#### K

Received by OCL	): 6/15/2023 7:0	03:07 AM				Page 1 of		
Form 3160-5 (June 2019)		UNITED STATES ARTMENT OF THE INTE EAU OF LAND MANAGE		FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021 5. Lease Serial No. NMNM77063				
	not use this f	OTICES AND REPORT form for proposals to di Jse Form 3160-3 (APD)	6. If Indian, Allottee c					
	SUBMIT IN T	<b>RIPLICATE</b> - Other instruction		7. If Unit of CA/Agre	ement, Name and/or No.			
1. Type of Well								
V Oil V	Well Gas W	Vell Other			8. Well Name and No	INGA 33 FED COM/583H		
2. Name of Operato	<sup>r</sup> EOG RESOURC	CES INCORPORATED			9. API Well No.	30-025-51574		
3a. Address 1111	BAGBY SKY LOB	BY 2, HOUSTON, TX 77( 3b. I (713	Phone No. <i>(inclu</i> 3) 651-7000	de area code)	10. Field and Pool or WC-025 G-08 S24	Exploratory Area 3217P: UPPER WOLFCAMP		
4. Location of Well SEC 33/T23S/R3		.,M., or Survey Description)			11. Country or Parish, LEA/NM	State		
	12. CHE0	CK THE APPROPRIATE BOX(E	ES) TO INDICAT	TE NATURE OF NO	TICE, REPORT OR OTI	HER DATA		
TYPE OF SU	JBMISSION			TYPE OF A	CTION			
Votice of Int	ent	Acidize	Deepen Hydraulic		oduction (Start/Resume) clamation	Water Shut-Off Well Integrity		
Subsequent I	Report	Casing Repair	New Const		complete	✓ Other		
Final Abando	onment Notice	Change Plans Convert to Injection	Plug and A Plug Back		mporarily Abandon ater Disposal			
the Bond under completion of th completed. Fina is ready for fina	which the work will ne involved operatio I Abandonment Not I inspection.)	be perfonned or provide the Bon ns. If the operation results in a m ices must be filed only after all re	nd No. on file wit ultiple completio	th BLM/BIA. Require on or recompletion in	ed subsequent reports mu a new interval, a Form 3	of all pertinent markers and zones. Attach ist be filed within 30 days following 160-4 must be filed once testing has been he operator has detennined that the site		
-	tfully requests an a	583H) API #: 30-025-51574 amendment to our approved A	PD for this wel	I to reflect				
Change nam	ne from Inga 33 Fe	ed Com 583H to Inga 33 Fed C	Com 714H.					
0		2-E, Sec 4, 100' FSL, 2178' FE FSL, 2025' FEL, Lea Co., N.M		М,				
Change targ	et formation to Wo	olfcamp Clastics Y.						
Continued on	page 3 additional	information						
14. I hereby certify t	hat the foregoing is	true and correct. Name (Printed/	Typed)					
STAR HARRELL	/ Ph: (432) 848-91	161	Title	Regulatory Specia	alist			
Signature			Date	;	06/12/2	023		
		THE SPACE FO	R FEDERA	L OR STATE O	FICE USE			
Approved by								
CHRISTOPHER	WALLS / Ph: (575	5) 234-2234 / Approved		Petroleum E		06/14/2023 Date		
		ed. Approval of this notice does a quitable title to those rights in the		Office CARLSBAD				

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.

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 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

Page 2 of 31

(Form 3160-5, page 2)

#### **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: TR K / 2271 FSL / 2514 FWL / TWSP: 23S / RANGE: 32E / SECTION: 33 / LAT: 32.2600258 / LONG: -103.6800058 ( TVD: 0 feet, MD: 0 feet ) PPP: TR J / 2542 FSL / 2178 FEL / TWSP: 23S / RANGE: 32E / SECTION: 33 / LAT: 32.2607734 / LONG: -103.6776133 ( TVD: 11004 feet, MD: 11053 feet ) BHL: TR O / 100 FSL / 2178 FEL / TWSP: 24S / RANGE: 32E / SECTION: 4 / LAT: 32.2395835 / LONG: -103.678087 ( TVD: 11269 feet, MD: 18864 feet )

DISTRICT I 1625 N. French Dr., Hobbs, NM 88240 Phome: (575) 393-6161 Fax: (575) 393-0720 DISTRICT II 811 S. First St., Artesia, NM 88210 Phome: (575) 748-1283 Fax: (575) 748-9720 DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410 Phome: (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

□ AMENDED REPORT

.

API Number 30-025-51574		Pool Code 98248 WC-025 G-08 Property Name						<sup>Pool Name</sup> S S243217P; Upper Wolfcamp		
Property Code 334073					INGA 33		Well Number 714			
OGRID No 7377	).			I	Operato EOG RESC		NC.	Elevation 368	Elevation 3682'	
		-			Surface L				•	
UL or lot no. K	Section 33	Township 23-S	Range 32-E	Lot Idn	Feet from t		th/South line	Feet from 251		County
, K				ole Loca	tion If Diffe			201		/
UL or lot no.	Section	Township	Range	Lot Idn			th/South line	Feet from	the East/West line	County
0	4	24-S	32-E	-	100	)'	SOUTH	202	25' EAST	LEA
Dedicated Acres	Joint or I	nfill	Consolidated Co	de	Order No.	PENDING	G COM AG		T	
479.48	ll be assig	ned to this	completion	until all	interests have				unit has been approved by	the
X=743289 LAT.: N 32	(ICO EAST 1983 Y=458945 2.2600258	5		20			28	27	FED PERF. POINT (FF	PP)
X=702106 LAT.: N 33 LONG.: W 1 2271' FSL KICK OFF P NEW MEX NAD X=744031 LAT.: N 33 LONG.: W 1 2592' FSL UPPER MOST NEW MEX NAD X=744032 LAT.: N 3 LONG.: W 1 NAD X=744032	1927 Y=458886 2.2599024 03.679523 2514' FWL POINT (KO) (ICO EAST 1983 Y=459272 2.2609123 03.677600 1927 Y=459213 2.2607889 103.677117 2025' FEL C PERF. (U (ICO EAST 1983 2.Y=459222 2.2607749	<ul> <li>32</li> <li>P)</li> <li>2</li> <li>00</li> <li>3</li> <li>74</li> <li>IMP)</li> <li>2</li> <li>200</li> <li>3</li> <li>3</li> </ul>	· – – – +				33 2025'	34 X=746055.79 Y=459341.73 100' X=746071.53 Y=456700.53 34 34 3	NEW MEXICO EAST NAD 1983 X=744048 Y=45668 LAT.: N 32.2537888 LONG.: W 103.67759 NAD 1927 X=702864 Y=456622 LAT.: N 32.2536654 LONG.: W 103.67711 0' FSL 2024' FEL LOWER MOST PERF. (L BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1983 X=744081 Y=451513 LAT.: N 32.2395833 LONG.: W 103.677592 NAD 1927 X=702897 Y=451454 LAT.: N 32.2394598 LONG.: W 103.677110 100' FSL 2025' FEL	1 3 75 2 4 51 <b>LMP)</b> <b>N (BHL</b> T 3 3 24 4 3 08
LONG.: W 1	103.677117 2025' FEL 2025'	73 	5	SEC LOT 1 - 3 LOT 2 - 3 LOT 3 - 3	S, R-32-E TTION 4 19.80 ACRES 19.68 ACRES 19.64 ACRES 19.44 ACRES		LOI 1	X=746090.72 Y=454064.73	SURVEYORS CERTIFIC I hereby certify that the well location : plat was plotted from field notes of ac made by me or under my supervision, same is true and correct to the best of 12/05/2020 Date of Survey Signature and Scal of Professional Surveyor: UNIVER MEXICON	shown on ctual surv and that f my belie
S <u>tar L Har</u> <sup>Signature</sup> tar L Harrell	<u>rell 6</u> /	/ <u>12/2023</u> Date	8	9	X=743455.52 Y=451409.28	1000	2025' ——	10 X=746106.55 I Y=451424.60	5/15/2023 9:15:47 AM	AND AND

# **S**eog resources

#### Inga 33 Fed Com 714H

#### **Revised Permit Information 04/27/2023:**

Well Name: Inga 33 Fed Com 714H

Location: SHL: 2271' FSL & 2514' FWL, Section 33, T-23-S, R-32-E, Lea Co., N.M. BHL: 100' FSL & 2025' FEL, Section 4, T-24-S, R-32-E, Lea Co., N.M.

