Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No. NMNM121490

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☑ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No. RATTLESNAKE 28 FED COM/753H

2. Name of Operator EOG RESOURCES INCORPORATED

9. API Well No. 3002548352

3a. Address 1111 BAGBY SKY LOBBY 2, HOUSTON, TX 77(

3b. Phone No. *(include area code)* (713) 651-7000

10. Field and Pool or Exploratory Area WC025 G08 S253325G; LOWER BONE SPRING

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)* SEC 28/T26S/R33E/NMP

11. Country or Parish, State LEA/NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☑ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

EOG respectfully requests an amendment to our approved APD for this well to reflect the following changes:

Rattlesnake 28 Fed Com 515H (FKA 753H) API #: 30-025-48352

Change name from Rattlesnake 28 Fed Com 753H to Rattlesnake 28 Fed Com 515H.

Change BHL from T-26-S, R-33-E, Sec 33, 2442' FNL, 1980' FWL, Lea Co., NM,
to T-26-S, R-33-E, Sec 33, 2547' FNL, 1040' FWL, Lea Co., N.M.

Change target formation to Second Bone Spring Sand.

Continued on page 3 additional information

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)* STAR HARRELL / Ph: (432) 848-9161

Title Regulatory Specialist

Signature

Date 08/21/2023

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by KEITH P IMMATTY / Ph: (575) 988-4722 / Approved

Title ENGINEER

Date 08/28/2023

Conditions of approval, if any, are attached. Approval of this notice 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.

Office CARLSBAD

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.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law 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, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. 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 the 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., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.
PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.
ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.
EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.
Response to this request is mandatory.
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 ofthis form to U.S. Department ofthe Interior, Bureau ofLand Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Additional Remarks

Update casing and cement program to current design.

Update the Pool as reflected in the C-102.

Location of Well

0. SHL: NWNE / 1188 FNL / 2566 FEL / TWSP: 26S / RANGE: 33E / SECTION: 28 / LAT: 32.0184667 / LONG: -103.5769942 (TVD: 0 feet, MD: 0 feet)

PPP: NENW / 100 FNL / 1980 FWL / TWSP: 26S / RANGE: 33E / SECTION: 28 / LAT: 32.0214652 / LONG: -103.579353 (TVD: 12432 feet, MD: 12526 feet)

PPP: NESW / 1320 FNL / 1980 FWL / TWSP: 26S / RANGE: 33E / SECTION: 28 / LAT: 32.0144823 / LONG: -103.5793489 (TVD: 12697 feet, MD: 15168 feet)

BHL: LOT 3 / 2442 FNL / 1980 FWL / TWSP: 26S / RANGE: 33E / SECTION: 33 / LAT: 32.0005209 / LONG: -103.5793408 (TVD: 12697 feet, MD: 20247 feet)

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 & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-48352	7280	BRADLEY;BONE SPRING

Property Code	Property Name	Well Number
315317	RATTLESNAKE 28 FED COM	515H

OGRID No.	Operator Name	Elevation
7377	EOG RESOURCES, INC.	3240'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	28	26-S	33-E	-	1188'	NORTH	2566'	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	33	26-S	33-E	-	2547'	NORTH	1040'	WEST	LEA

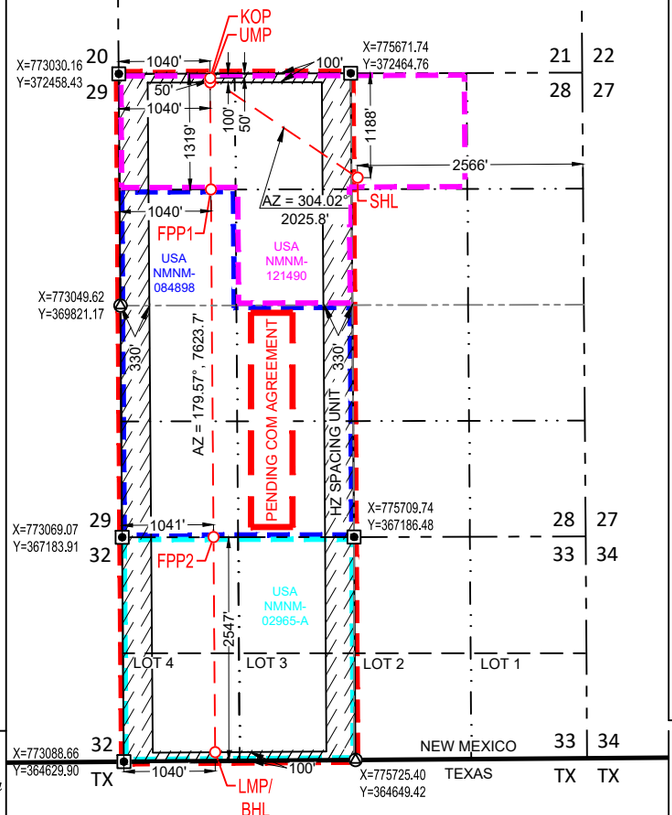
Dedicated Acres	Joint or Infill	Consolidated Code	Order No.
474.49			PENDING COM AGREEMENT

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 (SHL)
NEW MEXICO EAST
NAD 1983
X=775750 Y=371277
LAT.: N 32.0184667
LONG.: W 103.5769942
NAD 1927
X=734562 Y=371221
LAT.: N 32.0183414
LONG.: W 103.5765284
1188' FNL 2566' FEL

KICK OFF POINT (KOP)
NEW MEXICO EAST
NAD 1983
X=774071 Y=372411
LAT.: N 32.0216145
LONG.: W 103.5823859
NAD 1927
X=732883 Y=372354
LAT.: N 32.0214892
LONG.: W 103.5819197
50' FNL 1040' FWL

UPPER MOST PERF. (UMP)
NEW MEXICO EAST
NAD 1983
X=774071 Y=372361
LAT.: N 32.0214770
LONG.: W 103.5823859
NAD 1927
X=732883 Y=372304
LAT.: N 32.0213518
LONG.: W 103.5819196
100' FNL 1040' FWL



T26S-R33E
SECTION 33
LOT 4 - 37.35 ACRES
LOT 2 - 37.14 ACRES
LOT 3 - 36.71 ACRES
LOT 4 - 36.71 ACRES

FED PERF. POINT (FPP1)
NEW MEXICO EAST
NAD 1983
X=774080 Y=371142
LAT.: N 32.0181265
LONG.: W 103.5823838
NAD 1927
X=732892 Y=371085
LAT.: N 32.0180012
LONG.: W 103.5819178
1319' FNL 1040' FWL

FED PERF. POINT (FPP2)
NEW MEXICO EAST
NAD 1983
X=774110 Y=367185
LAT.: N 32.0072487
LONG.: W 103.5823771
NAD 1927
X=732922 Y=367128
LAT.: N 32.0071233
LONG.: W 103.5819117
0' FNL 1041' FWL

LOWER MOST PERF. (LMP)
BOTTOM HOLE LOCATION (BHL)
NEW MEXICO EAST
NAD 1983
X=774128 Y=364737
LAT.: N 32.0005208
LONG.: W 103.5823729
NAD 1927
X=732940 Y=364681
LAT.: N 32.0003954
LONG.: W 103.5819080
2547' FNL 1040' FWL

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 voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Star L Harrell 8/21/2023
Signature Date

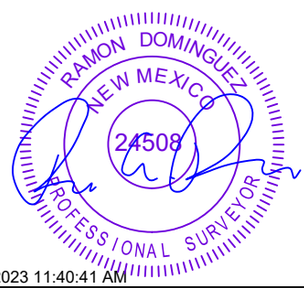
Star L Harrell
Print Name

star_harrell@eogresources.com
E-mail Address

SURVEYORS CERTIFICATION

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

08/09/2023
Date of Survey
Signature and Seal of Professional Surveyor:



8/14/2023 11:40:41 AM

S:\SURVEY\EOG_MIDLAND\RATTLESNAKE_28_FED_COM\FINAL_PRODUCTS\LO_RATTLESNAKE28FC_515H_REV1.dwg TGRIFFIN 8/14/2023 11:40 AM

eog resources

Rattlesnake 28 Fed Com 515H

Revised Permit Information 08/04/2023:

Well Name: Rattlesnake 28 Fed Com 515H

Location: SHL: 1188' FNL & 2566' FEL, Section 28, T-26-S, R-33-E, Lea Co., N.M.
BHL: 2547' FNL & 1040' FWL, Section 33, T-26-S, R-33-E, Lea Co., N.M.

Casing Program A:

Hole Size	Interval MD From (ft)	Interval MD To (ft)	Interval TVD From (ft)	Interval TVD To (ft)	Csg OD	Weight	Grade	Conn
16"	0	890	0	890	13-3/8"	54.5#	J-55	STC
11"	0	5,324	0	4,860	9-5/8"	40#	J-55	LTC
6-3/4"	0	18,869	0	11,007	5-1/2"	17#	HCP-110	LTC

Variance is requested to waive the centralizer requirements for the 9-5/8" casing in the 11" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 11" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive any centralizer requirements for the 5-1/2" casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

EOG requests permission to allow deviation from the 0.422'' annulus clearance requirement for the intermediate (salt) section from Onshore Order #2 under the following conditions:

- The variance is not applicable within the Potash Boundaries or Capitan Reef areas.
- Operator takes responsibility to get casing to set point in the event that the clearance causes stuck pipe issues.

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
890' 13-3/8"	270	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	100	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 690')
4,860' 9-5/8"	440	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	100	14.8	1.32	Tail: Class C + 10% NaCL + 3% MagOx (TOC @ 3,890')
18,869' 5-1/2"	340	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 4,360')
	570	13.2	1.52	Tail: Class H + 5% NEX-020 + 0.2% NAC-102 + 0.15% NAS-725 + 0.5% NFL-549 + 0.2% NFP-703 + 1% NBE-737 + 0.3% NRT-241 (TOC @ 10930')

eog resources

Rattlesnake 28 Fed Com 515H

Additive	Purpose
Bentonite Gel	Lightweight/Lost circulation prevention
Calcium Chloride	Accelerator
Cello-flake	Lost circulation prevention
Sodium Metasilicate	Accelerator
MagOx	Expansive agent
Pre-Mag-M	Expansive agent
Sodium Chloride	Accelerator
FL-62	Fluid loss control
Halad-344	Fluid loss control
Halad-9	Fluid loss control
HR-601	Retarder
Microbond	Expansive Agent

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

Mud Program:

Depth (TVD)	Type	Weight (ppg)	Viscosity	Water Loss
0 – 890'	Fresh - Gel	8.6-8.8	28-34	N/c
890' – 4,860'	Brine	8.6-8.8	28-34	N/c
4,860’ – 18,869’	Oil Base	8.8-9.5	58-68	N/c - 6

Wellhead & Offline Cementing:

EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards for well control equipment testing of Onshore Order No. 2 (item III.A.2.a.i) to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) along with Batch Drilling & Offline cement operations to include the following:

- Full BOPE test at first installation on the pad.
- Full BOPE test every 21 days per Onshore Order No. 2.
- Function test BOP elements per Onshore Order No. 2.
- Break testing BOP and BOPE coupled with batch drilling operations and option to offline cement and/or remediate (if needed) any surface or intermediate sections, according to attached offline cementing support documentation.
- After the well section is secured, the BOP will be disconnected from the wellhead and walked with the rig to another well on the pad.
- TA cap will also be installed per Wellhead vendor procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.
- See attached "EOG BLM Variance 3a -Offline Cement Intermediate Operational Procedure"

eog resources

Rattlesnake 28 Fed Com 515H

TUBING REQUIREMENTS

EOG respectively requests an exception to the following NMOCD rule:

- 19.15.16.10 Casing AND TUBING RQUIREMENTS:
  J (3): "The operator shall set tubing as near the bottom as practical and tubing perforations shall not be more than 250 feet above top of pay zone."

With horizontal flowing and gas lifted wells an end of tubing depth placed at or slightly above KOP is a conservative way to ensure the tubing stays clean from debris, plugging, and allows for fewer well interventions post offset completion. The deeper the tubulars are run into the curve, the higher the probability is that the tubing will become stuck in sand and or well debris as the well produces over time. An additional consideration for EOT placement during artificial lift installations is avoiding the high dog leg severity and inclinations found in the curve section of the wellbore to help improve reliability and performance. Dog leg severity and inclinations tend not to hamper gas lifted or flowing wells, but they do effect other forms of artificial lift like rod pump or ESP (electric submersible pump). Keeping the EOT above KOP is an industry best practice for those respective forms of artificial lift.

eog resources

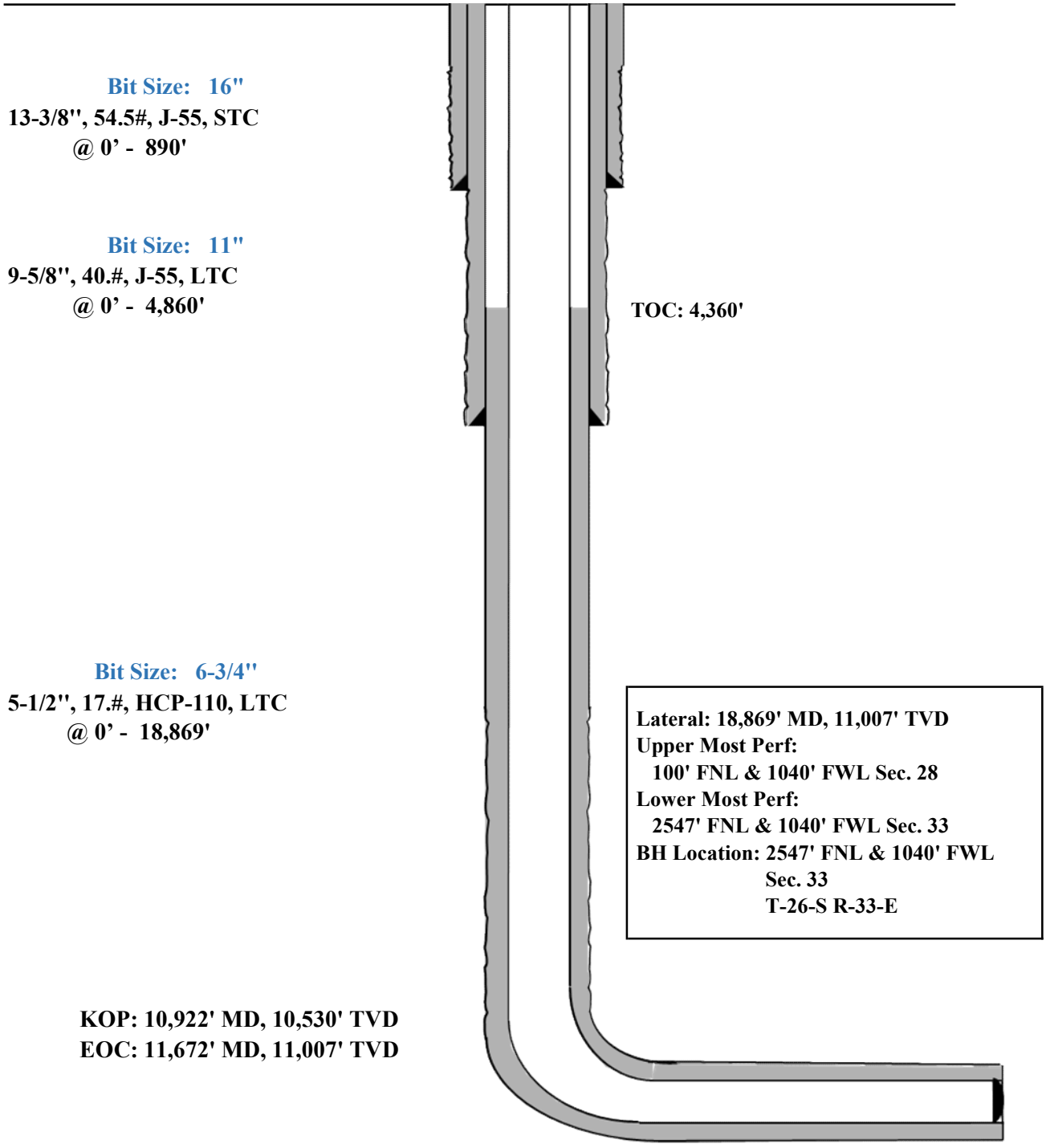
Rattlesnake 28 Fed Com 515H

1188' FNL
2566' FEL
Section 28
T-26-S, R-33-E

Revised Wellbore A:

API: 30-025-48352

KB: 3265'
GL: 3240'



eog resources

Rattlesnake 28 Fed Com 515H

Revised Permit Information 08/04/2023:

Well Name: Rattlesnake 28 Fed Com 515H

Location: SHL: 1188' FNL & 2566' FEL, Section 28, T-26-S, R-33-E, Lea Co., N.M.
BHL: 2547' FNL & 1040' FWL, Section 33, T-26-S, R-33-E, Lea Co., N.M.

