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. NMNM0438001

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. CASSIDY 18 FED COM/706H

2. Name of Operator EOG RESOURCES INCORPORATED

9. API Well No. 30-015-48471

3a. Address 1111 BAGBY SKY LOBBY 2, HOUSTON, TX 770

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

10. Field and Pool or Exploratory Area PURPLE SAGE; WOLFCAMP (GAS)

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)* SEC 18/T26S/R31E/NMP

11. Country or Parish, State EDDY/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:

Cassidy 18 Fed Com 706H API #: 30-015-48471

Change BHL from T-26-S, R-31-E, Sec 7, 230' FNL, 1980' FEL, Eddy Co., NM,
to T-26-S, R-31-E, Sec 7, 230' FNL, 2430' FEL, Eddy Co., N.M.

Update casing and cement program to current design.

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 02/24/2023

THE SPACE FOR FEDERAL OR STATE OFICE USE

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

Title ENGINEER

Date 03/08/2023

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

Location of Well

0. SHL: SWSE / 205 FSL / 2057 FEL / TWSP: 26S / RANGE: 31E / SECTION: 18 / LAT: 32.035962 / LONG: -103.815617 (TVD: 0 feet, MD: 0 feet)

PPP: SWSE / 330 FSL / 1980 FEL / TWSP: 26S / RANGE: 31E / SECTION: 18 / LAT: 32.036308 / LONG: -103.815368 (TVD: 11463 feet, MD: 11577 feet)

BHL: NWNE / 230 FNL / 1980 FEL / TWSP: 26S / RANGE: 31E / SECTION: 7 / LAT: 32.064055 / LONG: -103.81535 (TVD: 11506 feet, MD: 21677 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
30-015-48471	98220	PURPLE SAGE; WOLFCAMP(GAS)

Property Code	Property Name	Well Number
329880	CASSIDY 18 FED COM	706H

OGRID No.	Operator Name	Elevation
7377	EOG RESOURCES, INC.	3187'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	18	26 S	31 E		205	SOUTH	2057	EAST	EDDY

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
B	7	26 S	31 E		230	NORTH	2430	EAST	EDDY

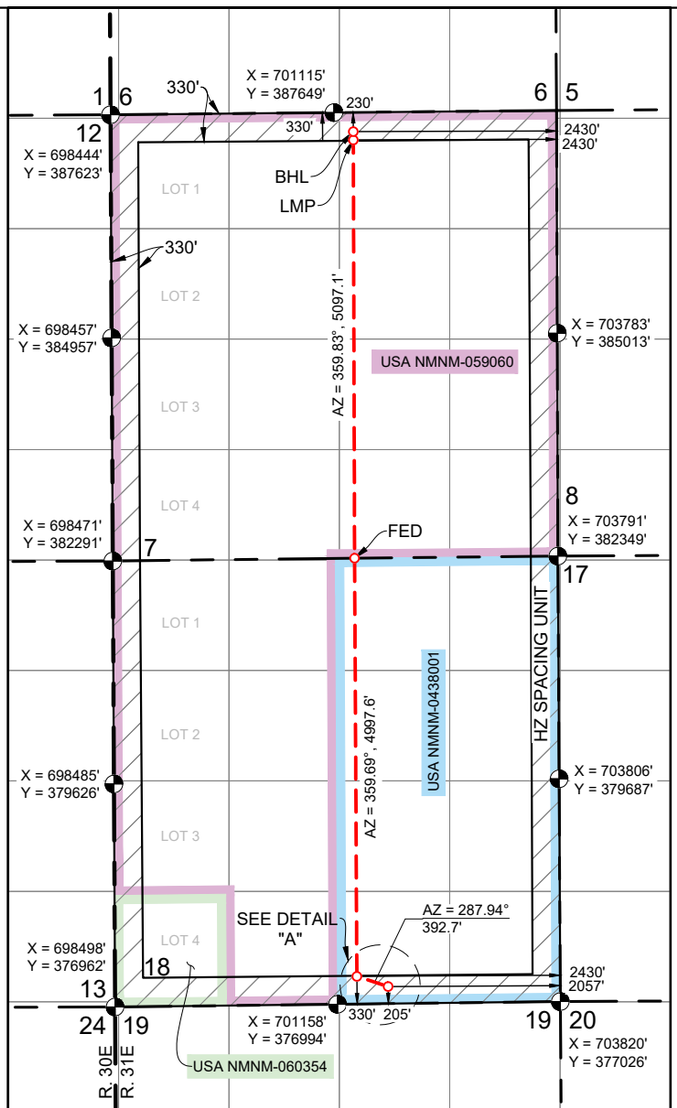
Dedicated Acres	Joint or Infill	Consolidated Code	Order No.
1280.4			

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
NEW MEXICO EAST
NAD 1983
X=701762' Y=377206'
LAT=N32.035962°
LONG=W103.815617°
NAD 1927
X=660575' Y=377148'
LAT=N32.035837°
LONG=W103.815141°

UPPER MOST PERF.
NEW MEXICO EAST
NAD 1983
X=701388' Y=377327'
LAT=N32.036299°
LONG=W103.816821°
NAD 1927
X=660202' Y=377269'
LAT=N32.036174°
LONG=W103.816345°

FED PERF. POINT
NEW MEXICO EAST
NAD 1983
X=701361' Y=382324'
LAT=N32.050037°
LONG=W103.816832°
NAD 1927
X=660175' Y=382267'
LAT=N32.049912°
LONG=W103.816355°



LOWER MOST PERF.
NEW MEXICO EAST
NAD 1983
X=701346' Y=387321'
LAT=N32.063774°
LONG=W103.816803°
NAD 1927
X=660160' Y=387264'
LAT=N32.063649°
LONG=W103.816326°

BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1983
X=701345' Y=387421'
LAT=N32.064049°
LONG=W103.816803°
NAD 1927
X=660159' Y=387364'
LAT=N32.063924°
LONG=W103.816325°

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.