#### **Casing Program:**

Hole	Interval MD		Interval TVD		Csg			
Size	From (ft)	To (ft)	From (ft)	To (ft)	OD	Weight	Grade	Conn
12-1/4"	0	1,150	0	1,150	9-5/8"	36#	J-55	LTC
8-3/4"	0	11,262	0	11,200	7-5/8"	29.7#	HCP-110	FXL
6-3/4"	0	10,762	0	10,700	5-1/2"	20#	P110-EC	DWC/C IS MS
6-3/4"	10,762	11,262	10,700	11,200	5-1/2"	20#	P110-EC	Vam Sprint SF
6-3/4"	11,262	20,001	11,200	12,387	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.

		Wt.	Yld	Slurry Description
Depth	No. Sacks	ppg	Ft3/sk	Siurry Description
1,150'	320	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-
9-5/8''				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 @ 950')
11,200'	520	14.2	1.11	1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3%
7-5/8''				Microbond (TOC @ 6,800')
	1160	14.8	1.5	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-
				M + 6% Bentonite Gel (TOC @ surface)
20,001'	810	13.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond
5-1/2''				(TOC @ 10,700')

#### **Cementing Program:**



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 (7,004') 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 160 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.

8				
<b>Measured Depth</b>	Туре	Weight (ppg)	Viscosity	Water Loss
0 – 1,150'	Fresh - Gel	8.6-8.8	28-34	N/c
1,150' - 11,200'	Brine	10.0-10.2	28-34	N/c
11,200' - 11,970'	Oil Base	8.7-9.4	58-68	N/c - 6
11,970' - 20,001'	Oil Base	10.0-14.0	58-68	4 - 6
Lateral	On Dasc	10.0-14.0	50-00	<b>-</b> - 0

#### **Mud Program:**



#### 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"



#### **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.

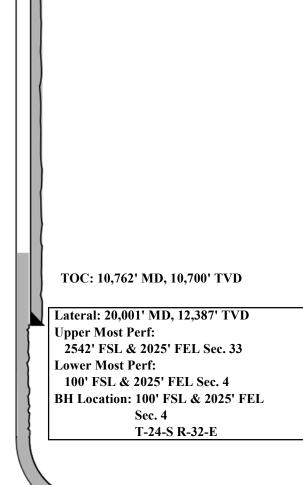


	<b>e</b> og resources	
	Inga 33 Fed Com 714H	
2271' FSL 2514' FWL Section 33	<b>Revised Wellbore</b>	KB: 3707' GL: 3682'
T-23-8, R-32-E	API: 30-025-****	
Bit Size: 12-1/4" 9-5/8", 36#, J-55, LTC, @ 0' - 1,150'		

Bit Size: 8-3/4" 7-5/8", 29.7#, HCP-110, FXL, (a) 0' - 11,262'



KOP: 11,970' MD, 11,910' TVD EOC: 12,720' MD, 12,387' TVD





#### Design B 4. CASING PROGRAM

Hole	Interv	al MD	Interval TVD		Csg			
Size	From (ft)	To (ft)	From (ft)	To (ft)	OD	Weight	Grade	Conn
13"	0	1,150	0	1,150	10-3/4"	40.5#	J-55	STC
9-7/8"	0	11,262	0	11,200	8-3/4"	38.5#	P110-EC	SLIJ II NA
7-7/8"	0	20,001	0	12,387	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.

		Wt.	Yld	Slurry Description
Depth	No. Sacks	ppg	Ft3/sk	Sturry Description
1,150'	300	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk
10-3/4"				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 @ 950')
11,200'	590	14.2	1.11	1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3%
8-3/4"				Microbond (TOC @ 6,800')
	1320	14.8	1.5	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-
				M + 6% Bentonite Gel (TOC @ surface)
20,001'	1310	13.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond
6"				(TOC @ 10,700')

#### **<u>Cementing Program</u>**:



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 (7,004') 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 322 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.

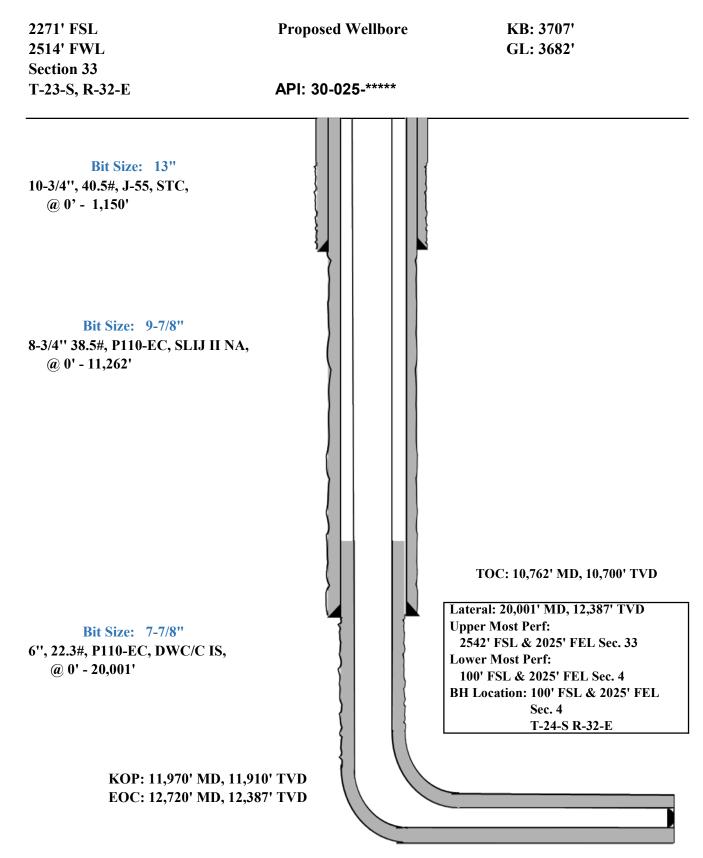
EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

#### 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"





# **S**eog resources

#### Inga 33 Fed Com 714H

#### **GEOLOGIC NAME OF SURFACE FORMATION:**

Permian

#### **ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:**

Rustler	1,089'
Tamarisk Anhydrite	1,124'
Top of Salt	1,359'
Base of Salt	4,549'
Lamar	4,788'
Bell Canyon	4,815'
Cherry Canyon	5,589'
Brushy Canyon	7,004'
Bone Spring Lime	8,635'
Leonard (Avalon) Shale	8,802'
1st Bone Spring Sand	9,801'
2nd Bone Spring Shale	10,055'
2nd Bone Spring Sand	10,394'
3rd Bone Spring Carb	11,099'
3rd Bone Spring Sand	11,576'
Wolfcamp	12,024'
TD	12,387'

#### ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Upper Permian Sands	0-400'	Fresh Water
Bell Canyon	4,815'	Oil
Cherry Canyon	5,589'	Oil
Brushy Canyon	7,004'	Oil
Leonard (Avalon) Shale	8,802'	Oil
1st Bone Spring Sand	9,801'	Oil
2nd Bone Spring Shale	10,055'	Oil
2nd Bone Spring Sand	10,394'	Oil



## Midland

Lea County, NM (NAD 83 NME) Inga 33 Fed Com #714H

OH

Plan: Plan #0.1 RT

# **Standard Planning Report**

18 May, 2023



Database: Company: Project: Site: Well: Wellbore: Design:	PEDM Midland Lea County, I Inga 33 Fed 0 #714H OH Plan #0.1 RT		ME)	TVD Reference MD Reference North Referen		Well #714H kb = 25' @ 37( kb = 25' @ 37( Grid Minimum Curv	07.0usft
Project	Lea County, N	IM (NAD 83 NN	1E)				
Map System: Geo Datum: Map Zone:	US State Plane North American New Mexico Ea	Datum 1983		System Datum:		Mean Sea Level	
Site	Inga 33 Fed C	om					
Site Position: From: Position Uncertainty:	Мар	0.0 usft	Northing: Easting: Slot Radius:	458,724. 745,466. 13-3/	00 usft Longitu		32° 15' 33.773 N 103° 40' 22.690 W
Well	#714H						
Well Position	+N/-S +E/-W	0.0 usft 0.0 usft 0.0 usft	Northing: Easting: Wellhead Eley	7	58,945.00 usft 43,289.00 usft usft	Latitude: Longitude: Ground Level:	32° 15' 36.091 N 103° 40' 48.027 W 2.682 0 upt
Position Uncertainty Grid Convergence:		0.35 °		vation:	usit	Ground Level:	3,682.0 usf
Wellbore	OH						
Magnetics	Model Na	me	Sample Date	Declination (°)		Dip Angle (°)	Field Strength (nT)
	IGF	RF2020	5/18/2023		6.37	59.85	47,302.04385899
Design	Plan #0.1 RT						
Audit Notes: Version:			Phase:	PLAN	Tie On Dep	th:	0.0
Vertical Section:		(L	rom (TVD) Isft) 0.0	+N/-S (usft) 0.0	+E/-W (usft) 0.0		irection (°) 173.92
				0.0	0.0		110.32
Plan Survey Tool Pro	-	Date 5/18/2	2023				
Depth From (usft)	Depth To (usft)	Survey (Wellb	ore)	Tool Name	Rema	irks	
1 0.0	20,001.2	Plan #0.1 RT (	OH)	EOG MWD+IFR1			



