800.0	90.00	179.67	11,900.0	-11,361.8	408.1	11,369.1	0.00	0.00	0.00
22,900.0	90.00	179.67	11,900.0	-11,461.8	408.7	11,469.0	0.00	0.00	0.00
23,000.0	90.00	179.67	11,900.0	-11,561.8	409.3	11,569.0	0.00	0.00	0.00
23,100.0	90.00	179.67	11,900.0	-11,661.8	409.9	11,669.0	0.00	0.00	0.00
23,200.0	90.00	179.67	11,900.0	-11,761.8	410.4	11,768.9	0.00	0.00	0.00
23,300.0	90.00	179.67	11,900.0	-11,861.8	411.0	11,868.9	0.00	0.00	0.00
23,400.0	90.00	179.67	11,900.0	-11,961.8	411.6	11,968.9	0.00	0.00	0.00
23,500.0	90.00	179.67	11,900.0	-12,061.8	412.2	12,068.8	0.00	0.00	0.00
23,600.0	90.00	179.67	11,900.0	-12,161.8	412.8	12,168.8	0.00	0.00	0.00
23,700.0	90.00	179.67	11,900.0	-12,261.8	413.3	12,268.7	0.00	0.00	0.00
23,800.0	90.00	179.67	11,900.0	-12,361.8	413.9	12,368.7	0.00	0.00	0.00
23,900.0	90.00	179.67	11,900.0	-12,461.8	414.5	12,468.7	0.00	0.00	0.00
24,000.0	90.00	179.67	11,900.0	-12,561.8	415.1	12,568.6	0.00	0.00	0.00
24,072.1	90.00	179.67	11,900.0	-12,633.9	415.5	12,640.7	0.00	0.00	0.00

TD at 24072.1 - Margarita Federal Com 20H BHL

ADVANCE ENERGY PARTNERS

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Margarita Federal Com 20H
Company:	Advance Energy Partners	**TVD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Project:	Hat Mesa	**MD Reference:**	WELL @ 3931.0usft (Original Well Elev)
Site:	Margarita Federal Com - Pad A	**North Reference:**	Grid
Well:	Margarita Federal Com 20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Margarita Federal Com 20H		
Design:	Margarita Federal Com 20H - Prelim 1		

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
Margarita Federal Com 2 - plan hits target center - Point	0.00	0.00	11,900.0	-12,633.9	415.5	528,239.80	761,074.90	32° 27' 0.652 N	103° 37' 15.532 W
Margarita Federal Com 2 - plan hits target center - Point	0.00	0.01	11,900.0	-820.0	191.0	540,053.70	760,850.38	32° 28' 57.564 N	103° 37' 17.232 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
12,235.3	11,900.0	LP	20	24

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
5,200.0	5,200.0	0.0	0.0	KOP - Start Build 1.00
5,553.9	5,553.7	-10.9	0.0	Start 4100.4 hold at 5553.9 MD
9,654.3	9,646.3	-264.1	0.0	Start Drop -1.00
10,008.3	10,000.0	-275.0	0.0	Start 1327.0 hold at 10008.3 MD
11,335.3	11,327.0	-275.0	0.0	KOP #2 - Start Build 10.00
12,235.3	11,900.0	-815.7	189.5	LP - Start 4.5 hold at 12235.3 MD
12,239.9	11,900.0	-820.0	191.0	Start DLS 2.00 TFO 90.00
13,188.9	11,900.0	-1,750.8	352.2	Start 10883.3 hold at 13188.9 MD
24,072.1	11,900.0	-12,633.9	415.5	TD at 24072.1

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL
Margarita Federal Com 13 16H, 7H, 24H, 12H, 20H, and 8H, and 15H, 5H, 23H, 11H, 19H, and 6H, and 14H, 3H, 22H, 10H, 18H, and 4H Wells and Access Roads

Lease Nos. NMNM 014155/NMNM 112934

Advance Energy Partners Hat Mesa, LLC

Margarita Federal Com 13

Well Pad A

16H:
Surface Hole Locations: 460 ft. FNL and 807 ft. FEL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 990 ft. FEL; Section 25, T. 21 S., R. 32 E.

7H:
Surface Hole Locations: 460 ft. FNL and 774 ft. FEL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 990 ft. FEL; Section 25, T. 21 S., R. 32 E.

24H:
Surface Hole Locations: 460 ft. FNL and 741 ft. FEL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 660 ft. FEL; Section 25, T. 21 S., R. 32 E.

12H:
Surface Hole Locations: 460 ft. FNL and 708 ft. FEL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 660 ft. FEL; Section 25, T. 21 S., R. 32 E.

20H:
Surface Hole Locations: 460 ft. FNL and 675 ft. FEL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 330 ft. FEL; Section 25, T. 21 S., R. 32 E.

8H:
Surface Hole Locations: 460 ft. FNL and 642 ft. FEL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 330 ft. FEL; Section 25, T. 21 S., R. 32 E.

Well Pad B

15H:
Surface Hole Locations: 1399 ft. FNL and 2047 ft. FEL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 2310 ft. FEL; Section 25, T. 21 S., R. 32 E.

5H:
Surface Hole Locations: 1399 ft. FNL and 2014 ft. FEL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 2310 ft. FEL; Section 25, T. 21 S., R. 32 E.

23H:
Surface Hole Locations: 1399 ft. FNL and 1981 ft. FEL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 1980 ft. FEL; Section 25, T. 21 S., R. 32 E.

Approval Date: 04/19/2022

11H:
Surface Hole Locations: 1399 ft. FNL and 1948 ft. FEL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 1980 ft. FEL; Section 25, T. 21 S., R. 32 E.

19H:
Surface Hole Locations: 1399 ft. FNL and 1915 ft. FEL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 1650 ft. FEL; Section 25, T. 21 S., R. 32 E.

6H:
Surface Hole Locations: 1399 ft. FNL and 1882 ft. FEL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 1650 ft. FEL; Section 25, T. 21 S., R. 32 E.

Well Pad C
14H:
Surface Hole Locations: 1250 ft. FNL and 1435 ft. FWL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 1650 ft. FEL; Section 25, T. 21 S., R. 32 E.

3H:
Surface Hole Locations: 1250 ft. FNL and 1468 ft. FWL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 1650 ft. FEL; Section 25, T. 21 S., R. 32 E.

22H:
Surface Hole Locations: 1250 ft. FNL and 1501 ft. FEL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 1980 ft. FWL; Section 25, T. 21 S., R. 32 E.

10H:
Surface Hole Locations: 1250 ft. FNL and 1534 ft. FWL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 1980 ft. FWL; Section 25, T. 21 S., R. 32 E.

18H:
Surface Hole Locations: 1250 ft. FNL and 1567 ft. FWL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 2310 ft. FWL; Section 25, T. 21 S., R. 32 E.

4H:
Surface Hole Locations: 1250 ft. FNL and 1600 ft. FWL; Section 13, T. 21 S., R. 32 E.
Bottom Hole Locations: 2540 ft. FNL and 2310 ft. FWL; Section 25, T. 21 S., R. 32 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.

Hydrology
Potash Resources

☐ **Construction**
Notification
Topsoil
Closed Loop System
Federal Mineral Material Pits
Well Pads
Roads

☐ **Road Section Diagram**

☐ **Production (Post Drilling)**
Well Structures & Facilities

☐ **Interim Reclamation**

☐ **Final Abandonment & Reclamation**

Approval Date: 04/19/2022

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Timing Limitation Exceptions:
The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

Avian Power line Protection:

Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States.

Hydrology:

The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.

Approval Date: 04/19/2022

Potash Resources

Lessees must comply with the 2012Secretarial Potash Order. The Order is designed to manage the efficient development of oil, gas, and potash resources. Section 6 of the Order provides general provisions which must be followed to minimize conflict between the industries and ensure the safety of operations.

To minimize impacts to potash resources, the proposed well is confined within the boundaries of the established Margarita Ridge Drill Island.

Approval Date: 04/19/2022

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (24) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 24' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

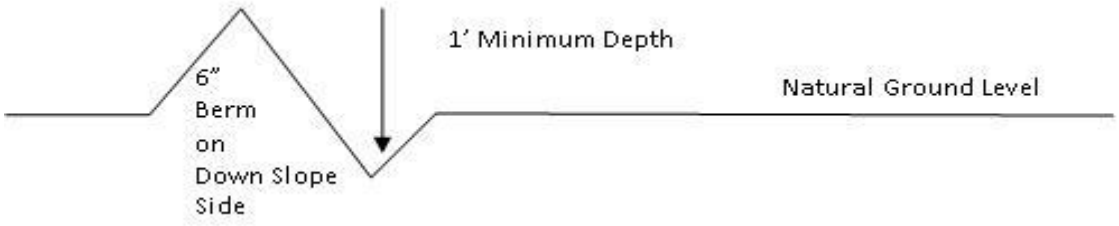
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Approval Date: 04/19/2022