Shea Keithley — 2/22/23
Signature — Date

Shea Keithley
Print Name

shea_keithley@eogresources.com
E-mail Address

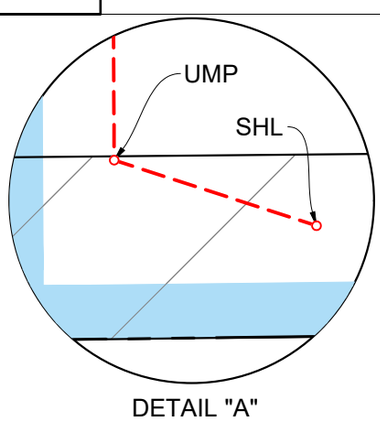
SURVEYORS CERTIFICATION

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.

JANUARY 15, 2022
Date of Survey
Signature and Seal of Professional Surveyor:

BRANDON MOSER · NEW MEXICO · 22502 · PROFESSIONAL SURVEYOR
02/15/2023

BRANDON MOSER, N.M.P.L.S. Certificate Number 22502



DETAIL "A"
N.T.S.

Job No.: EOG_B190018

P:\EOG__B1900\18\PRODC-1020-Cassidy_18 Fed Com C102 706H.dwg AJACOBS 2/15/2023 9:51 AM

eog resources

Cassidy 18 Fed Com 706H

Revised Permit Information 02/22/2023:

Well Name: Cassidy 18 Fed Com 706H

Location: SHL: 205' FSL & 2057' FEL, Section 18, T-26-S, R-31-E, Eddy Co., N.M.
BHL: 230' FNL & 2430' FEL, Section 7, T-26-S, R-31-E, Eddy Co., N.M.

Casing Design A

Hole Size	Interval MD From (ft)	Interval MD To (ft)	Interval TVD From (ft)	Interval TVD To (ft)	Csg OD	Weight	Grade	Conn
12-1/4"	0	1,040	0	1,040	9-5/8"	36#	J-55	LTC
8-3/4"	0	10,048	0	10,030	7-5/8"	29.7#	HCP-110	FXL
6-3/4"	0	9,548	0	9,530	5-1/2"	20#	P110-EC	DWC/C IS MS
6-3/4"	9,548	10,048	9,530	10,030	5-1/2"	20#	P110-EC	Vam Sprint SF
6-3/4"	10,048	21,367	10,030	11,184	5-1/2"	20#	P110-EC	DWC/C IS MS

Variance is requested to waive the centralizer requirements for the 7-5/8" casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4 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.

Variance is also requested to waive the annular clearance requirements for the 5-1/2" casing by 7-5/8" casing annulus to the proposed top of cement.

EOG requests permission to allow deviation from the 0.422'' annulus clearance requirement from Onshore Order #2 under the following conditions:

- Annular clearance to meet or exceed 0.422'' between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.
- Annular clearance less than 0.422'' is acceptable for the production open hole section.

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
1,040' 9-5/8"	290	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	80	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 840')
10,030' 7-5/8"	500	14.2	1.11	1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 5,801')
	1000	14.8	1.5	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
21,367' 5-1/2"	1010	13.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 9,530')

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Cassidy 18 Fed Com 706H

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

EOG requests variance from minimum standards to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (6,001') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. Top will be verified by Echo-meter.

EOG will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,040'	Fresh - Gel	8.6-8.8	28-34	N/c
1,040' – 10,030'	Brine	10.0-10.2	28-34	N/c
10,030’ – 10,724'	Oil Base	8.7-9.4	58-68	N/c - 6
10,724’ – 21,367’	Oil Base	10.0-14.0	58-68	4 - 6

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Cassidy 18 Fed Com 706H

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 30 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"

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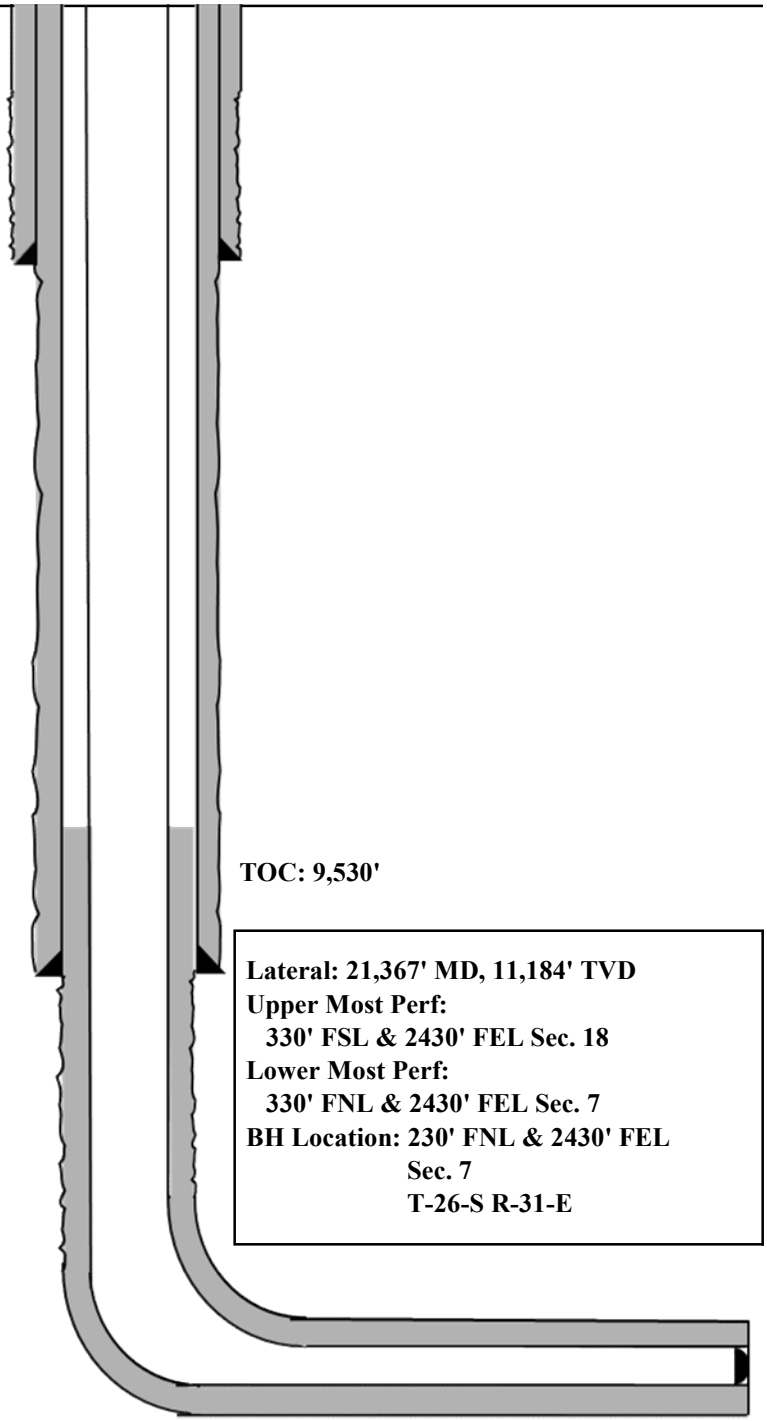
Cassidy 18 Fed Com 706H