Database:	PEDM	Local Co-ordinate Reference:	Well #714H
Company:	Midland	TVD Reference:	kb = 25' @ 3707.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 25' @ 3707.0usft
Site:	Inga 33 Fed Com	North Reference:	Grid
Well:	#714H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ОН		
Design:	Plan #0.1 RT		

Plan Sections

	Turn	Build	Dogleg			Vertical			Measured
TFO (°)	Rate (°/100usft)	Rate (°/100usft)	Rate (°/100usft)	+E/-W (usft)	+N/-S (usft)	Depth (usft)	Azimuth (°)	Inclination (°)	Depth (usft)
0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
0.00	0.00	0.00	0.00	0.0	0.0	1,300.0	0.00	0.00	1,300.0
66.22	0.00	2.00	2.00	30.2	13.3	1,733.8	66.22	8.71	1,735.5
0.00	0.00	0.00	0.00	711.8	313.7	6,595.2	66.22	8.71	6,653.6
180.00	0.00	-2.00	2.00	742.0	327.0	7,029.0	0.00	0.00	7,089.1
0.00	0.00	0.00	0.00	742.0	327.0	11,909.5	0.00	0.00	11,969.6
178.85	81.13	12.00	12.00	743.0	277.0	12,122.2	178.85	26.46	12,190.0
0.92	0.16	12.00	12.00	747.3	-150.4	12,386.9	179.68	90.00	12,719.5
0.00	0.00	0.00	0.00	759.0	-2,264.0	12,387.0	179.68	90.00	14,833.1
-87.38	0.00	0.00	0.00	792.0	-7,432.0	12,387.0	179.59	90.00	20,001.2

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Plan #0.1 RT

**Planning Report** 

Planned Survey

Design:

	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	2.00	66.22	1,400.0	0.7	1.6	-0.5	2.00	2.00	0.00
I	1,500.0	4.00	66.22	1,499.8	2.8	6.4	-2.1	2.00	2.00	0.00
	1,600.0	6.00	66.22	1,599.5	6.3	14.4	-4.8	2.00	2.00	0.00
	1,700.0	8.00	66.22	1,698.7	11.2	25.5	-8.5	2.00	2.00	0.00
	1,735.5	8.71	66.22	1,733.8	13.3	30.2	-10.0	2.00	2.00	0.00
	1,800.0	8.71	66.22	1,797.6	17.3	39.2	-13.0	0.00	0.00	0.00
	1,900.0	8.71	66.22	1,896.4	23.4	53.0	-17.6	0.00	0.00	0.00
	2,000.0	8.71	66.22	1,995.3	29.5	66.9	-22.2	0.00	0.00	0.00
	2,100.0	8.71	66.22	2,094.1	35.6	80.7	-26.8	0.00	0.00	0.00
	2,200.0	8.71	66.22	2,193.0	41.7	94.6	-31.4	0.00	0.00	0.00
	2,300.0	8.71	66.22	2,291.8	47.8	108.5	-36.0	0.00	0.00	0.00
	2,400.0	8.71	66.22	2,390.7	53.9	122.3	-40.6	0.00	0.00	0.00
	2,500.0	8.71	66.22	2,489.5	60.0	136.2	-45.2	0.00	0.00	0.00
	2,600.0	8.71	66.22	2,588.4	66.1	150.0	-49.8	0.00	0.00	0.00
	2,700.0	8.71	66.22	2,687.2	72.2	163.9	-54.5	0.00	0.00	0.00
	2,800.0	8.71	66.22	2,786.0	78.3	177.7	-59.1	0.00	0.00	0.00
	2,900.0	8.71	66.22	2,884.9	84.4	191.6	-63.7	0.00	0.00	0.00
	3,000.0	8.71	66.22	2,983.7	90.5	205.5	-68.3	0.00	0.00	0.00
	3,100.0	8.71	66.22	3,082.6	96.7	219.3	-72.9	0.00	0.00	0.00
	3,200.0	8.71	66.22	3,181.4	102.8	233.2	-77.5	0.00	0.00	0.00
	3,300.0	8.71	66.22	3,280.3	108.9	247.0	-82.1	0.00	0.00	0.00
1	3,400.0	8.71	66.22	3,379.1	115.0	260.9	-86.7	0.00	0.00	0.00
	3,500.0	8.71	66.22	3,478.0	121.1	274.8	-91.3	0.00	0.00	0.00
	3,600.0	8.71	66.22	3,576.8	127.2	288.6	-95.9	0.00	0.00	0.00
	3,700.0	8.71	66.22	3,675.7	133.3	302.5	-100.5	0.00	0.00	0.00
	3,800.0	8.71	66.22	3,774.5	139.4	316.3	-105.1	0.00	0.00	0.00
	3,900.0	8.71	66.22	3,873.4	145.5	330.2	-109.7	0.00	0.00	0.00
	4,000.0	8.71	66.22	3,972.2	151.6	344.0	-114.3	0.00	0.00	0.00
	4,100.0	8.71	66.22	4,071.1	157.7	357.9	-118.9	0.00	0.00	0.00
	4,200.0	8.71	66.22	4,169.9	163.8	371.8	-123.5	0.00	0.00	0.00
	4,300.0	8.71	66.22	4,268.7	169.9	385.6	-128.1	0.00	0.00	0.00
	4,400.0	8.71	66.22	4,367.6	176.0	399.5	-132.7	0.00	0.00	0.00
	4,500.0	8.71	66.22	4,466.4	182.2	413.3	-137.3	0.00	0.00	0.00
	4,600.0	8.71	66.22	4,565.3	188.3	427.2	-141.9	0.00	0.00	0.00
	4,700.0	8.71	66.22	4,664.1	194.4	441.0	-146.5	0.00	0.00	0.00
	4,800.0	8.71	66.22	4,763.0	200.5	454.9	-151.1	0.00	0.00	0.00
	4,900.0	8.71	66.22	4,861.8	206.6	468.8	-155.7	0.00	0.00	0.00
	5,000.0	8.71	66.22	4,960.7	212.7	482.6	-160.4	0.00	0.00	0.00
	5,100.0	8.71	66.22	5,059.5	218.8	496.5	-165.0	0.00	0.00	0.00
	5,200.0	8.71	66.22	5,158.4	224.9	510.3	-169.6	0.00	0.00	0.00

5/18/2023 11:24:52AM

Page 4

COMPASS 5000.16 Build 100



Database:	PEDM	Local Co-ordinate Reference:	Well #714H
Company:	Midland	TVD Reference:	kb = 25' @ 3707.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 25' @ 3707.0usft
Site:	Inga 33 Fed Com	North Reference:	Grid
Well:	#714H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1 RT		

