Form 3160-5 (June 2019)

# UNITED STATES DEPARTMENT OF THE INTERIOR

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 202

BUR	EAU OF LAND MANAGEMENT		5. Lease Serial No.	NMNM119276
Do not use this t	IOTICES AND REPORTS ON W form for proposals to drill or to Use Form 3160-3 (APD) for suc	re-enter an	6. If Indian, Allottee	or Tribe Name
	TRIPLICATE - Other instructions on pag	e 2	7. If Unit of CA/Agre	eement, Name and/or No.
1. Type of Well  Oil Well  Gas W	/all Othor		8. Well Name and No	
Oil Well Gas V  2. Name of Operator EOG RESOURG			9. API Well No.	MODELO 10 FED COM/506H
	BY 2, HOUSTON, TX 77( 3b. Phone No.	(include area code)	10. Field and Pool or	Exploratory Area
Juli BAGBY SKY LOB	(713) 651-70		TRISTE DRAW/B	•
4. Location of Well (Footage, Sec., T., R SEC 10/T24S/R32E/NMP	,M., or Survey Description)		11. Country or Parish LEA/NM	ı, State
12. CHE	CK THE APPROPRIATE BOX(ES) TO INI	DICATE NATURE OF NOT	ICE, REPORT OR OT	HER DATA
TYPE OF SUBMISSION		TYPE OF AC	TION	
✓ Notice of Intent		raulic Fracturing Recl	duction (Start/Resume)	Water Shut-Off     Well Integrity     ✓ Other
Subsequent Report			omplete porarily Abandon	• Otner
Final Abandonment Notice			er Disposal	
the Bond under which the work will completion of the involved operation completed. Final Abandonment No is ready for final inspection.)  EOG respectfully requests and the following changes:  Modelo 10 Fed Com 606H (FM Change name from Modelo 10 Change BHL from T-24-S, R-3 to T-24-S, R-32-E, Sec 15, 25:  Change target formation to The Continued on page 3 additional		ile with BLM/BIA. Required pletion or recompletion in a s, including reclamation, have is well to reflect	l subsequent reports m new interval, a Form	ust be filed within 30 days following 3160-4 must be filed once testing has been
STAR HARRELL / Ph: (432) 848-9	*** /	Regulatory Speciali	ist	
Signature		Date	01/11/2	2023
	THE SPACE FOR FED	ERAL OR STATE OF	FICE USE	
Approved by				
KEITH P IMMATTY / Ph: (575) 988	3-4722 / Approved	ENGINEER Title		02/21/2023 Date
Conditions of approval, if any, are attacl certify that the applicant holds legal or $\epsilon$ which would entitle the applicant to con	ned. Approval of this notice does not warran equitable title to those rights in the subject le duct operations thereon.	t or 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, 3162.3-4.

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 of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

(Form 3160-5, page 2)

# **Additional Information**

#### **Additional Remarks**

Update casing and cement program to current design.

EOG requests execution of Variance 3a (attached) to offline cement the intermediate sections.

#### **Location of Well**

0. SHL: TR B / 625 FNL / 2046 FEL / TWSP: 24S / RANGE: 32E / SECTION: 10 / LAT: 32.2376395 / LONG: -103.6600906 ( TVD: 0 feet, MD: 0 feet ) PPP: TR J / 2649 FSL / 2530 FEL / TWSP: 24S / RANGE: 32E / SECTION: 10 / LAT: 32.2320833 / LONG: -103.6621394 ( TVD: 10660 feet, MD: 13097 feet ) PPP: TR B / 100 FNL / 2530 FEL / TWSP: 24S / RANGE: 32E / SECTION: 10 / LAT: 32.2390719 / LONG: -103.662137 ( TVD: 10395 feet, MD: 10453 feet ) BHL: TR G / 2538 FNL / 2530 FEL / TWSP: 24S / RANGE: 32E / SECTION: 15 / LAT: 32.2178438 / LONG: -103.6621444 ( TVD: 10660 feet, MD: 18277 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 Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

