OCD Received 11/6/2020

Form 3160-3 (June 2015)				OMB N	APPROVED o. 1004-0137 anuary 31, 2018
UNITED STATE DEPARTMENT OF THE BUREAU OF LAND MAN	INTERIOR			5. Lease Serial No. NMNM100558	
APPLICATION FOR PERMIT TO				6. If Indian, Allotee	or Tribe Name
1a. Type of work: Image: DRILL	REENTER			7. If Unit or CA Agi	reement, Name and No.
	Other Single Zone	Multiple Zone		8. Lease Name and ROSEMARY 10 FI	
2. Name of Operator				733H 9. API Well No.	
EOG RESOURCES INCORPORATED				30 015 47656	
3a. Address 1111 BAGBY ST., SKY LOBBY 2, Houston, TX 77002	3b. Phone (713) 651-	No. <i>(include area cod</i> 7000	e)	10. Field and Pool, or PERMIAN/PURPL	or Exploratory E SAGE; WOLFCAMP
 Location of Well (Report location clearly and in accordance At surface NWSW / 2312 FSL / 1042 FWL / LAT 32.0 	2	1 /		11. Sec., T. R. M. or SEC 10/T26S/R30	r Blk. and Survey or Area E/NMP
At proposed prod. zone SWSW / 230 FSL / 990 FWL /	LAT 32.0359	32 / LONG -103.874	1522		
14. Distance in miles and direction from nearest town or post of	office*			12. County or Parisl EDDY	h 13. State NM
15. Distance from proposed* 230 feet location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of a 960	icres in lease	17. Spaci 960.0	ng Unit dedicated to t	his well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 33 feet	19. Propos 11038 fee	ed Depth t / 18539 feet	20. BLM	/BIA Bond No. in file 12308	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3118 feet	22. Approx 10/01/202	timate date work will 0	start*	23. Estimated durati 25 days	ion
	24. Atta	chments		1	
The following, completed in accordance with the requirements (as applicable)	of Onshore Oi	l and Gas Order No. 1	, and the H	Iydraulic Fracturing r	rule per 43 CFR 3162.3-3
 Well plat certified by a registered surveyor. A Drilling Plan. 		4. Bond to cover th Item 20 above).	e operatior	as unless covered by an	n existing bond on file (see
3. A Surface Use Plan (if the location is on National Forest Syst SUPO must be filed with the appropriate Forest Service Office				mation and/or plans as	s may be requested by the
25. Signature (Electronic Submission)		e (Printed/Typed) R HARRELL / Ph: (713) 651-	7000	Date 04/21/2020
Title Regulatory Specialist					
Approved by (Signature) (Electronic Submission)		e (Printed/Typed) v Layton / Ph: (575)	234-5959		Date 09/25/2020
Title Assistant Field Manager Lands & Minerals	Offic Carls	e bad Field Office			
Application approval does not warrant or certify that the application applicant to conduct operations thereon. Conditions of approval, if any, are attached.	ant holds legal	or equitable title to the	iose rights	in the subject lease w	hich would entitle the
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, of the United States any false, fictitious or fraudulent statements	ts or representa	tions as to any matter			any department or agency
are not to be used until fresh water zones are cased and cemente diesel. This includes synthetic oils. Oil based mud, drilling fluid steel closed loop system. Il require a directional survey with the C-104 P Will require administrative order for non-standard spacing uni	ds and solids m		IONS	through whole or not	d, to prevent ground wate rtial conduits from the su- vithout interruption throug nall immediately set in cer
SL	WED W	TH COMPA		KP 11/9/2	2020 GEO Review
(Continued on page 2)				*(In	structions on page 2

Approval Date: 09/25/2020 Entered - KMS NMOCD

•

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., Azrec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 DISTRICT IV 1220 S. St. Francis Dr., Smalt F., NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

□ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

^A 30-015- 4	PI Number 7656			Pool Code 98220						
Property C	ode				Property Name			Well Number		
329793				ROS	SEMARY 10 FE	ED COM		733H	1	
OGRID N	lo.				Operator Name			Elevati	on	
7377				EO	G RESOURCE	S, INC.		311	8'	
		Surface Location								
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the North/South line Feet from the			East/West line	County	
L	10	26 S	30 E		2312	SOUTH	WEST	EDDY		
			Bott	om Hole l	Location If Diffe	erent From Surfac	e e			
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
М	15	26 S	30 E		230	WEST	EDDY			
Dedicated Acres	Joint or	Infill	Consolidated Code Order No.							
960.00										

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.

X = 682495' Y = 384852' UPPER MOST PERF. NEW MEXICO EAST NAD 1983 X = 683487' Y = 384529' LAT.= N 32.056319°	330' 348	X = 685164' Y = 384870' AZ = 288.21° 55.3'	X = 687833' Y = 384887'	NEW ME NAI X = 6 Y = 3 LAT.= N LONG.= W	E LOCATION XICO EAST D 1983 683540' 384511' 32.056271° / 103.874320° D 1927	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.
LONG.= W 103.874489° NAD 1927 X = 642301' Y = 384471' LAT. = N 32.056194° LONG. = W 103.874010° 9	AZ = 179.64°, 23	2320	10	Y = 3 LAT. = N	642354' 384454' I 32.056146° V 103.873841°	Star L Harrell 4/20/2020 Signature Date Star L Harrell Print Name
x = 682512' 16 Y = 382192'	SPACING UNIT	FED PERF. PC NEW MEXICO E		14 X = 687853' Y = 382230'		star_harrell@eogresources.com E-mail Address
330'	179.93°, 5087.1'	NAD 1983 X = 683505 Y = 379543 LAT.= N 32.042 LONG.= W 103.87 NAD 1927	612° 74499°	X = 687847' Y = 379570'		SURVEYORS CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.
LOWER MOST PERF. NEW MEXICO EAST NAD 1983 X = 683508' Y = 377213' LAT.= N 32.036207°	AZ = 1	X = 642319 Y = 379485 LAT. = N 32.042 LONG. = W 103.8	2487°	LO NEW M NA X = Y =	TOM HOLE DCATION IEXICO EAST AD 1983 = 683509' = 377113'	November 13, 2019 Date of Survey Signature and Soli of Parts Mail Saysor:
LONG.= W 103.874521° NAD 1927 X = 642322' Y = 377155' LAT. = N 32.036082° LONG. = W 103.874043° 990				LONG.= \ N/ X = Y = 11 LAT.= 1	N 32.035932° W 103.874522° AD 1927 = 642322' = 377055' N 32.035807° W 103.874044°	
x = 682519' 21 Y = 376876'	22 330' 230'	330' X = 685183' Y = 376894'	22	23 X = 687847' Y = 376911'	•	Job No.: EOG.B190007 CASEY WAYNE FAIRCLOTH, N.M.P.L.S.
				l		Certificate Number 21051