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	8.71	66.22	5,257.2	231.0	524.2	-174.2	0.00	0.00	0.00
5.400.0	8.71	66.22	5,356.1	237.1	538.1	-178.8	0.00	0.00	0.00
5,500.0	8.71	66.22	5,454.9	243.2	551.9	-183.4	0.00	0.00	0.00
5,600.0	8.71	66.22	5,553.8	249.3	565.8	-188.0	0.00	0.00	0.00
5,700.0	8.71	66.22	5,652.6	249.3	579.6	-192.6	0.00	0.00	0.00
5,800.0	8.71	66.22	5,751.4	261.5	593.5	-197.2	0.00	0.00	0.00
5,900.0	8.71	66.22	5,850.3	267.7	607.3	-201.8	0.00	0.00	0.00
6,000.0	8.71	66.22	5,949.1	273.8	621.2	-206.4	0.00	0.00	0.00
6,100.0	8.71	66.22	6,048.0	279.9	635.1	-211.0	0.00	0.00	0.00
6,200.0	8.71	66.22	6,146.8	286.0	648.9	-215.6	0.00	0.00	0.00
6,300.0	8.71	66.22	6,245.7	292.1	662.8	-220.2	0.00	0.00	0.00
6,400.0	8.71	66.22	6,344.5	298.2	676.6	-224.8	0.00	0.00	0.00
6,500.0	8.71	66.22	6,443.4	304.3	690.5	-229.4	0.00	0.00	0.00
6,600.0	8.71	66.22	6,542.2	310.4	704.3	-234.0	0.00	0.00	0.00
6,653.6	8.71	66.22	6,595.2	313.7	711.8	-236.5	0.00	0.00	0.00
6,700.0	7.78	66.22	6,641.1	316.4	717.9	-238.5	2.00	-2.00	0.00
6,800.0	5.78	66.22	6,740.4	321.1	728.7	-242.1	2.00	-2.00	0.00
6,900.0	3.78	66.22	6,840.1	324.5	736.3	-244.6	2.00	-2.00	0.00
7,000.0	1.78	66.22	6,939.9	326.4	740.7	-246.1	2.00	-2.00	0.00
7,089.1	0.00	0.00	7,029.0	327.0	742.0	-246.5	2.00	-2.00	0.00
7,100.0	0.00	0.00	7,039.9	327.0	742.0	-246.5	0.00	0.00	0.00
7,200.0	0.00	0.00	7,139.9	327.0	742.0	-246.5	0.00	0.00	0.00
7,300.0	0.00	0.00	7,239.9	327.0	742.0	-240.5	0.00	0.00	0.00
	0.00		7,239.9	327.0 327.0	742.0	-246.5	0.00	0.00	0.00
7,400.0		0.00							
7,500.0	0.00	0.00	7,439.9	327.0	742.0	-246.5	0.00	0.00	0.00
7,600.0	0.00	0.00	7,539.9	327.0	742.0	-246.5	0.00	0.00	0.00
7,700.0	0.00	0.00	7,639.9	327.0	742.0	-246.5	0.00	0.00	0.00
7,800.0	0.00	0.00	7,739.9	327.0	742.0	-246.5	0.00	0.00	0.00
7,900.0	0.00	0.00	7,839.9	327.0	742.0	-246.5	0.00	0.00	0.00
8,000.0	0.00	0.00	7,939.9	327.0	742.0	-246.5	0.00	0.00	0.00
8,100.0	0.00	0.00	8,039.9	327.0	742.0	-246.5	0.00	0.00	0.00
8,200.0	0.00	0.00	8,139.9	327.0	742.0	-246.5	0.00	0.00	0.00
8,300.0	0.00	0.00	8,239.9	327.0	742.0	-246.5	0.00	0.00	0.00
8,400.0	0.00	0.00	8,339.9	327.0	742.0	-246.5	0.00	0.00	0.00
8,500.0	0.00	0.00	8,439.9	327.0	742.0	-246.5	0.00	0.00	0.00
8,600.0	0.00	0.00	8,539.9	327.0	742.0	-246.5	0.00	0.00	0.00
8,700.0	0.00	0.00	8,639.9	327.0	742.0	-246.5	0.00	0.00	0.00
8,800.0	0.00	0.00	8,739.9	327.0	742.0	-246.5	0.00	0.00	0.00
8,900.0	0.00	0.00	8,839.9	327.0	742.0	-246.5	0.00	0.00	0.00
9,000.0	0.00	0.00	8,939.9	327.0	742.0	-246.5	0.00	0.00	0.00
9,100.0	0.00	0.00	9,039.9	327.0	742.0	-246.5	0.00	0.00	0.00
9,200.0	0.00	0.00	9,139.9	327.0	742.0	-246.5	0.00	0.00	0.00
9,200.0	0.00	0.00	9,139.9	327.0	742.0	-246.5	0.00	0.00	0.00
9,300.0 9,400.0	0.00	0.00	9,239.9 9,339.9	327.0 327.0	742.0		0.00	0.00	
						-246.5			0.00
9,500.0	0.00	0.00	9,439.9	327.0	742.0	-246.5	0.00	0.00	0.00
9,600.0	0.00	0.00	9,539.9	327.0	742.0	-246.5	0.00	0.00	0.00
9,700.0	0.00	0.00	9,639.9	327.0	742.0	-246.5	0.00	0.00	0.00
9,800.0	0.00	0.00	9,739.9	327.0	742.0	-246.5	0.00	0.00	0.00
9,900.0	0.00	0.00	9,839.9	327.0	742.0	-246.5	0.00	0.00	0.00
10,000.0	0.00	0.00	9,939.9	327.0	742.0	-246.5	0.00	0.00	0.00
10,100.0	0.00	0.00	9,939.9 10,039.9	327.0	742.0	-246.5	0.00	0.00	0.00
10,100.0	0.00	0.00		527.0	742.0	-240.3		0.00	0.00
10,200.0	0.00	0.00	10,139.9	327.0	742.0	-246.5	0.00	0.00	0.00
10,300.0	0.00	0.00	10,239.9	327.0	742.0	-246.5	0.00	0.00	0.00
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5/18/2023 11:24:52AM

Released to Imaging: 8/1/2023 11:42:17 AM

Page 5

COMPASS 5000.16 Build 100

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Database:	PEDM	Local Co-ordinate Reference:	Well #714H
Company:	Midland	TVD Reference:	kb = 25' @ 3707.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 25' @ 3707.0usft
Site:	Inga 33 Fed Com	North Reference:	Grid
Well:	#714H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ОН		
Design:	Plan #0.1 RT		