AMENDED REPORT

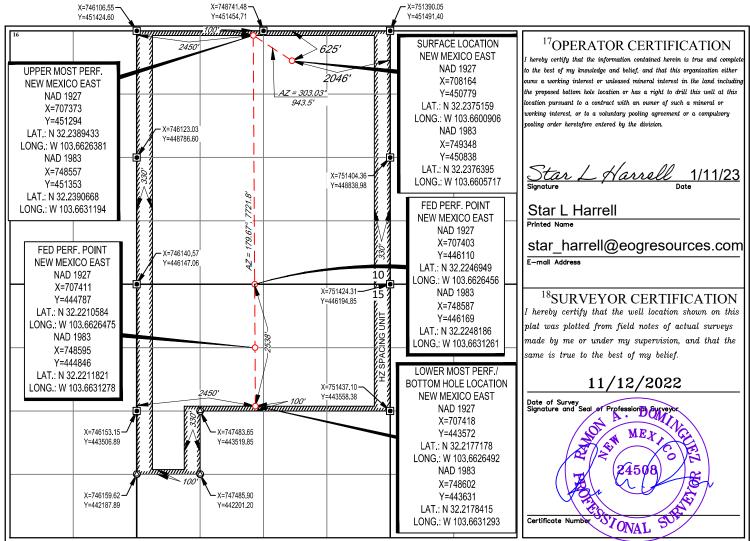
# WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Numbe 30-025	<sup>2</sup> Pool Code 96603	³Pool Name Triste Draw; Bone Տր	oring
<sup>4</sup> Property Code 325486		operty Name 10 FED COM	<sup>6</sup> Well Number 606H
<sup>7</sup> OGRID №. 7377	- 1	perator Name SOURCES, INC.	<sup>9</sup> Elevation 3643'

<sup>10</sup>Surface Location

B	10	24-S	32-E	Lot Idn	625'	NORTH	2046'	EAST EAST	LEA
			11]	Bottom Ho	le Location If I	Different From Su	rface		
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	15	24-S	32-E	_	2538'	NORTH	2450'	WEST	LEA
1000.00	<sup>13</sup> Joint or 1	Infill 14Cc	onsolidation Co	de <sup>15</sup> Ord	er No.				

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.



Released to Imaging: 3/15/2023 11:40:15 AM S:\SURVEY\EOG\_MIDLANDIMODELO\_10\_15\_FED\_COM\FINAL\_PRODUCTS\LO\_MODELO\_10\_FED\_COM\_606H\_C102.DWG 11/29/2022 3:41:42 PM adisable to Imaging: 3/15/2023 11:40:15 AM



# **Revised Permit Information 11/07/2022:**

Well Name: Modelo 10 Fed Com 606H

Location: SHL: 625' FNL & 2046' FEL, Section 10, T-24-S, R-32-E, Lea Co., N.M.

BHL: 2538' FNL & 2450' FWL, Section 15, T-24-S, R-32-E, Lea Co., N.M.

**Casing Program:** 

Hole	Interv	al MD	Interva	al TVD	Csg			
Size	From (ft)	To (ft)	From (ft)	To (ft)	OD	Weight	Grade	Conn
12-1/4"	0	1,260	0	1,260	9-5/8"	36#	J-55	LTC
8-3/4"	0	11,299	0	11,210	7-5/8"	29.7#	HCP-110	FXL
6-3/4"	0	10,799	0	10,710	5-1/2"	20#	P110-EC	DWC/C IS MS
6-3/4"	10,799	11,299	10,710	11,210	5-1/2"	20#	P110-EC	Vam Sprint SF
6-3/4"	11,299	19,863	11,210	12,211	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:** 

		Wt.	Yld	Slurry Description		
Depth	No. Sacks	ppg	Slurry Description			
1,260' 9-5/8''	340	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 @ 1,060')		
11,210' 7-5/8''	500	14.2	1.11			
	1190	14.8	1.5	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag- M + 6% Bentonite Gel (TOC @ surface)		
19,863' 5-1/2''	790	13.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 10,710')		



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 (7,175') and the second stage performed as a 1000 sack bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 190 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:**