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

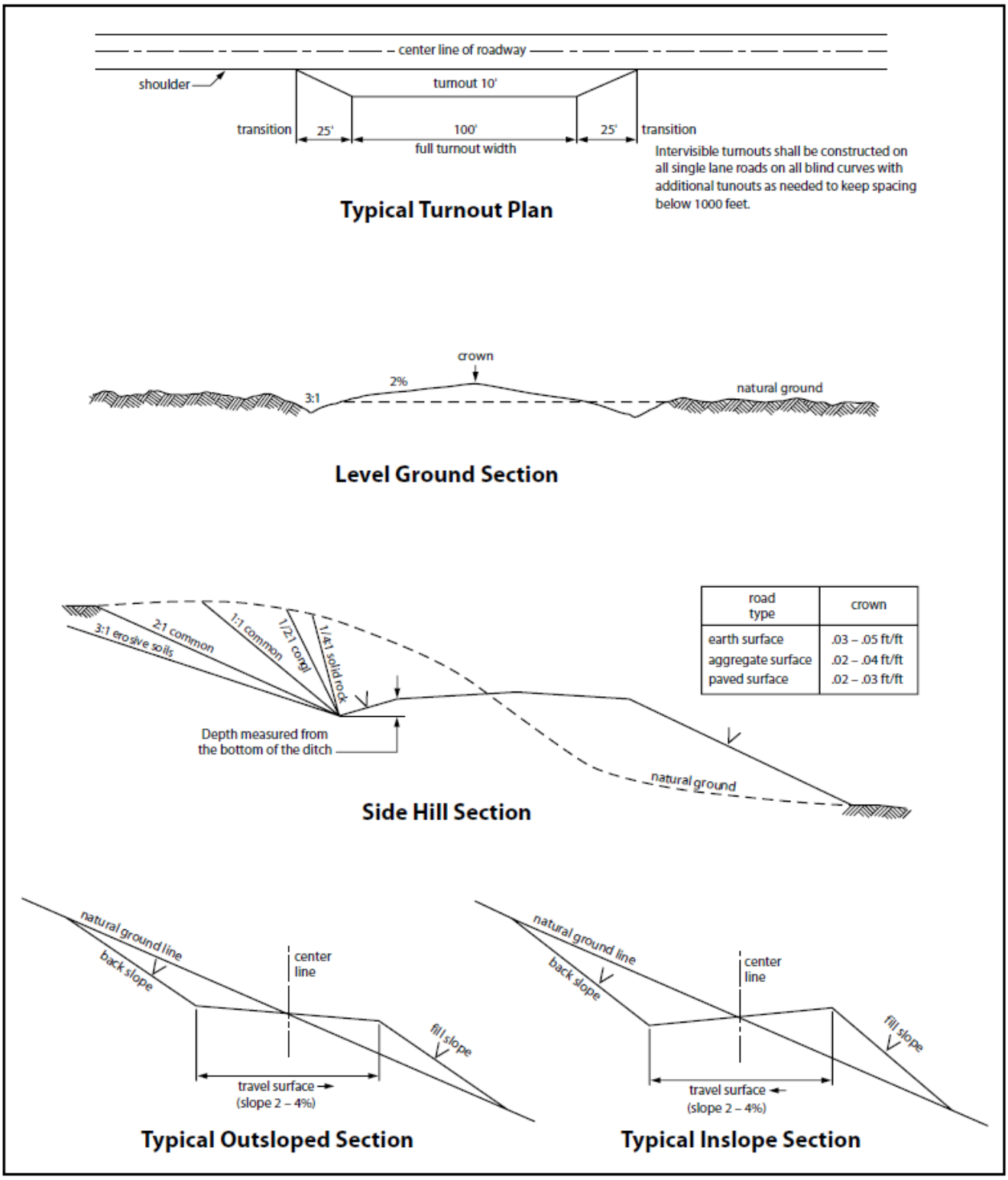


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

Approval Date: 04/19/2022

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone*.) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Approval Date: 04/19/2022

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Advance Energy Partners Hat Mesa LLC**
LEASE NO.:	**NMNM014155**
LOCATION:	Section 13, T.21 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	**Margarita Federal Com 13 20H**
SURFACE HOLE FOOTAGE:	460'/N & 675'/E
BOTTOM HOLE FOOTAGE	2540'/N & 330'/E

COA

H2S	○ Yes	◉ No	
Potash	○ None	○ Secretary	◉ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	○ Multibowl	○ Both
Wellhead Variance	◉ Diverter		
Other	☑ 4 String Area	☑ Capitan Reef	☐ WIPP
Other	☑ Fluid Filled	☐ Pilot Hole	☐ Open Annulus
Cementing	☐ Cement Squeeze	☐ EchoMeter	
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit
Special Requirements Variance	☐ Break Testing	☐ Offline Cementing	

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 **20** inch surface casing shall be set at approximately **1765 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature

survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job will be a minimum of **24 hours in the Potash Area** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **13-3/8** inch intermediate casing shall be set at approximately **3495 feet** is:

Option 1 (Single Stage):

- 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 or potash.
  Cement excess is less than 25%, more cement might be required.

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- 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 or potash.

❖ In R111 Potash Areas if cement does not circulate to surface on the first two salt protection casing strings, the cement on the 3rd casing salt string must come to surface.

 Approval Date: 04/19/2022

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

3. The minimum required fill of cement behind the **9-5/8** 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, potash or capitan reef. Cement excess is less than 25%, more cement might be required.**

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:

    - Cement should tie-back at least **50 feet** on top of Capitan Reef top **or 200 feet** into the previous casing, whichever is greater. 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, potash or capitan reef. Cement excess is less than 25%, more cement might be required.

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.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be tested to **2000 (2M)** psi.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13-3/8** inch intermediate casing shoe shall be **5000 (5M)** psi.

c. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch intermediate casing shoe shall be **5000 (5M)** psi.

Option 2:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe

shall be tested to **2000 (2M)** psi. **The operator is approved to use a sacrificial wellhead to drill the 17 ½ inch intermediate hole. Once the intermediate hole is drilled, cased, and cemented. The sacrificial wellhead will be cut off and the 13 5/8 inch 5K MN-DS multi-bowl wellhead will be installed.**

b. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch intermediate casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M)** psi.

i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
ii. 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.
iii. Manufacturer representative shall install the test plug for the initial BOP test.
iv. 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.
v. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i 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.
- 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. When the Communitization Agreement number is known, it shall also be on the sign.

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
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

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 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 Onshore Oil and Gas Order No. 2 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.

2. Wait on cement (WOC) for Potash Areas: 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 24 hours. 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. Wait on cement (WOC) for Water Basin: 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 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity 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

 Approval Date: 04/19/2022

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

2. 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 OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

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 when specified), whichever is greater. However, if the float does not

Approval Date: 04/19/2022

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 plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

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 Onshore Order No. 2.

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.

H_2S Drilling Operations Plan

a. All personnel will be trained in H_2S working conditions as required by Onshore Order 6 before drilling out of the surface casing.

b. Two briefing areas will be established. Each briefing area will be ≥150' from the wellhead, perpendicular from one another, and easily entered and exited. See H_2S page 5 for more details.

c. H_2S Safety Equipment/Systems:

i. Well Control Equipment

- Flare line will be ≥150' from the wellhead and ignited by a flare gun.
- Beware of SO_2 created by flaring.
- Choke manifold will have a remotely operated choke.
- Mud gas separator

ii. Protective Equipment for Personnel

- Every person on site will wear a personal H_2S and SO_2 monitor at all times while on site. Monitors will not be worn on hard hats. Monitors will be worn on the front of the waist or chest.
- One self-contained breathing apparatus (SCBA) 30-minute rescue pack will be at each briefing area. Two 30-minute SCBA packs will be stored in the safety trailer.
- Four work/escape packs will be on the rig floor. Each pack will have a sufficiently long hose to allow unimpaired work activity.
- Four emergency escape packs will be in the doghouse for emergency evacuation.
- Hand signals will be used when wearing protective breathing apparatus.
- Stokes litter or stretcher
- Two full OSHA compliant body harnesses
- A 100' long x 5/8" OSHA compliant rope
- One 20-pound ABC fire extinguisher

iii. H_2S Detection & Monitoring Equipment

- Every person on site will wear a personal H_2S and SO_2 monitor at all times while on site. Monitors will not be worn on hard hats. Monitors will be worn on the front of the waist or chest.
- A stationary detector with three sensors will be in the doghouse.
- Sensors will be installed on the rig floor, bell nipple, and at the end of the flow line or where drilling fluids are discharged.
- Visual alarm will be triggered at 10 ppm.
- Audible alarm will be triggered at 10 ppm.
- Calibration will occur at least every 30 days. Gas sample tubes will be kept in the safety trailer.

iv. Visual Warning System

- A color-coded H_2S condition sign will be set at each pad entrance.
- Color-coded condition flag will be installed to indicate current H_2S conditions.
- Two wind socks will be installed that will be visible from all sides.

v. Mud Program

- A water based mud with a pH of $\geq$10 will be maintained to control corrosion, H_2S gas returns to the surface, and minimize sulfide stress cracking and embrittlement.
- Drilling mud containing H_2S gas will be degassed at an optimum location for the rig configuration.
- This gas will be piped into the flare system.
- Enough mud additives will be on location to scavenge and/or neutralize H_2S where formation pressures are unknown.

vi. Metallurgy

- All equipment that has the potential to be exposed to H_2S will be suitable for H_2S service.
- Equipment that will meet these metallurgical standards include the drill string, casing, wellhead, BOP assembly, casing head and spool, rotating head, kill lines, choke, choke manifold and lines, valves, mud-gas separators, DST tools, test units, tubing, flanges, and other related equipment (elastomer packings and seals).

vii. Communication from well site

- Cell phones and/or two-way radios will be used to communicate from the well site.

d. A remote-controlled choke, mud-gas separator, and a rotating head will be installed before drilling or testing any formation expected to contain H_2S.

Company Personnel to be Notified

Braden Harris, Drilling Manager	Office: (832) 672-4700
	Mobile: (406) 600-3310

Local & County Agencies

Monument Fire Department	911 or (575) 393-4339
Eunice Fire & Ambulance Dept.	(575) 394-3258
Hobbs Fire Marshal	(575) 391-8185
Lea County Sheriff (Lovington)	911 or (575) 396-3611
Lea County Emergency Management (Lovington)	(575) 396-8602
Lea Regional Medical Center Hospital (Hobbs)	(575) 492-5000

State Agencies

NM State Police (Hobbs)	(575) 392-5588
NM Oil Conservation (Hobbs)	(575) 370-3186
NM Oil Conservation (Santa Fe)	(505) 476-3440
NM Dept. of Transportation (Roswell)	(575) 637-7201

Federal Agencies

BLM Carlsbad Field Office	(575) 234-5972

BLM Hobbs Field Station	(575) 393-3612
National Response Center	(800) 424-8802
US EPA Region 6 (Dallas)	(800) 887-6063
	(214) 665-6444

Veterinarians

Dal Paso Animal Hospital (Hobbs)	(575) 397-2286
Hobbs Animal Clinic & Pet Care (Hobbs)	(575) 392-5563
Great Plains Veterinary Clinic & Hospital (Hobbs)	(575) 392-5513

Residents within 2 miles

No residents are within 2 miles.