Intent X As Drille	ed		
API #			
30-015-			
Operator Name:		Property Name:	Well Number
EOG Resources, Inc	, •	Rosemary 10 Fed Com	733H

Kick Off Point (KOP)

UL L	Section 10	Township 26S	Range 30E	Lot	Feet 50	From N/S SOUTH	Feet 990	From E/W WEST	County EDDY
Latitude					Longitude	Longitude			NAD
N 32	N 32.0570893					W -103.8744865			83

First Take Point (FTP)

UL L	Section 10	Township 26S	Range 30E	Lot	Feet 2329	From N/S SOUTH	Feet 990	From E/W WEST	County EDDY
Latitude					Longitude	Longitude			NAD
N 32	N 32.056319					374489			83

Last Take Point (LTP)

UL Section	n Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
M 15	26S	30E		330	SOUTH	990	WEST	EDDY
Latitude N 32.036207				Longitud W -1(^{de})3.87452	21		NAD 83

Is this well the defining well for the Horizontal Spacing Unit? N_0

Is this well an infill well?

Yes

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
32-015-		
Operator Name:	Property Name:	Well Number
EOG Resources, Inc	Rosemary 10 Fed Com	708H

KZ 06/29/2018

Additional Operator Remarks

Location of Well

0. SHL: NWSW / 2312 FSL / 1042 FWL / TWSP: 26S / RANGE: 30E / SECTION: 10 / LAT: 32.056271 / LONG: -103.87432 (TVD: 0 feet, MD: 0 feet) PPP: NWSW / 330 FNL / 990 FWL / TWSP: 26S / RANGE: 30E / SECTION: 10 / LAT: 32.056319 / LONG: -103.874489 (TVD: 10995 feet, MD: 11117 feet) BHL: SWSW / 230 FSL / 990 FWL / TWSP: 26S / RANGE: 30E / SECTION: 15 / LAT: 32.035932 / LONG: -103.874522 (TVD: 11038 feet, MD: 18539 feet)

BLM Point of Contact

Name: Tanja Baca Title: Land Law Examiner Phone: (575) 234-5940 Email: tabaca@blm.gov

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	EOG RESOURCES, INC.
LEASE NO.:	NMNM100558
WELL NAME & NO.:	ROSEMARY 10 FED COM 702H - 735H
LOCATION:	Section 10, T.26 S., R.30 E., NMPM
COUNTY:	EDDY County, New Mexico

COA

H2S	O Yes	No	
Potash	None	O Secretary	© R-111-P
Cave/Karst Potential	O Low	Medium	O High
Variance	O None	Flex Hose	O Other
Wellhead	Conventional	Multibowl	O Both
Other	□4 String Area	Capitan Reef	WIPP
Other	Fluid Filled	Cement Squeeze	Pilot Hole
Special Requirements	□ Water Disposal	COM	🗆 Unit

A. Hydrogen Sulfide

 Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

Primary Casing Design

- 1. The **9-5/8** inch surface casing shall be set at approximately **990** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of $\underline{\mathbf{8}}$ hours or 500 pounds compressive strength, whichever is greater. (This is to

Page 1 of 9

include the lead cement)

- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage.

First Stage

• Operator will cement to **5,695** feet with intent to reach the top of Brushy Canyon.

Second Stage

• Operator will perform bradenhead squeeze. Cement to surface. If cement does not circulate see B.1.a, c-d above.

Operator has proposed to pump down 9-5/8" X 7-5/8" annulus. <u>Operator must run</u> <u>Echo-meter to verify fluid top and the volume of displacement fluid above the</u> <u>cement slurry in the annulus.</u>

- In <u>Medium/High Cave/Karst Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Alternate Casing Design

- 4. The **13-3/8** inch surface casing shall be set at approximately **990** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of $\underline{8}$

<u>hours</u> or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 5. The minimum required fill of cement behind the **9-5/8** inch first intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.
- 6. The minimum required fill of cement behind the **7-5/8** inch second intermediate casing is:

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage.

First Stage

• Operator will cement to **5,695** feet with intent to reach the top of Brushy Canyon.

Second Stage

- Operator will perform bradenhead squeeze. Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
- In <u>Medium/High Cave/Karst Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Operator has proposed to pump down 9-5/8" X 7-5/8" annulus. <u>Operator must run</u> Echo-meter to verify fluid top and the volume of displacement fluid above the cement slurry in the annulus.

- 7. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

- 1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
If the operator does not comply with this condition of approval, the BLM may take

enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.

• In addition, the well sign shall include the surface and bottom hole lease numbers. <u>When the Communitization Agreement number is known, it shall also be on the sign.</u>

JJP09102020

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)
 - Chaves and Roosevelt Counties
 Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
 During office hours call (575) 627-0272.
 After office hours call (575)

Eddy County

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

- Lea County
 Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612
- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

- 1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
- <u>Wait on cement (WOC) for Potash Areas:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least <u>24 hours</u>. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least <u>8 hours</u>. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a

larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
- 3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been

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done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

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C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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

GAS CAPTURE PLAN

Date: 4/07/2020

 \boxtimes Original

Operator & OGRID No.: EOG Resources, Inc. 7377

□ Amended - Reason for Amendment:_

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location	Footages	Expected	Flared or	Comments
		(ULSTR)		MCF/D	Vented	
Rosemary 10 Fed Com 702H	30-015- ****	I-10-26S-30E	2450' FSL & 674' FEL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 704H	30-015- ****	J-10-26S-30E	2460' FSL & 1744' FEL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 706H	30-015- ****	J-10-26S-30E	2460' FSL & 1810' FEL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 708H	30-015- ****	K-10-26S-30E	2420' FSL & 2227' FWL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 710H	30-015- ****	K-10-26S-30E	2377' FSL & 1522' FWL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 712H	30-015- ****	K-10-26S-30E	2311' FSL & 1522' FWL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 714H	30-015- ****	L-10-26S-30E	2345' FSL & 1042' FWL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 721H	30-015- ****	I-10-26S-30E	2450' FSL & 641' FEL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 723H	30-015- ****	I-10-26S-30E	2450' FSL & 707' FEL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 725H	30-015- ****	J-10-26S-30E	2460' FSL & 1777' FEL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 727H	30-015- ****	K-10-26S-30E	2420' FSL & 2260' FWL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 729H	30-015- ****	K-10-26S-30E	2420' FSL & 2194' FWL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 731H	30-015- ****	K-10-26S-30E	2344' FSL & 1522' FWL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 733H	30-015- ****	L-10-26S-30E	2312' FSL & 1042' FWL	±3500	None Planned	APD Submission
Rosemary 10 Fed Com 735H	30-015- ****	L-10-26S-30E	2378' FSL & 1042' FWL	±3500	None Planned	APD Submission