Casing Program B:

Hole Size	Interval MD From (ft)	Interval MD To (ft)	Interval TVD From (ft)	Interval TVD To (ft)	Csg OD	Weight	Grade	Conn
13-1/2"	0	890	0	890	10-3/4"	40.5#	J-55	STC
9-7/8"	0	4,466	0	4,000	8-5/8"	32#	J-55	BTC-SC
9-7/8"	4,466	5,326	4,000	4,860	8-5/8"	32#	P110-EC	BTC-SC
6-3/4"	0	18,869	0	11,007	5-1/2"	17#	HCP-110	LTC

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
890' 10-3/4''	310	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	110	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 690')
4,860' 8-5/8''	330	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	100	14.8	1.32	Tail: Class C + 10% NaCL + 3% MagOx (TOC @ 3,890')
18,869' 5-1/2''	700	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 4,360')
	590	13.2	1.52	Tail: Class H + 5% NEX-020 + 0.2% NAC-102 + 0.15% NAS-725 + 0.5% NFL-549 + 0.2% NFP-703 + 1% NBE-737 + 0.3% NRT-241 (TOC @ 10930')

eog resources

Rattlesnake 28 Fed Com 515H

Variance is requested to waive the centralizer requirements for the 8-5/8" casing in the 9-7/8" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 9-7/8" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive any centralizer requirements for the 5-1/2" casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

EOG requests permission to allow deviation from the 0.422'' annulus clearance requirement for the intermediate (salt) section from Onshore Order #2 under the following conditions:

- The variance is not applicable within the Potash Boundaries or Capitan Reef areas.
- Operator takes responsibility to get casing to set point in the event that the clearance causes stuck pipe issues.

Wellhead & Offline Cementing:

EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards for well control equipment testing of Onshore Order No. 2 (item III.A.2.a.i) to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) along with Batch Drilling & Offline cement operations to include the following:

- Full BOPE test at first installation on the pad.
- Full BOPE test every 21 days per Onshore Order No. 2.
- Function test BOP elements per Onshore Order No. 2.
- Break testing BOP and BOPE coupled with batch drilling operations and option to offline cement and/or remediate (if needed) any surface or intermediate sections, according to attached offline cementing support documentation.
- After the well section is secured, the BOP will be disconnected from the wellhead and walked with the rig to another well on the pad.
- TA cap will also be installed per Wellhead vendor procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.
- See attached "EOG BLM Variance 3a -Offline Cement Intermediate Operational Procedure"

eog resources

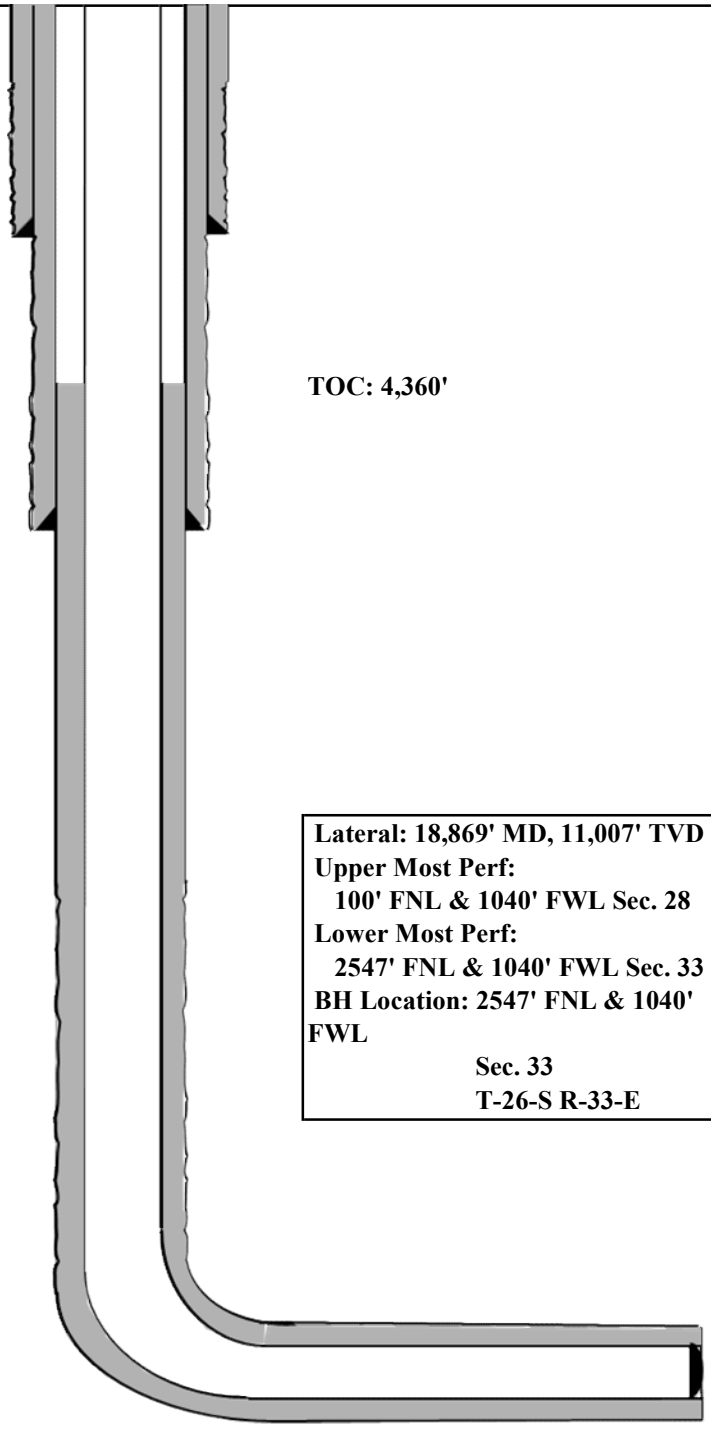
Rattlesnake 28 Fed Com 515H

1188'
2566'
Section 28
T-26-S, R-33-E

Revised Wellbore B:

API: 30-025-48352

KB: 3265'
GL: 3240'



Bit Size: 13-1/2"
10-3/4", 40.5#, J-55, STC
@ 0' - 890'

Bit Size: 9-7/8"
8-5/8", 32.#, J-55, BTC-SC
@ 0' - 4,000'
8-5/8", 32.#, P110-EC, BTC-SC
@ 4,000' - 4,860'

TOC: 4,360'

Bit Size: 6-3/4"
5-1/2", 17.#, HCP-110, LTC
@ 0' - 18,869'

Lateral: 18,869' MD, 11,007' TVD
Upper Most Perf:
100' FNL & 1040' FWL Sec. 28
Lower Most Perf:
2547' FNL & 1040' FWL Sec. 33
BH Location: 2547' FNL & 1040' FWL
Sec. 33
T-26-S R-33-E

KOP: 10,922' MD, 10,530' TVD
EOC: 11,672' MD, 11,007' TVD

eog resources

Rattlesnake 28 Fed Com 515H

GEOLOGIC NAME OF SURFACE FORMATION:

Permian

ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	781'
Tamarisk Anhydrite	860'
Top of Salt	1,815'
Base of Salt	4,758'
Lamar	4,995'
Bell Canyon	5,018'
Cherry Canyon	6,051'
Brushy Canyon	7,609'
Bone Spring Lime	9,185'
Leonard (Avalon) Shale	9,272'
1st Bone Spring Sand	10,138'
2nd Bone Spring Shale	10,305'
2nd Bone Spring Sand	10,642'
3rd Bone Spring Carb	11,112'
TD	11,007'

ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Upper Permian Sands	0- 400’	Fresh Water
Bell Canyon	5,018'	Oil
Cherry Canyon	6,051'	Oil
Brushy Canyon	7,609'	Oil
Leonard (Avalon) Shale	9,272'	Oil
1st Bone Spring Sand	10,138'	Oil
2nd Bone Spring Shale	10,305'	Oil
2nd Bone Spring Sand	10,642'	Oil

Midland

Lea County, NM (NAD 83 NME)
Rattlesnake 28 Fed Com
#515H
140577
OH

Plan: Plan #0.1

Standard Planning Report

15 August, 2023

eog resources

Planning Report

Database:	PEDM	**Local Co-ordinate Reference:**	Well #515H
Company:	Midland	**TVD Reference:**	kb=25' @ 3265.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb=25' @ 3265.0usft
Site:	Rattlesnake 28 Fed Com	**North Reference:**	Grid
Well:	#515H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

Project Lea County, NM (NAD 83 NME)

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

Site Rattlesnake 28 Fed Com

Site Position:		**Northing:**	371,629.00 usft	**Latitude:**	32° 1' 9.870 N
From:	Map	**Easting:**	777,030.00 usft	**Longitude:**	103° 34' 22.279 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well #515H

Well Position	**+N/-S**	0.0 usft	**Northing:**	371,277.00 usft	**Latitude:**	32° 1' 6.475 N
	+E/-W	0.0 usft	**Easting:**	775,750.00 usft	**Longitude:**	103° 34' 37.175 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,240.0 usft
Grid Convergence:		0.40 °				

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/15/2023	6.28	59.64	47,147.14203518

Design Plan #0.1

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	193.93

Plan Survey Tool Program **Date** 8/15/2023

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	18,869.0	Plan #0.1 (OH)	EOG MWD+IFR1	
				MWD + IFR1	

eog resources

Planning Report

Database:	PEDM	**Local Co-ordinate Reference:**	Well #515H
Company:	Midland	**TVD Reference:**	kb=25' @ 3265.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb=25' @ 3265.0usft
Site:	Rattlesnake 28 Fed Com	**North Reference:**	Grid
Well:	#515H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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	
1,815.0	0.00	0.00	1,815.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,007.2	23.84	304.04	2,973.1	136.8	-202.6	2.00	2.00	0.00	304.04	
6,809.6	23.84	304.04	6,450.9	997.2	-1,476.4	0.00	0.00	0.00	0.00	
8,001.7	0.00	0.00	7,609.0	1,134.0	-1,679.0	2.00	-2.00	0.00	180.00	
10,922.2	0.00	0.00	10,529.5	1,134.0	-1,679.0	0.00	0.00	0.00	0.00	KOP(Rattlesnake 28 I
11,142.7	26.46	180.00	10,742.2	1,084.0	-1,679.0	12.00	12.00	81.65	180.00	FTP(Rattlesnake 28 F
11,672.2	90.00	179.53	11,006.9	656.6	-1,676.6	12.00	12.00	-0.09	-0.53	
12,463.8	90.00	179.53	11,007.0	-135.0	-1,670.0	0.00	0.00	0.00	0.00	FPP1(Rattlesnake 28
16,420.9	90.00	179.61	11,007.0	-4,092.0	-1,640.0	0.00	0.00	0.00	84.48	FPP2(Rattlesnake 28
18,869.0	90.00	179.55	11,007.0	-6,540.0	-1,622.0	0.00	0.00	0.00	-98.19	PBHL(Rattlesnake 28