205' FSL
2057' FEL
Section 18
T-26-S, R-31-E

Revised Wellbore

API: 30-015-48471

KB: 3212'
GL: 3187'



Bit Size: 12-1/4"
9-5/8", 36#, J-55, LTC,
@ 0' - 1,040'

Bit Size: 8-3/4"
7-5/8", 29.7#, HCP-110, FXL,
@ 0' - 10,030'

TOC: 9,530'

Bit Size: 6-3/4"
5-1/2", 20#, P110-EC, DWC/C IS MS,
@ 0' - 9,530'

5-1/2", 20#, P110-EC, Vam Sprint SF,
@ 9,530' - 10,030'

5-1/2", 20#, P110-EC, DWC/C IS MS,
@ 10,030' - 21,367'

KOP: 10,724' MD, 10,706' TVD
EOC: 11,474' MD, 11,184' TVD

Lateral: 21,367' MD, 11,184' TVD
Upper Most Perf:
330' FSL & 2430' FEL Sec. 18
Lower Most Perf:
330' FNL & 2430' FEL Sec. 7
BH Location: 230' FNL & 2430' FEL
Sec. 7
T-26-S R-31-E

Midland

Eddy County, NM (NAD 83 NME)
Cassidy 18 Fed Com
#706H

OH

Plan: Plan #0.2

Standard Planning Report

22 February, 2023

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Planning Report

Database:	PEDM	**Local Co-ordinate Reference:**	Well #706H
Company:	Midland	**TVD Reference:**	kb = 25' @ 3212.0usft
Project:	Eddy County, NM (NAD 83 NME)	**MD Reference:**	kb = 25' @ 3212.0usft
Site:	Cassidy 18 Fed Com	**North Reference:**	Grid
Well:	#706H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.2		

Project Eddy County, NM (NAD 83 NME)

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

Site Cassidy 18 Fed Com

Site Position:		**Northing:**	377,185.00 usft	**Latitude:**	32° 2' 9.214 N
From:	Map	**Easting:**	702,663.00 usft	**Longitude:**	103° 48' 45.751 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well #706H

Well Position	**+N/-S**	0.0 usft	**Northing:**	377,206.00 usft	**Latitude:**	32° 2' 9.465 N
	+E/-W	0.0 usft	**Easting:**	701,762.00 usft	**Longitude:**	103° 48' 56.217 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,187.0 usft
Grid Convergence:		0.27 °				

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	7/29/2020	6.75	59.72	47,450.28161351

Design Plan #0.2

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	357.66

Plan Survey Tool Program **Date** 2/22/2023

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	21,366.8	Plan #0.2 (OH)	MWD	
				OWSG MWD - Standard	

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Planning Report

Database:	PEDM	**Local Co-ordinate Reference:**	Well #706H
Company:	Midland	**TVD Reference:**	kb = 25' @ 3212.0usft
Project:	Eddy County, NM (NAD 83 NME)	**MD Reference:**	kb = 25' @ 3212.0usft
Site:	Cassidy 18 Fed Com	**North Reference:**	Grid
Well:	#706H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.2		

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	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,454.4	5.09	247.49	1,454.1	-4.3	-10.4	2.00	2.00	0.00	247.49	
5,764.2	5.09	247.49	5,746.9	-150.7	-363.6	0.00	0.00	0.00	0.00	
6,018.7	0.00	0.00	6,001.0	-155.0	-374.0	2.00	-2.00	0.00	180.00	
10,724.2	0.00	0.00	10,706.5	-155.0	-374.0	0.00	0.00	0.00	0.00	KOP(Cassidy 18 Fed
11,266.2	65.04	0.00	11,139.4	121.0	-374.0	12.00	12.00	0.00	0.00	FTP(Cassidy 18 Fed (
11,474.2	90.00	359.68	11,184.0	322.5	-374.6	12.00	12.00	-0.15	-0.75	
16,269.8	90.00	359.68	11,184.0	5,118.0	-401.0	0.00	0.00	0.00	0.00	Fed Perf(Cassidy 18 I
21,266.8	90.00	359.97	11,184.0	10,115.0	-416.0	0.01	0.00	0.01	89.99	LTP(Cassidy 18 Fed (
21,366.8	90.00	358.88	11,184.0	10,215.0	-417.0	1.09	0.00	-1.09	-90.00	PBHL(Cassidy 18 Fe(