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to <u>Enlink Midstream. Enterprise & Markwest Energy</u> and will be connected to <u>EOG Resources</u> low/high pressure gathering system located in Eddy County, New Mexico. EOG Resources provides (periodically) to <u>Enlink Midstream, Enterprise & Markwest Energy</u> a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, EOG Resources and <u>Enlink Midstream, Enterprise & Markwest Energy</u> have periodic conference calls to discuss changes to drilling and

completion schedules. Gas from these wells will be processed at <u>Enlink Midstream, Enterprise & Markwest Energy</u> Processing Plant located in Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on **Enlink Midstream, Enterprise & Markwest Energy** system at that time. Based on current information, it is **EOG Resources's** belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal On lease
 - o Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

1. GEOLOGIC NAME OF SURFACE FORMATION: Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	757'
Tamarisk Anhydrite	833'
Top of Salt	1,142'
Base of Salt	3,380'
Lamar	3,512'
Bell Canyon	3,541'
Cherry Canyon	4,303'
Brushy Canyon	5,580'
Bone Spring Lime	7,381'
Leonard	7,474'
1 st Bone Spring Sand	8,322'
2 nd Bone Spring Shale	8,603'
2 nd Bone Spring Sand	8,968'
3 rd Bone Spring Carb	9,580'
3 rd Bone Spring Sand	10,249'
Wolfcamp	10,642'
TD	11,038'

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Upper Permian Sands	0-400'	Fresh Water
Cherry Canyon	4,303'	Oil
Brushy Canyon	5,580'	Oil
1 st Bone Spring Sand	8,322'	Oil
2 nd Bone Spring Shale	8,603'	Oil
2 nd Bone Spring Sand	8,968'	Oil
3 rd Bone Spring Carb	9,580'	Oil
3 rd Bone Spring Sand	10,249'	Oil
Wolfcamp	10,642'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 9.625" casing at 990' and circulating cement back to surface.

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
12.25"	0'-990'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
8.75"	0'-9,810'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0'-9,310'	5.5"	20#	P-110EC	DWC/C-IS	1.125	1.25	1.60
					MS			
6.75"	9,310'-9,810'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60
6.75"	9,810' – 18,539'	5.5"	20#	P-110EC	DWC/C-IS	1.125	1.25	1.60
					MS			

4. CASING PROGRAM - NEW

Variance is requested to waive the centralizer requirements for the 7-5/8" FJ 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" FJ 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 curve and lateral portions of the production open hole section.

EOG Resources also requests approval to implement Casing Design B (pg. 8-9). BLM will be notified of elected design at spud.

	No.	Wt.	Yld	
Depth	Sacks	ppg	Ft ³ /sk	Slurry Description
990'	850	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl ₂ + 0.25
9-5/8"				lb/sk Cello-Flake (TOC @ Surface)
	100	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2%
				Sodium Metasilicate (TOC @ 790')
9,810'	520	14.2	1.11	1 st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 +
7-5/8"				3% Microbond (TOC @ 5,550')
	1,000	12.7	2.30	2 nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1%
				PreMag-M + 6% Bentonite Gel (TOC @ surface)
18,539'	780	14.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3%
5-1/2"				Microbond (TOC @ 9,310')

<u>Cementing Program</u>:

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 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 (5,580") and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 1,000 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. The final cement 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.

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

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (5,000-psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top.

Variance is requested to use a 5,000 psi annular BOP with the 10,000 psi BOP stack.

Pipe rams and blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.

The applicable depths and properties of the drilling fluid systems are as follows.

Depth	Туре	Weight (ppg)	Viscosity	Water Loss
0-990'	Fresh - Gel	8.6-8.8	28-34	N/c
990' - 9,810'	Brine	10.0-10.2	28-34	N/c
9,810' – 10,571'	Oil Base	8.7-9.4	58-68	N/c - 6
10,571' – 18,539'	Oil Base	10.0-14.0	58-68	3 - 6
Lateral				

The highest mud weight needed to balance formation is expected to be 11.5 ppg. In order to maintain hole stability, mud weights up to 14.0 ppg may be utilized.

An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

- (A) A kelly cock will be kept in the drill string at all times.
- (B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- (C) H₂S monitoring and detection equipment will be utilized from surface casing point to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well.

GR–CCL Will be run in cased hole during completions phase of operations.

9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:

The estimated bottom-hole temperature (BHT) at TD is 181 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 8,028 psig and a maximum anticipated surface pressure of 5,598 psig (based on 14.0 ppg MW). No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. Severe loss circulation is expected from 7,300' to Intermediate casing point.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

The drilling operation should be finished in approximately one month. If the well is productive, an additional 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

(A) EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and cement on the subject well. After WOC 8 hours or 500 psi compressive strength (whichever is greater), the Surface Rig will move off so the wellhead can be installed. A welder will cut the casing to the proper height and weld on the wellhead (both "A" and "B" sections). The weld will be tested to 1000 psi. All valves will be closed and a wellhead cap will be installed (diagram attached). If the timing between rigs is such that EOG Resources would not be able to preset the surface, the Primary Rig will MIRU and drill the well in its entirety per the APD.

11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 9-5/8" surface casing, a 9-5/8" BOP/BOPE system with a minimum working pressure of 10,000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 10,000 psi pressure test. This pressure test will be repeated at least every 30 days, as per Onshore Order No. 2

The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 10,000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Cactus Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

The wellhead will be installed by a third party welder while being monitored by WH vendor's representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

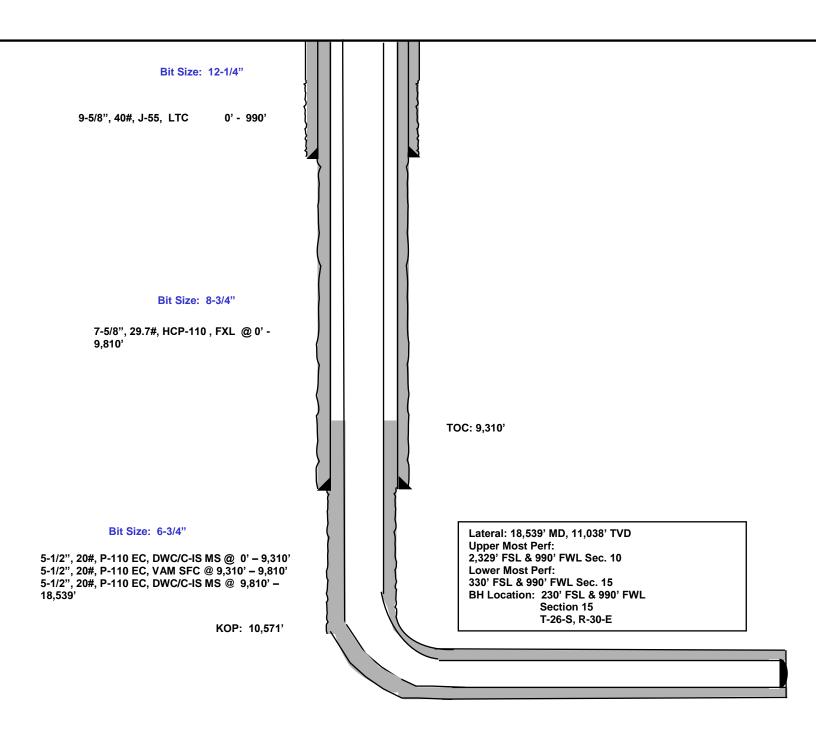
A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

Casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

2,312' FSL 1,042' FWL Section 10 T-26-S, R-30-E

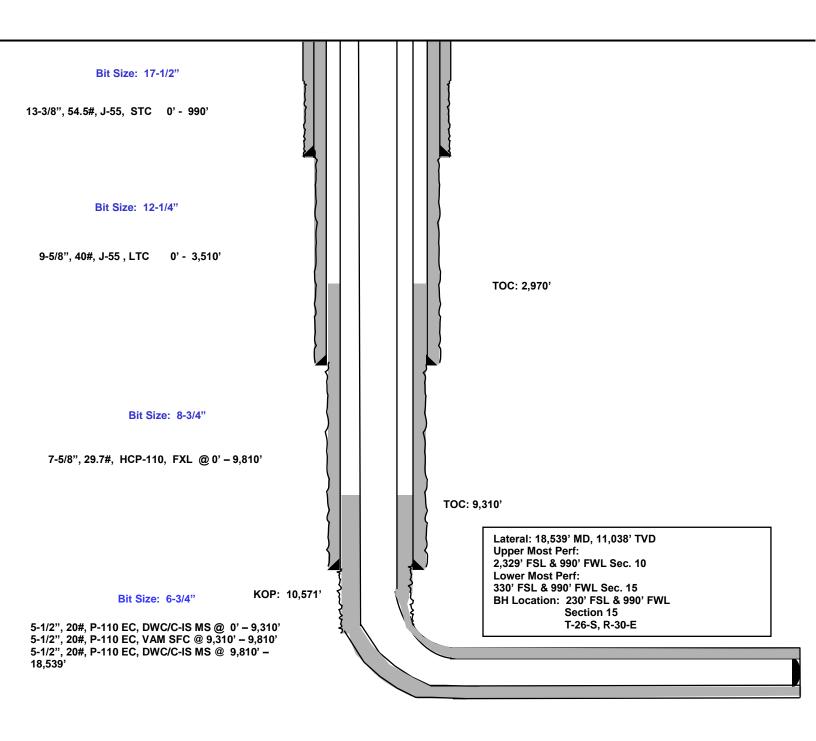
Proposed Wellbore Design A KB: 3,143' GL: 3,118'

API: 30-025-****



2,312' FSL 1,042' FWL Section 10 T-26-S, R-30-E Proposed Wellbore Design B KB: 3,143' GL: 3,118'

API: 30-025-*****



<u>Design B</u>

Casing Program:

Hole		Csg				DF _{min}	DF _{min}	\mathbf{DF}_{\min}
Size	Interval	OD	Weight	Grade	Conn	Collapse	Burst	Tension
17.5"	0-990'	13.375"	54.5#	J-55	STC	1.125	1.25	1.60
12.25"	0-3,510'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
8.75"	0-9,810'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0' - 9,310'	5.5"	20#	P-110EC	DWC/C-IS	1.125	1.25	1.60
					MS			
6.75"	9,310'-9,810'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60
6.75"	9,810' – 18,539'	5.5"	20#	P-110EC	DWC/C-IS	1.125	1.25	1.60
					MS			

Cement Program:

	No.	Wt.	Yld	
Depth	Sacks	lb/gal	Ft ³ /sk	Slurry Description
990'	580	13.5	1.74	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl ₂ + 0.25 lb/sk
13-3/8"				Cello-Flake (TOC @ Surface)
	180	14.8	1.35	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2%
				Sodium Metasilicate (TOC @ 790')
3,510'	620	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx
9-5/8"				(TOC @ Surface)
	280	14.8	1.32	Tail: Class C + 10% NaCl + 3% MagOx (TOC @ 2,776')
9,810'	240	10.8	3.67	Lead: Class C + 3% CaCl2 + 3% Microbond (TOC @ 2,970')
7-5/8"				
	100	14.8	2.38	Tail: Class H + 0.6% Halad-9 + 0.45% HR-601 + 3%
				Microbond (TOC @ 8,310')
18,539'	780	14.8	1.31	Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond
5-1/2"				(TOC @ 9,310')

As a contingency, EOG requests 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 (5,580") and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 1,000 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed.

Mud Program:

Depth	Туре	Weight (ppg)	Viscosity	Water Loss
0 – 990'	Fresh - Gel	8.6-8.8	28-34	N/c
990' - 3,510'	Brine	10.0-10.2	28-34	N/c
3,510'-9,810'	Oil Base	8.7-9.4	58-68	N/c - 6
9,810'-18,539'	Oil Base	10.0-14.0	58-68	3 - 6
Lateral				