<b>Measured Depth</b>	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,260'	Fresh - Gel	8.6-8.8	28-34	N/c
1,260' – 11,210'	Brine	10.0-10.2	28-34	N/c
11,210' – 11,818'	Oil Base	8.7-9.4	58-68	N/c - 6
11,818' – 19,863' Lateral	Oil Base	10.0-14.0	58-68	4 - 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"



625' FNL 2046' FEL **Revised Wellbore** 

KB: 3668' GL: 3643'

**Section 10** 

T-24-S, R-32-E

API: 30-025-\*\*\*\*

Bit Size: 12-1/4"

9-5/8", 36#, J-55, LTC,

@ 0' - 1,260'

Bit Size: 8-3/4"

7-5/8", 29.7#, HCP-110, FXL,

@ 0' - 11,299'

Bit Size: 6-3/4"

5-1/2", 20#, P110-EC, DWC/C IS MS,

@ 0' - 10,799'

5-1/2", 20#, P110-EC, Vam Sprint SF,

@ 10,799' - 11,299'

5-1/2", 20#, P110-EC, DWC/C IS MS,

@ 11,299' - 19,863'

KOP: 11,818' MD, 11,734' TVD

EOC: 12,568' MD, 12,211' TVD

TOC: 10,799' MD, 10,710' TVD

Lateral: 19,863' MD, 12,211' TVD

**Upper Most Perf:** 

100' FNL & 2450' FWL Sec. 10

**Lower Most Perf:** 

2538' FNL & 2450' FWL Sec. 15

BH Location: 2538' FNL & 2450' FWL

Sec. 15

T-24-S R-32-E



# **Design B**

#### 4. CASING PROGRAM

Hole	Interv	Interval MD		Interval TVD				
Size	From (ft)	To (ft)	From (ft)	To (ft)	OD	Weight	Grade	Conn
13"	0	1,260	0	1,260	10-3/4"	40.5#	J-55	STC
9-7/8"	0	11,299	0	11,210	8-3/4"	38.5#	P110-EC	SLIJ II NA
7-7/8"	0	19,863	0	12,211	6"	22.3#	P110-EC	DWC/C IS

Variance is requested to waive the centralizer requirements for the 8-3/4" 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 6" casing in the 7-7/8" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 7-7/8" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive the annular clearance requirements for the 6" casing by 8-3/4" 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
1,260' 10-3/4"	320	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	70	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1,060')
11,210' 8-3/4"	570	14.2	1.11	1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 6,980')
	1350	14.8	1.5	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
19,863'	1290	13.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 10,710')



EOG requests variance from minimum standards to pump a two stage cement job on the 8-3/4" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (7,175') and the second stage performed as a 1000 sack bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 355 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.

# 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"



625' FNL 2046' FEL **Proposed Wellbore** 

KB: 3668' GL: 3643'

**Section 10** 

T-24-S, R-32-E

API: 30-025-\*\*\*\*

Bit Size: 13" 10-3/4", 40.5#, J-55, STC, @ 0' - 1,260' Bit Size: 9-7/8" 8-3/4" 38.5#, P110-EC, SLIJ II NA, @ 0' - 11,299' TOC: 10,799' MD, 10,710' TVD Lateral: 19,863' MD, 12,211' TVD Bit Size: 7-7/8" **Upper Most Perf:** 100' FNL & 2450' FWL Sec. 10 6", 22.3#, P110-EC, DWC/C IS, **Lower Most Perf:** @ 0' - 19,863' 2538' FNL & 2450' FWL Sec. 15 BH Location: 2538' FNL & 2450' FWL Sec. 15 T-24-S R-32-E KOP: 11,818' MD, 11,734' TVD EOC: 12,568' MD, 12,211' TVD



# **Midland**

Lea County, NM (NAD 83 NME) Modelo 10 Fed Com #606H

OH

Plan: Plan #0.2

# **Standard Planning Report**

04 January, 2023



#### **Planning Report**

Database: Company:

Project:

PEDM Midland

Lea County, NM (NAD 83 NME)

Modelo 10 Fed Com Site:

Well: #606H Wellbore: OH Plan #0.2 Design:

**Local Co-ordinate Reference:** 

**TVD Reference:** MD Reference: North Reference:

**Survey Calculation Method:** 

Well #606H

kb = 25' @ 3668.0usft kb = 25' @ 3668.0usft

Grid

Minimum Curvature

Project Lea County, NM (NAD 83 NME)