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
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,454.4	5.09	247.49	1,454.1	-4.3	-10.4	-3.9	2.00	2.00	0.00
5,764.2	5.09	247.49	5,746.9	-150.7	-363.6	-135.7	0.00	0.00	0.00
6,018.7	0.00	0.00	6,001.0	-155.0	-374.0	-139.6	2.00	-2.00	0.00
10,724.2	0.00	0.00	10,706.5	-155.0	-374.0	-139.6	0.00	0.00	0.00
11,266.2	65.04	0.00	11,139.4	121.0	-374.0	136.2	12.00	12.00	0.00
11,474.2	90.00	359.68	11,184.0	322.5	-374.6	337.5	12.00	12.00	-0.15
16,269.8	90.00	359.68	11,184.0	5,118.0	-401.0	5,130.1	0.00	0.00	0.00
21,266.8	90.00	359.97	11,184.0	10,115.0	-416.0	10,123.6	0.01	0.00	0.01
21,366.8	90.00	358.88	11,184.0	10,215.0	-417.0	10,223.5	1.09	0.00	-1.09

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(Cassidy 18 Fed Cc - plan hits target center - Point	0.00	0.01	10,706.5	-155.0	-374.0	377,051.00	701,388.00	32° 2' 7.948 N	103° 49' 0.571 W
FTP(Cassidy 18 Fed Co - plan hits target center - Point	0.00	0.00	11,139.4	121.0	-374.0	377,327.00	701,388.00	32° 2' 10.680 N	103° 49' 0.556 W
Fed Perf(Cassidy 18 Fe(- plan hits target center - Point	0.00	0.00	11,184.0	5,118.0	-401.0	382,324.00	701,361.00	32° 3' 0.131 N	103° 49' 0.592 W
LTP(Cassidy 18 Fed Coı - plan hits target center - Point	0.00	0.00	11,184.0	10,115.0	-416.0	387,321.00	701,346.00	32° 3' 49.582 N	103° 49' 0.488 W
PBHL(Cassidy 18 Fed C - plan hits target center - Point	0.00	0.00	11,184.0	10,215.0	-417.0	387,421.00	701,345.00	32° 3' 50.571 N	103° 49' 0.494 W

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Planning Report

Database:	PEDM	**Local Co-ordinate Reference:**	Well #706H
Company:	Midland	**TVD Reference:**	kb = 25' @ 3212.0usft
Project:	Eddy County, NM (NAD 83 NME)	**MD Reference:**	kb = 25' @ 3212.0usft
Site:	Cassidy 18 Fed Com	**North Reference:**	Grid
Well:	#706H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.2		

eog resources

Eddy County, NM (NAD 83 NME)

Cassidy 18 Fed Com #706H

Plan #0.2

Azimuths to Grid North
True North: -0.27°
Magnetic North: 6.47°

Magnetic Field
Strength: 47450.3nT
Dip Angle: 59.72°
Date: 7/29/2020
Model: IGRF2020

To convert a Magnetic Direction to a Grid Direction, Add 6.47°
To convert a Magnetic Direction to a True Direction, Add 6.75° East
To convert a True Direction to a Grid Direction, Subtract 0.27°

PROJECT DETAILS: Eddy 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: #706H

3187.0
kb = 25' @ 3212.0usft

Northing	Easting	Latittude	Longitude
377206.00	701762.00	32° 2' 9.465 N	103° 48' 56.217 W

SECTION DETAILS

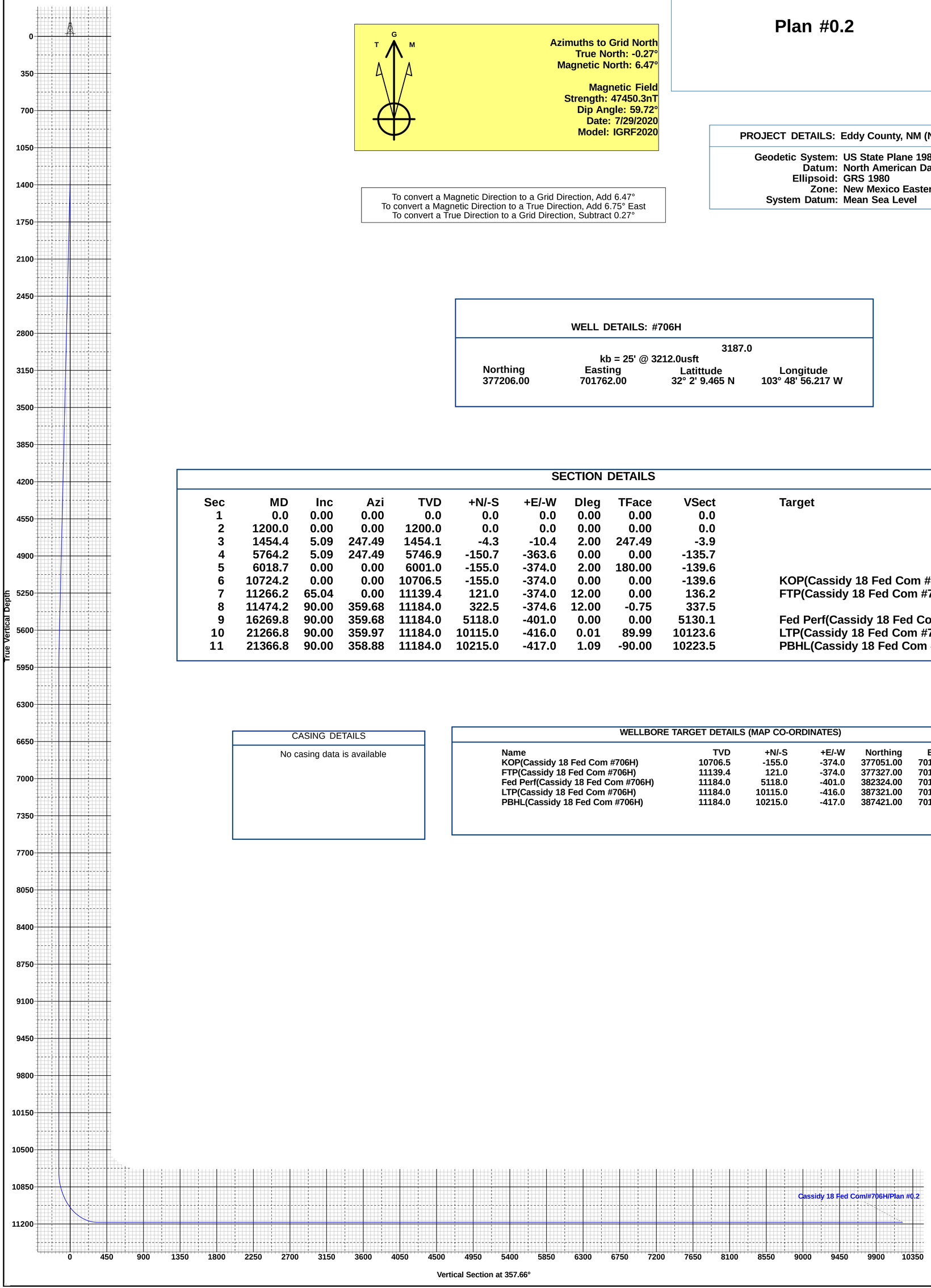
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	1454.4	5.09	247.49	1454.1	-4.3	-10.4	2.00	247.49	-3.9	
4	5764.2	5.09	247.49	5746.9	-150.7	-363.6	0.00	0.00	-135.7	
5	6018.7	0.00	0.00	6001.0	-155.0	-374.0	2.00	180.00	-139.6	
6	10724.2	0.00	0.00	10706.5	-155.0	-374.0	0.00	0.00	-139.6	KOP(Cassidy 18 Fed Com #706H)
7	11266.2	65.04	0.00	11139.4	121.0	-374.0	12.00	0.00	136.2	FTP(Cassidy 18 Fed Com #706H)
8	11474.2	90.00	359.68	11184.0	322.5	-374.6	12.00	-0.75	337.5	
9	16269.8	90.00	359.68	11184.0	5118.0	-401.0	0.00	0.00	5130.1	Fed Perf(Cassidy 18 Fed Com #706H)
10	21266.8	90.00	359.97	11184.0	10115.0	-416.0	0.01	89.99	10123.6	LTP(Cassidy 18 Fed Com #706H)
11	21366.8	90.00	358.88	11184.0	10215.0	-417.0	1.09	-90.00	10223.5	PBHL(Cassidy 18 Fed Com #706H)