Air Evacuation

Med Flight Air Ambulance (Albuquerque)	(800) 842-4431
Lifeguard (Albuquerque)	(888) 866-7256

AFMSS

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

PWD Data Report

04/20/2022

APD ID: 10400064255 **Submission Date:** 10/26/2020

Operator Name: ADVANCE ENERGY PARTNERS HAT MESA LLC

Well Name: MARGARITA FEDRAL COM 13 **Well Number:** 20H

Well Type: OIL WELL **Well Work Type:** Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Operator Name: ADVANCE ENERGY PARTNERS HAT MESA LLC

Well Name: MARGARITA FEDRAL COM 13 **Well Number:** 20H

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Operator Name: ADVANCE ENERGY PARTNERS HAT MESA LLC

Well Name: MARGARITA FEDRAL COM 13 **Well Number:** 20H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Operator Name: ADVANCE ENERGY PARTNERS HAT MESA LLC

Well Name: MARGARITA FEDRAL COM 13 **Well Number:** 20H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

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

Drilling Plan Data Report
04/20/2022

APD ID: 10400064255 **Submission Date:** 10/26/2020

Operator Name: ADVANCE ENERGY PARTNERS HAT MESA LLC

Well Name: MARGARITA FEDRAL COM 13 **Well Number:** 20H

Well Type: OIL 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
1098745	QUATERNARY	3906	0	0	OTHER : Caliche	USEABLE WATER	N
1098746	RUSTLER ANHYDRITE	2166	1740	1740	ANHYDRITE	NONE	N
1098747	TANSILL	538	3368	3368	DOLOMITE	NONE	N
1098748	YATES	495	3411	3411	SANDSTONE	NONE	N
1098749	SEVEN RIVERS	291	3615	3615	GYPSUM	NONE	N
1098750	CAPITAN REEF	150	3756	3756	OTHER : None	USEABLE WATER	N
1098751	BELL CANYON	-1795	5701	5701	LIMESTONE	NATURAL GAS, OIL	N
1098752	CHERRY CANYON	-3084	6990	6990	SHALE	NATURAL GAS, OIL	N
1098753	LOWER BRUSHY CANYON 8A	-4732	8638	8644	SANDSTONE	NATURAL GAS, OIL	N
1098754	AVALON SAND	-5156	9062	9069	SHALE	NATURAL GAS, OIL	N
1098755	BONE SPRING 1ST	-6105	10011	10019	SANDSTONE	NATURAL GAS, OIL	N
1098756	BONE SPRING 2ND	-6652	10558	10566	SANDSTONE	NATURAL GAS, OIL	N
1098757	BONE SPRING 3RD	-7174	11080	11088	OTHER, SANDSTONE : Carbonate	NATURAL GAS, OIL	N
1098758	BONE SPRING 3RD	-7663	11569	11585	SANDSTONE	NATURAL GAS, OIL	N
1098759	WOLFCAMP	-7875	11781	11859	OTHER : A Carbonate	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Drawing Appendix

OFFLINE CHOKE MANIFOLD TEST

TEST 1

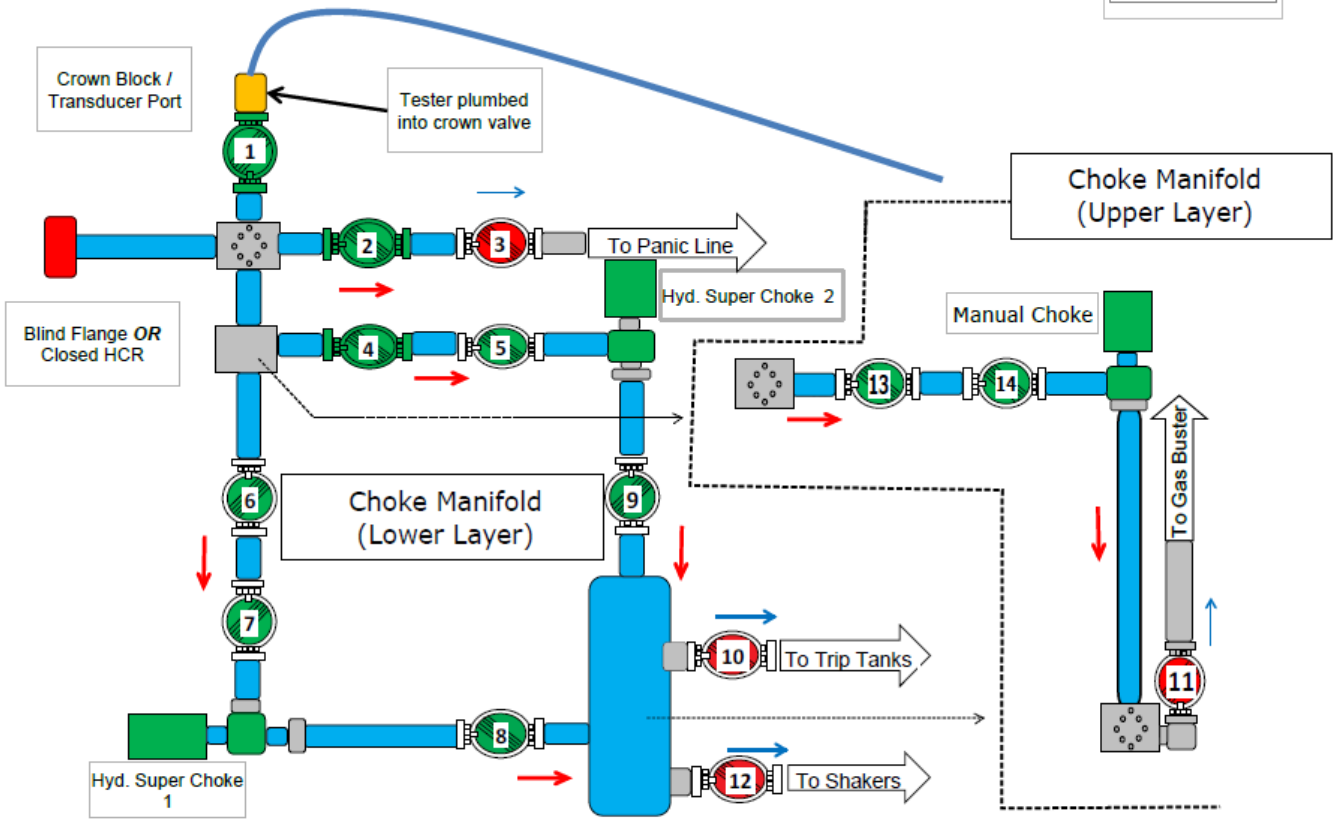
NOTE: Verify Test Pressure With Company Representative. Initial Test to RWP of BOP if utilizing test plug.

Duration:
10 min low
10 min high

KEY

- Applied Pressure
- Pressure Path
- Leak Path
- Open
- Closed
- Test Unit / Test Equipment

Post Test: Close upstream valve in subsequent test, prior to opening previously tested valve.



NOTE: Valves 10, 11 & 12 are 5K valves. Test to 75% RWP.

Closed:

X Choke Manifold Valves 3, 10, 11, 12

Leak Paths:

☐ Gas Buster
☐ Trip Tanks
☐ Shakers
☐ Panic Line

Figure 1: Choke Manifold Test 1

OFFLINE CHOKE MANIFOLD TEST

TEST 2

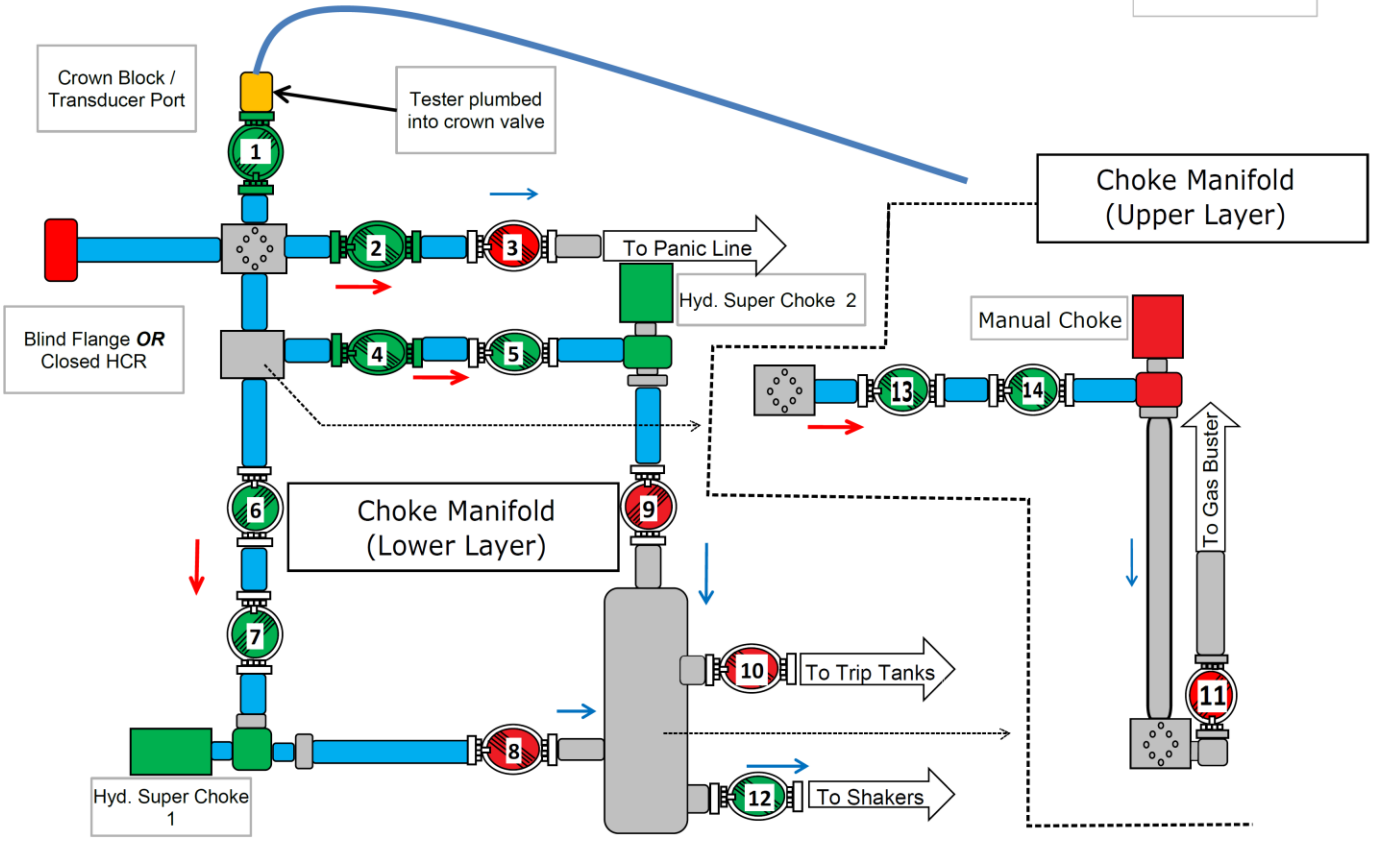
NOTE: Verify Test Pressure With Company Representative. Initial Test to RWP of BOP if utilizing test plug.