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)
10,500.0	0.00	0.00	10,439.9	327.0	742.0	-246.5	0.00	0.00	0.0
10,600.0	0.00	0.00	10,539.9	327.0	742.0	-246.5	0.00	0.00	0.0
10,700.0	0.00	0.00	10,639.9	327.0	742.0	-246.5	0.00	0.00	0.0
10,800.0	0.00	0.00	10,739.9	327.0	742.0	-246.5	0.00	0.00	0.0
10,900.0	0.00	0.00	10,839.9	327.0	742.0	-246.5	0.00	0.00	0.0
11,000.0	0.00	0.00	10,939.9	327.0	742.0	-246.5	0.00	0.00	0.0
11,100.0	0.00	0.00	11,039.9	327.0	742.0	-246.5	0.00	0.00	0.0
11,200.0	0.00	0.00	11,139.9	327.0	742.0	-246.5	0.00	0.00	0.0
11,300.0	0.00	0.00	11,239.9	327.0	742.0	-246.5	0.00	0.00	0.0
11,400.0	0.00	0.00	11,339.9	327.0	742.0	-246.5	0.00	0.00	0.0
		0.00	11,439.9		742.0	-240.5			
11,500.0	0.00			327.0			0.00	0.00	0.0
11,600.0	0.00	0.00	11,539.9	327.0	742.0	-246.5	0.00	0.00	0.0
11,700.0	0.00	0.00	11,639.9	327.0	742.0	-246.5	0.00	0.00	0.0
11,800.0	0.00	0.00	11,739.9	327.0	742.0	-246.5	0.00	0.00	0.0
11,900.0	0.00	0.00	11,839.9	327.0	742.0	-246.5	0.00	0.00	0.0
11,969.6	0.00	0.00	11,909.5	327.0	742.0	-246.5	0.00	0.00	0.0
	3 Fed Com #714H		,						510
11,975.0	0.65	178.85	11,914.9	327.0	742.0	-246.5	12.00	12.00	0.0
12,000.0	3.65	178.85	11,939.9	326.0	742.0	-245.6	12.00	12.00	0.0
12,025.0	6.65	178.85	11,964.8	323.8	742.1	-243.3	12.00	12.00	0.0
12,020.0	9.65	178.85	11,989.5	320.2	742.1	-239.8	12.00	12.00	0.0
12,030.0	12.65	178.85	12,014.1	315.4	742.2	-235.0	12.00	12.00	0.0
12,075.0	15.66	178.85	12,014.1	309.3	742.2	-233.0	12.00	12.00	0.0
12,100.0	15.00	170.00	12,030.3		742.4	-220.9	12.00	12.00	0.0
12,125.0	18.66	178.85	12,062.2	301.9	742.5	-221.5	12.00	12.00	0.0
12,150.0	21.66	178.85	12,085.7	293.3	742.7	-213.0	12.00	12.00	0.0
12,175.0	24.66	178.85	12,108.6	283.5	742.9	-203.2	12.00	12.00	0.0
12,190.0	26.46	178.85	12,122.2	277.0	743.0	-196.7	12.00	12.00	0.0
FTP(Inga 33	Fed Com #714H	)							
12,200.0	27.66	178.90	12,131.1	272.5	743.1	-192.2	12.00	12.00	0.4
12,225.0	30.66	178.99	12,152.9	260.3	743.3	-180.1	12.00	12.00	0.3
12,250.0	33.66	179.06	12,174.1	247.0	743.5	-166.8	12.00	12.00	0.3
12,275.0	36.66	179.13	12,194.5	232.6	743.8	-152.5	12.00	12.00	0.2
12,300.0	39.66	179.19	12,214.2	217.1	744.0	-137.1	12.00	12.00	0.2
12,300.0	42.66	179.23	12,233.0	200.7	744.0	-120.7	12.00	12.00	0.2
12,350.0	45.66	179.28	12,250.9	183.3	744.4	-103.4	12.00	12.00	0.1
12,375.0	48.66	179.32	12,267.9	165.0	744.7	-85.1	12.00	12.00	0.1
12,400.0	51.66	179.36	12,283.9	145.8	744.9	-66.0	12.00	12.00	0.1
12,425.0	54.66	179.39	12,298.9	125.8	745.1	-46.1	12.00	12.00	0.1
12,450.0	57.66	179.42	12,312.8	105.0	745.3	-25.4	12.00	12.00	0.1
12,475.0	60.66	179.45	12.325.7	83.5	745.5	-4.1	12.00	12.00	0.1
12,500.0	63.66	179.48	12,337.3	61.4	745.7	17.9	12.00	12.00	0.1
12,525.0	66.66	179.50	12,347.8	38.8	745.9	40.5	12.00	12.00	0.1
12,525.0	69.66	179.53	12,347.8	15.6	746.1	63.6	12.00	12.00	0.1
12,550.0	72.66	179.55	12,365.2	-8.1	746.1	87.1	12.00	12.00	0.1
12,600.0	75.66	179.58	12,372.0	-32.1	746.5	111.1	12.00	12.00	0.0
12,625.0	78.66	179.60	12,377.6	-56.5	746.7	135.3	12.00	12.00	0.0
12,650.0	81.66	179.62	12,381.9	-81.1	746.9	159.8	12.00	12.00	0.0
12,675.0	84.66	179.64	12,384.8	-106.0	747.0	184.5	12.00	12.00	0.0
12,700.0	87.66	179.67	12,386.5	-130.9	747.2	209.3	12.00	12.00	0.0
12,719.5	90.00	179.68	12,386.9	-150.4	747.3	228.8	12.00	12.00	0.0
12,800.0	90.00	179.68	12,386.9	-230.9	747.7	308.8	0.00	0.00	0.0
12,900.0	90.00	179.68	12,386.9	-330.9	748.3	408.3	0.00	0.00	0.0
13,000.0	90.00	179.68	12,386.9	-430.9	748.8	507.8	0.00	0.00	0.0
13,100.0	90.00	179.68	12,386.9	-530.9	749.4	607.3	0.00	0.00	0.0

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COMPASS 5000.16 Build 100

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Database:	PEDM	Local Co-ordinate Reference:	Well #714H
Company:	Midland	TVD Reference:	kb = 25' @ 3707.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 25' @ 3707.0usft
Site:	Inga 33 Fed Com	North Reference:	Grid
Well:	#714H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ОН		
Design:	Plan #0.1 RT		

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)
13,200.0	90.00	179.68	12,386.9	-630.9	749.9	706.8	0.00	0.00	0.00
13,300.0	90.00	179.68	12,386.9	-730.9	750.5	806.3	0.00	0.00	0.00
13,400.0	90.00	179.68	12,386.9	-830.9	751.0	905.8	0.00	0.00	0.00
13,500.0	90.00	179.68	12,386.9	-930.9	751.6	1,005.3	0.00	0.00	0.00
13,600.0	90.00	179.68	12,387.0	-1,030.9	752.2	1,104.8	0.00	0.00	0.00
13,700.0	90.00	179.68	12,387.0	-1,130.9	752.7	1,204.3	0.00	0.00	0.00
13,800.0	90.00	179.68	12,387.0	-1,230.9	753.3	1,303.8	0.00	0.00	0.00
13,900.0	90.00	179.68	12,387.0	-1,330.9	753.8	1,403.3	0.00	0.00	0.00
14,000.0	90.00	179.68	12,387.0	-1,430.9	754.4	1,502.8	0.00	0.00	0.00
14,100.0	90.00	179.68	12,387.0	-1,530.9	754.9	1,602.3	0.00	0.00	0.00
14,200.0	90.00	179.68	12,387.0	-1,630.9	755.5	1,701.8	0.00	0.00	0.00
14,300.0	90.00	179.68	12,387.0	-1,730.9	756.0	1,801.2	0.00	0.00	0.00
14,400.0	90.00	179.68	12,387.0	-1,830.9	756.6	1,900.7	0.00	0.00	0.00
14,500.0	90.00	179.68	12,387.0	-1,930.9	757.2	2,000.2	0.00	0.00	0.00
14,600.0	90.00	179.68	12,387.0	-2,030.9	757.7	2,099.7	0.00	0.00	0.00
14,700.0	90.00	179.68	12,387.0	-2.130.9	758.3	2,199.2	0.00	0.00	0.00
14,800.0	90.00	179.68	12,387.0	-2,230.9	758.8	2,199.2	0.00	0.00	0.00
14,800.0	90.00	179.68	12,387.0	-2,264.0	759.0	2,296.7	0.00	0.00	0.00
	nga 33 Fed Com		12,307.0	-2,204.0	759.0	2,331.7	0.00	0.00	0.00
14,900.0	90.00	179.68	12,387.0	-2,330.9	759.4	2,398.2	0.00	0.00	0.00
15,000.0	90.00	179.68	12,387.0	-2,430.9	759.9	2,497.7	0.00	0.00	0.00
15,100.0	90.00	179.68	12,387.0	-2,530.9	760.5	2,597.2	0.00	0.00	0.00
15,200.0	90.00	179.68	12,387.0	-2,630.9	761.1	2,696.7	0.00	0.00	0.00
15,300.0	90.00	179.67	12,387.0	-2,730.9	761.6	2,796.2	0.00	0.00	0.00
15,400.0	90.00	179.67	12,387.0 12,387.0	-2,830.9	762.2	2,895.7 2,995.2	0.00 0.00	0.00	0.00
15,500.0	90.00	179.67	12,387.0	-2,930.9	762.8	2,995.2		0.00	0.00
15,600.0	90.00	179.67	12,387.0	-3,030.9	763.3	3,094.7	0.00	0.00	0.00
15,700.0	90.00	179.67	12,387.0	-3,130.9	763.9	3,194.2	0.00	0.00	0.00
15,800.0	90.00	179.66	12,387.0	-3,230.9	764.5	3,293.7	0.00	0.00	0.00
15,900.0	90.00	179.66	12,387.0	-3,330.9	765.1	3,393.2	0.00	0.00	0.00
16,000.0	90.00	179.66	12,387.0	-3,430.8	765.7	3,492.7	0.00	0.00	0.00
16,100.0	90.00	179.66	12,387.0	-3,530.8	766.3	3,592.2	0.00	0.00	0.00
16,200.0	90.00	179.66	12,387.0	-3,630.8	766.9	3,691.7	0.00	0.00	0.00
16,300.0	90.00	179.65	12,387.0	-3,730.8	767.5	3,791.2	0.00	0.00	0.00
16,400.0	90.00	179.65	12,387.0	-3,830.8	768.1	3,890.7	0.00	0.00	0.00
16,500.0	90.00	179.65	12,387.0	-3,930.8	768.7	3,990.2	0.00	0.00	0.00
16,600.0	90.00	179.65	12,387.0	-4,030.8	769.3	4,089.7	0.00	0.00	0.00
16,700.0	90.00	179.65	12,387.0	-4,030.8 -4,130.8	769.3	4,089.7 4,189.2	0.00	0.00	0.00
16,800.0	90.00	179.65	12,387.0	-4,130.8	769.9	4,189.2	0.00	0.00	0.00
16,900.0	90.00	179.65	12,387.0	-4,230.8 -4,330.8	770.5	4,200.7 4,388.2	0.00	0.00	0.00
17,000.0	90.00	179.64	12,387.0	-4,430.8	771.8	4,300.2	0.00	0.00	0.00
17,100.0	90.00	179.64	12,387.0	-4,530.8	772.4	4,587.2	0.00	0.00	0.00
17,200.0	90.00	179.64	12,387.0	-4,630.8	773.0	4,686.7	0.00	0.00	0.00
17,300.0	90.00	179.64	12,387.0	-4,730.8	773.7	4,786.2	0.00	0.00	0.00
17,400.0	90.00	179.63	12,387.0	-4,830.8	774.3	4,885.7	0.00	0.00	0.00
17,500.0	90.00	179.63	12,387.0	-4,930.8	774.9	4,985.2	0.00	0.00	0.00
17,600.0	90.00	179.63	12,387.0	-5,030.8	775.6	5,084.7	0.00	0.00	0.00
17,700.0	90.00	179.63	12,387.0	-5,130.8	776.2	5,184.2	0.00	0.00	0.00
17,800.0	90.00	179.63	12,387.0	-5,230.8	776.9	5,283.7	0.00	0.00	0.00
17,900.0	90.00	179.63	12,387.0	-5,330.8	777.5	5,383.2	0.00	0.00	0.00
18,000.0	90.00	179.62	12,387.0	-5,430.8	778.2	5,482.7	0.00	0.00	0.00
18,100.0	90.00	179.62	12,387.0	-5,530.8	778.9	5,582.2	0.00	0.00	0.00
18,200.0	90.00	179.62	12,387.0	-5,630.8	779.5	5,681.7	0.00	0.00	0.00
10,200.0	30.00	110.02	12,001.0	-0,000.0	113.5	0,001.7	0.00	0.00	0.00