EOG Resources - Midland

Eddy County, NM (NAD 83 NME) Rosemary 10 Fed Com #733H

ОН

Plan: Plan #0.1

Standard Planning Report

19 March, 2020

Project	Eddy Co	ounty, NM (NA	D 83 NME	.)						
Map System: Geo Datum: Map Zone:	North Am	Plane 1983 ierican Datum ico Eastern Zo			System Dati	ım:	Me	an Sea Level		
Site	Rosema	ary 10 Fed Cor	m							
Site Position: From: Position Uncertainty	Map :		Ea	orthing: asting: ot Radius:		678.00 usft 090.00 usft 13-3/16 "	Latitude: Longitude: Grid Converge	ence:		32° 3' 24.115 103° 51' 57.911 0.25
Well	#733H									
Well Position Position Uncertainty	+N/-S +E/-W	-2,550	7.0 usft 9.0 usft 9.0 usft	Northing: Easting: Wellhead Eleva	ation:	384,511.00 683,540.00	usft Lon	tude: gitude: und Level:		32° 3' 22.570 103° 52' 27.550 3,118.0 us
Wellberg	ОН									
Wellbore	ОП									
Magnetics	Мо	del Name	Sa	mple Date	Declinat (°)	ion	Dip A (°			Strength (nT)
		IGRF2015		3/19/2020		6.78		59.83	47,	526.50119572
Design	Plan #0	.1								
Audit Notes:										
Version:			Р	hase:	PLAN	Tie	On Depth:		0.0	
Vertical Section:		D	Depth From (TVD) (usft)		+N/-S +E/-W (usft) (usft)			Direction (°)		
			0.0		0.0	0	.0	18	30.24	
Plan Survey Tool Pro Depth From		Date	3/19/202	0						
(usft)	Depth (usf		(Wellbore)	Tool Name		Remarks			
•	(usf		-)	Tool Name EOG MWD+IFI MWD + IFR1	R1	Remarks			
(usft) 1 0.0	(usf	ft) Survey	-)	EOG MWD+IF	R1	Remarks			
(usft) 1 0.0 Plan Sections Measured Depth Incli	(usf	ft) Survey	-) +N/-S (usft)	EOG MWD+IFI MWD + IFR1 +E/-W	R1 Dogleg Rate (°/100usft)	Remarks Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
(usft) 1 0.0 Plan Sections Measured Depth Incli (usft) 0.0	(usf 18,5 nation (°) 0.00	Survey i39.3 Plan #0 Azimuth (°) 0.00	Vertical Depth (usft)	+N/-S (usft)	EOG MWD+IFI MWD + IFR1 +E/-W (usft) 0.0	Dogleg Rate (°/100usft) 0.00	Build Rate (°/100usft) 0.00	Rate (°/100usft) 0.00	(°) 0.00	-
(usft) 1 0.0 Plan Sections Measured Depth Incli (usft) 0.0 1,000.0	(usf 18,5 nation (°) 0.00 0.00	Survey i39.3 Plan #0 Azimuth (°) 0.00 0.00	Vertical Depth (usft)	+N/-S (usft) 0.0 0.0 0.0 0.0	EOG MWD+IF1 MWD + IFR1 +E/-W (usft) 0.0 0.0	Dogleg Rate (°/100usft) 0.00 0.00	Build Rate (°/100usft) 0.00 0.00	Rate (°/100usft) 0.00 0.00	(°) 0.00 0.00	
(usft) 1 0.0 Plan Sections Measured Depth Incli (usft) 0.0 1,000.0 1,197.5	(usf 18,5 nation (°) 0.00 0.00 3.95	Survey i39.3 Plan #0 Azimuth (°) 0.00 0.00 349.92	Vertical Depth (usft) (1,000 1,197	+N/-S (usft) 0.0 0.0 0.0 0.0 7.4 6.7	EOG MWD+IFR1 MWD + IFR1 +E/-W (usft) 0.0 0.0 -1.2	Dogleg Rate (°/100usft) 0.00 0.00 2.00	Build Rate (°/100usft) 0.00 0.00 2.00	Rate (°/100usft) 0.00 0.00	(°) 0.00 0.00 349.92	
(usft) 1 0.0 Plan Sections Measured Depth (usft) 0.0 1,000.0 1,197.5 5,392.7	(usf 18,5 nation (°) 0.00 0.00 3.95 3.95	Survey i39.3 Plan #0 Azimuth (°) 0.00 0.00 349.92 349.92 349.92	Vertical Depth (usft) (1,000 1,197 5,382	+N/-S (usft) 0.0 0.0 0.0 0.0 7.4 6.7 2.6 291.3	EOG MWD+IFR1 MWD + IFR1 +E/-W (usft) 0.0 0.0 -1.2 -51.8	Dogleg Rate (°/100usft) 0.00 0.00 2.00 0.00	Build Rate (°/100usft) 0.00 0.00 2.00 0.00	Rate (°/100usft) 0.00 0.00 0.00 0.00	(°) 0.00 0.00 349.92 0.00	
(usft) 1 0.0 Plan Sections Measured Depth (usft) 0.0 1,000.0 1,197.5 5,392.7 5,590.3	(usf 18,5 (°) 0.00 0.00 3.95 3.95 0.00	Survey i39.3 Plan #0 Azimuth (°) 0.00 0.00 349.92 349.92 0.00	Vertical Depth (usft) (1,000 1,197 5,382 5,580	+N/-S (usft) 0.0 0.0 0.0 0.0 7.4 6.7 2.6 291.3 0.0 298.0	EOG MWD+IFR1 MWD + IFR1 +E/-W (usft) 0.0 0.0 -1.2 -51.8 -53.0	Dogleg Rate (°/100usft) 0.00 0.00 2.00 0.00 2.00	Build Rate (°/100usft) 0.00 0.00 2.00 0.00 0.00 -2.00	Rate (°/100usft) 0.00 0.00 0.00 0.00 0.00	(°) 0.00 349.92 0.00 180.00	
(usft) 1 0.0 Plan Sections Measured Depth Incli (usft) 0.0 1,000.0 1,197.5 5,392.7	(usf 18,5 nation (°) 0.00 0.00 3.95 3.95	Survey i39.3 Plan #0 Azimuth (°) 0.00 0.00 349.92 349.92 349.92	Vertical Depth (usft) (1,000 1,197 5,382	+N/-S (usft) 0.0 0.0 0.0 0.0 7.4 6.7 2.6 291.3 0.0 298.0 0.5 298.0	EOG MWD+IF1 MWD + IFR1 +E/-W (usft) 0.0 0.0 -1.2 -51.8 -53.0 -53.0	Dogleg Rate (°/100usft) 0.00 0.00 2.00 0.00	Build Rate (°/100usft) 0.00 0.00 2.00 0.00	Rate (°/100usft) 0.00 0.00 0.00 0.00	(°) 0.00 349.92 0.00 180.00 0.00	