Duration:
10 min low
10 min high

KEY

- Applied Pressure
- Pressure Path
- Leak Path
- Open
- Closed
- Test Unit / Test Equipment

Post Test: Close upstream valve in subsequent test, prior to opening previously tested valve.



Closed:
X Choke Manifold Valves 3, 8, 9, 10, 11
X Manual Choke

Leak Paths:
☐ Shakers
☐ Panic Line

**Test Manual Choke only at request of Operator. If not requested, close valve 14.

Figure 2: Choke Manifold Test 2

OFFLINE CHOKE MANIFOLD TEST

TEST 3

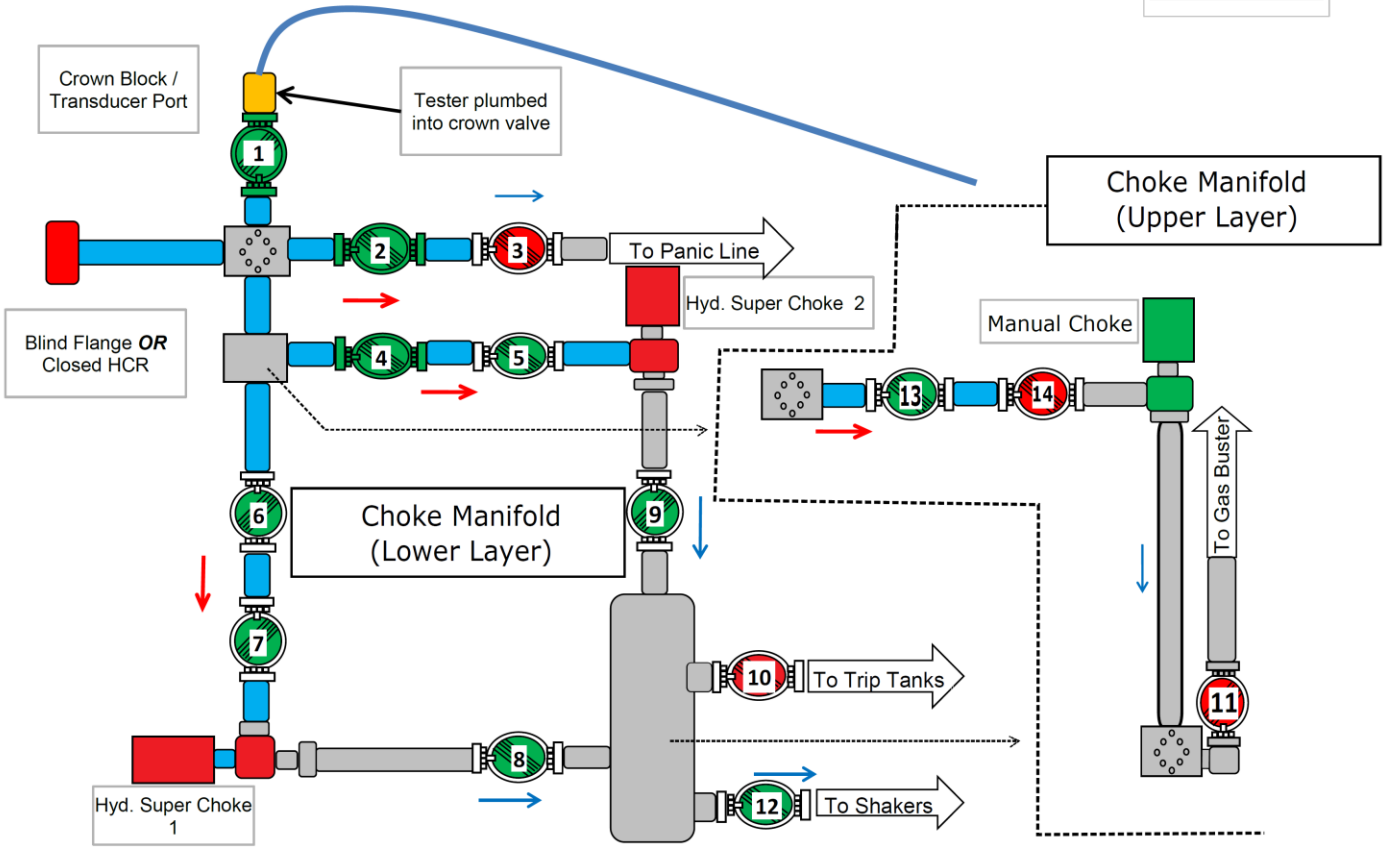
NOTE: Verify Test Pressure With Company Representative. Initial Test to RWP of BOP if utilizing test plug.

Duration:
10 min low
10 min high

KEY

- Applied Pressure
- Pressure Path
- Leak Path
- Open
- Closed
- Test Unit / Test Equipment

Post Test: Close upstream valve in subsequent test, prior to opening previously tested valve.



Closed:
X Choke Manifold Valves 3, 10, 11, 14
X Hydraulic Super Choke 1 and 2

Leak Paths:
☐ Shakers
☐ Panic Line

**Test Hydraulic Chokes only at request of Operator.
If not requested, skip to Test 4.

Figure 3: Choke Manifold Test 3

OFFLINE CHOKE MANIFOLD TEST

TEST 4

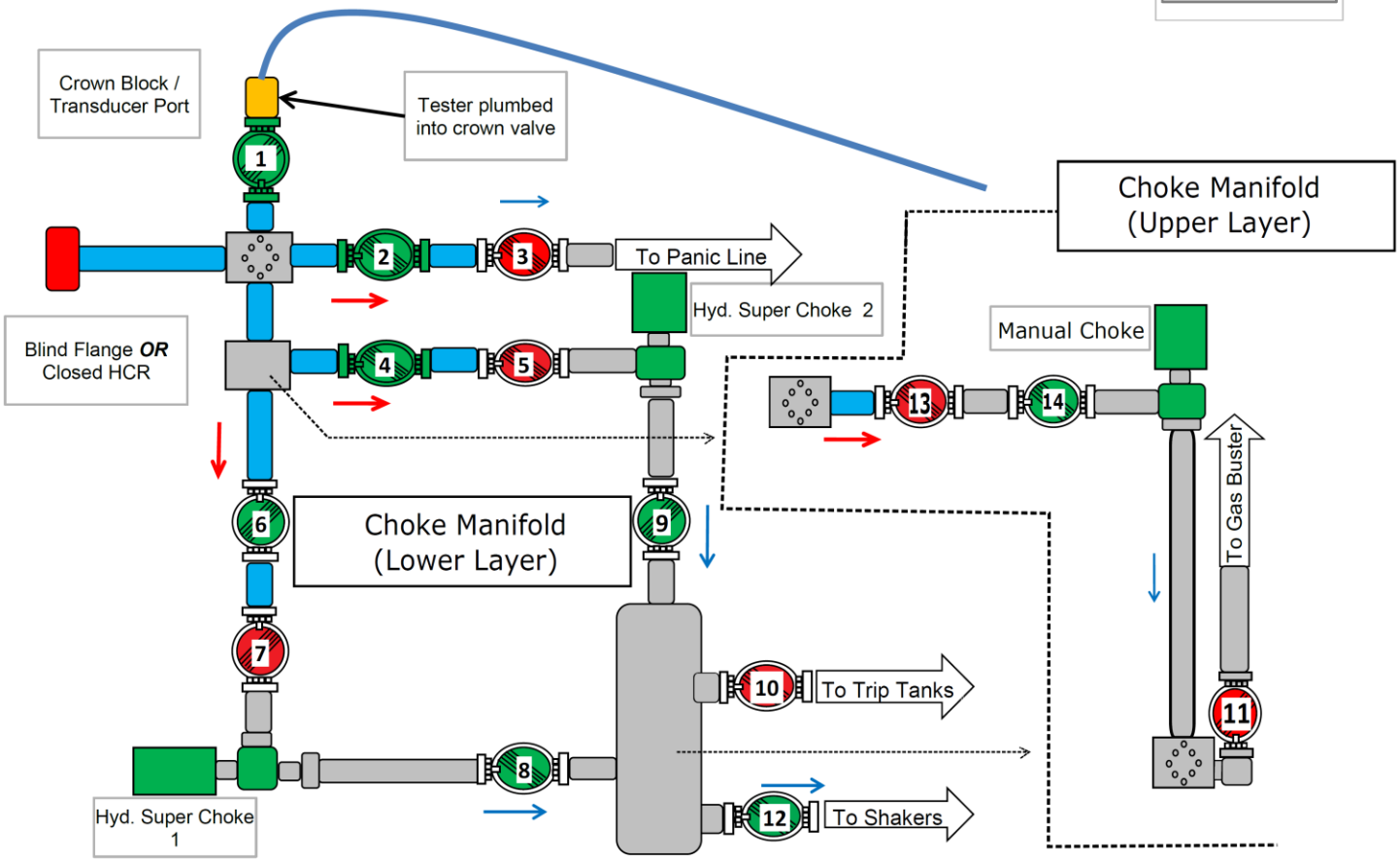
NOTE: Verify Test Pressure With Company Representative. Initial Test to RWP of BOP if utilizing test plug.