eog resources

Planning Report

Database:	PEDM	**Local Co-ordinate Reference:**	Well #515H
Company:	Midland	**TVD Reference:**	kb=25' @ 3265.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb=25' @ 3265.0usft
Site:	Rattlesnake 28 Fed Com	**North Reference:**	Grid
Well:	#515H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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
1,815.0	0.00	0.00	1,815.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	1.70	304.04	1,900.0	0.7	-1.0	-0.4	2.00	2.00	0.00
2,000.0	3.70	304.04	1,999.9	3.3	-4.9	-2.1	2.00	2.00	0.00
2,100.0	5.70	304.04	2,099.5	7.9	-11.7	-4.9	2.00	2.00	0.00
2,200.0	7.70	304.04	2,198.8	14.5	-21.4	-8.9	2.00	2.00	0.00
2,300.0	9.70	304.04	2,297.7	22.9	-33.9	-14.1	2.00	2.00	0.00
2,400.0	11.70	304.04	2,395.9	33.3	-49.3	-20.5	2.00	2.00	0.00
2,500.0	13.70	304.04	2,493.5	45.6	-67.5	-28.0	2.00	2.00	0.00
2,600.0	15.70	304.04	2,590.2	59.8	-88.6	-36.7	2.00	2.00	0.00
2,700.0	17.70	304.04	2,686.0	75.9	-112.4	-46.6	2.00	2.00	0.00
2,800.0	19.70	304.04	2,780.7	93.8	-139.0	-57.6	2.00	2.00	0.00
2,900.0	21.70	304.04	2,874.2	113.6	-168.2	-69.8	2.00	2.00	0.00
3,007.2	23.84	304.04	2,973.1	136.8	-202.6	-84.0	2.00	2.00	0.00
3,100.0	23.84	304.04	3,058.0	157.8	-233.7	-96.9	0.00	0.00	0.00
3,200.0	23.84	304.04	3,149.4	180.5	-267.2	-110.8	0.00	0.00	0.00
3,300.0	23.84	304.04	3,240.9	203.1	-300.7	-124.7	0.00	0.00	0.00
3,400.0	23.84	304.04	3,332.4	225.7	-334.2	-138.6	0.00	0.00	0.00
3,500.0	23.84	304.04	3,423.8	248.4	-367.7	-152.5	0.00	0.00	0.00
3,600.0	23.84	304.04	3,515.3	271.0	-401.2	-166.4	0.00	0.00	0.00
3,700.0	23.84	304.04	3,606.8	293.6	-434.7	-180.3	0.00	0.00	0.00
3,800.0	23.84	304.04	3,698.2	316.2	-468.2	-194.2	0.00	0.00	0.00
3,900.0	23.84	304.04	3,789.7	338.9	-501.7	-208.1	0.00	0.00	0.00
4,000.0	23.84	304.04	3,881.2	361.5	-535.2	-222.0	0.00	0.00	0.00
4,100.0	23.84	304.04	3,972.6	384.1	-568.7	-235.9	0.00	0.00	0.00
4,200.0	23.84	304.04	4,064.1	406.7	-602.2	-249.8	0.00	0.00	0.00
4,300.0	23.84	304.04	4,155.5	429.4	-635.7	-263.7	0.00	0.00	0.00
4,400.0	23.84	304.04	4,247.0	452.0	-669.2	-277.6	0.00	0.00	0.00
4,500.0	23.84	304.04	4,338.5	474.6	-702.7	-291.5	0.00	0.00	0.00
4,600.0	23.84	304.04	4,429.9	497.2	-736.2	-305.4	0.00	0.00	0.00
4,700.0	23.84	304.04	4,521.4	519.9	-769.7	-319.3	0.00	0.00	0.00
4,800.0	23.84	304.04	4,612.9	542.5	-803.2	-333.2	0.00	0.00	0.00
4,900.0	23.84	304.04	4,704.3	565.1	-836.7	-347.1	0.00	0.00	0.00
5,000.0	23.84	304.04	4,795.8	587.7	-870.2	-361.0	0.00	0.00	0.00
5,100.0	23.84	304.04	4,887.3	610.4	-903.7	-374.9	0.00	0.00	0.00
5,200.0	23.84	304.04	4,978.7	633.0	-937.2	-388.8	0.00	0.00	0.00

eog resources

Planning Report

Database:	PEDM	**Local Co-ordinate Reference:**	Well #515H
Company:	Midland	**TVD Reference:**	kb=25' @ 3265.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb=25' @ 3265.0usft
Site:	Rattlesnake 28 Fed Com	**North Reference:**	Grid
Well:	#515H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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	23.84	304.04	5,070.2	655.6	-970.7	-402.7	0.00	0.00	0.00
5,400.0	23.84	304.04	5,161.7	678.2	-1,004.2	-416.6	0.00	0.00	0.00
5,500.0	23.84	304.04	5,253.1	700.9	-1,037.7	-430.5	0.00	0.00	0.00
5,600.0	23.84	304.04	5,344.6	723.5	-1,071.2	-444.4	0.00	0.00	0.00
5,700.0	23.84	304.04	5,436.1	746.1	-1,104.7	-458.2	0.00	0.00	0.00
5,800.0	23.84	304.04	5,527.5	768.7	-1,138.2	-472.1	0.00	0.00	0.00
5,900.0	23.84	304.04	5,619.0	791.4	-1,171.7	-486.0	0.00	0.00	0.00
6,000.0	23.84	304.04	5,710.5	814.0	-1,205.2	-499.9	0.00	0.00	0.00
6,100.0	23.84	304.04	5,801.9	836.6	-1,238.7	-513.8	0.00	0.00	0.00
6,200.0	23.84	304.04	5,893.4	859.2	-1,272.2	-527.7	0.00	0.00	0.00
6,300.0	23.84	304.04	5,984.9	881.9	-1,305.7	-541.6	0.00	0.00	0.00
6,400.0	23.84	304.04	6,076.3	904.5	-1,339.2	-555.5	0.00	0.00	0.00
6,500.0	23.84	304.04	6,167.8	927.1	-1,372.7	-569.4	0.00	0.00	0.00
6,600.0	23.84	304.04	6,259.3	949.7	-1,406.2	-583.3	0.00	0.00	0.00
6,700.0	23.84	304.04	6,350.7	972.4	-1,439.7	-597.2	0.00	0.00	0.00
6,809.6	23.84	304.04	6,450.9	997.2	-1,476.4	-612.4	0.00	0.00	0.00
6,900.0	22.03	304.04	6,534.2	1,016.9	-1,505.6	-624.6	2.00	-2.00	0.00
7,000.0	20.03	304.04	6,627.5	1,037.0	-1,535.3	-636.9	2.00	-2.00	0.00
7,100.0	18.03	304.04	6,722.1	1,055.2	-1,562.4	-648.1	2.00	-2.00	0.00
7,200.0	16.03	304.04	6,817.7	1,071.6	-1,586.6	-658.2	2.00	-2.00	0.00
7,300.0	14.03	304.04	6,914.2	1,086.1	-1,608.1	-667.1	2.00	-2.00	0.00
7,400.0	12.03	304.04	7,011.7	1,098.8	-1,626.8	-674.8	2.00	-2.00	0.00
7,500.0	10.03	304.04	7,109.8	1,109.5	-1,642.7	-681.4	2.00	-2.00	0.00
7,600.0	8.03	304.04	7,208.6	1,118.3	-1,655.7	-686.8	2.00	-2.00	0.00
7,700.0	6.03	304.04	7,307.8	1,125.1	-1,665.8	-691.0	2.00	-2.00	0.00
7,800.0	4.03	304.04	7,407.4	1,130.0	-1,673.1	-694.0	2.00	-2.00	0.00
7,900.0	2.03	304.04	7,507.3	1,133.0	-1,677.5	-695.9	2.00	-2.00	0.00
8,001.7	0.00	0.00	7,609.0	1,134.0	-1,679.0	-696.5	2.00	-2.00	0.00
8,100.0	0.00	0.00	7,707.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
8,200.0	0.00	0.00	7,807.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
8,300.0	0.00	0.00	7,907.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
8,400.0	0.00	0.00	8,007.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
8,500.0	0.00	0.00	8,107.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
8,600.0	0.00	0.00	8,207.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
8,700.0	0.00	0.00	8,307.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
8,800.0	0.00	0.00	8,407.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
8,900.0	0.00	0.00	8,507.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
9,000.0	0.00	0.00	8,607.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
9,100.0	0.00	0.00	8,707.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
9,200.0	0.00	0.00	8,807.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
9,300.0	0.00	0.00	8,907.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
9,400.0	0.00	0.00	9,007.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
9,500.0	0.00	0.00	9,107.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
9,600.0	0.00	0.00	9,207.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
9,700.0	0.00	0.00	9,307.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
9,800.0	0.00	0.00	9,407.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
9,900.0	0.00	0.00	9,507.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
10,000.0	0.00	0.00	9,607.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
10,100.0	0.00	0.00	9,707.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
10,200.0	0.00	0.00	9,807.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
10,300.0	0.00	0.00	9,907.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
10,400.0	0.00	0.00	10,007.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
10,500.0	0.00	0.00	10,107.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
10,600.0	0.00	0.00	10,207.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00

eog resources

Planning Report

Database:	PEDM	**Local Co-ordinate Reference:**	Well #515H
Company:	Midland	**TVD Reference:**	kb=25' @ 3265.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb=25' @ 3265.0usft
Site:	Rattlesnake 28 Fed Com	**North Reference:**	Grid
Well:	#515H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
10,700.0	0.00	0.00	10,307.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
10,800.0	0.00	0.00	10,407.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
10,900.0	0.00	0.00	10,507.3	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
10,922.2	0.00	0.00	10,529.5	1,134.0	-1,679.0	-696.5	0.00	0.00	0.00
10,925.0	0.33	180.00	10,532.3	1,134.0	-1,679.0	-696.5	12.00	12.00	0.00
10,950.0	3.33	180.00	10,557.2	1,133.2	-1,679.0	-695.7	12.00	12.00	0.00
10,975.0	6.33	180.00	10,582.1	1,131.1	-1,679.0	-693.7	12.00	12.00	0.00
11,000.0	9.33	180.00	10,606.9	1,127.7	-1,679.0	-690.4	12.00	12.00	0.00
11,025.0	12.33	180.00	10,631.5	1,123.0	-1,679.0	-685.8	12.00	12.00	0.00
11,050.0	15.33	180.00	10,655.7	1,117.0	-1,679.0	-680.0	12.00	12.00	0.00
11,075.0	18.33	180.00	10,679.7	1,109.8	-1,679.0	-673.0	12.00	12.00	0.00
11,100.0	21.33	180.00	10,703.2	1,101.3	-1,679.0	-664.7	12.00	12.00	0.00
11,125.0	24.33	180.00	10,726.2	1,091.6	-1,679.0	-655.3	12.00	12.00	0.00
11,142.7	26.46	180.00	10,742.2	1,084.0	-1,679.0	-648.0	12.00	12.00	0.00
11,150.0	27.33	179.98	10,748.7	1,080.7	-1,679.0	-644.8	12.00	12.00	-0.24
11,175.0	30.33	179.93	10,770.6	1,068.6	-1,679.0	-633.1	12.00	12.00	-0.21
11,200.0	33.33	179.88	10,791.8	1,055.5	-1,679.0	-620.3	12.00	12.00	-0.18
11,225.0	36.33	179.85	10,812.4	1,041.2	-1,678.9	-606.4	12.00	12.00	-0.15
11,250.0	39.33	179.81	10,832.1	1,025.8	-1,678.9	-591.5	12.00	12.00	-0.13
11,275.0	42.33	179.78	10,851.0	1,009.5	-1,678.8	-575.7	12.00	12.00	-0.12
11,300.0	45.33	179.76	10,869.1	992.2	-1,678.8	-558.9	12.00	12.00	-0.10
11,325.0	48.33	179.74	10,886.2	974.0	-1,678.7	-541.2	12.00	12.00	-0.09
11,350.0	51.33	179.71	10,902.3	954.9	-1,678.6	-522.7	12.00	12.00	-0.08
11,375.0	54.33	179.70	10,917.4	934.9	-1,678.5	-503.4	12.00	12.00	-0.08
11,400.0	57.33	179.68	10,931.4	914.3	-1,678.4	-483.4	12.00	12.00	-0.07
11,425.0	60.33	179.66	10,944.4	892.9	-1,678.3	-462.6	12.00	12.00	-0.07
11,450.0	63.33	179.64	10,956.2	870.8	-1,678.1	-441.3	12.00	12.00	-0.06
11,475.0	66.33	179.63	10,966.8	848.2	-1,678.0	-419.3	12.00	12.00	-0.06
11,500.0	69.33	179.61	10,976.2	825.1	-1,677.8	-396.9	12.00	12.00	-0.06
11,525.0	72.33	179.60	10,984.4	801.4	-1,677.7	-374.0	12.00	12.00	-0.06
11,550.0	75.33	179.59	10,991.4	777.4	-1,677.5	-350.8	12.00	12.00	-0.05
11,575.0	78.33	179.57	10,997.1	753.1	-1,677.3	-327.2	12.00	12.00	-0.05
11,600.0	81.33	179.56	11,001.5	728.5	-1,677.1	-303.4	12.00	12.00	-0.05
11,625.0	84.33	179.55	11,004.6	703.7	-1,676.9	-279.3	12.00	12.00	-0.05
11,650.0	87.33	179.54	11,006.4	678.8	-1,676.7	-255.2	12.00	12.00	-0.05
11,672.2	90.00	179.53	11,006.9	656.6	-1,676.6	-233.7	12.00	12.00	-0.05
11,700.0	90.00	179.53	11,006.9	628.8	-1,676.3	-206.8	0.00	0.00	0.00
11,800.0	90.00	179.53	11,007.0	528.8	-1,675.5	-109.9	0.00	0.00	0.00
11,900.0	90.00	179.53	11,007.0	428.8	-1,674.7	-13.0	0.00	0.00	0.00
12,000.0	90.00	179.53	11,007.0	328.8	-1,673.8	83.8	0.00	0.00	0.00
12,100.0	90.00	179.53	11,007.0	228.8	-1,673.0	180.7	0.00	0.00	0.00
12,200.0	90.00	179.53	11,007.0	128.8	-1,672.2	277.5	0.00	0.00	0.00
12,300.0	90.00	179.53	11,007.0	28.8	-1,671.4	374.4	0.00	0.00	0.00
12,400.0	90.00	179.53	11,007.0	-71.2	-1,670.5	471.2	0.00	0.00	0.00
12,463.8	90.00	179.53	11,007.0	-135.0	-1,670.0	533.0	0.00	0.00	0.00
12,500.0	90.00	179.53	11,007.0	-171.2	-1,669.7	568.1	0.00	0.00	0.00
12,600.0	90.00	179.53	11,007.0	-271.2	-1,668.9	664.9	0.00	0.00	0.00
12,700.0	90.00	179.53	11,007.0	-371.2	-1,668.1	761.8	0.00	0.00	0.00
12,800.0	90.00	179.53	11,007.0	-471.2	-1,667.2	858.7	0.00	0.00	0.00
12,900.0	90.00	179.53	11,007.0	-571.2	-1,666.4	955.5	0.00	0.00	0.00
13,000.0	90.00	179.54	11,007.0	-671.2	-1,665.6	1,052.4	0.00	0.00	0.00
13,100.0	90.00	179.54	11,007.0	-771.2	-1,664.8	1,149.3	0.00	0.00	0.00
13,200.0	90.00	179.54	11,007.0	-871.2	-1,664.0	1,246.1	0.00	0.00	0.00
13,300.0	90.00	179.54	11,007.0	-971.2	-1,663.2	1,343.0	0.00	0.00	0.00