11,320.8

16,109.3

18,539.3

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11,037.9

11,038.0

11,038.0

-179.4

-4,968.0

-7,398.0

-52.6

-35.0

-31.0

12.00

0.00

0.01

12.00

0.00

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-0.10

0.00

0.01

-0.51

0.00 FED PP(RM 10 FC #

89.65 PBHL(RM 10 FC #73

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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	2.00	349.92	1,100.0	1.7	-0.3	-1.7	2.00	2.00	0.00
1,197.5	3.95	349.92	1,197.4	6.7	-1.2	-6.7	2.00	2.00	0.00
1,200.0	3.95	349.92	1,199.8	6.9	-1.2	-6.9	0.00	0.00	0.00
1,300.0	3.95	349.92	1,299.6	13.7	-2.4	-13.6	0.00	0.00	0.00
1,400.0	3.95	349.92	1,399.4	20.4	-3.6	-20.4	0.00	0.00	0.00
1,500.0	3.95	349.92	1,499.1	27.2	-4.8	-27.2	0.00	0.00	0.00
1,600.0	3.95	349.92	1,598.9	34.0	-6.0	-34.0	0.00	0.00	0.00
1,700.0	3.95	349.92	1,698.6	40.8	-7.3	-40.8	0.00	0.00	0.00
1,800.0	3.95	349.92	1,798.4	47.6	-8.5	-47.5	0.00	0.00	0.00
1,900.0	3.95	349.92	1,898.2	54.4	-9.7	-54.3	0.00	0.00	0.00
2,000.0	3.95	349.92	1,997.9	61.1	-10.9	-61.1	0.00	0.00	0.00
2,100.0	3.95	349.92	2,097.7	67.9	-12.1	-67.9	0.00	0.00	0.00
2,200.0	3.95	349.92	2,197.5	74.7	-13.3	-74.7	0.00	0.00	0.00
2,300.0	3.95	349.92	2,297.2	81.5	-14.5	-81.4	0.00	0.00	0.00
2,400.0	3.95	349.92	2,397.0	88.3	-15.7	-88.2	0.00	0.00	0.00
2,500.0	3.95	349.92	2,496.7	95.1	-16.9	-95.0	0.00	0.00	0.00
2,600.0	3.95	349.92	2,596.5	101.8	-18.1	-101.8	0.00	0.00	0.00
2,700.0	3.95	349.92	2,696.3	108.6	-19.3	-108.5	0.00	0.00	0.00
2,800.0	3.95	349.92	2,796.0	115.4	-20.5	-115.3	0.00	0.00	0.00
2,900.0	3.95	349.92	2,895.8	122.2	-21.7	-122.1	0.00	0.00	0.00
3,000.0	3.95	349.92	2,995.6	129.0	-22.9	-128.9	0.00	0.00	0.00
3,100.0	3.95	349.92	3,095.3	135.8	-24.1	-135.7	0.00	0.00	0.00
3,200.0	3.95	349.92	3,195.1	142.5	-25.4	-142.4	0.00	0.00	0.00
3,300.0	3.95	349.92	3,294.8	149.3	-26.6	-149.2	0.00	0.00	0.00
3,400.0	3.95	349.92	3,394.6	156.1	-27.8	-156.0	0.00	0.00	0.00
3,500.0	3.95	349.92	3,494.4	162.9	-29.0	-162.8	0.00	0.00	0.00
3,600.0	3.95	349.92	3,594.1	169.7	-30.2	-169.6	0.00	0.00	0.00
3,700.0	3.95	349.92	3,693.9	176.5	-31.4	-176.3	0.00	0.00	0.00
3,800.0	3.95	349.92	3,793.7	183.2	-32.6	-183.1	0.00	0.00	0.00
3,900.0	3.95	349.92	3,893.4	190.0	-33.8	-189.9	0.00	0.00	0.00
4,000.0	3.95	349.92	3,993.2	196.8	-35.0	-196.7	0.00	0.00	0.00
4,100.0	3.95	349.92	4,092.9	203.6	-36.2	-203.4	0.00	0.00	0.00
4,200.0	3.95	349.92	4,192.7	210.4	-37.4	-210.2	0.00	0.00	0.00
4,300.0	3.95	349.92	4,292.5	217.2	-38.6	-217.0	0.00	0.00	0.00
4,400.0	3.95	349.92	4,392.2	224.0	-39.8	-223.8	0.00	0.00	0.00
4,500.0	3.95	349.92	4,492.0	230.7	-41.0	-230.6	0.00	0.00	0.00
4,600.0	3.95	349.92	4,591.8	237.5	-42.2	-237.3	0.00	0.00	0.00
4,700.0	3.95	349.92	4,691.5	244.3	-43.4	-244.1	0.00	0.00	0.00
4,800.0	3.95	349.92	4,791.3	251.1	-44.7	-250.9	0.00	0.00	0.00
4,900.0	3.95	349.92	4,891.0	257.9	-45.9	-257.7	0.00	0.00	0.00
5,000.0	3.95	349.92	4,990.8	264.7	-47.1	-264.5	0.00	0.00	0.00
5,100.0	3.95	349.92	5,090.6	271.4	-48.3	-271.2	0.00	0.00	0.00
5,200.0	3.95	349.92	5,190.3	278.2	-49.5	-278.0	0.00	0.00	0.00
5,300.0	3.95	349.92	5,290.1	285.0	-50.7	-284.8	0.00	0.00	0.00
5,392.7	3.95	349.92	5,382.6	291.3	-51.8	-291.1	0.00	0.00	0.00
5,400.0	3.81	349.92	5,389.9	291.8	-51.9	-291.6	2.00	-2.00	0.00
5,500.0	1.81	349.92	5,489.7	296.6	-52.8	-296.4	2.00	-2.00	0.00
5,590.3	0.00	0.00	5,580.0	298.0	-53.0	-297.8	2.00	-2.00	0.00
5,600.0	0.00	0.00	5,589.7	298.0	-53.0	-297.8	0.00	0.00	0.00
5,700.0	0.00	0.00	5,689.7	298.0	-53.0	-297.8	0.00	0.00	0.00
5,800.0	0.00	0.00	5,789.7	298.0	-53.0	-297.8	0.00	0.00	0.00
5,900.0	0.00	0.00	5,889.7	298.0	-53.0	-297.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,989.7	298.0	-53.0	-297.8	0.00	0.00	0.00
6,100.0	0.00	0.00	6,089.7	298.0	-53.0	-297.8	0.00	0.00	0.00
6,200.0	0.00	0.00	6,189.7	298.0	-53.0	-297.8	0.00	0.00	0.00