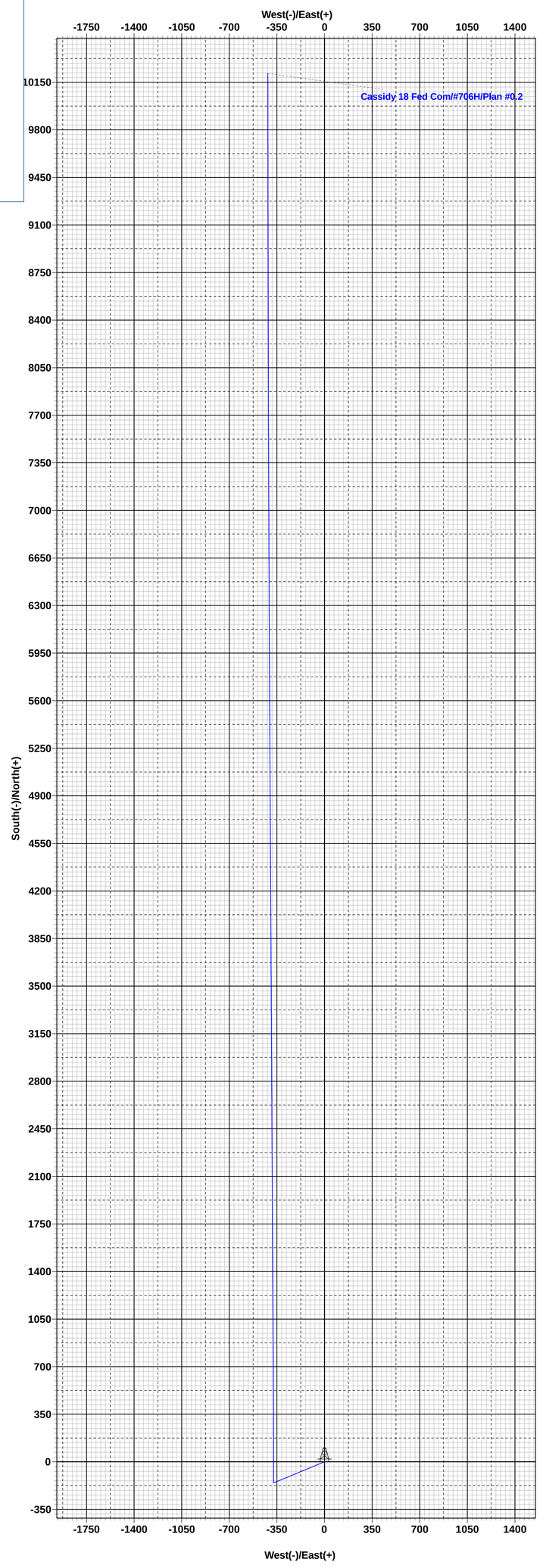
CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP(Cassidy 18 Fed Com #706H)	10706.5	-155.0	-374.0	377051.00	701388.00
FTP(Cassidy 18 Fed Com #706H)	11139.4	121.0	-374.0	377327.00	701388.00
Fed Perf(Cassidy 18 Fed Com #706H)	11184.0	5118.0	-401.0	382324.00	701361.00
LTP(Cassidy 18 Fed Com #706H)	11184.0	10115.0	-416.0	387321.00	701346.00
PBHL(Cassidy 18 Fed Com #706H)	11184.0	10215.0	-417.0	387421.00	701345.00





Eddy County, NM (NAD 83 NME)
Cassidy 18 Fed Com
#706H
OH
Plan #0.2
16:14, February 22 2023

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.