eog resources

Planning Report

Database:	PEDM	**Local Co-ordinate Reference:**	Well #515H
Company:	Midland	**TVD Reference:**	kb=25' @ 3265.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb=25' @ 3265.0usft
Site:	Rattlesnake 28 Fed Com	**North Reference:**	Grid
Well:	#515H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
13,400.0	90.00	179.54	11,007.0	-1,071.2	-1,662.4	1,439.8	0.00	0.00	0.00
13,500.0	90.00	179.55	11,007.1	-1,171.2	-1,661.6	1,536.7	0.00	0.00	0.00
13,600.0	90.00	179.55	11,007.1	-1,271.2	-1,660.8	1,633.6	0.00	0.00	0.00
13,700.0	90.00	179.55	11,007.1	-1,371.2	-1,660.0	1,730.4	0.00	0.00	0.00
13,800.0	90.00	179.55	11,007.1	-1,471.2	-1,659.3	1,827.3	0.00	0.00	0.00
13,900.0	90.00	179.55	11,007.1	-1,571.2	-1,658.5	1,924.2	0.00	0.00	0.00
14,000.0	90.00	179.56	11,007.1	-1,671.1	-1,657.7	2,021.0	0.00	0.00	0.00
14,100.0	90.00	179.56	11,007.1	-1,771.1	-1,656.9	2,117.9	0.00	0.00	0.00
14,200.0	90.00	179.56	11,007.1	-1,871.1	-1,656.2	2,214.8	0.00	0.00	0.00
14,300.0	90.00	179.56	11,007.1	-1,971.1	-1,655.4	2,311.7	0.00	0.00	0.00
14,400.0	90.00	179.56	11,007.1	-2,071.1	-1,654.6	2,408.5	0.00	0.00	0.00
14,500.0	90.00	179.57	11,007.1	-2,171.1	-1,653.9	2,505.4	0.00	0.00	0.00
14,600.0	90.00	179.57	11,007.1	-2,271.1	-1,653.1	2,602.3	0.00	0.00	0.00
14,700.0	90.00	179.57	11,007.1	-2,371.1	-1,652.4	2,699.2	0.00	0.00	0.00
14,800.0	90.00	179.57	11,007.1	-2,471.1	-1,651.6	2,796.0	0.00	0.00	0.00
14,900.0	90.00	179.57	11,007.1	-2,571.1	-1,650.9	2,892.9	0.00	0.00	0.00
15,000.0	90.00	179.58	11,007.1	-2,671.1	-1,650.1	2,989.8	0.00	0.00	0.00
15,100.0	90.00	179.58	11,007.1	-2,771.1	-1,649.4	3,086.7	0.00	0.00	0.00
15,200.0	90.00	179.58	11,007.1	-2,871.1	-1,648.7	3,183.6	0.00	0.00	0.00
15,300.0	90.00	179.58	11,007.1	-2,971.1	-1,647.9	3,280.4	0.00	0.00	0.00
15,400.0	90.00	179.58	11,007.1	-3,071.1	-1,647.2	3,377.3	0.00	0.00	0.00
15,500.0	90.00	179.59	11,007.0	-3,171.1	-1,646.5	3,474.2	0.00	0.00	0.00
15,600.0	90.00	179.59	11,007.0	-3,271.1	-1,645.8	3,571.1	0.00	0.00	0.00
15,700.0	90.00	179.59	11,007.0	-3,371.1	-1,645.1	3,668.0	0.00	0.00	0.00
15,800.0	90.00	179.59	11,007.0	-3,471.1	-1,644.3	3,764.9	0.00	0.00	0.00
15,900.0	90.00	179.60	11,007.0	-3,571.1	-1,643.6	3,861.7	0.00	0.00	0.00
16,000.0	90.00	179.60	11,007.0	-3,671.1	-1,642.9	3,958.6	0.00	0.00	0.00
16,100.0	90.00	179.60	11,007.0	-3,771.1	-1,642.2	4,055.5	0.00	0.00	0.00
16,200.0	90.00	179.60	11,007.0	-3,871.1	-1,641.5	4,152.4	0.00	0.00	0.00
16,300.0	90.00	179.60	11,007.0	-3,971.1	-1,640.8	4,249.3	0.00	0.00	0.00
16,400.0	90.00	179.61	11,007.0	-4,071.1	-1,640.1	4,346.2	0.00	0.00	0.00
16,420.9	90.00	179.61	11,007.0	-4,092.0	-1,640.0	4,366.5	0.00	0.00	0.00
16,500.0	90.00	179.60	11,007.0	-4,171.1	-1,639.5	4,443.1	0.00	0.00	0.00
16,600.0	90.00	179.60	11,007.0	-4,271.1	-1,638.8	4,540.0	0.00	0.00	0.00
16,700.0	90.00	179.60	11,007.0	-4,371.1	-1,638.1	4,636.9	0.00	0.00	0.00
16,800.0	90.00	179.60	11,007.0	-4,471.1	-1,637.4	4,733.7	0.00	0.00	0.00
16,900.0	90.00	179.60	11,007.0	-4,571.1	-1,636.7	4,830.6	0.00	0.00	0.00
17,000.0	90.00	179.59	11,007.0	-4,671.1	-1,635.9	4,927.5	0.00	0.00	0.00
17,100.0	90.00	179.59	11,007.0	-4,771.1	-1,635.2	5,024.4	0.00	0.00	0.00
17,200.0	90.00	179.59	11,007.0	-4,871.1	-1,634.5	5,121.3	0.00	0.00	0.00
17,300.0	90.00	179.59	11,007.0	-4,971.1	-1,633.8	5,218.2	0.00	0.00	0.00
17,400.0	90.00	179.58	11,007.0	-5,071.1	-1,633.1	5,315.1	0.00	0.00	0.00
17,500.0	90.00	179.58	11,007.0	-5,171.1	-1,632.3	5,411.9	0.00	0.00	0.00
17,600.0	90.00	179.58	11,007.0	-5,271.1	-1,631.6	5,508.8	0.00	0.00	0.00
17,700.0	90.00	179.58	11,007.0	-5,371.1	-1,630.9	5,605.7	0.00	0.00	0.00
17,800.0	90.00	179.58	11,007.0	-5,471.0	-1,630.1	5,702.6	0.00	0.00	0.00
17,900.0	90.00	179.57	11,007.0	-5,571.0	-1,629.4	5,799.5	0.00	0.00	0.00
18,000.0	90.00	179.57	11,007.0	-5,671.0	-1,628.7	5,896.3	0.00	0.00	0.00
18,100.0	90.00	179.57	11,007.0	-5,771.0	-1,627.9	5,993.2	0.00	0.00	0.00
18,200.0	90.00	179.57	11,007.0	-5,871.0	-1,627.1	6,090.1	0.00	0.00	0.00
18,300.0	90.00	179.56	11,007.0	-5,971.0	-1,626.4	6,187.0	0.00	0.00	0.00
18,400.0	90.00	179.56	11,007.0	-6,071.0	-1,625.6	6,283.8	0.00	0.00	0.00
18,500.0	90.00	179.56	11,007.0	-6,171.0	-1,624.9	6,380.7	0.00	0.00	0.00
18,600.0	90.00	179.56	11,007.0	-6,271.0	-1,624.1	6,477.6	0.00	0.00	0.00

eog resources

Planning Report

Database:	PEDM	**Local Co-ordinate Reference:**	Well #515H
Company:	Midland	**TVD Reference:**	kb=25' @ 3265.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb=25' @ 3265.0usft
Site:	Rattlesnake 28 Fed Com	**North Reference:**	Grid
Well:	#515H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
18,700.0	90.00	179.56	11,007.0	-6,371.0	-1,623.3	6,574.4	0.00	0.00	0.00
18,800.0	90.00	179.55	11,007.0	-6,471.0	-1,622.5	6,671.3	0.00	0.00	0.00
18,869.0	90.00	179.55	11,007.0	-6,540.0	-1,622.0	6,738.1	0.00	0.00	0.00

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
KOP(Rattlesnake 28 Fe - plan hits target center - Point	0.00	0.00	10,529.5	1,134.0	-1,679.0	372,411.00	774,071.00	32° 1' 17.813 N	103° 34' 56.584 W
FTP(Rattlesnake 28 Fed - plan hits target center - Point	0.00	0.00	10,742.2	1,084.0	-1,679.0	372,361.00	774,071.00	32° 1' 17.318 N	103° 34' 56.588 W
FPP1(Rattlesnake 28 Fe - plan hits target center - Point	0.00	0.00	11,007.0	-135.0	-1,670.0	371,142.00	774,080.00	32° 1' 5.255 N	103° 34' 56.582 W
PBHL(Rattlesnake 28 Fe - plan hits target center - Point	0.00	0.00	11,007.0	-6,540.0	-1,622.0	364,737.00	774,128.00	32° 0' 1.870 N	103° 34' 56.541 W
FPP2(Rattlesnake 28 Fe - plan hits target center - Point	0.00	0.00	11,007.0	-4,092.0	-1,640.0	367,185.00	774,110.00	32° 0' 26.096 N	103° 34' 56.553 W

Lea County, NM (NAD 83 NME)

Rattlesnake 28 Fed Com #515H

Plan #0.1

Azimuths to Grid North
True North: -0.40°
Magnetic North: 5.88°

Magnetic Field
Strength: 47147.1nT
Dip Angle: 59.64°
Date: 8/15/2023
Model: IGRF2020

To convert a Magnetic Direction to a Grid Direction, Add 5.88°
To convert a Magnetic Direction to a True Direction, Add 6.28° East
To convert a True Direction to a Grid Direction, Subtract 0.40°

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

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

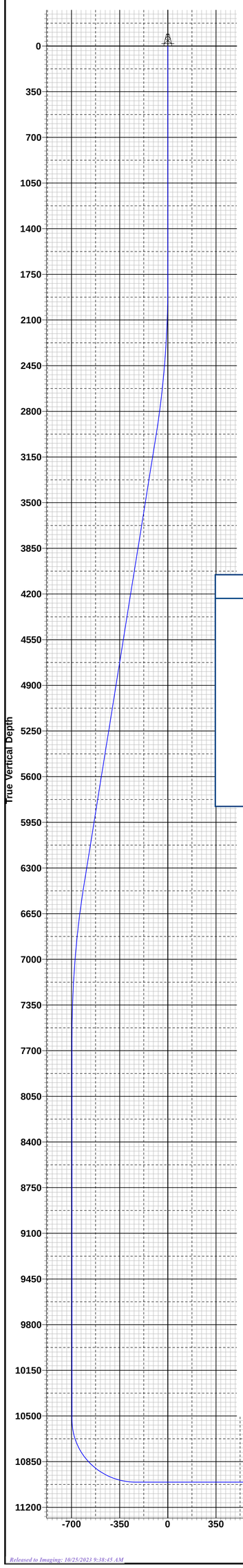
WELL DETAILS: #515H

3240.0
kb=25' @ 3265.0usft

Northing	Easting	Latittude	Longitude
371277.00	775750.00	32° 1' 6.475 N	103° 34' 37.175 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1815.0	0.00	0.00	1815.0	0.0	0.0	0.00	0.00	0.0	
3	3007.2	23.84	304.04	2973.1	136.8	-202.6	2.00	304.04	-84.0	
4	6809.6	23.84	304.04	6450.9	997.2	-1476.4	0.00	0.00	-612.4	
5	8001.7	0.00	0.00	7609.0	1134.0	-1679.0	2.00	180.00	-696.5	
6	10922.2	0.00	0.00	10529.5	1134.0	-1679.0	0.00	0.00	-696.5	KOP(Rattlesnake 28 Fed Com #515H)
7	11142.7	26.46	180.00	10742.2	1084.0	-1679.0	12.00	180.00	-648.0	FTP(Rattlesnake 28 Fed Com #515H)
8	11672.2	90.00	179.53	11006.9	656.6	-1676.6	12.00	-0.53	-233.7	
9	12463.8	90.00	179.53	11007.0	-135.0	-1670.0	0.00	0.00	533.0	FPP1(Rattlesnake 28 Fed Com #515H)
10	16420.9	90.00	179.61	11007.0	-4092.0	-1640.0	0.00	84.48	4366.5	FPP2(Rattlesnake 28 Fed Com #515H)
11	18869.0	90.00	179.55	11007.0	-6540.0	-1622.0	0.00	-98.19	6738.1	PBHL(Rattlesnake 28 Fed Com #515H)

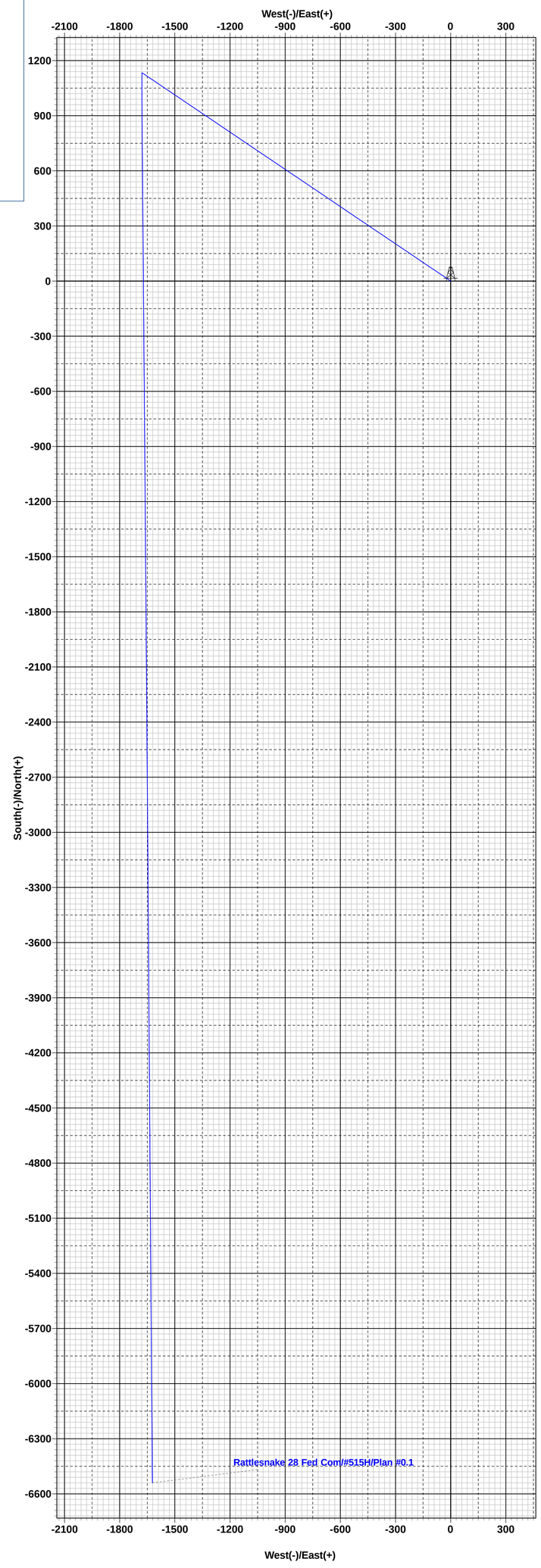


CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP(Rattlesnake 28 Fed Com #515H)	10529.5	1134.0	-1679.0	372411.00	774071.00
FTP(Rattlesnake 28 Fed Com #515H)	10742.2	1084.0	-1679.0	372361.00	774071.00
FPP1(Rattlesnake 28 Fed Com #515H)	11007.0	-135.0	-1670.0	371142.00	774080.00
FPP2(Rattlesnake 28 Fed Com #515H)	11007.0	-4092.0	-1640.0	367185.00	774110.00
PBHL(Rattlesnake 28 Fed Com #515H)	11007.0	-6540.0	-1622.0	364737.00	774128.00