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)
6,300.0 6,400.0 6,500.0 6,600.0	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	6,289.7 6,389.7 6,489.7 6,589.7	298.0 298.0 298.0 298.0	-53.0 -53.0 -53.0 -53.0	-297.8 -297.8 -297.8 -297.8	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
6,700.0 6,800.0 6,900.0 7,000.0 7,100.0	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	6,689.7 6,789.7 6,889.7 6,989.7 7,089.7	298.0 298.0 298.0 298.0 298.0 298.0	-53.0 -53.0 -53.0 -53.0 -53.0	-297.8 -297.8 -297.8 -297.8 -297.8	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
7,100.0 7,200.0 7,300.0 7,400.0 7,500.0	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	7,189.7 7,289.7 7,389.7 7,489.7	298.0 298.0 298.0 298.0 298.0	-53.0 -53.0 -53.0 -53.0 -53.0	-297.8 -297.8 -297.8 -297.8 -297.8	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
7,600.0 7,700.0 7,800.0 7,900.0	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	7,589.7 7,689.7 7,789.7 7,889.7	298.0 298.0 298.0 298.0	-53.0 -53.0 -53.0 -53.0	-297.8 -297.8 -297.8 -297.8	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
8,000.0 8,100.0 8,200.0 8,300.0	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	7,989.7 8,089.7 8,189.7 8,289.7	298.0 298.0 298.0 298.0	-53.0 -53.0 -53.0 -53.0	-297.8 -297.8 -297.8 -297.8	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
8,400.0 8,500.0 8,600.0 8,700.0	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	8,389.7 8,489.7 8,589.7 8,689.7	298.0 298.0 298.0 298.0	-53.0 -53.0 -53.0	-297.8 -297.8 -297.8 -297.8	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
8,800.0 8,900.0 9,000.0 9,100.0	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	8,789.7 8,889.7 8,989.7 9,089.7	298.0 298.0 298.0 298.0	-53.0 -53.0 -53.0 -53.0	-297.8 -297.8 -297.8 -297.8	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
9,200.0 9,300.0 9,400.0 9,500.0 9,600.0	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	9,189.7 9,289.7 9,389.7 9,489.7 9,589.7	298.0 298.0 298.0 298.0 298.0	-53.0 -53.0 -53.0 -53.0 -53.0	-297.8 -297.8 -297.8 -297.8 -297.8	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
9,700.0 9,800.0 9,900.0 10,000.0 10,100.0	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	9,689.7 9,789.7 9,889.7 9,989.7 10,089.7	298.0 298.0 298.0 298.0 298.0 298.0	-53.0 -53.0 -53.0 -53.0 -53.0	-297.8 -297.8 -297.8 -297.8 -297.8	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
10,200.0 10,300.0 10,400.0 10,500.0 10,570.8	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	10,189.7 10,289.7 10,389.7 10,489.7 10,560.5	298.0 298.0 298.0 298.0 298.0 298.0	-53.0 -53.0 -53.0 -53.0 -53.0	-297.8 -297.8 -297.8 -297.8 -297.8	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
KOP(RM 10		0.00	10,00010	20010	00.0	20110	0.00	0.00	0.00
10,575.0 10,600.0 10,625.0 10,650.0 10,675.0	0.51 3.51 6.51 9.51 12.51	180.00 180.00 180.00 180.00 180.00	10,564.7 10,589.7 10,614.6 10,639.4 10,663.9	298.0 297.1 294.9 291.4 286.7	-53.0 -53.0 -53.0 -53.0 -53.0	-297.8 -296.9 -294.7 -291.2 -286.4	12.00 12.00 12.00 12.00 12.00	12.00 12.00 12.00 12.00 12.00	0.00 0.00 0.00 0.00 0.00 0.00
10,700.0 10,725.0 10,750.0 10,775.0 10,800.0	15.51 18.51 21.51 24.51 27.51	180.00 180.00 180.00 180.00 180.00	10,688.1 10,712.0 10,735.5 10,758.5 10,781.0	280.6 273.3 264.8 255.0 244.0	-53.0 -53.0 -53.0 -53.0 -53.0	-280.4 -273.1 -264.5 -254.8 -243.8	12.00 12.00 12.00 12.00 12.00	12.00 12.00 12.00 12.00 12.00	0.00 0.00 0.00 0.00 0.00 0.00
10,825.0 10,850.0 10,875.0 10,900.0 10,925.0	30.51 33.51 36.51 39.51 42.51	180.00 180.00 180.00 180.00 180.00	10,802.9 10,824.1 10,844.5 10,864.2 10,883.1	231.9 218.7 204.3 188.9 172.5	-53.0 -53.0 -53.0 -53.0 -53.0	-231.7 -218.4 -204.1 -188.7 -172.3	12.00 12.00 12.00 12.00 12.00	12.00 12.00 12.00 12.00 12.00	0.00 0.00 0.00 0.00 0.00 0.00
10,950.0 10,975.0 11,000.0 11,025.0	45.51 48.51 51.51 54.51	180.00 180.00 180.00 180.00	10,901.1 10,918.1 10,934.2 10,949.2	155.2 136.9 117.7 97.7	-53.0 -53.0 -53.0 -53.0	-154.9 -136.6 -117.5 -97.5	12.00 12.00 12.00 12.00	12.00 12.00 12.00 12.00	0.00 0.00 0.00 0.00
11,050.0 11,075.0	57.51 60.51	180.00 180.00	10,963.2 10,976.1	77.0 55.6	-53.0 -53.0	-76.8 -55.4	12.00 12.00	12.00 12.00	0.00 0.00