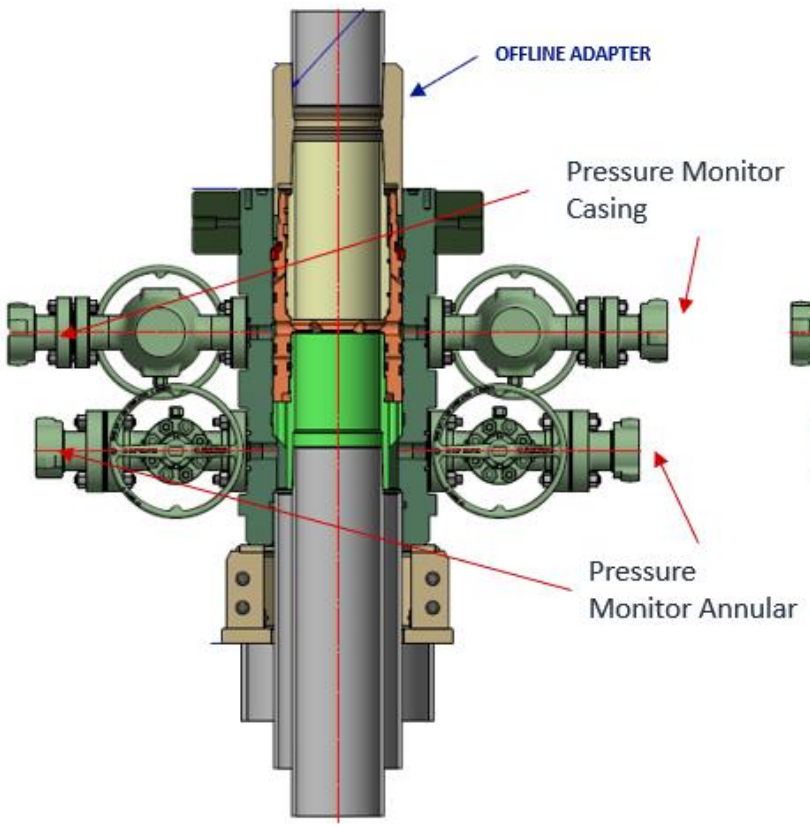
General Procedure While Cementing

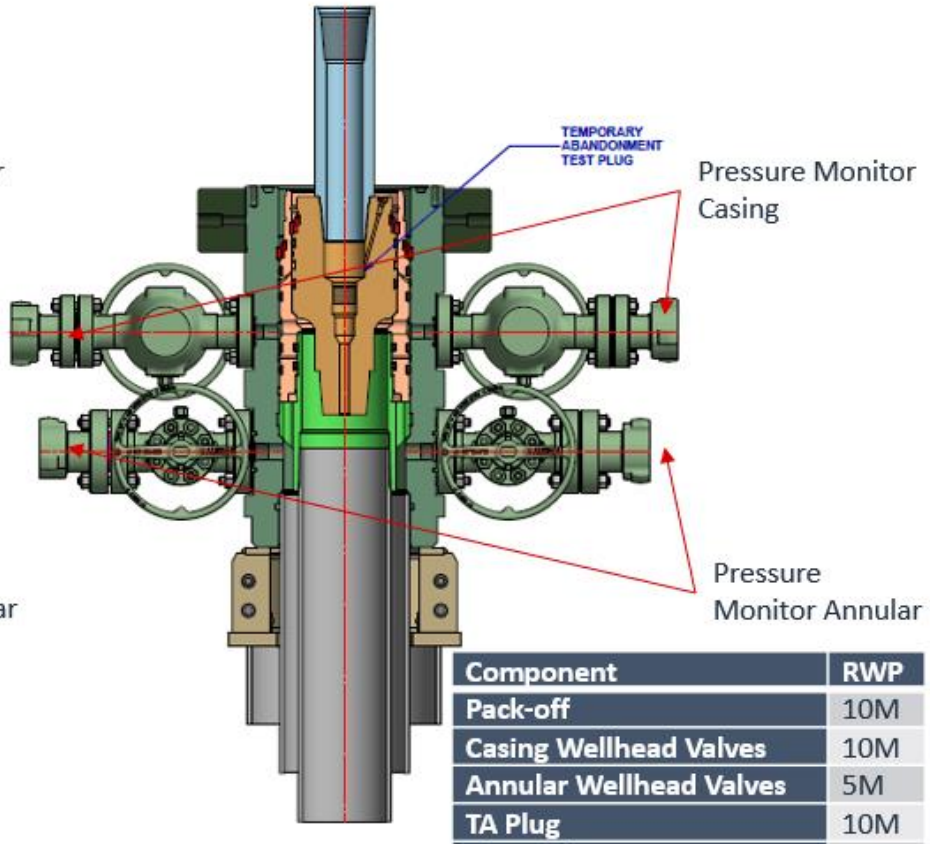
1. Sound alarm (alert crew).
2. Shut down pumps.
3. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
4. Confirm shut-in.
5. Notify tool pusher/company representative.
6. Open rig choke and begin pumping again taking returns through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