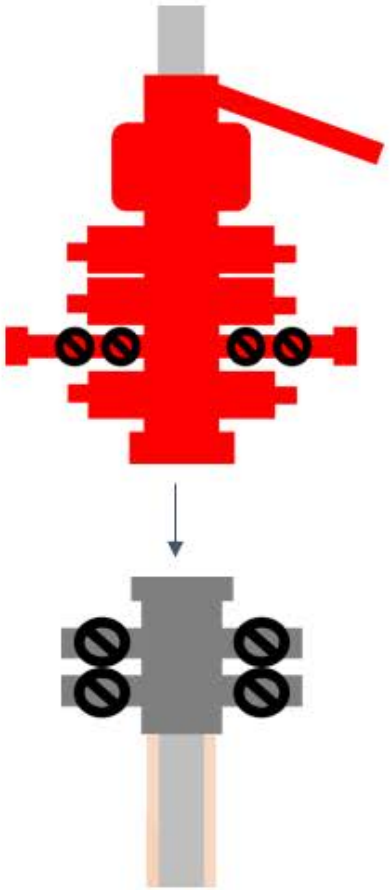
Lea County, NM (NAD 83 NME)
Rattlesnake 28 Fed Com
#515H
OH
Plan #0.1
16:34, August 15 2023

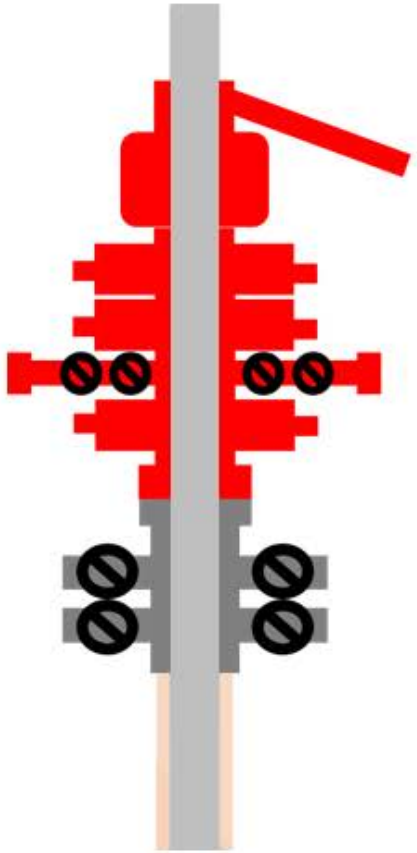
Break-test BOP & Offline Cementing:

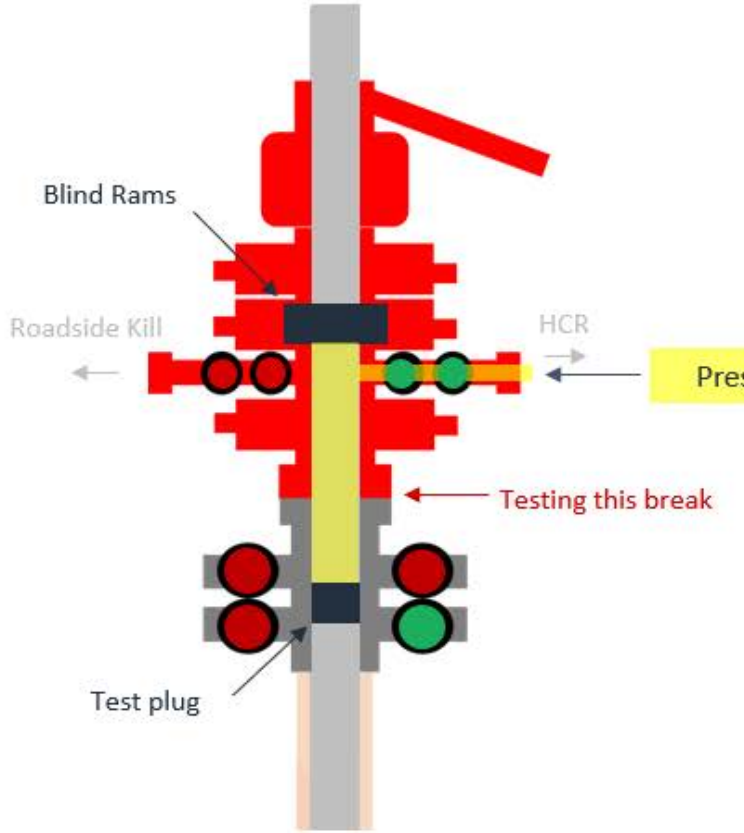
EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards for well control equipment testing of ECFR Title 43 Part 3172.6(b)(9)(iv) to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) along with Batch Drilling & Offline cement operations to include the following:

- Full BOPE test at first installation on the pad.
- Full BOPE test every 21 days.
- This test will be conducted for 5M rated hole intervals only.
- Each rig requesting the break-test variance is capable of picking up the BOP without damaging components using winches, following API Standard 53, Well Control Equipment Systems for Drilling Wells (Fifth edition, December 2018, Annex C. Table C.4) which recognizes break testing as an acceptable practice.
- Function tests will be performed on the following BOP elements:
    - Annular à during each full BOPE test
    - Upper Pipe Rams à On trip ins where FIT required
    - Blind Rams à Every trip
    - Lower Pipe Rams à during each full BOPE test
- Break testing BOP and BOPE coupled with batch drilling operations and option to offline cement and/or remediate (if needed) any surface or intermediate sections, according to attached offline cementing support documentation.
- After the well section is secured, the BOP will be disconnected from the wellhead and walked with the rig to another well on the pad.
- TA cap will also be installed per Wellhead vendor procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

Break Test Diagram (HCR valve)



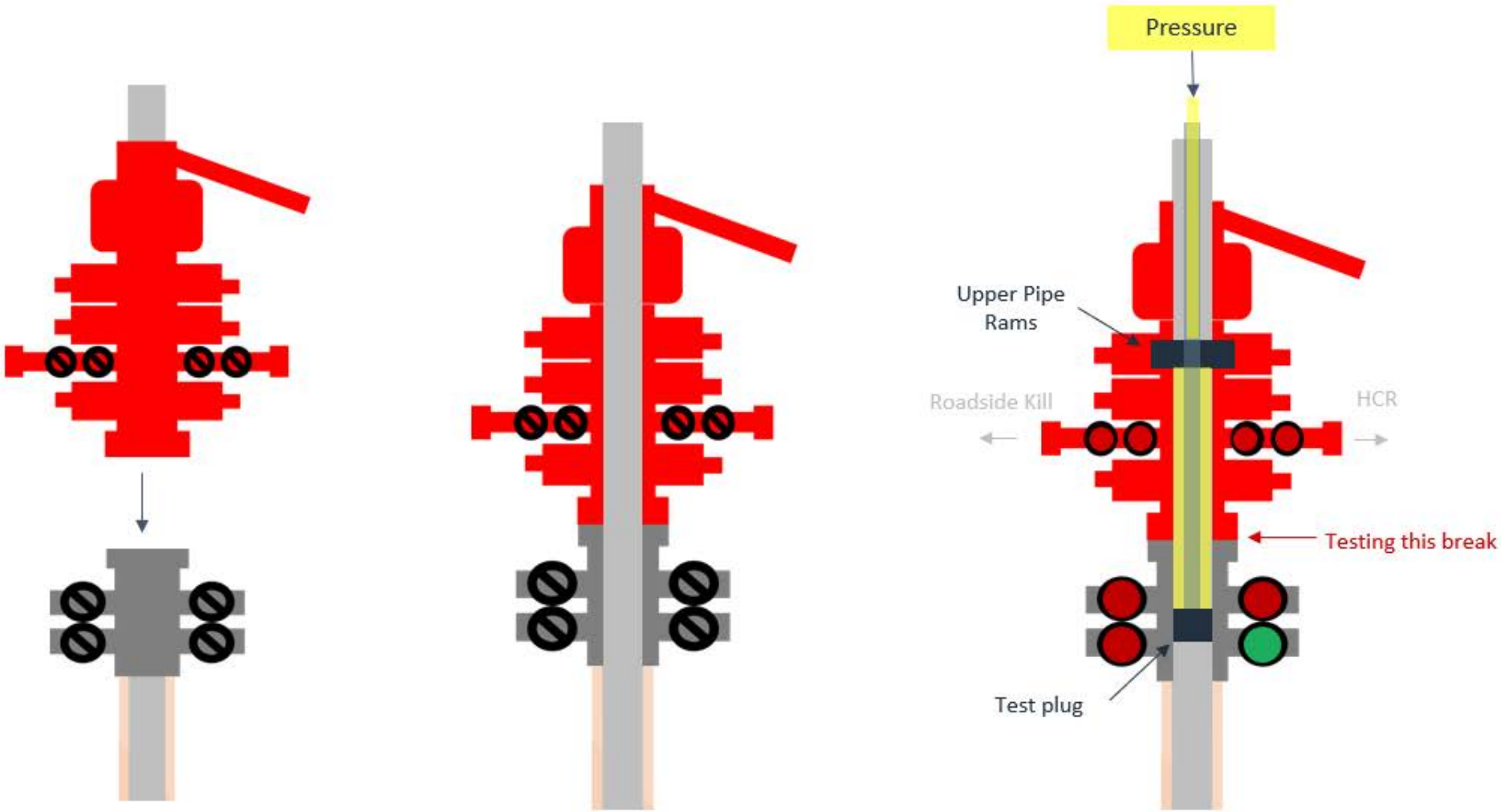




Steps

1. Set plug in wellhead (lower barrier)
2. Close Blind Rams (upper barrier)
3. Close roadside kill
4. Open HCR (pressure application)
5. Open wellhead valves below test plug to ensure if leak past test plug, pressure won't be applied to wellbore
6. Tie BOP testers high pressure line to main choke manifold crown valve
7. Pressure up to test break
8. Bleed test pressure from BOP testing unit

Break Test Diagram (Test Joint)



Steps

1. Set plug in with test joint wellhead (lower barrier)
2. Close Upper Pipe Rams (upper barrier)
3. Close roadside kill
4. Close HCR
5. Open wellhead valves below test plug to ensure if leak past test plug, pressure won't be applied to wellbore
6. Tie BOP testers high pressure line to top of test joint
7. Pressure up to test break
8. Bleed test pressure from BOP testing unit

eog resources

Offline Intermediate Cementing Procedure 2/24/2022

Cement Program

1. No changes to the cement program will take place for offline cementing.

Summarized Operational Procedure for Intermediate Casing

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment back pressure valves.
    a. Float equipment is equipped with two back pressure valves rated to a minimum of 5,000 psi.
2. Land production casing on mandrel hanger through BOP.
    a. If casing is unable to be landed with a mandrel hanger, then the **casing will be cemented online**.
3. Break circulation and confirm no restrictions.
    a. Ensure no blockage of float equipment and appropriate annular returns.
    b. Perform flow check to confirm well is static.
4. Set pack-off
    a. If utilizing a fluted/ported mandrel hanger, ensure well is static on the annulus and inside the casing by filling the pipe with kill weight fluid, remove landing joint, and set annular packoff through BOP. Pressure test to 5,000 psi for 10 min.
    b. If utilizing a solid mandrel hanger, ensure well is static on the annulus and inside the casing by filling the pipe with kill weight fluid. Pressure test seals to 5,000 psi for 10 min. Remove landing joint through BOP.
5. After confirmation of both annular barriers and the two casing barriers, install TA plug and pressure test to 5,000 psi for 10 min. Notify the BLM with intent to proceed with nipple down and offline cementing.
    a. Minimum 4 hrs notice.
6. With the well secured and BLM notified, nipple down BOP and secure on hydraulic carrier or cradle.
    a. **Note, if any of the barriers fail to test, the BOP stack will not be nippled down until after the cement job has concluded and both lead and tail slurry have reached 500 psi.**
7. Skid/Walk rig off current well.
8. Confirm well is static before removing TA Plug.
    a. Cementing operations will not proceed until well is under control. (If well is not static, notify BLM and proceed to kill)
    b. Casing outlet valves will provide access to both the casing ID and annulus. Rig or third party pump truck will kill well prior to cementing.
    c. Well control plan can be seen in Section B, Well Control Procedures.
    d. If need be, rig can be moved back over well and BOP nippled back up for any further remediation.

e. Diagram for rig positioning relative to offline cementing can be seen in Figure 4.

9. Rig up return lines to take returns from wellhead to pits and rig choke.
    a. Test all connections and lines from wellhead to choke manifold to 5,000 psi high for 10 min.
    b. If either test fails, perform corrections and retest before proceeding.
    c. Return line schematics can be seen in Figure 3.
10. Remove TA Plug from the casing.
11. Install offline cement tool.
    a. Current offline cement tool schematics can be seen in Figure 1 (Cameron) and Figure 2 (Cactus).
12. Rig up cement head and cementing lines.
    a. Pressure test cement lines against cement head to 80% of casing burst for 10 min.
13. Break circulation on well to confirm no restrictions.
    a. If gas is present on circulation, well will be shut in and returns rerouted through gas buster.
    b. Max anticipated time before circulating with cement truck is 6 hrs.
14. Pump cement job as per plan.
    a. At plug bump, test casing to 0.22 psi/ft or 1500 psi, whichever is greater.
    b. If plug does not bump on calculated, shut down and wait 8 hrs or 500 psi compressive strength, whichever is greater before testing casing.
15. Confirm well is static and floats are holding after cement job.
    a. With floats holding and backside static:
        i. Remove cement head.
    b. If floats are leaking:
        i. Shut-in well and WOC (Wait on Cement) until tail slurry reaches 500 psi compressive strength and the casing is static prior to removing cement head.
    c. If there is flow on the backside:
        i. Shut in well and WOC until tail slurry reaches 500 psi compressive strength. Ensure that the casing is static prior to removing cement head.
16. Remove offline cement tool.
17. Install night cap with pressure gauge for monitoring.
18. Test night cap to 5,000 psi for 10 min.

Example Well Control Plan Content

A. Well Control Component Table

The table below, which covers the cementing of the **5M MASP (Maximum Allowable Surface Pressure) portion of the well**, outlines the well control component rating in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the BOP nippled up to the wellhead.

Intermediate hole section, 5M requirement

Component	RWP
Pack-off	10M
Casing Wellhead Valves	10M
Annular Wellhead Valves	5M
TA Plug	10M
Float Valves	5M
2” 1502 Lo-Torque Valves	15M

B. Well Control Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are the minimal high-level tasks prescribed to assure a proper shut-in while circulating and cementing through the Offline Cement Adapter.