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COMPASS 5000.16 Build 100



Database:	PEDM	Local Co-ordinate Reference:	Well #714H
Company:	Midland	TVD Reference:	kb = 25' @ 3707.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 25' @ 3707.0usft
Site:	Inga 33 Fed Com	North Reference:	Grid
Well:	#714H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ОН		
Desian:	Plan #0.1 RT		

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)
18,300.0	90.00	179.62	12,387.0	-5,730.8	780.2	5,781.2	0.00	0.00	0.00
18,400.0	90.00	179.62	12,387.0	-5,830.8	780.8	5,880.7	0.00	0.00	0.00
18,500.0	90.00	179.61	12,387.0	-5,930.8	781.5	5,980.2	0.00	0.00	0.00
18,600.0	90.00	179.61	12,387.0	-6,030.8	782.2	6,079.7	0.00	0.00	0.00
18,700.0	90.00	179.61	12,387.0	-6,130.8	782.9	6,179.2	0.00	0.00	0.00
18,800.0	90.00	179.61	12,387.0	-6,230.8	783.6	6,278.7	0.00	0.00	0.00
18,900.0	90.00	179.61	12,387.0	-6,330.8	784.2	6,378.2	0.00	0.00	0.00
19,000.0	90.00	179.60	12,387.0	-6,430.8	784.9	6,477.8	0.00	0.00	0.00
19,100.0	90.00	179.60	12,387.0	-6,530.8	785.6	6,577.3	0.00	0.00	0.00
19,200.0	90.00	179.60	12,387.0	-6,630.8	786.3	6,676.8	0.00	0.00	0.00
19,300.0	90.00	179.60	12,387.0	-6,730.8	787.0	6,776.3	0.00	0.00	0.00
19,400.0	90.00	179.60	12,387.0	-6,830.8	787.7	6,875.8	0.00	0.00	0.00
19,500.0	90.00	179.60	12,387.0	-6,930.8	788.4	6,975.3	0.00	0.00	0.00
19,600.0	90.00	179.59	12,387.0	-7,030.8	789.1	7,074.8	0.00	0.00	0.00
19,700.0	90.00	179.59	12,387.0	-7,130.8	789.8	7,174.3	0.00	0.00	0.00
19,800.0	90.00	179.59	12,387.0	-7,230.8	790.6	7,273.8	0.00	0.00	0.00
19,900.0	90.00	179.59	12,387.0	-7,330.8	791.3	7,373.3	0.00	0.00	0.00
20,001.2	90.00	179.59	12,387.0	-7,432.0	792.0	7,474.1	0.00	0.00	0.00
PBHL(Inga 3	3 Fed Com #714	4H)							

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(Inga 33 Fed Com # - plan hits target cen - Point		0.00	11,909.5	327.0	742.0	459,272.00	744,031.00	32° 15' 39.282 N	103° 40' 39.362 W
FTP(Inga 33 Fed Com # - plan hits target cen - Point		0.00	12,122.2	277.0	743.0	459,222.00	744,032.00	32° 15' 38.788 N	103° 40' 39.354 W
PBHL(Inga 33 Fed Com - plan hits target cen - Point	0.00 ter	0.00	12,387.0	-7,432.0	792.0	451,513.00	744,081.00	32° 14' 22.501 N	103° 40' 39.332 W
Fed Perf 1(Inga 33 Fed ) - plan hits target cen - Point		0.00	12,387.0	-2,264.0	759.0	456,681.00	744,048.00	32° 15' 13.643 N	103° 40' 39.349 W

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# leog resources

MD

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1300.0

1735.5

6653.6

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12719.5

14833.1

20001.2

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179.68

179.59

12387.0

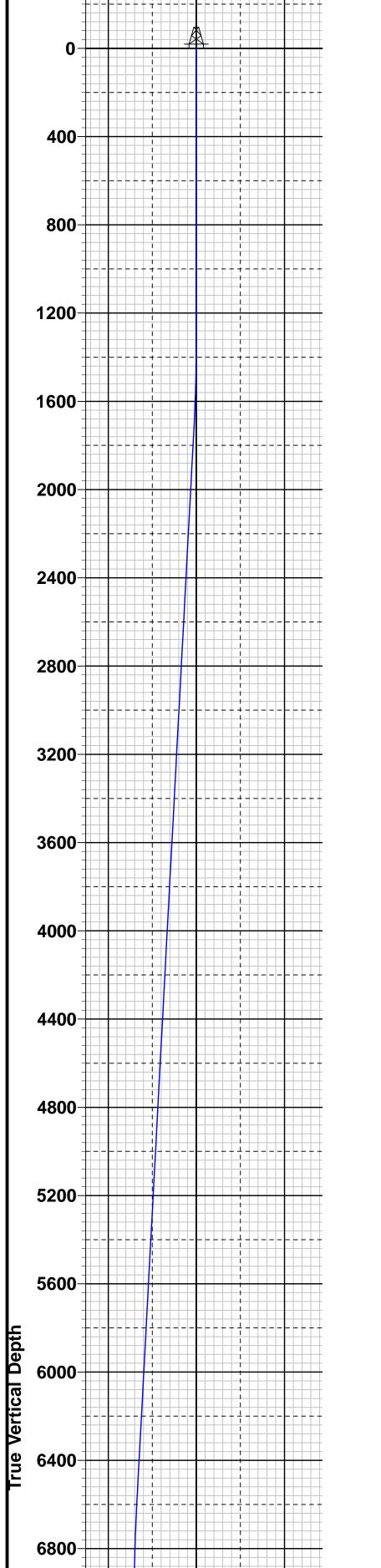
12387.0

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# Lea County, NM (NAD 83 NME) West(-)/East(+) 300 600 900 \_\_\_+ -• + + - - - 1- - + + Inga 33 Fed Com #714H 300-**Plan #0.1 RT** -300 -600 PROJECT DETAILS: Lea County, NM (NAD 83 NME) Geodetic System: US State Plane 1983 -900 Datum: North American Datum 1983 Ellipsoid: GRS 1980 - + + - - - | - | - - - -Zone: New Mexico Eastern Zone System Datum: Mean Sea Level -1200--1500-