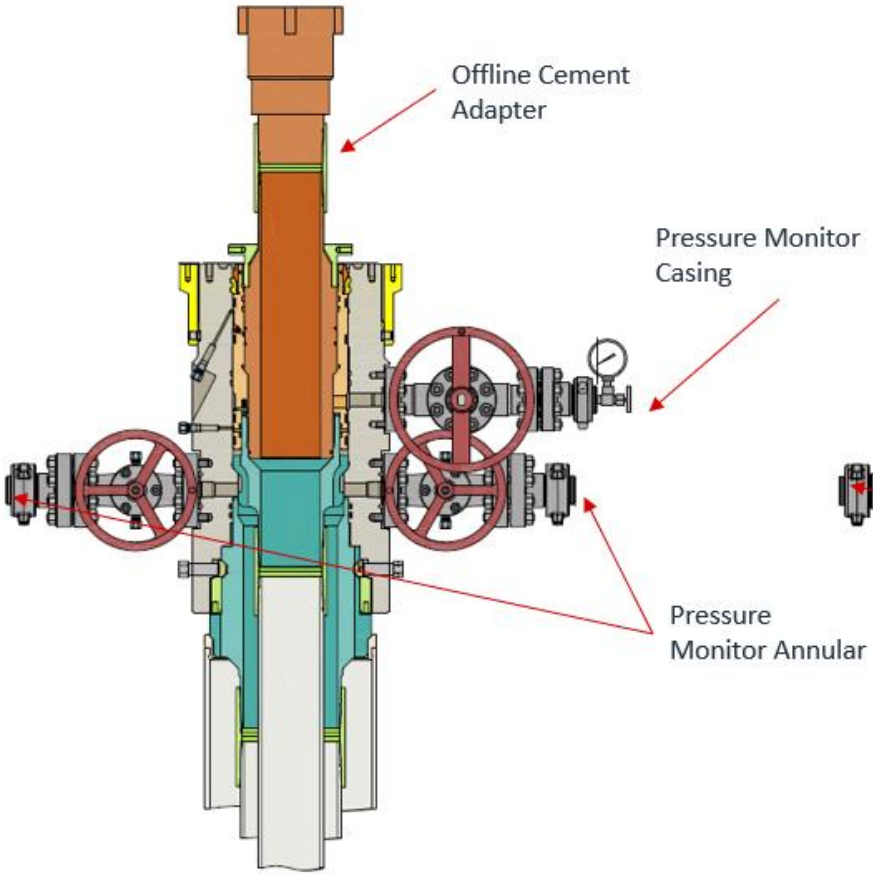
Figure 1: Cameron TA Plug and Offline Adapter Schematic

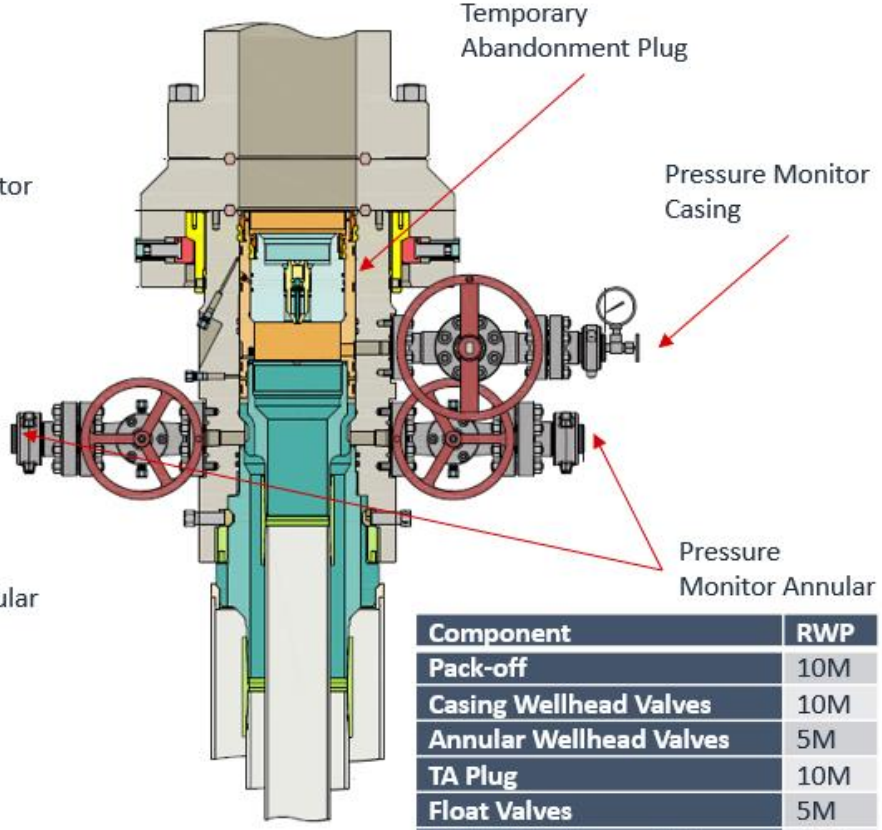




Component	RWP
Pack-off	10M
Casing Wellhead Valves	10M
Annular Wellhead Valves	5M
TA Plug	10M
Float Valves	5M
2" 1502 Lo-Torque Valves	15M