Duration:
10 min low
10 min high

KEY

- Applied Pressure
- Pressure Path
- Leak Path
- Open
- Closed
- Test Unit / Test Equipment

Post Test: Close upstream valve in subsequent test, prior to opening previously tested valve.



Closed:
X Choke Manifold Valves 3, 5, 7, 10, 11, 13

Leak Paths:
- Shakers
- Panic Line

Figure 4: Choke Manifold Test 4

OFFLINE CHOKE MANIFOLD TEST

TEST 5

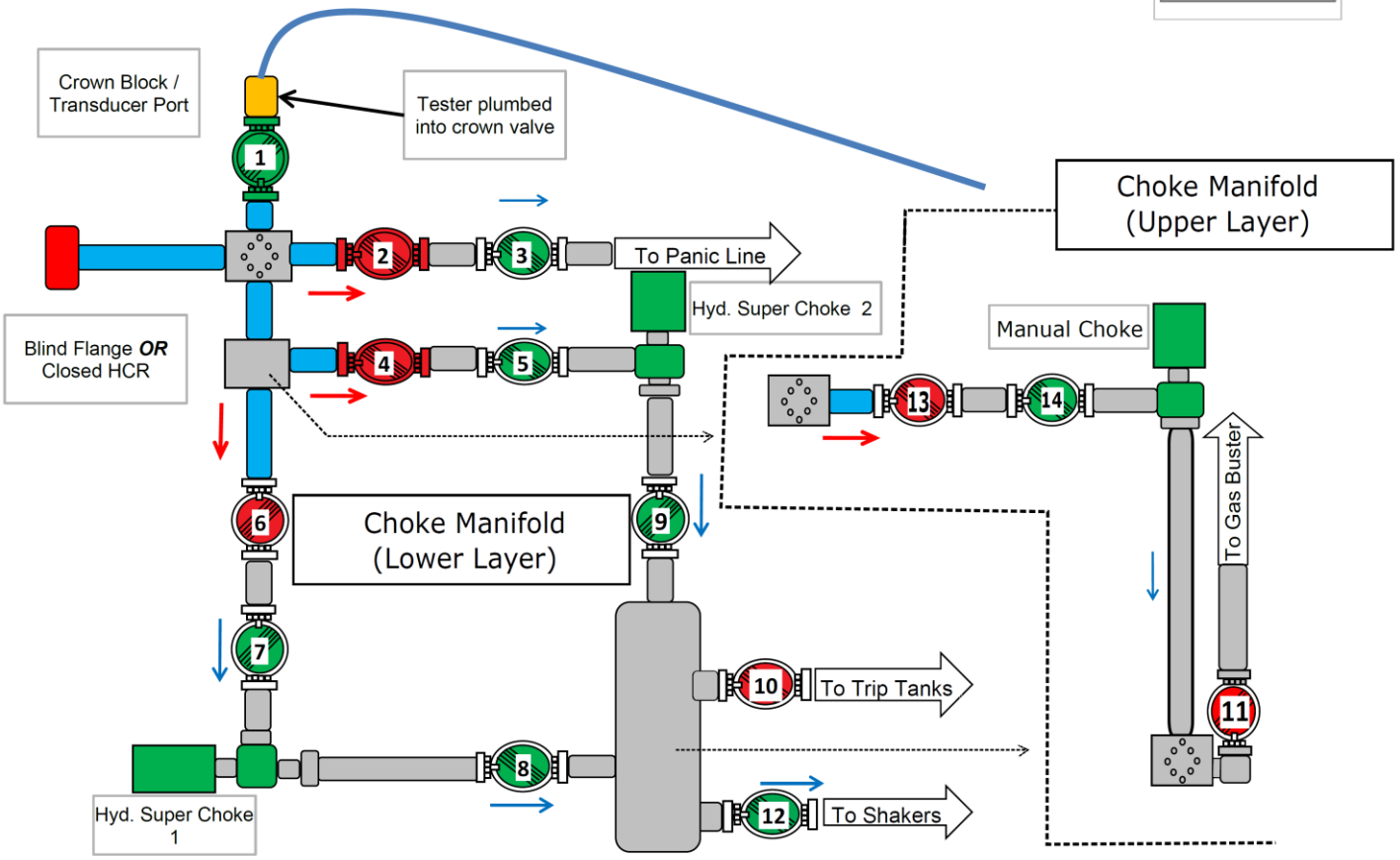
NOTE: Verify Test Pressure With Company Representative. Initial Test to RWP of BOP if utilizing test plug.

Duration:
10 min low
10 min high

KEY

- Applied Pressure
- Pressure Path
- Leak Path
- Open
- Closed
- Test Unit / Test Equipment

Post Test: Close upstream valve in subsequent test, prior to opening previously tested valve.



Closed:
X Choke Manifold Valves 2, 4, 6, 10, 11, 13

Leak Paths:
- Shakers
- Panic Line

Figure 5: Choke Manifold Test 5

Rev. 03/05/18

BOP Testing - BLM

Online BOP (Offline Choke Manifold)

2-String (VBR) Procedure

Job Step List

5000 psi

THESE PROCEDURES WERE DEVELOPED FOR THE HELMERICH & PAYNE FLEX 3 AND FLEX 5 STANDARD CONFIGURATION RIGS. IF THE BOP BEING TESTED IS NOT ON A FLEX 3 OR FLEX 5 STANDARD CONFIGURATION RIG (OR IF YOU DO NOT KNOW HOW THE RIG YOU ARE WORKING ON IS CONFIGURED), YOU ARE REQUIRED TO CONSULT WITH THE RIG MANAGER IN ORDER TO DETERMINE IF CHANGES TO THESE PROCEDURES ARE APPROPRIATE.

Job Steps

Below is a detailed document containing the job steps that need to be taken by H&P personnel overseeing online BOP and Offline Choke testing. While overseeing the project, H&P personnel should take detailed notes and make recommendations to optimize and improve future tests.

Recommended windows to test choke and floor subs offline:

1. Test the floor subs as soon as practical – if there is an issue with the testing unit or any of the tester's equipment, this will allow time to get the new equipment to the rig. This will help to eliminate NPT due to waiting on testing companies.

    a. Recommended times to test floor subs
        i. While pumping cement (ensure to have 1 FOSV on the rig floor while pumping)
        ii. While WOC
        iii. Any time before drilling out shoe track.

    b. Verify floor sub test pressures with company representative.

2. Testing the choke manifold offline:
    a. After casing slips are set and tested, you can either:
        i. Remove coflex choke line from choke manifold side and install a blind flange to test choke manifold against.
        ii. Or leave coflex choke line connected, and test against HCR. The 20' pressure testing buffer zone must still be maintained around **ALL** lines under pressure.

    b. The optimal time to test the choke manifold offline is up to the DSV and rig manager's discretion. Recommended time periods are as follows:
        i. During inflow test, after casing slips are set and tested. Ensure buffer zone is maintained.
        ii. During rig up on new well, as time allows.
        iii. At any point before drilling out cased hole:
            1. While picking up BHA
            2. While tripping in cased hole.

    c. Keep in mind there are 2 tests in the Online BOP Test Procedure that test back to the choke manifold. If you have not finished testing the choke manifold, you can utilize these online tests to test the remaining choke manifold valves.

    d. If ready to perform the Online BOP Test before the choke manifold has been tested, that is ok. Perform the Online BOP Test and then you can finish testing the choke manifold at any point before drilling out the shoe track.

Rig up to Test Choke Manifold Offline:

- Inspect all 3rd party equipment
  - *RM or driller ~ 0.25 hours*
- Rig up test unit to crown valve (choke manifold valve #1)
  - *1 employee ~ 0.25 hours*
- Before beginning test, tester must pump through both super chokes one at a time. This is to verify both super chokes are functioning and neither are plugged.

Test Choke Manifold Offline:

- Test choke manifold per the 5 step test displayed in Figure 1 through 5 in Drawing Appendix. The components being tested are listed beneath each test.
  Note: Never pump down the panic line. Doing so will cause a spill of drilling fluid on side of location.
- **Choke Manifold Test 1** – Figure 1. (Test Valves 10, 11, 12 to 50% of RWP)
  - Choke valves # 3, 10, 11, 12
- **Choke Manifold Test 2** – Figure 2.
  - Choke valves # 3, 8, 9
  - Manual Choke

  Note: Manual choke test done per request of operator only. If not requested close valve 14.
- **Choke Manifold Test 3** – Figure 3.

  Note: Super **choke test done per request of operator only. If not requested skip to test 4.**
  - Hydraulic Super choke #1 & 2
  - Choke valve #14
- **Choke Manifold Test 4** – Figure 4.
  - Choke valve #5, 7, 13
- **Choke Manifold Test 5** – Figure 5.
  - Choke valves # 2, 4, 6

Prep to Test BOP:

- Install test plug in wellhead before skidding and beginning nipple up on new well.
  Note: Confined space entry permit may be required.
  - *2 employees ~ 0.25 hours*
- Inspect all 3rd party equipment.
  - *RM or driller ~ 0.25 hours*
- Spot test unit and load 3rd party equipment to PDS/rig floor.
  - *2 employees ~ 0.25 hours*
- Fill BOP with water and connect test hoses.
  - *2 employees ~ 0.25 hours*
- Verify sequence to open, close, test, and bleed off with tester.
  - *Driller and 1 employee ~ 0.25 hours*

Test BOP:

- Test BOP components per the 7 step test displayed in Figure 6 through 13. The components being tested are listed beneath each test.
  Note: Keep all high pressure areas barricaded and labeled. Always have a knowledgeable rig team member with tester to verify open/close sequence.
  Note: All tests are 10 minutes in duration. Be sure to bleed off completely between each test.