Page 22 of 3

1500

	WELL DETAILS: #714H									
							3682.0	0		
							3707.0usft			
			Northir 458945		Eastir 743289		Latittude 32° 15' 36.091 N	Longitude 103° 40' 48.027 W		
			400340		145203		52 IJ JU.UJI N	103 40 40.027 44		
				SE	CTION D	DETAILS				
Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target		
0.00	0.00	0.0	0.0	0.0	0.00	0.00				
0.00	0.00	1300.0	0.0	0.0	0.00	0.00				
8.71	66.22	1733.8	13.3	30.2	2.00	66.22				
8.71	66.22	6595.2	313.7	711.8	0.00	0.00	-236.5			
0.00	0.00	7029.0	327.0	742.0	2.00	180.00	-246.5			
0.00	0.00	11909.5	327.0	742.0	0.00	0.00	-246.5	KOP(Inga 33 Fed Com #714H)		
26.46	178.85	12122.2	277.0	743.0	12.00	178.85	-196.7	FTP(Inga 33 Fed Com #714H)		
90.00	179.68	12386.9	-150.4	747.3	12.00	0.92	228.8			

**Azimuths to Grid North** 

Magnetic North: 6.02°

Strength: 47302.0nT

Dip Angle: 59.85°

Model: IGRF2020

To convert a Magnetic Direction to a Grid Direction, Add 6.02° To convert a Magnetic Direction to a True Direction, Add 6.37° East To convert a True Direction to a Grid Direction, Subtract 0.35°

759.0

792.0

0.00

0.00

0.00

-87.38

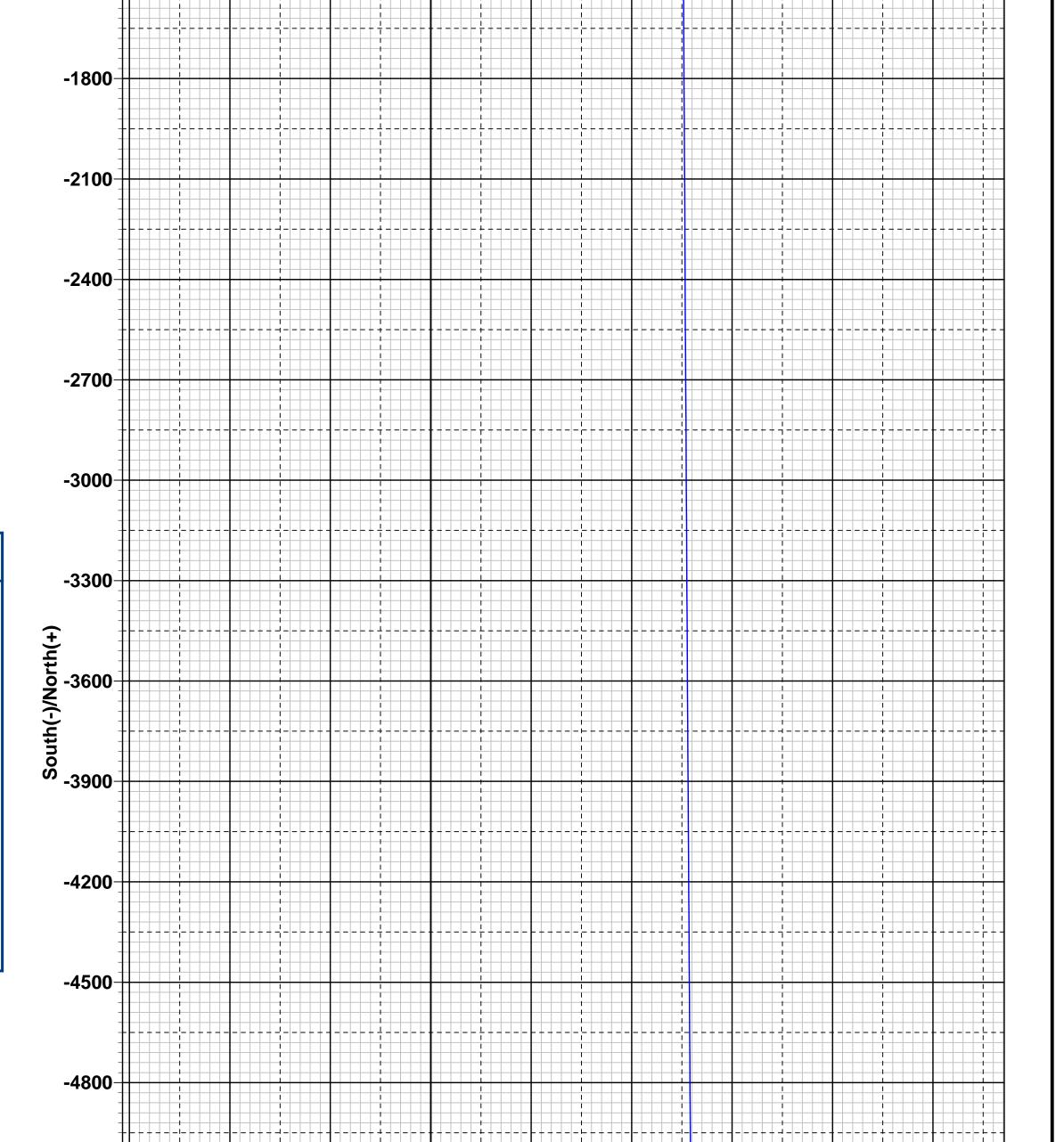
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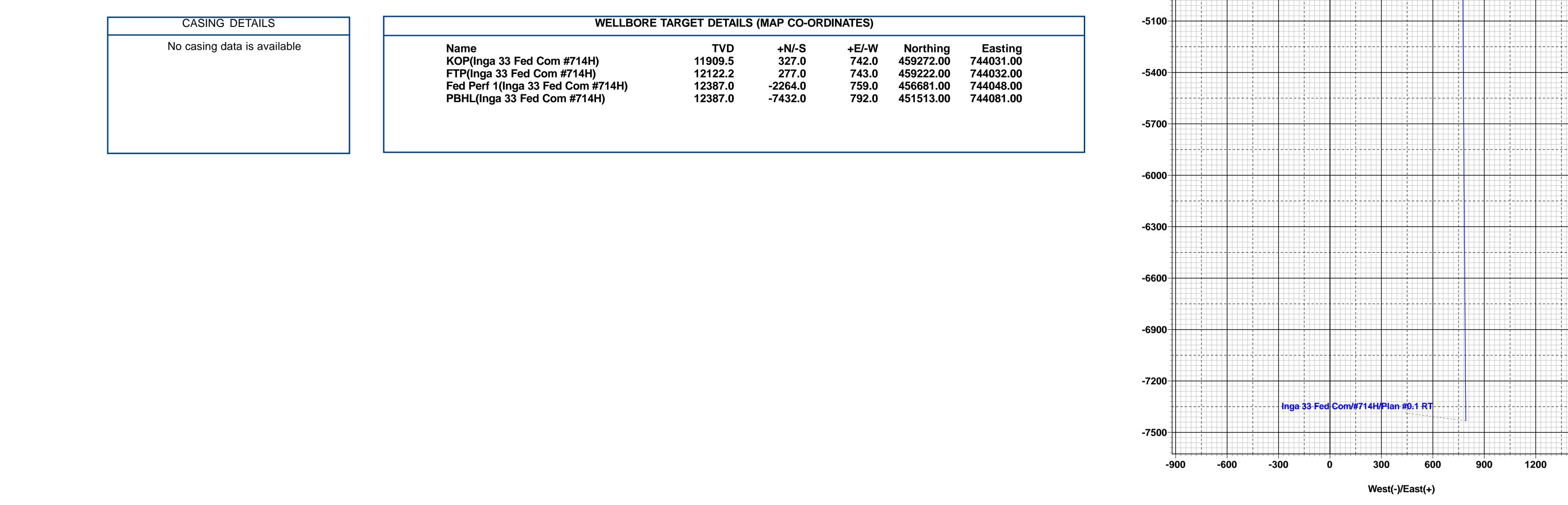
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Date: 5/18/2023