General Procedure While Circulating

1. Sound alarm (alert crew).
2. Shut down pumps.
3. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
4. Confirm shut-in.
5. Notify tool pusher/company representative.

6. Read and record the following:
    a. SICP (Shut in Casing Pressure) and AP (Annular Pressure)
    b. Pit gain
    c. Time
    d. Regroup and identify forward plan to continue circulating out kick via rig choke and mud/gas separator. Circulate and adjust mud density as needed to control well.

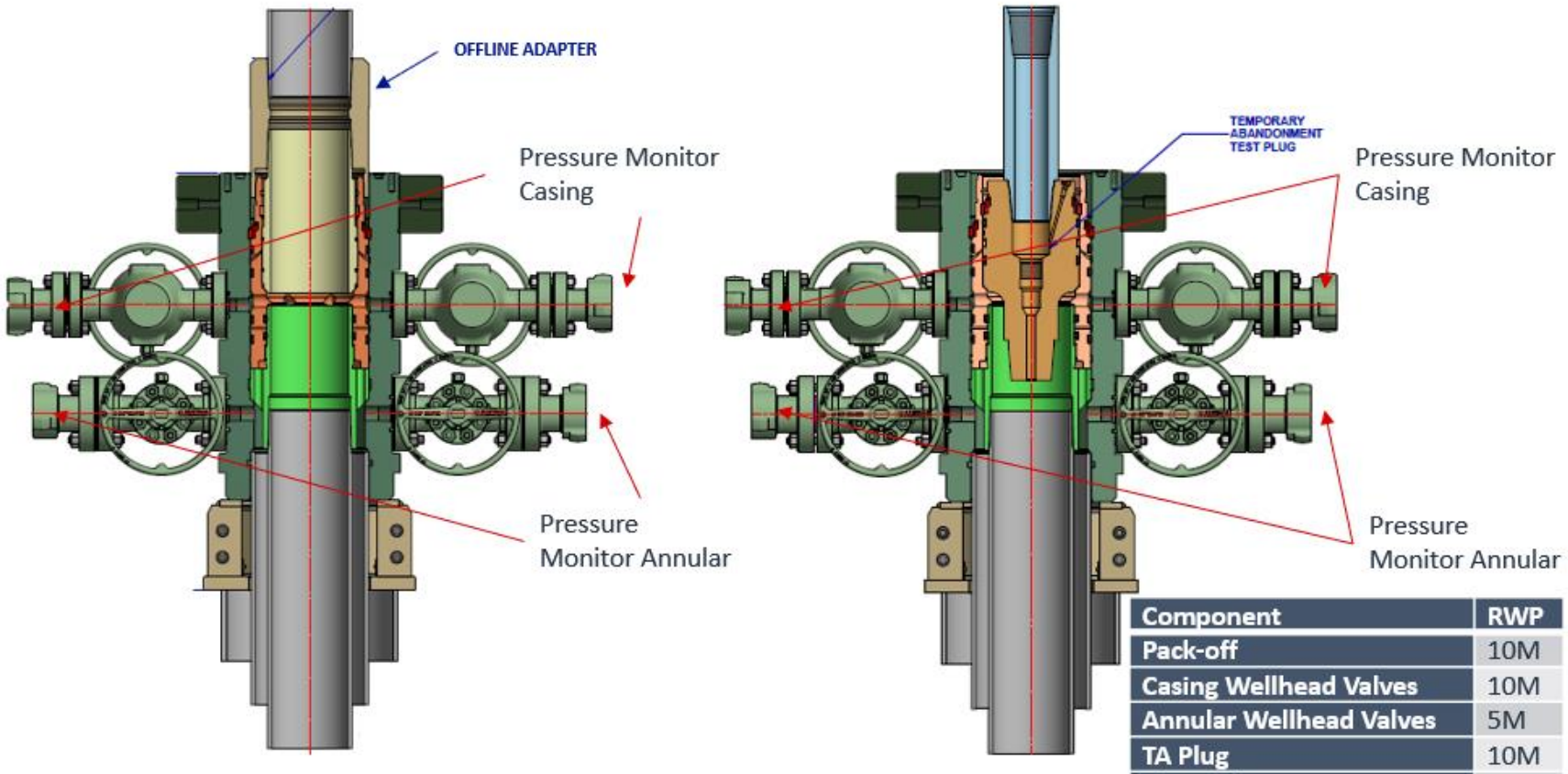
General Procedure While Cementing

1. Sound alarm (alert crew).
2. Shut down pumps.
3. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
4. Confirm shut-in.
5. Notify tool pusher/company representative.
6. Open rig choke and begin pumping again taking returns through choke manifold and mud/gas separator.
7. Continue to place cement until plug bumps.
8. At plug bump close rig choke and cement head.
9. Read and record the following
    a. SICP and AP
    b. Pit gain
    c. Time
    d. Shut-in annulus valves on wellhead

General Procedure After Cementing

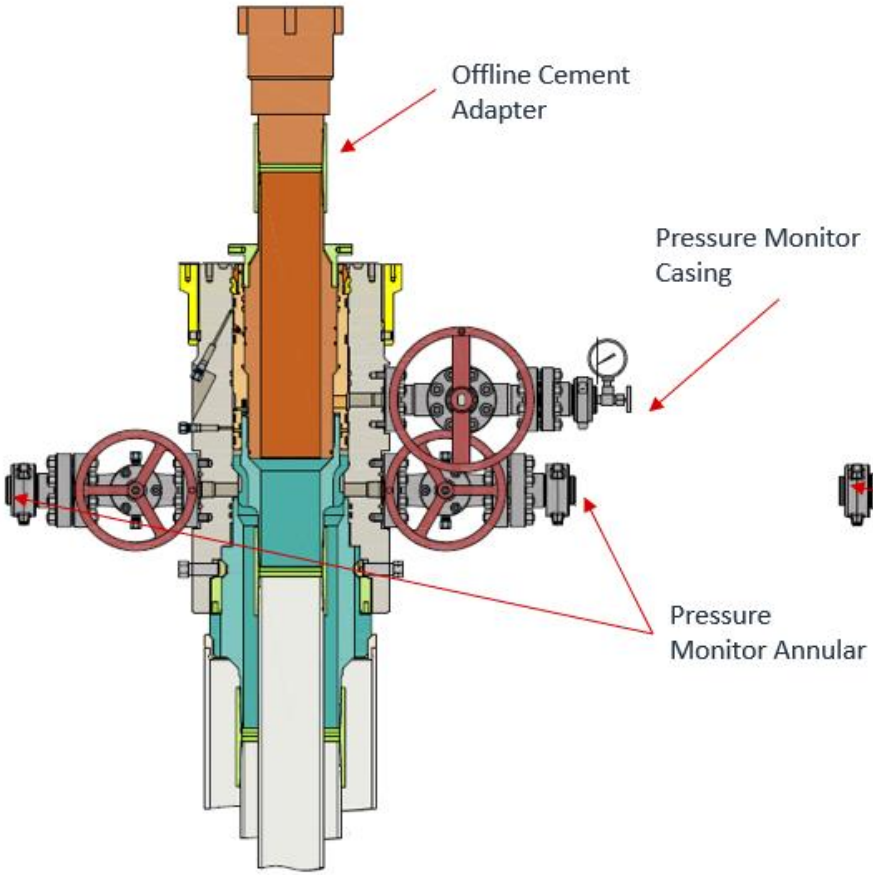
1. Sound alarm (alert crew).
2. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
3. Confirm shut-in.
4. Notify tool pusher/company representative.
5. Read and record the following:
    a. SICP and AP
    b. Pit gain
    c. Time
    d. Shut-in annulus valves on wellhead

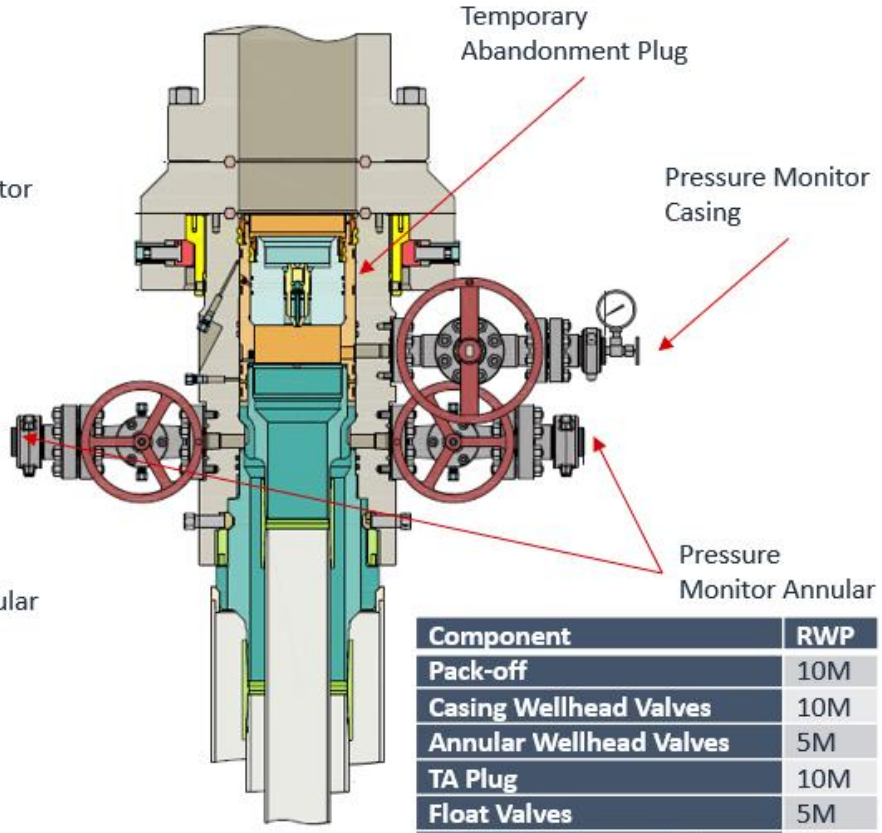
Figure 1: Cameron TA Plug and Offline Adapter Schematic



Component	RWP
Pack-off	10M
Casing Wellhead Valves	10M
Annular Wellhead Valves	5M
TA Plug	10M
Float Valves	5M
2" 1502 Lo-Torque Valves	15M

Figure 2: Cactus TA Plug and Offline Adapter Schematic





Component	RWP
Pack-off	10M
Casing Wellhead Valves	10M
Annular Wellhead Valves	5M
TA Plug	10M
Float Valves	5M
2" 1502 Lo-Torque Valves	15M

Figure 3: Back Yard Rig Up

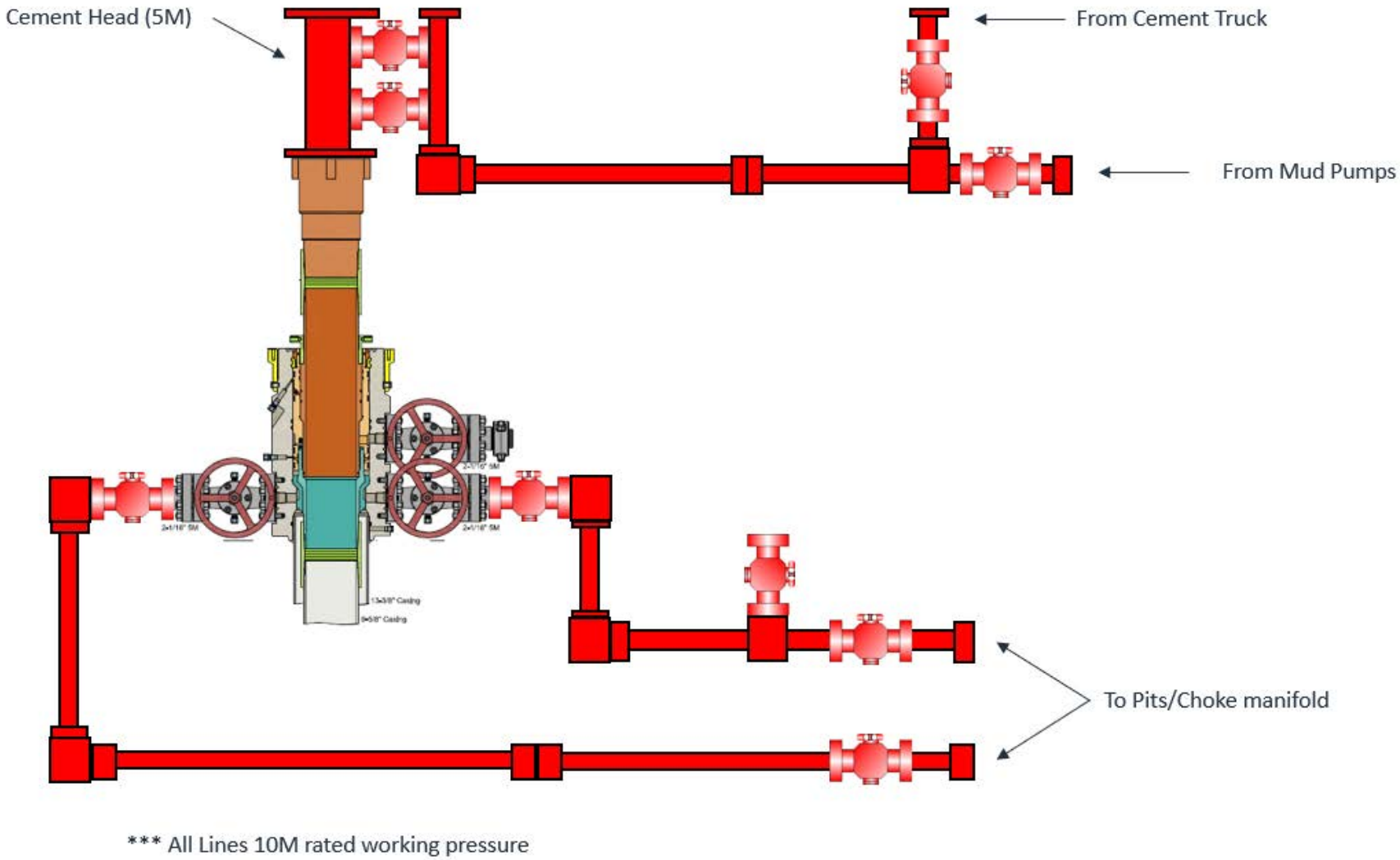
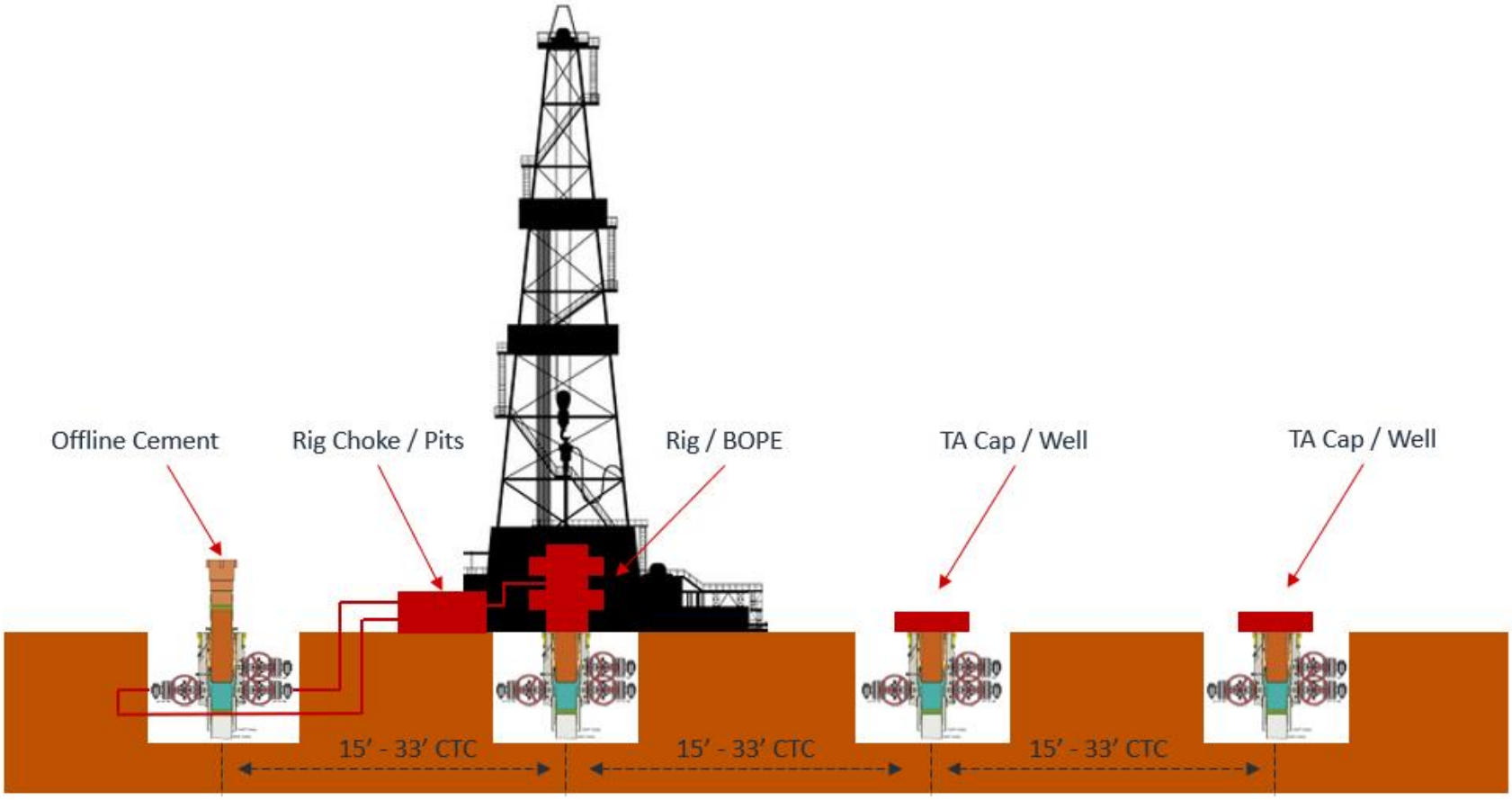