- **High Pressure Mud Line Test** – Figure 6.
  - Upper Hydraulic IBOP
  - Mud pump 4" valves
  - 2" bleed off valve on the rig floor

- Line up to pump water from rig tank with mud pumps. **Set pressure alarm to 150 psi above rig "zero" and fill lines with water through top drive using mud pumps. Do not exceed 15 SPM at any time.** Pump until returns are received down flowline; this will verify the weep hole is not plugged.
  - **BOP Test 1** - Figure 7.
    - Blind rams
    - 2" bleed off valve on rig floor
    - 4" standpipe valve
    - 2" bleed off at mud pump
- Make up pump-in sub to joint of drill pipe and lower joint into test plug. Make up joint to test plug.
  - **BOP Test 2** – Figure 8.
    Note: In Test 2, open crown valve at choke to verify manual gauge, choke panel gauge, and electronic sensor on driller screen. Record on test chart.
    - Upper pipe rams – smaller size of DP
    - Upper Hydraulic IBOP valve
    - Outside kill valve
    - Crown valve gauge on choke manifold (Valve #1)
  - **BOP Test 3** – Figure 9.
    - Inside kill valve
    - Hydraulic HCR
    - Lower Manual IBOP valve
  - **BOP Test 4** – Figure 11.
    - Lower pipe rams
  - **BOP Test 5 –** Figure 10.
    - Annular – smaller size of DP

    Note: Test annular to 50% of RWP of element
  - **BOP Test 6** – Figure 12.
    - Annular – 2nd and larger size of DP

    Note: Install Check valve and cap while change DP sizes
  - **BOP Test 7** – Figure 13.
    - Upper pipe rams (VBR's) – 2nd and larger size of DP
    - Check valve on kill line
    - Inside choke valve (manual HCR)

Rig Down

- R/D and L/D test joint and plug; remove test equipment from rig floor and load 3rd party truck.
  - *3 employees ~ 0.5 hours*
- Close casing valve and re-align / verify correct alignment of all other valves. Verify that check valve on kill side has been re-installed.
  Note: Confined space entry permit may be required.
  - *2 employees ~ 0.25 hours*

OFFLINE MUD LINE TEST

TEST 1

CAN BE PERFORMED DURING NIPPLE UP OPERATIONS

NOTE: Verify Test Pressure With Company Representative.
Initial test to RWP of BOP if utilizing test plug.

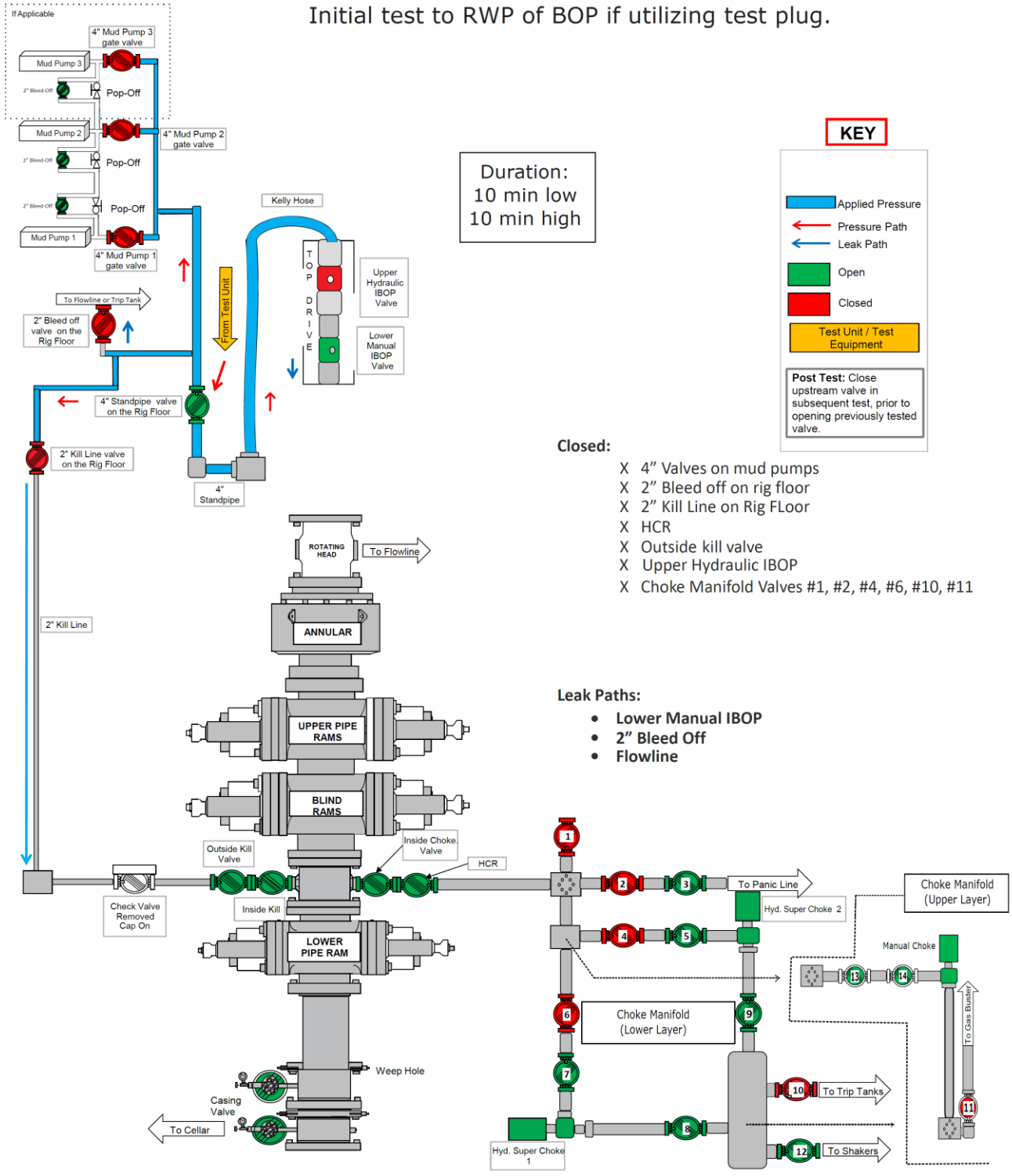


Figure 6: High Pressure Mud Line Test

ONLINE BOP TEST

TEST 1

NOTE: Verify Test Pressure With Company Representative.
Initial test to RWP of BOP if utilizing test plug.

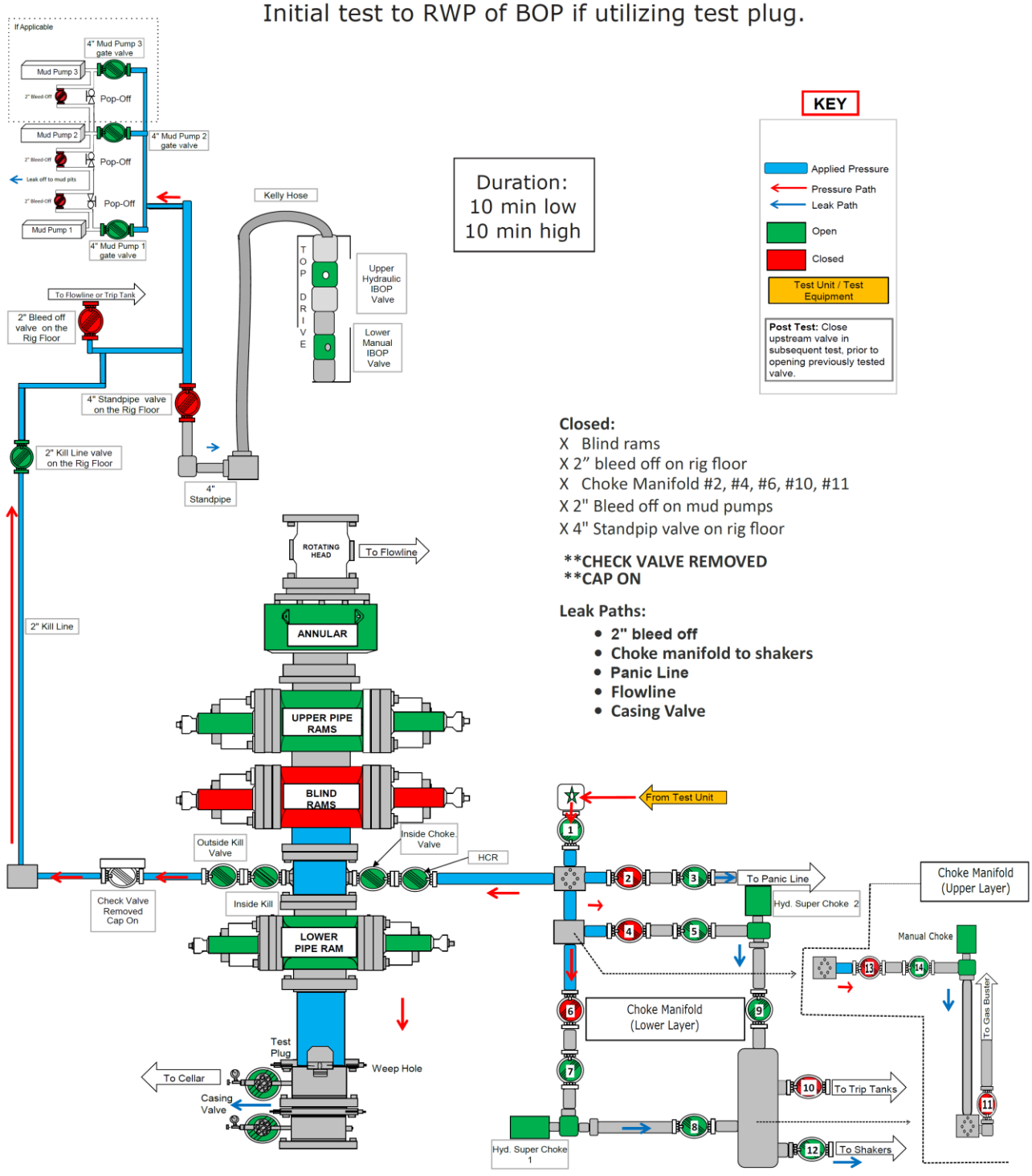


Figure 7: BOP Test 1

ONLINE BOP TEST

TEST 2

NOTE: Verify Test Pressure With Company Representative.
Initial test to RWP of BOP if utilizing test plug.