True North: -0.35°

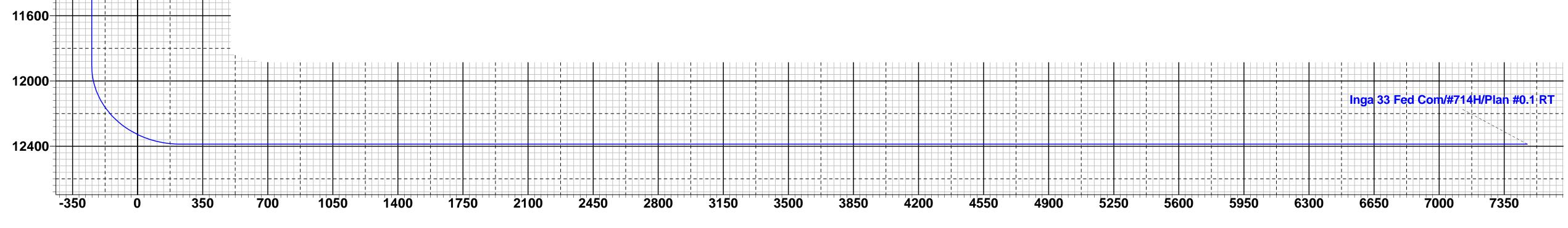
**Magnetic Field** 





Fed Perf 1(Inga 33 Fed Com #714H)

PBHL(Inga 33 Fed Com #714H)



## Vertical Section at 173.92°



Lea County, NM (NAD 83 NME) Inga 33 Fed Com #714H ОН Plan #0.1 RT 11:25, May 18 2023

1500

### **Seog resources** Offline Intermediate Cementing Procedure

#### **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.

Page | 1

## **b**eog resources

Offline Intermediate Cementing Procedure

- 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 <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

## **S**eog resources

Offline Intermediate Cementing Procedure

- 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

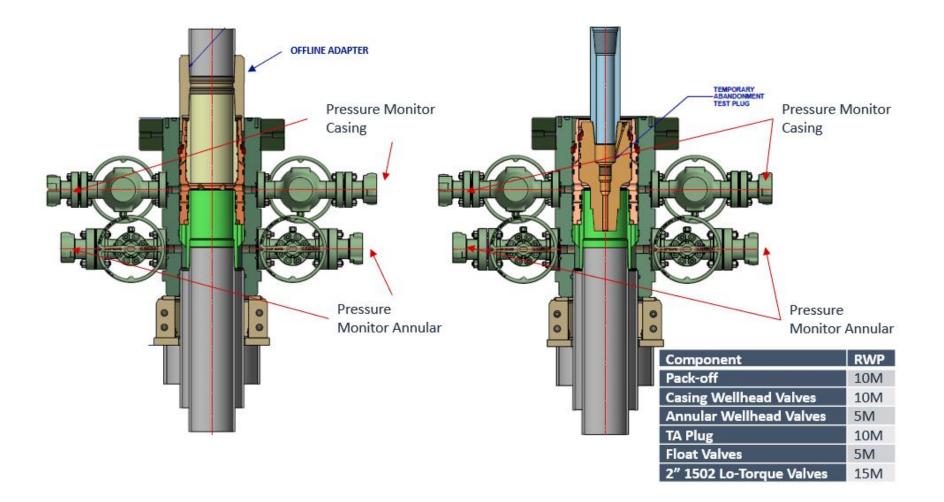
#### General Procedure After Cementing

- 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

Page | 4

## **Seog resources** Offline Intermediate Cementing Procedure

Figure 1: Cameron TA Plug and Offline Adapter Schematic

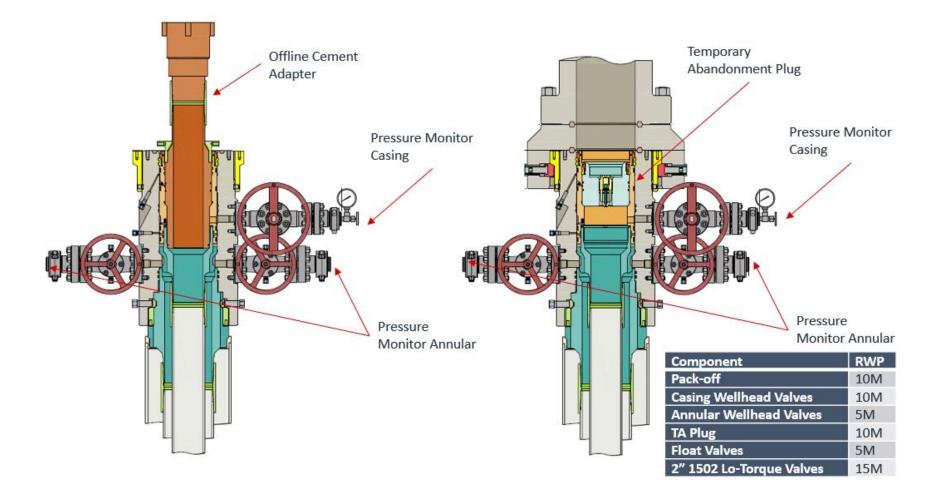


2/24/2022

Page 27 of 31

# **Offline Intermediate Cementing Procedure**



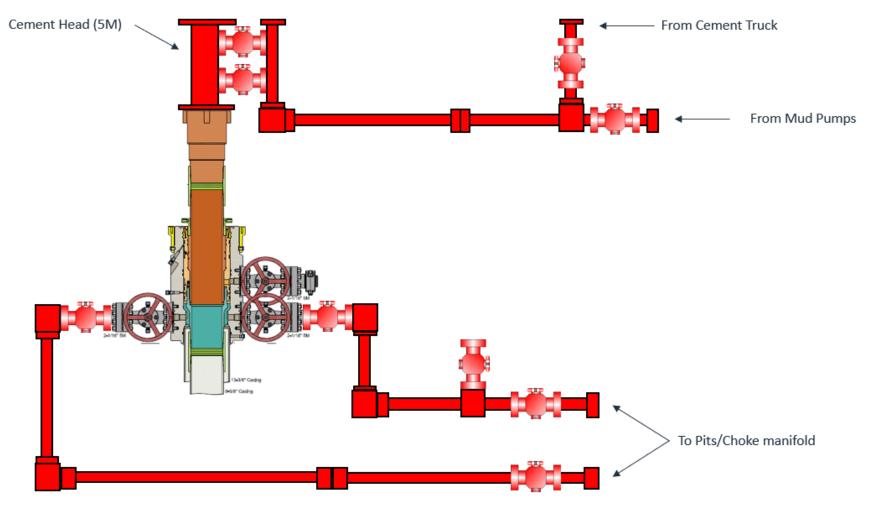


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## **Seog resources** Offline Intermediate Cementing Procedure



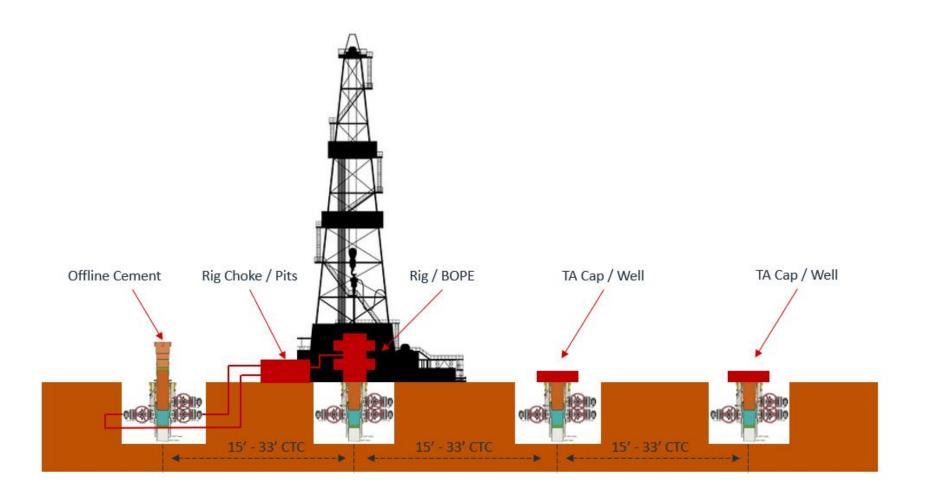


\*\*\* All Lines 10M rated working pressure

Page | 7

**Offline Intermediate Cementing Procedure** 





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CONDITIONS

Operator:	OGRID:
EOG RESOURCES INC	7377
P.O. Box 2267	Action Number:
Midland, TX 79702	228280
	Action Type:
	[C-103] NOI Change of Plans (C-103A)

#### CONDITIONS

Created By		Condition Date
pkautz	None	8/1/2023

Page 31 of 31