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

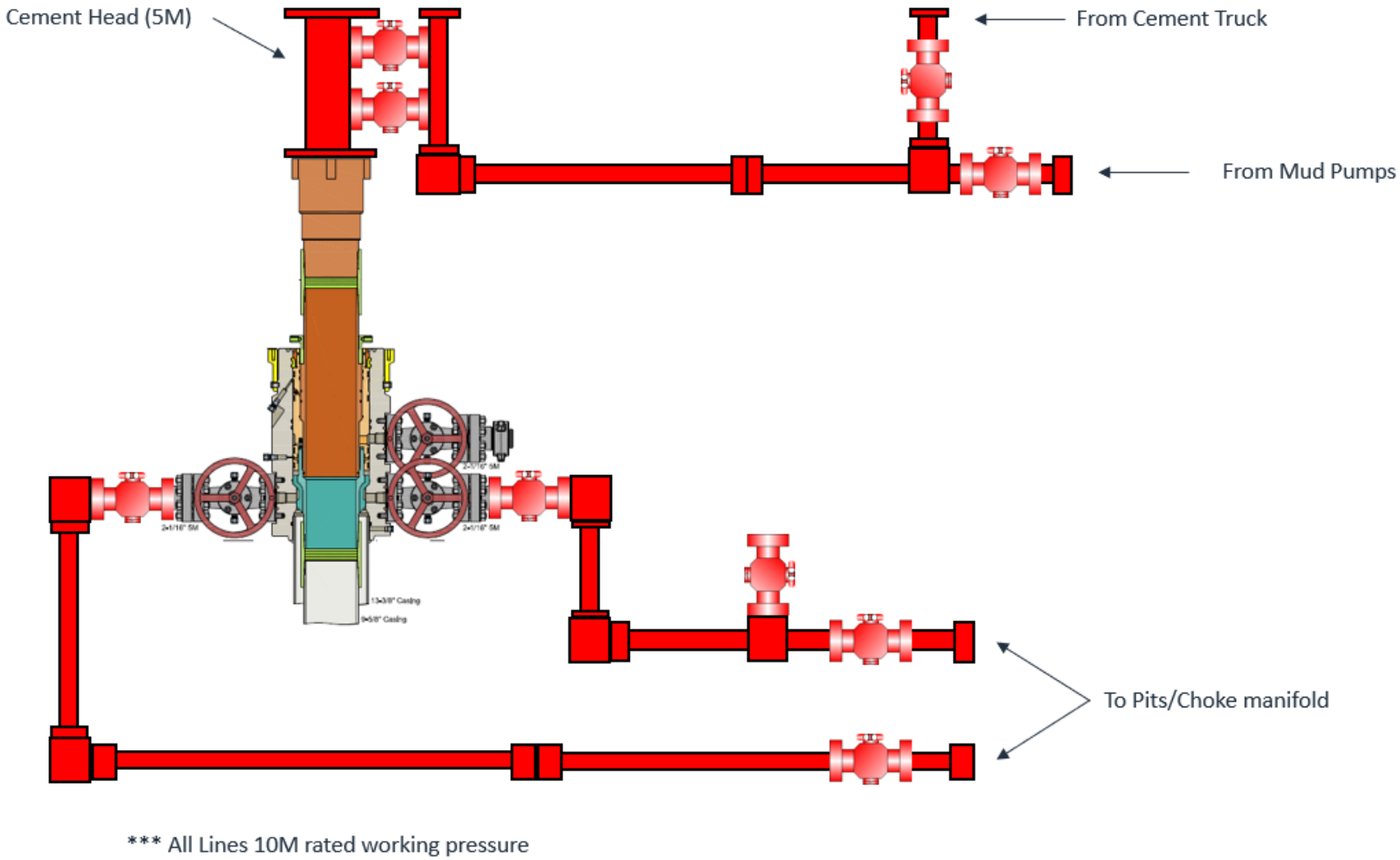
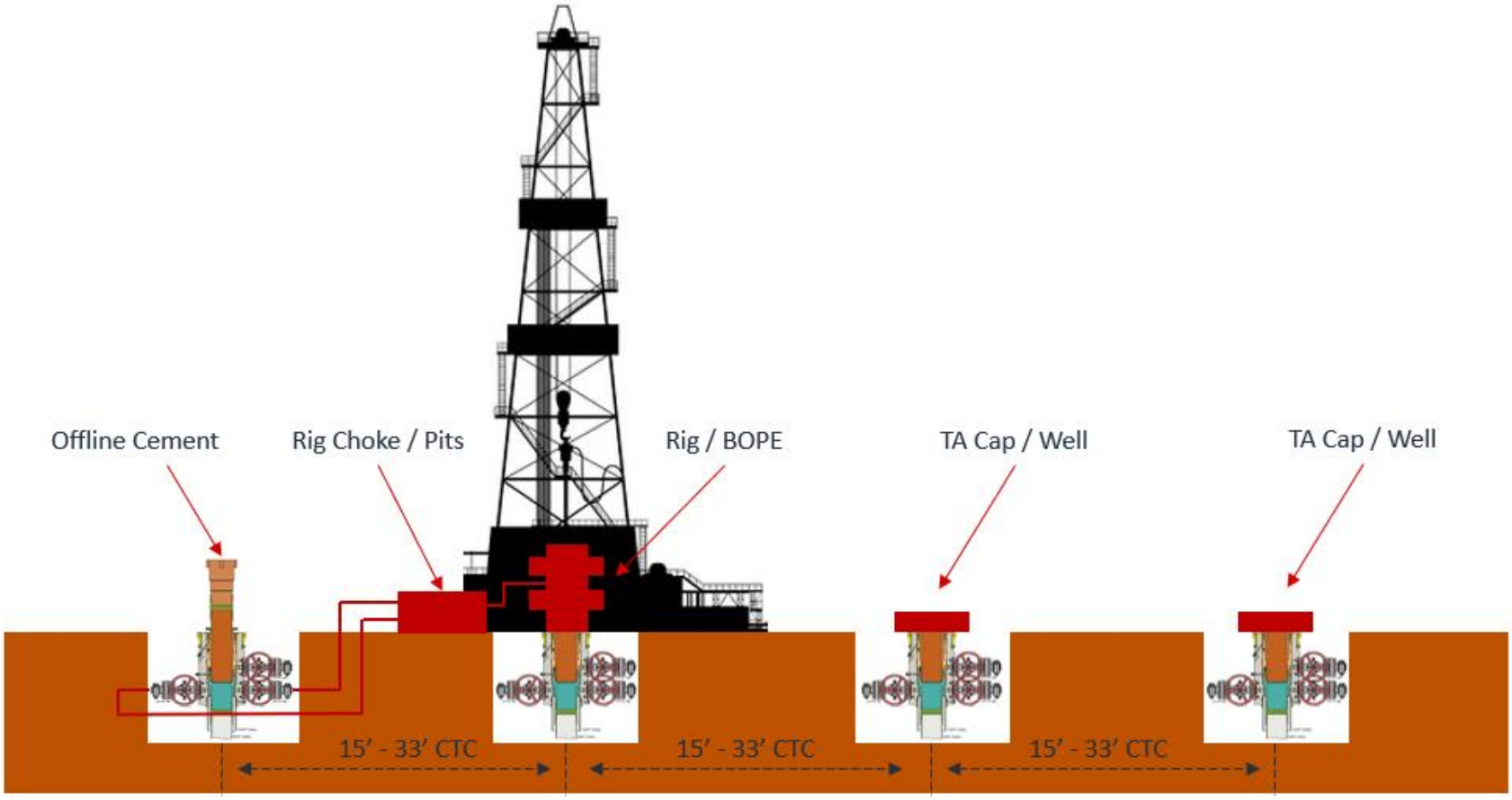


Figure 4: Rig Placement Diagram



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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 196085

CONDITIONS

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 196085
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Adhere to previous NMOCD Conditions of Approval	3/14/2023