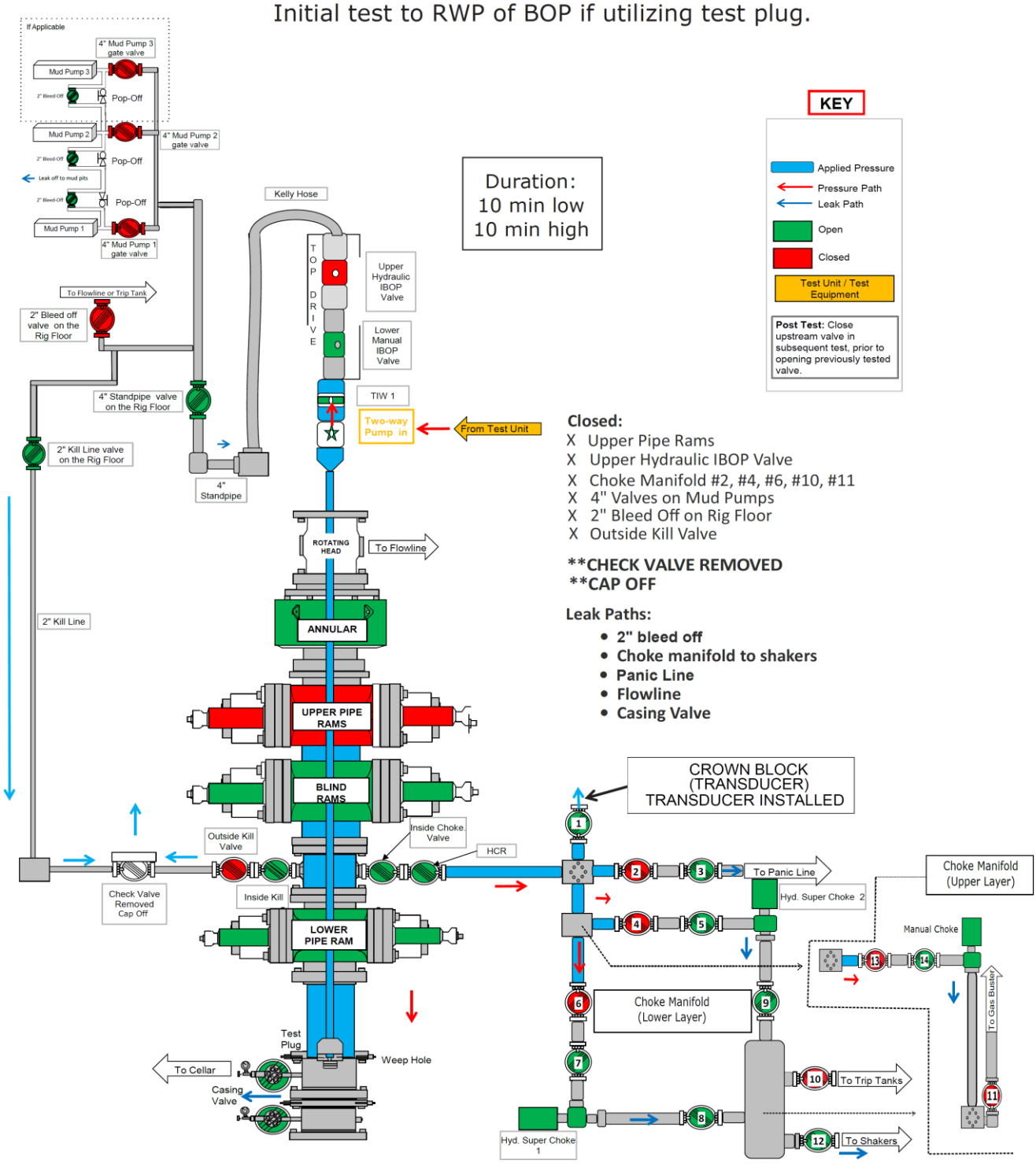


Figure 8: BOP Test 2

ONLINE BOP TEST

TEST 3

NOTE: Verify Test Pressure With Company Representative.
Initial test to RWP of BOP if utilizing test plug.

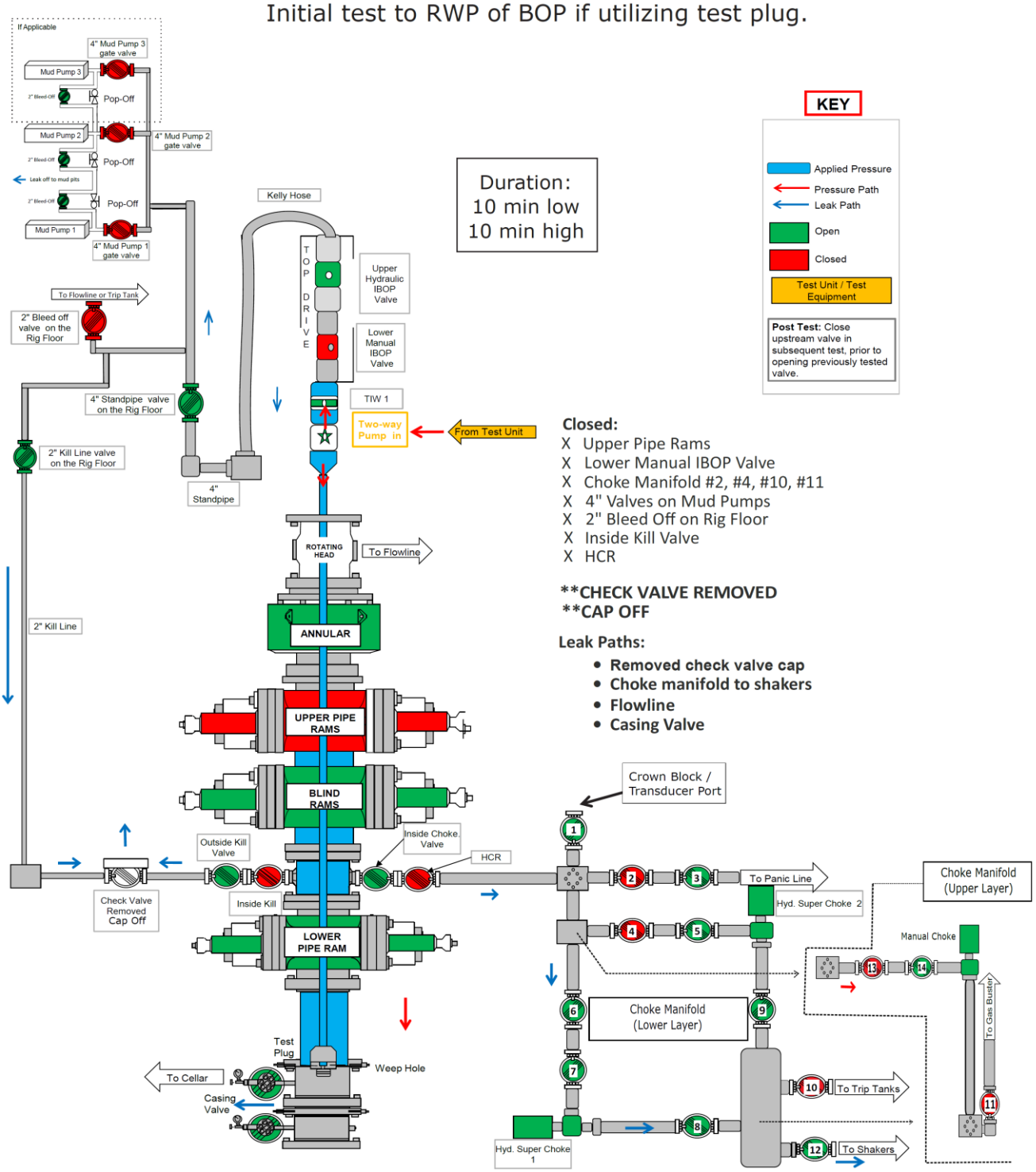


Figure 9: BOP Test 3

ONLINE BOP TEST

TEST 4

NOTE: Verify Test Pressure With Company Representative.
Initial test to RWP of BOP if utilizing test plug.