Map System: Geo Datum:

Map Zone:

**Well Position** 

**Position Uncertainty** 

US State Plane 1983 North American Datum 1983 New Mexico Eastern Zone

System Datum:

Mean Sea Level

Modelo 10 Fed Com Site

Northing: Site Position: From: Мар Easting:

451,286.00 usft Latitude: 750,991.00 usft Longitude:

32° 14' 19.830 N 103° 39' 18.896 W

**Position Uncertainty:** 0.0 usft Slot Radius: 13-3/16 "

Well #606H

> +N/-S +E/-W

0.0 usft 0.0 usft 0.0 usft

Northing: Easting: Wellhead Elevation: 450,838.00 usft 749,348.00 usft Latitude: Longitude: **Ground Level:** 

32° 14' 15.500 N 103° 39' 38.058 W

3,643.0 usft

0.36 **Grid Convergence:** 

ОН Wellbore

Declination Magnetics **Model Name** Sample Date Dip Angle Field Strength (°) (°) (nT) 47,491.93575116 IGRF2020 6/14/2021 6.59 59.90

Design Plan #0.2

Audit Notes:

Version:

Vertical Section: Depth From (TVD)

Phase: PLAN

+N/-S

Tie On Depth: +E/-W

(usft)

0.0

usft

0.0 Direction

(°) 185.91

**Plan Survey Tool Program** 

Date 1/4/2023

(usft)

0.0

**Depth From** Depth To (usft)

0.0

(usft)

19,862.9

Survey (Wellbore)

Plan #0.2 (OH)

**Tool Name** EOG MWD+IFR1

(usft)

0.0

Remarks

MWD + IFR1



# **Planning Report**

Database: PEDM Company: Midland

Project: Lea County, NM (NAD 83 NME)

Site: Modelo 10 Fed Com

 Well:
 #606H

 Wellbore:
 OH

 Design:
 Plan #0.2

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well #606H

kb = 25' @ 3668.0usft kb = 25' @ 3668.0usft

Grid

Minimum Curvature

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	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,814.6	10.29	305.54	1,811.9	26.8	-37.5	2.00	2.00	0.00	305.54	
6,739.2	10.29	305.54	6,657.1	538.2	-753.5	0.00	0.00	0.00	0.00	
7,253.8	0.00	0.00	7,169.0	565.0	-791.0	2.00	-2.00	0.00	180.00	
11,818.3	0.00	0.00	11,733.5	565.0	-791.0	0.00	0.00	0.00	0.00	KOP(Modelo 10 Fed
12,038.7	26.46	180.00	11,946.2	515.0	-791.0	12.00	12.00	81.65	180.00	FTP(Modelo 10 Fed
12,568.2	90.00	179.66	12,210.9	87.5	-789.2	12.00	12.00	-0.06	-0.38	
17,324.9	90.00	179.66	12,211.0	-4,669.0	-761.0	0.00	0.00	0.00	0.00	Fed Perf 1(Modelo 1
18,647.9	90.00	179.65	12,211.0	-5,992.0	-753.0	0.00	0.00	0.00	-83.86	Fed Perf 2(Modelo 1
19,862.9	90.00	179.69	12,211.0	-7,207.0	-746.0	0.00	0.00	0.00	91.70	PBHL(Modelo 10 Fee