Figure 4: Rig Placement Diagram



Salt Section Annular Clearance Variance Request

Daniel Moose

Current Design (Salt Strings)

0.422” Annular clearance requirement

> - Casing collars shall have a minimum clearance of 0.422 inches on all sides in the hole/casing annulus, with recognition that variances can be granted for justified exceptions.

- 12.25” Hole x 9.625”40# J55/HCK55 LTC Casing
  - 1.3125” Clearance to casing OD
  - 0.8125” Clearance to coupling OD
- 9.875” Hole x 8.75” 38.5# P110 Sprint-SF Casing
  - 0.5625” Clearance to casing OD
  - 0.433” Clearance to coupling OD

Annular Clearance Variance Request

EOG request permission to allow deviation from the 0.422” annulus clearance requirement for the intermediate (salt) section from Onshore Order #2 under the following conditions:

- The variance is not applicable within the Potash Boundaries or Capitan Reef areas.
- Operator takes responsibility to get casing to set point in the event that the clearance causes stuck pipe issues

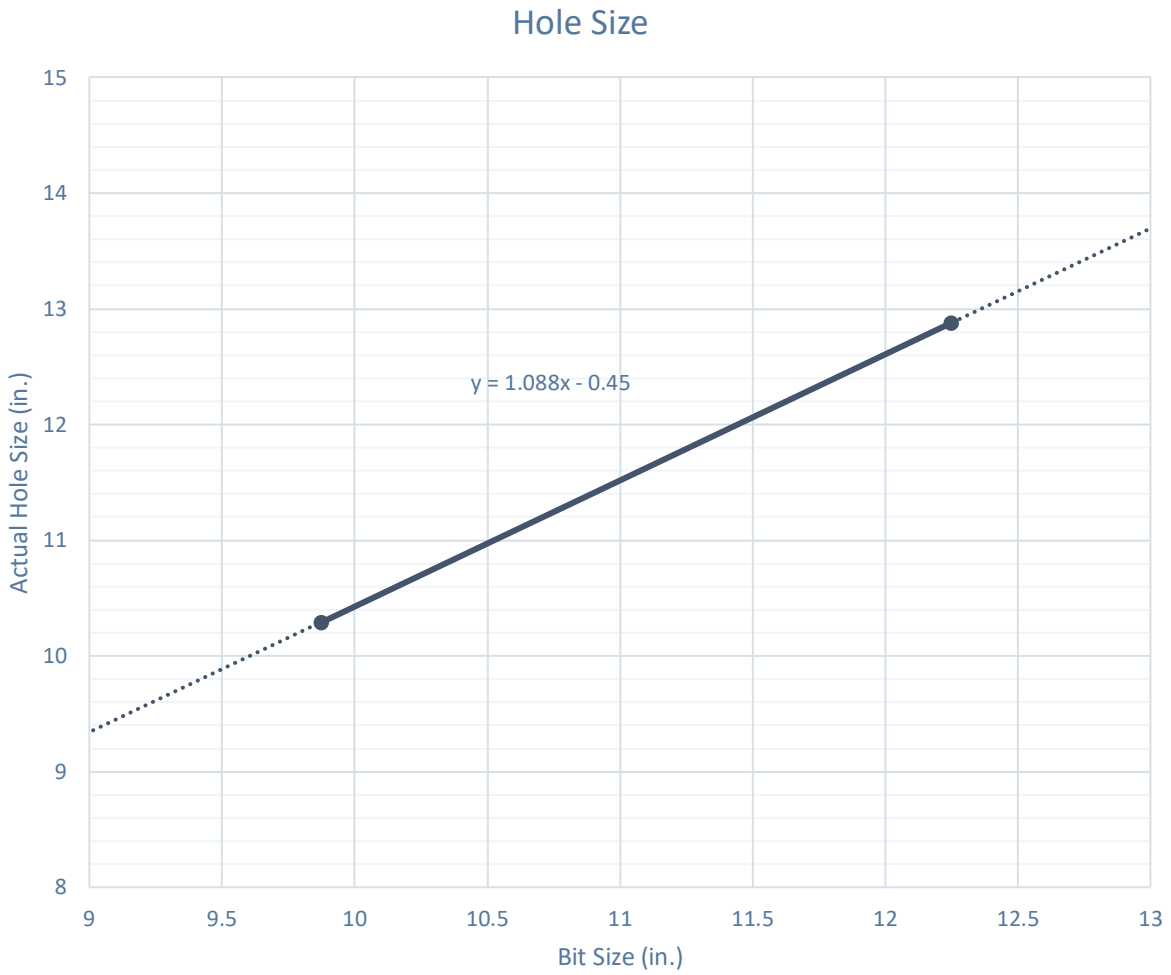
Volumetric Hole Size Calculation

Hole Size Calculations Off Cement Volumes

- Known volume of cement pumped
- Known volume of cement returned to surface
- Must not have had any losses
- Must have bumped plug

Average Hole Size

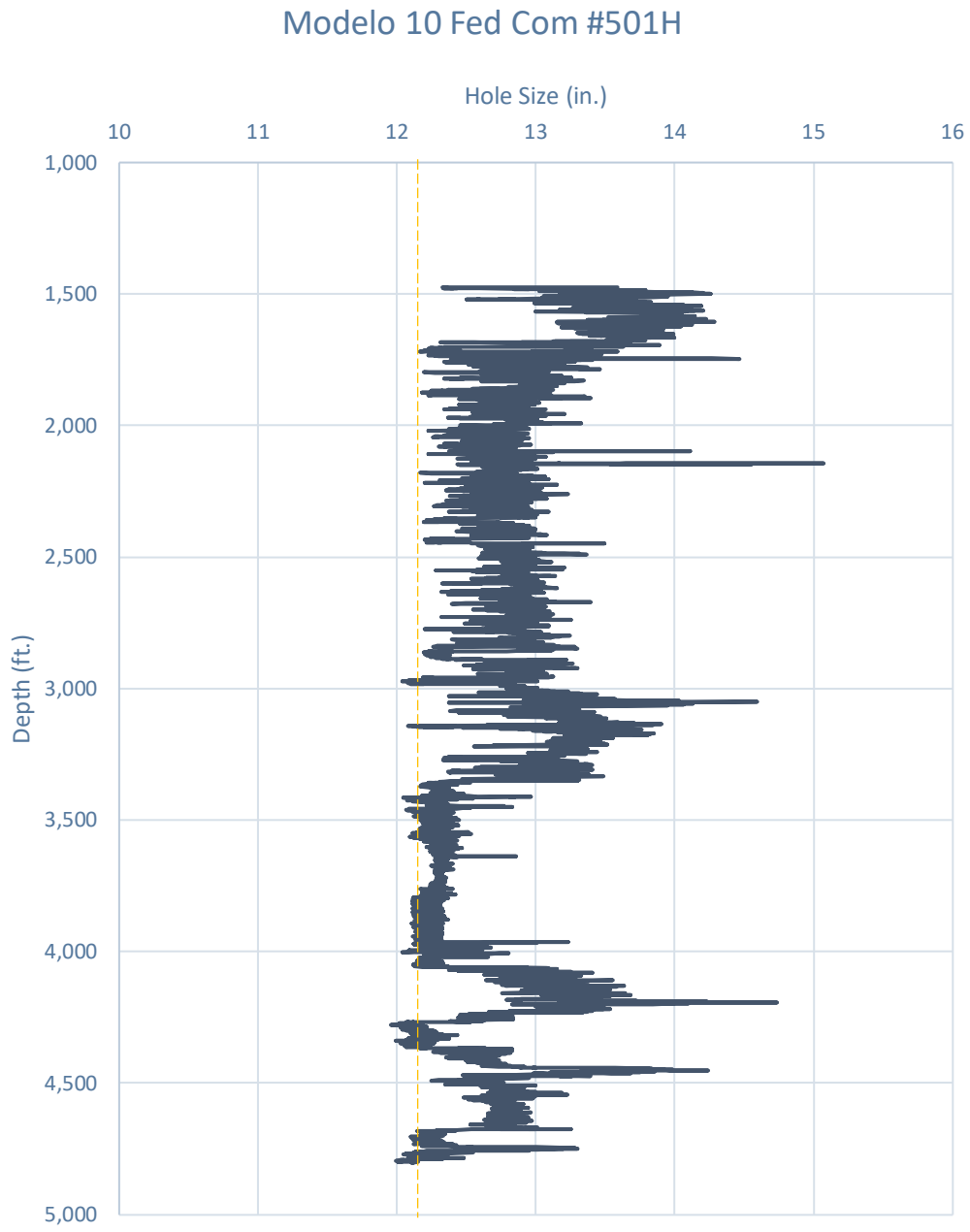
- 12.25” Hole
  - 12.88” Hole
    - 5.13% diameter increase
    - 10.52% area increase
  - 0.63” Average enlargement
  - 0.58” Median enlargement
  - 179 Well Count
- 9.875” Hole
  - 10.30” Hole
    - 4.24% diameter increase
    - 9.64% area increase
  - 0.42” Average enlargement
  - 0.46” Median enlargement
  - 11 Well Count



Caliper Hole Size (12.25”)

Average Hole Size

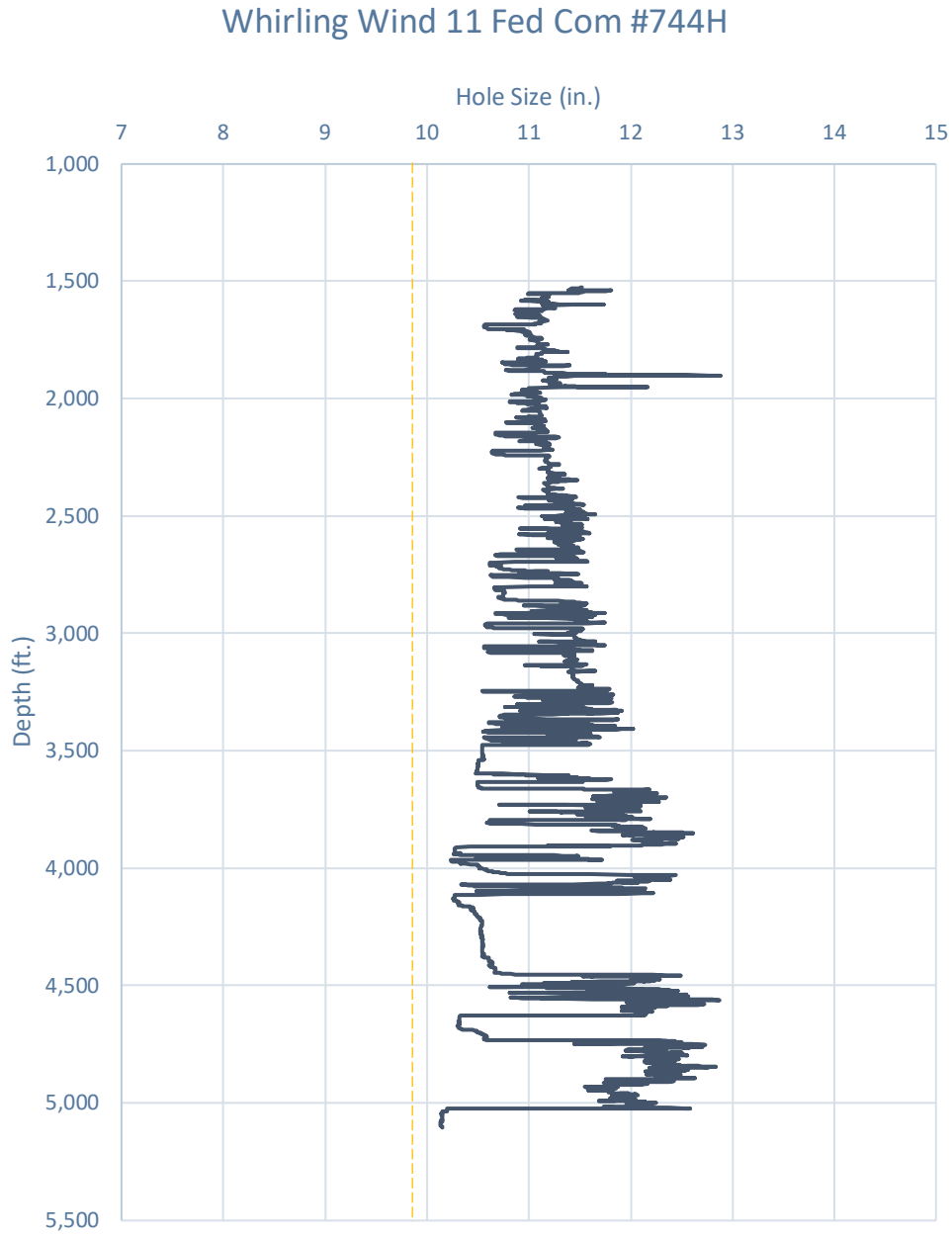
- 12.25” Bit
  - 12.76” Hole
    - 4.14% diameter increase
    - 8.44% area increase
  - 0.51” Average enlargement
  - 0.52” Median enlargement
  - Brine