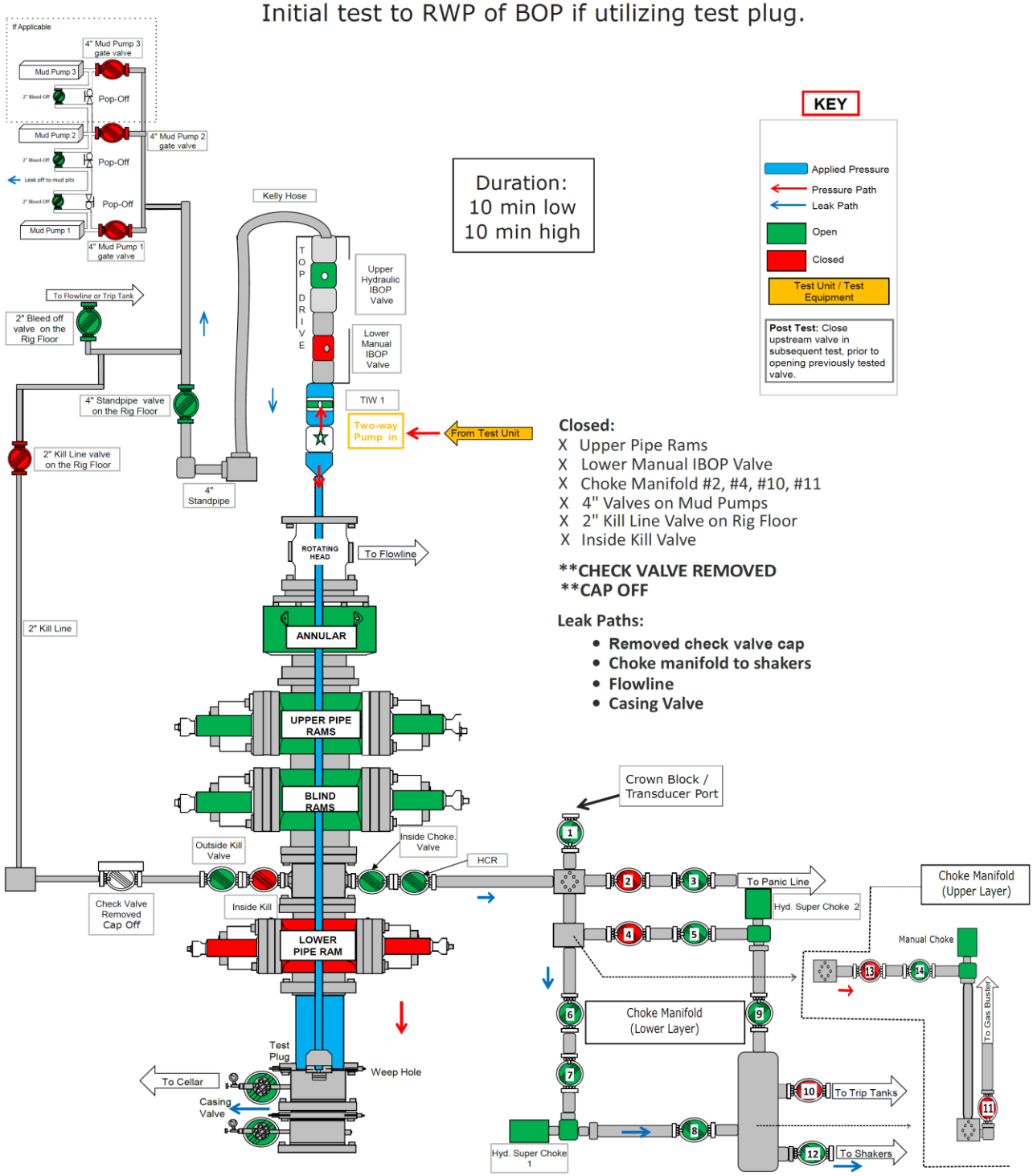


Figure 10: BOP Test 4

ONLINE BOP TEST

TEST 5

NOTE: Verify Test Pressure With Company Representative.
Annular Test to 50% RWP of Annular.

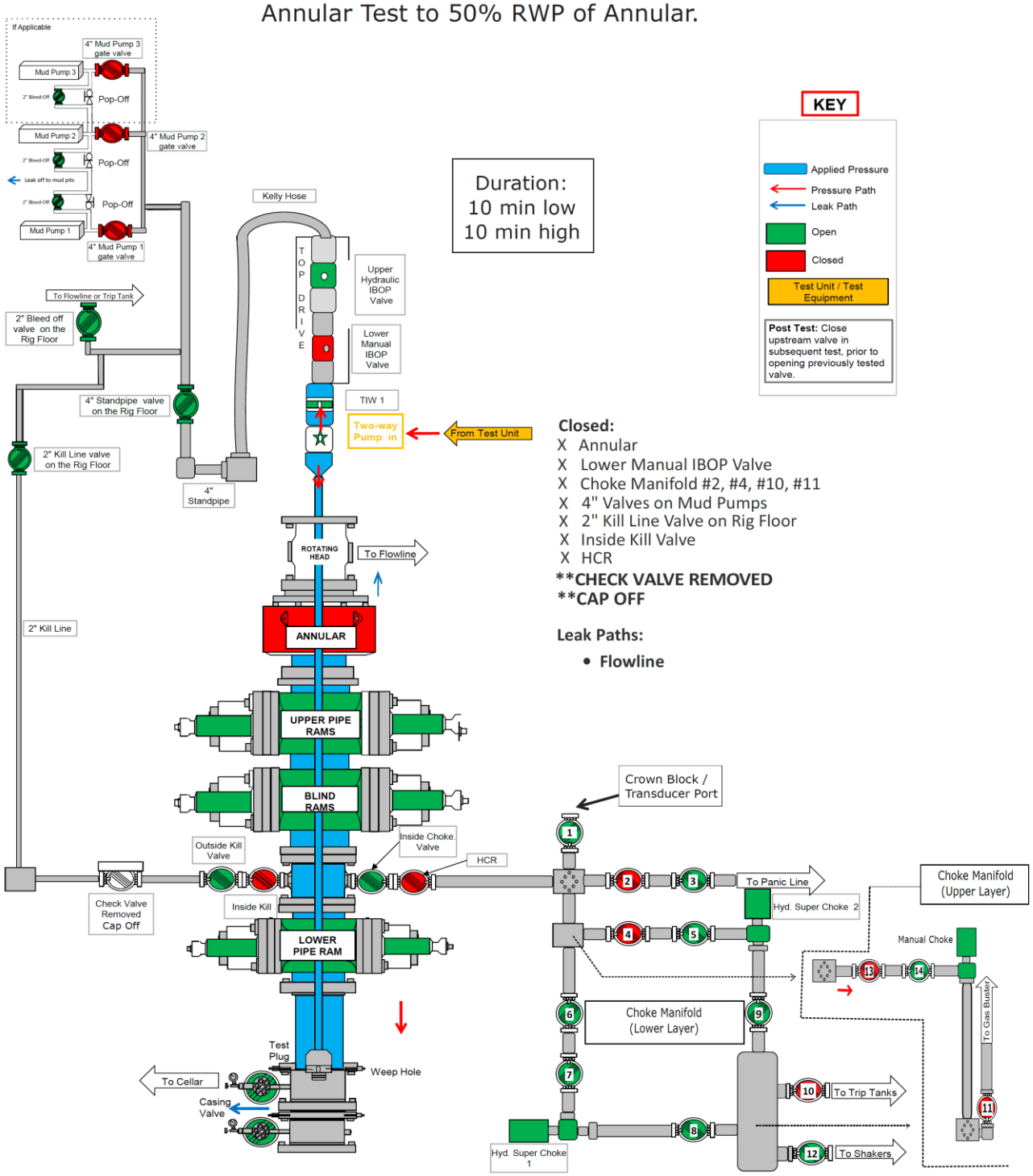


Figure 11: BOP Test 5

ONLINE BOP TEST

TEST 6

Utilize second (larger) size of drill pipe for this test.

NOTE: Verify Test Pressure With Company Representative.
Annular Test to 50% RWP of Annular.

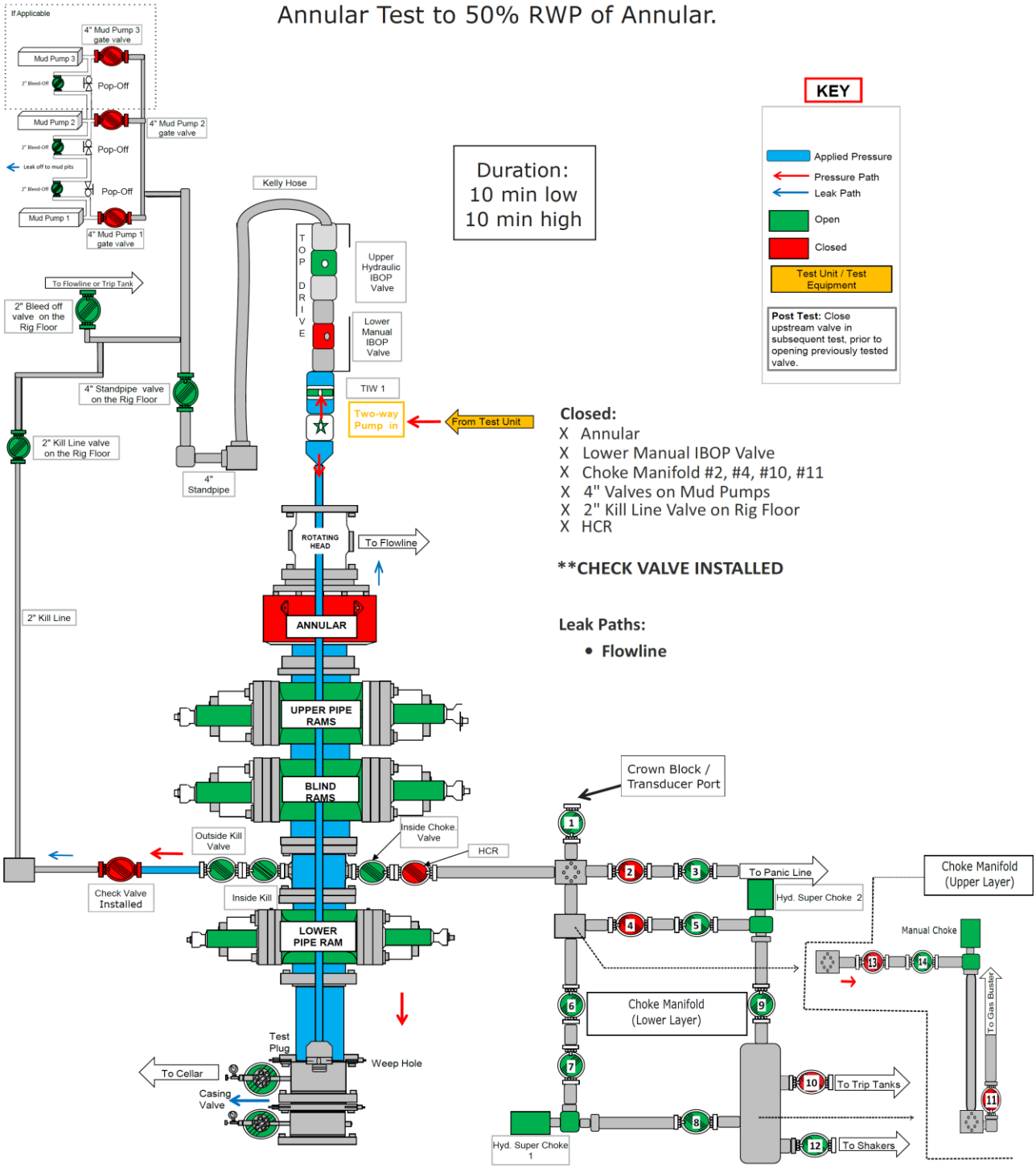


Figure 12: BOP Test 6

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 102685

CONDITIONS

Operator: ADVANCE ENERGY PARTNERS HAT MESA, LLC 11490 Westheimer Rd., Ste 950 Houston, TX 77077	OGRID: 372417
	Action Number: 102685
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	5/11/2022
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	5/11/2022
pkautz	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	5/11/2022
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	5/11/2022