anned 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
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,814.6	10.29	305.54	1,811.9	26.8	-37.5	-22.8	2.00	2.00	0.00
6,739.2	10.29	305.54	6,657.1	538.2	-753.5	-457.8	0.00	0.00	0.00
7,253.8	0.00	0.00	7,169.0	565.0	-791.0	-480.6	2.00	-2.00	0.00
11,818.3	0.00	0.00	11,733.5	565.0	-791.0	-480.6	0.00	0.00	0.00
12,038.7	26.46	180.00	11,946.2	515.0	-791.0	-430.8	12.00	12.00	0.00
12,568.2	90.00	179.66	12,210.9	87.5	-789.2	-5.8	12.00	12.00	-0.06
17,324.9	90.00	179.66	12,211.0	-4,669.0	-761.0	4,722.5	0.00	0.00	0.00
18,647.9	90.00	179.65	12,211.0	-5,992.0	-753.0	6,037.7	0.00	0.00	0.00
19,862.9	90.00	179.69	12,211.0	-7,207.0	-746.0	7,245.5	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(Modelo 10 Fed Co - plan hits target cen - Point	0.00 ter	0.00	11,733.5	565.0	-791.0	451,403.00	748,557.00	32° 14' 21.139 N	103° 39' 47.226 W
FTP(Modelo 10 Fed Cor - plan hits target cen - Point	0.00 ter	0.00	11,946.2	515.0	-791.0	451,353.00	748,557.00	32° 14' 20.645 N	103° 39' 47.230 W
Fed Perf 1(Modelo 10 Fe - plan hits target cen - Point	0.00 ter	0.00	12,211.0	-4,669.0	-761.0	446,169.00	748,587.00	32° 13' 29.345 N	103° 39' 47.257 W
PBHL(Modelo 10 Fed Co - plan hits target cen - Point	0.00 ter	0.01	12,211.0	-7,207.0	-746.0	443,631.00	748,602.00	32° 13' 4.230 N	103° 39' 47.267 W
Fed Perf 2(Modelo 10 Fe - plan hits target cen - Point	0.00 ter	0.00	12,211.0	-5,992.0	-753.0	444,846.00	748,595.00	32° 13′ 16.253 N	103° 39' 47.260 W



# **Planning Report**

Database: PEDM

Company: Midland

Project: Lea County, NM (NAD 83 NME)

Site: Modelo 10 Fed Com Well: #606H

Wellbore: OH
Design: Plan #0.2

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well #606H

kb = 25' @ 3668.0usft kb = 25' @ 3668.0usft

Grid

Minimum Curvature



T M

Azimuths to Grid North
True North: -0.36°
Magnetic North: 6.23°

Magnetic Field Strength: 47491.9nT Dip Angle: 59.90° Date: 6/14/2021 Model: IGRF2020

To convert a Magnetic Direction to a Grid Direction, Add 6.23° To convert a Magnetic Direction to a True Direction, Add 6.59° East To convert a True Direction to a Grid Direction, Subtract 0.36°

Northing

450838.00

Lea County, NM (NAD 83 NME)

Modelo 10 Fed Com #606H

Plan #0.2

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: #606H

3643.0

kb = 25' @ 3668.0usft

Easting Latittude Longitude 749348.00 32° 14′ 15.500 N 103° 39′ 38.058 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	1300.0	0.00	0.00	1300.0	0.0	0.0	0.00	0.00	0.0	
3	1814.6	10.29	305.54	1811.9	26.8	-37.5	2.00	305.54	-22.8	
4	6739.2	10.29	305.54	6657.1	538.2	-753.5	0.00	0.00	-457.8	
5	7253.8	0.00	0.00	7169.0	565.0	-791.0	2.00	180.00	-480.6	
6	11818.3	0.00	0.00	11733.5	565.0	-791.0	0.00	0.00	-480.6	KOP(Modelo 10 Fed Com #506H)
7	12038.7	26.46	180.00	11946.2	515.0	-791.0	12.00	180.00	-430.8	FTP(Modelo 10 Fed Com #506H)
8	12568.2	90.00	179.66	12210.9	87.5	-789.2	12.00	-0.38	-5.8	
9	17324.9	90.00	179.66	12211.0	-4669.0	-761.0	0.00	0.00	4722.5	Fed Perf 1(Modelo 10 Fed Com #506H)
10	18647.9	90.00	179.65	12211.0	-5992.0	-753.0	0.00	-83.86	6037.7	Fed Perf 2(Modelo 10 Fed Com #506H)
11	19862.9	90.00	179.69	12211.0	-7207.0	-746.0	0.00	91.70	7245.5	PBHL(Modelo 10 Fed Com #506H)