Caliper Hole Size (9.875”)

Average Hole Size

- 9.875” Hole
  - 11.21” Hole
    - 13.54% diameter increase
    - 28.92% area increase
  - 1.33” Average enlargement
  - 1.30” Median enlargement
  - EnerLite



Design A

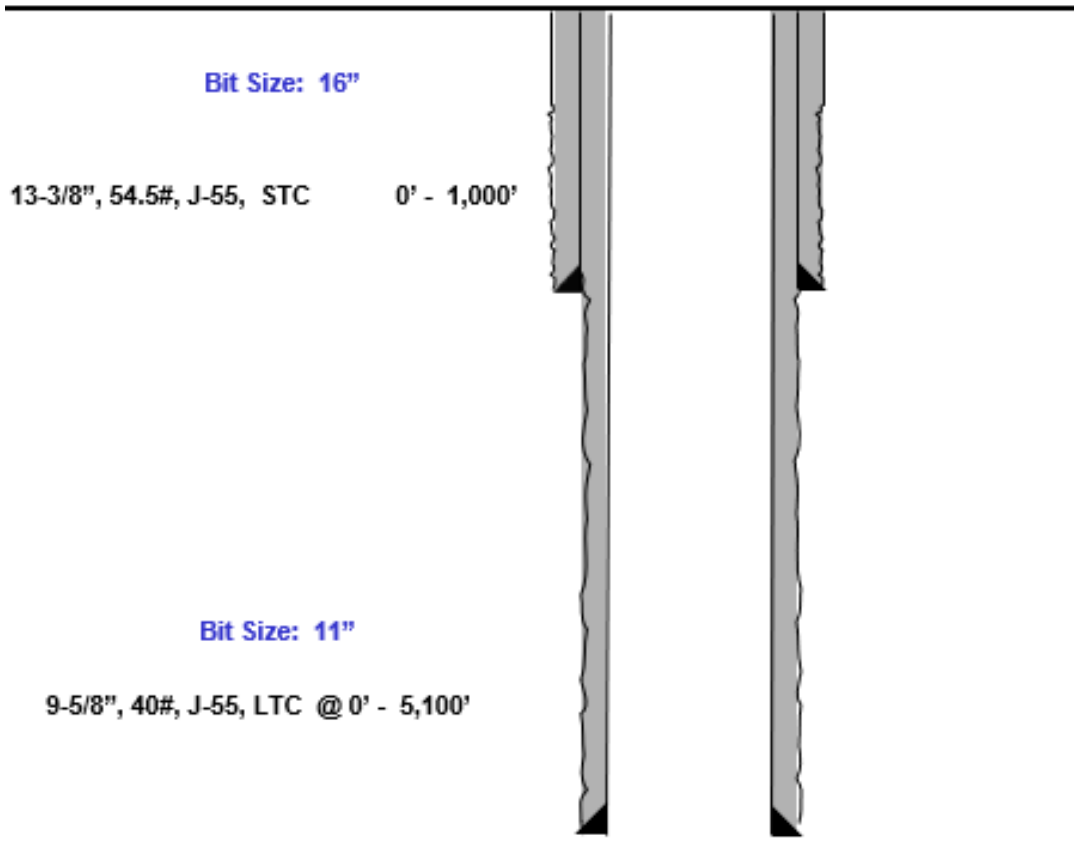
Proposed 11” Hole with 9.625” 40# J55/HCK55 LTC Casing

- 11” Bit + 0.52” Average hole enlargement = 11.52” Hole Size
  - 0.9475” Clearance to casing OD

    $= \frac{11.52 - 9.625}{2}$
  - 0.4475” Clearance to coupling OD

    $= \frac{11.52 - 10.625}{2}$
- Previous Shoe – 13.375” 54.5# J55 STC
  - 0.995” Clearance to coupling OD (~1,200’ overlap)

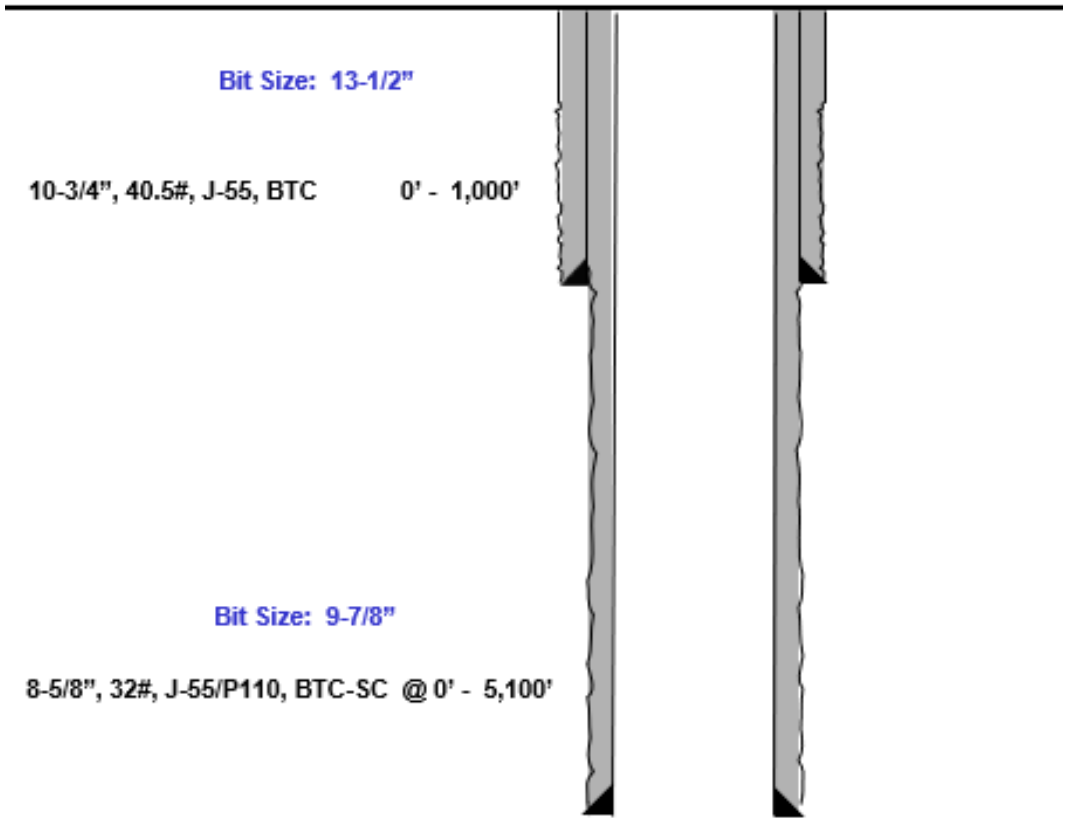
    $= \frac{12.615 - 10.625}{2}$



Design B

Proposed 9.875” Hole with 8.625” 32# J55/P110 BTC-SC Casing

- 9.875” Bit + 0.42” Average hole enlargement = 10.295” Hole Size
  - 0.835” Clearance to casing OD
    $$= \frac{10.295 - 8.625}{2}$$
  - 0.585” Clearance to coupling OD
    $$= \frac{10.295 - 9.125}{2}$$
- Previous Shoe – 10.75” 40.5# J55 STC
  - 0.4625” Clearance to coupling OD (~1,200’ overlap)
    $$= \frac{10.05 - 9.125}{2}$$



Index

Casing Spec Sheets

PERFORMANCE DATA

API LTC 9.625 in 40.00 lbs/ft K55 HC

Technical Data Sheet

Tubular Parameters

Size	9.625	in	Minimum Yield	55	ksi
Nominal Weight	40.00	lbs/ft	Minimum Tensile	95	ksi
Grade	K55 HC		Yield Load	629	kips
PE Weight	38.94	lbs/ft	Tensile Load	1088	kips
Wall Thickness	0.395	in	Min. Internal Yield Pressure	3,950	psi
Nominal ID	8.835	in	Collapse Pressure	3600	psi
Drift Diameter	8.750	in			
Nom. Pipe Body Area	11.454	in²			

Connection Parameters

Connection OD	10.625	in
Coupling Length	10.500	in
Threads Per Inch	8	tpi
Standoff Thread Turns	3.50	turns
Make-Up Loss	4.750	in
Min. Internal Yield Pressure	3,950	psi

Pipe Body and API Connections Performance Data

13.375 54.50/0.380 J55 PDF

New Search »

« Back to Previous List

USC Metric

6/8/2015 10:04:37 AM

Mechanical Properties	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi
Dimensions	**Pipe**	**BTC**	**LTC**	**STC**	
Outside Diameter	13.375	14.375	--	14.375	in.
Wall Thickness	0.380	--	--	--	in.
Inside Diameter	12.615	12.615	--	12.615	in.
Standard Drift	12.459	12.459	--	12.459	in.
Alternate Drift	--	--	--	--	in.
Nominal Linear Weight, T&C	54.50	--	--	--	lbs/ft
Plain End Weight	52.79	--	--	--	lbs/ft
Performance	**Pipe**	**BTC**	**LTC**	**STC**	
Minimum Collapse Pressure	1,130	1,130	--	1,130	psi
Minimum Internal Yield Pressure	2,740	2,740	--	2,740	psi
Minimum Pipe Body Yield Strength	853.00	--	--	--	1000 lbs
Joint Strength	--	909	--	514	1000 lbs
Reference Length	--	11,125	--	6,290	ft
Make-Up Data	**Pipe**	**BTC**	**LTC**	**STC**	
Make-Up Loss	--	4.81	--	3.50	in.
Minimum Make-Up Torque	--	--	--	3,860	ft-lbs
Maximum Make-Up Torque	--	--	--	6,430	ft-lbs

Casing Spec Sheets

Pipe Body and API Connections Performance Data

10.750 40.50/0.350 J55 PDF

New Search »

« Back to Previous List

USC Metric

6/8/2015 10:14:05 AM

Mechanical Properties	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi
Dimensions	**Pipe**	**BTC**	**LTC**	**STC**	
Outside Diameter	10.750	11.750	--	11.750	in.
Wall Thickness	0.350	--	--	--	in.
Inside Diameter	10.050	10.050	--	10.050	in.
Standard Drift	9.894	9.894	--	9.894	in.
Alternate Drift	--	--	--	--	in.
Nominal Linear Weight, T&C	40.50	--	--	--	lbs/ft
Plain End Weight	38.91	--	--	--	lbs/ft
Performance	**Pipe**	**BTC**	**LTC**	**STC**	
Minimum Collapse Pressure	1,580	1,580	--	1,580	psi
Minimum Internal Yield Pressure	3,130	3,130	--	3,130	psi
Minimum Pipe Body Yield Strength	629.00	--	--	--	1000 lbs
Joint Strength	--	700	--	420	1000 lbs
Reference Length	--	11,522	--	6,915	ft
Make-Up Data	**Pipe**	**BTC**	**LTC**	**STC**	
Make-Up Loss	--	4.81	--	3.50	in.
Minimum Make-Up Torque	--	--	--	3,150	ft-lbs
Maximum Make-Up Torque	--	--	--	5,250	ft-lbs

VALLOUREC STAR 8.625 32# J55 S S2L2 DA 7.875 W/O# SLN # PO# MADE IN USA FT LB

vallourec

API 5CT, 10th Ed. Connection Data Sheet

O.D. (in)	WEIGHT (lb/ft)	WALL (in)	GRADE	*API DRIFT (in)	RBW %
8.625	Nominal: 32.00 Plain End: 31.13	0.352	J55	7.796	87.5

Material Properties (PE)	
Pipe	
Minimum Yield Strength:	55 ksi
Maximum Yield Strength:	80 ksi
Minimum Tensile Strength:	75 ksi
Coupling	
Minimum Yield Strength:	55 ksi
Maximum Yield Strength:	80 ksi
Minimum Tensile Strength:	75 ksi

Pipe Body Data (PE)	
Geometry	
Nominal ID:	7.92 inch
Nominal Area:	9.149 in^2
*Special/Alt. Drift:	7.875 inch
Performance	
Pipe Body Yield Strength:	503 kips
Collapse Resistance:	2,530 psi
Internal Yield Pressure: (API Historical)	3,930 psi

API Connection Data Coupling OD: 9.625"	
STC Performance	
STC Internal Pressure:	3,930 psi
STC Joint Strength:	372 kips
LTC Performance	
LTC Internal Pressure:	3,930 psi
LTC Joint Strength:	417 kips
SC-BTC Performance - Cplg OD = 9.125"	
BTC Internal Pressure:	3,930 psi
BTC Joint Strength:	503 kips

API Connection Torque					
STC Torque (ft-lbs)					
Min:	2,793	Opti:	3,724	Max:	4,655
LTC Torque (ft-lbs)					
Min:	3,130	Opti:	4,174	Max:	5,217
BTC Torque (ft-lbs)					
follow API guidelines regarding positional make up					

*Alt. Drift will be used unless API Drift is specified on order.

**If above API connections do not suit your needs, VAM® premium connections are available up to 100% of pipe body ratings.

Rev 3, 7/30/2021 10/21/2022 15:24

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 258375

CONDITIONS

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 258375
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	10/25/2023