CASING DETAILS

No casing data is available

7200-

8400-

10000

10400-

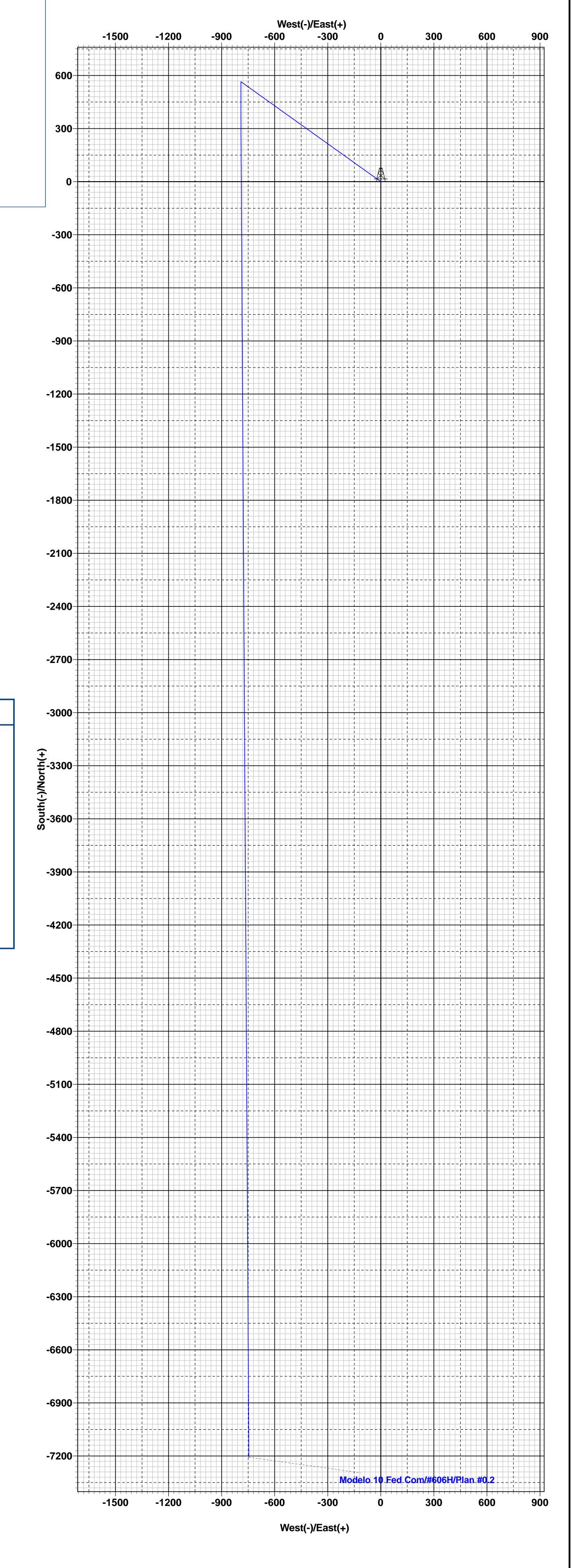
10800-

11200-

12000-

12400-

WELLBORE TARGET DETAILS (MAP CO-ORDINATES) TVD Northing **Easting** KOP(Modelo 10 Fed Com #506H) 11733.5 -791.0 451403.00 748557.00 FTP(Modelo 10 Fed Com #506H) 11946.2 -791.0 451353.00 748557.00 Fed Perf 1(Modelo 10 Fed Com #506H) -4669.0 -761.0 446169.00 748587.00 12211.0 Fed Perf 2(Modelo 10 Fed Com #506H) -5992.0 -753.0 444846.00 748595.00 12211.0 PBHL(Modelo 10 Fed Com #506H) -7207.0 -746.0 443631.00 748602.00 12211.0



2100 2450 2800 3150 3500 3850 4200 4550 4900 5250 5600 5950 6300 6650 7000 7350

Vertical Section at 185.91°

Lea County, NM (NAD 83 NME)

Modelo 10 Fed Com

#606H

OH

Plan #0.2
9:45, January 04 2023



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.



2/24/2022

- 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.



2/24/2022

# **Example Well Control Plan Content**

# A. Well Control Component Table

The table below, which covers the cementing of the <u>5M MASP (Maximum Allowable Surface Pressure) portion of the well</u>, 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.

Page | 3



2/24/2022

- 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**

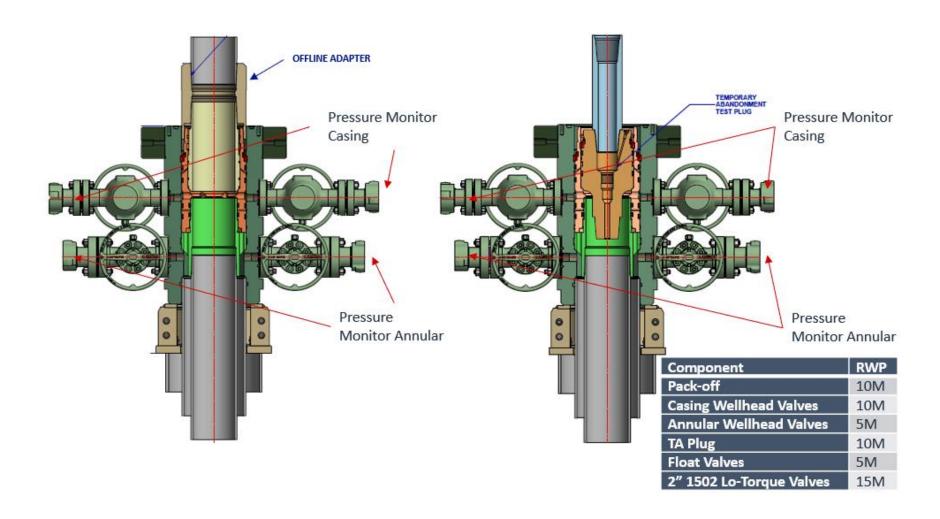
- 1. Sound alarm (alert crew).
- 2. Shut down pumps.
- 3. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
- 4. Confirm shut-in.
- 5. Notify tool pusher/company representative.
- 6. Open rig choke and begin pumping again taking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

2/24/2022

Figure 1: Cameron TA Plug and Offline Adapter Schematic



Page | 5



2/24/2022

Figure 2: Cactus TA Plug and Offline Adapter Schematic

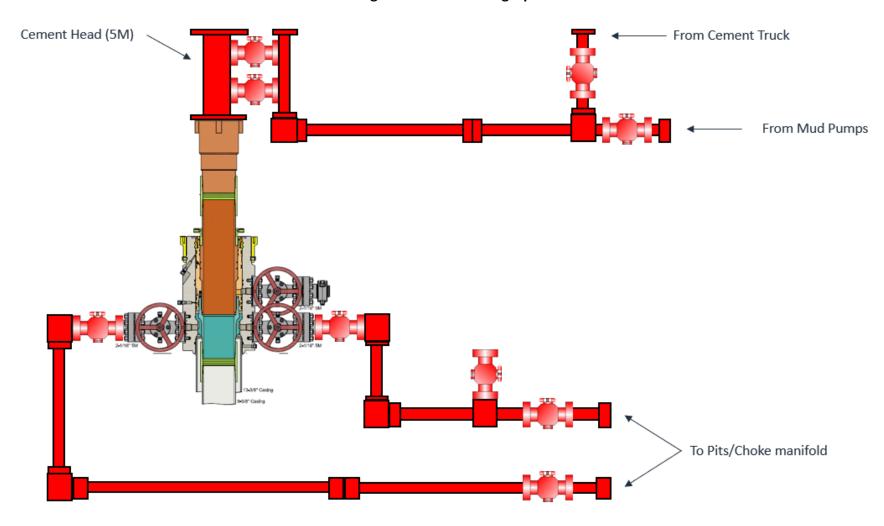


Page | 6



2/24/2022

Figure 3: Back Yard Rig Up



\*\*\* All Lines 10M rated working pressure

Page | 7



2/24/2022

Figure 4: Rig Placement Diagram



Page | 8

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

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 190107

# **CONDITIONS**

Operator:	OGRID:
EOG RESOURCES INC	7377
P.O. Box 2267	Action Number:
Midland, TX 79702	190107
	Action Type:
	[C-103] NOI Change of Plans (C-103A)

#### CONDITIONS

Created By		Condition Date
pkautz	None	3/15/2023