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Planne	d Survey									
				N. C. J			Martin			-
	Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
	(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
	11,100.0	63.51	180.00	10,987.8	33.5	-53.0	-33.3	12.00	12.00	0.00
	11,100.0	65.57	180.00	10,997.8	33.5 18.0	-53.0	-33.3 -17.8	12.00	12.00	0.00
	FTP(RM 10									
	11,125.0	66.51	179.99	10,998.4	10.9	-53.0	-10.6	12.00	12.00	-0.12
	11,150.0	69.51	179.96	11,007.7	-12.3	-53.0	12.5	12.00	12.00	-0.11
	11,175.0	72.51	179.94	11,015.9	-36.0	-53.0	36.2	12.00	12.00	-0.11
	11,200.0	75.51	179.91	11,022.8	-60.0	-52.9	60.2	12.00	12.00	-0.11
	11,225.0	78.51	179.88	11,028.4	-84.3	-52.9	84.6	12.00	12.00	-0.10
	11,250.0 11,275.0	81.51 84.51	179.86 179.83	11,032.7 11,035.7	-109.0 -133.8	-52.8 -52.8	109.2 134.0	12.00 12.00	12.00 12.00	-0.10 -0.10
	11,300.0	87.51	179.81	11,037.5 11,037.9	-158.7 -179.4	-52.7 -52.6	158.9	12.00	12.00 12.00	-0.10
	11,320.8 11,400.0	90.00 90.00	179.79 179.79	11,037.9	-179.4 -258.7	-52.6 -52.3	179.7 258.9	12.00 0.00	0.00	-0.10 0.00
	11,500.0	90.00	179.79	11,037.9	-358.7	-52.0	358.9	0.00	0.00	0.00
	11,600.0	90.00	179.79	11,037.9	-458.7	-51.6	458.9	0.00	0.00	0.00
	11,700.0	90.00	179.79	11,037.9	-558.7	-51.2	558.9	0.00	0.00	0.00
	11,800.0	90.00	179.79	11,037.9	-658.7	-50.9	658.9	0.00	0.00	0.00
	11,900.0	90.00	179.79	11,037.9	-758.7	-50.5	758.9	0.00	0.00	0.00
	12,000.0	90.00	179.79	11,037.9	-858.7	-50.1	858.9	0.00	0.00	0.00
	12,100.0	90.00	179.79	11,037.9	-958.7	-49.8	958.9	0.00	0.00	0.00
	12,200.0	90.00	179.79	11,038.0	-1,058.7	-49.4	1,058.9	0.00	0.00	0.00
	12,300.0	90.00	179.79	11,038.0	-1,158.7	-49.0	1,158.9	0.00	0.00	0.00
	12,400.0	90.00	179.79	11,038.0	-1,258.7	-48.6	1,258.9	0.00	0.00	0.00
	12,500.0 12,600.0	90.00 90.00	179.79 179.79	11,038.0 11,038.0	-1,358.7 -1,458.7	-48.3 -47.9	1,358.9 1,458.9	0.00 0.00	0.00 0.00	0.00 0.00
	12,700.0	90.00	179.79	11,038.0	-1,558.7	-47.5	1,558.9	0.00	0.00	0.00
	12,800.0 12,900.0	90.00 90.00	179.79 179.79	11,038.0 11,038.0	-1,658.7 -1,758.7	-47.2 -46.8	1,658.9 1,758.9	0.00 0.00	0.00 0.00	0.00 0.00
	13,000.0	90.00	179.79	11,038.0	-1,858.7	-46.4	1,858.9	0.00	0.00	0.00
	13,100.0	90.00	179.79	11,038.0	-1,958.7	-46.1	1,958.9	0.00	0.00	0.00
	13,200.0	90.00	179.79	11,038.0	-2,058.7	-45.7	2,058.9	0.00	0.00	0.00
	13,300.0	90.00	179.79	11,038.0	-2,158.7	-45.3	2,158.9	0.00	0.00	0.00
	13,400.0	90.00	179.79	11,038.0	-2,258.7	-45.0	2,258.9	0.00	0.00	0.00
	13,500.0	90.00	179.79	11,038.0	-2,358.7	-44.6	2,358.8	0.00	0.00	0.00
	13,600.0	90.00	179.79	11,038.0	-2,458.7	-44.2	2,458.8	0.00	0.00	0.00
	13,700.0	90.00	179.79	11,038.0	-2,558.7	-43.9	2,558.8	0.00	0.00	0.00
	13,800.0	90.00	179.79	11,038.0	-2,658.7	-43.5	2,658.8	0.00	0.00	0.00
	13,900.0	90.00	179.79	11,038.0	-2,758.7 -2.858.7	-43.1	2,758.8	0.00	0.00	0.00
	14,000.0 14,100.0	90.00 90.00	179.79 179.79	11,038.0 11,038.0	-2,050.7 -2,958.7	-42.8 -42.4	2,858.8 2,958.8	0.00 0.00	0.00 0.00	0.00 0.00
	14,200.0 14,300.0	90.00 90.00	179.79 179.79	11,038.0 11,038.0	-3,058.7 -3,158.7	-42.0 -41.7	3,058.8 3,158.8	0.00 0.00	0.00 0.00	0.00 0.00
	14,300.0	90.00	179.79	11,038.0	-3,258.7	-41.7	3,258.8	0.00	0.00	0.00
	14,500.0	90.00	179.79	11,038.0	-3,358.7	-40.9	3,358.8	0.00	0.00	0.00
	14,600.0	90.00	179.79	11,038.0	-3,458.7	-40.6	3,458.8	0.00	0.00	0.00
	14,700.0	90.00	179.79	11,038.0	-3,558.7	-40.2	3,558.8	0.00	0.00	0.00
	14,800.0	90.00	179.79	11,038.0	-3,658.7	-39.8	3,658.8	0.00	0.00	0.00
	14,900.0	90.00	179.79	11,038.0	-3,758.7	-39.4	3,758.8	0.00	0.00	0.00
	15,000.0	90.00	179.79	11,038.0	-3,858.7	-39.1	3,858.8	0.00	0.00	0.00
	15,100.0	90.00	179.79	11,038.0	-3,958.7	-38.7	3,958.8	0.00	0.00	0.00
	15,200.0	90.00	179.79	11,038.0	-4,058.7	-38.3	4,058.8	0.00	0.00	0.00
	15,300.0	90.00	179.79	11,038.0	-4,158.7	-38.0	4,158.8	0.00	0.00	0.00
	15,400.0 15,500.0	90.00 90.00	179.79 179.79	11,038.0 11,038.0	-4,258.7 -4,358.7	-37.6 -37.2	4,258.8 4,358.8	0.00 0.00	0.00 0.00	0.00 0.00
	15,600.0	90.00	179.79	11,038.0	-4,458.7	-36.9	4,358.8	0.00	0.00	0.00
	15,700.0	90.00	179.79	11,038.0	-4,558.7	-36.5	4,558.8	0.00	0.00	0.00
	15,700.0	90.00	179.79	11,038.0	-4,556.7 -4,658.7	-36.5	4,558.8	0.00	0.00	0.00
	15,900.0	90.00	179.79	11,038.0	-4,758.7	-35.8	4,758.8	0.00	0.00	0.00
	16,000.0	90.00	179.79	11,038.0	-4,858.7	-35.4	4,858.8	0.00	0.00	0.00
	16,109.3	90.00	179.79	11,038.0	-4,968.0	-35.0	4,968.1	0.00	0.00	0.00
	FED PP(RM	10 FC #733H)								
	16,200.0	90.00	179.80	11,038.0	-5,058.7	-34.7	5,058.8	0.01	0.00	0.01
	16,300.0	90.00	179.81	11,038.0	-5,158.7	-34.3	5,158.8	0.01	0.00	0.01
	16,400.0	90.00	179.82	11,038.0	-5,258.7	-34.0	5,258.8	0.01	0.00	0.01
	16,500.0 16,600.0	90.00 90.00	179.83 179.84	11,038.0 11,038.0	-5,358.7 -5,458.7	-33.7 -33.4	5,358.8 5,458.8	0.01 0.01	0.00 0.00	0.01 0.01
	10,000.0	30.00	173.04	11,000.0	-0,-00.7	-55.4	0,400.0	0.01	0.00	0.01

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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)
16,700.0	90.00	179.85	11,038.0	-5,558.7	-33.1	5,558.8	0.01	0.00	0.01
16,800.0	90.00	179.86	11,038.0	-5,658.7	-32.9	5,658.7	0.01	0.00	0.01
16,900.0	90.00	179.86	11,038.0	-5,758.7	-32.6	5,758.7	0.01	0.00	0.01
17,000.0	90.00	179.87	11,038.0	-5,858.7	-32.4	5,858.7	0.01	0.00	0.01
17,100.0	90.00	179.88	11,038.0	-5,958.7	-32.2	5,958.7	0.01	0.00	0.01
17,200.0	90.00	179.89	11,038.0	-6,058.7	-32.0	6,058.7	0.01	0.00	0.01
17,300.0	90.00	179.90	11,038.0	-6,158.7	-31.8	6,158.7	0.01	0.00	0.01
17,400.0	90.00	179.91	11,038.0	-6,258.7	-31.6	6,258.7	0.01	0.00	0.01
17,500.0	90.00	179.92	11,038.0	-6,358.7	-31.5	6,358.7	0.01	0.00	0.01
17,600.0	90.00	179.93	11,038.0	-6,458.7	-31.4	6,458.7	0.01	0.00	0.01
17,700.0	90.00	179.94	11,038.0	-6,558.7	-31.3	6,558.7	0.01	0.00	0.01
17,800.0	90.00	179.95	11,038.0	-6,658.7	-31.2	6,658.7	0.01	0.00	0.01
17,900.0	90.00	179.96	11,038.0	-6,758.7	-31.1	6,758.7	0.01	0.00	0.01
18,000.0	90.00	179.97	11,038.0	-6,858.7	-31.0	6,858.7	0.01	0.00	0.01
18,100.0	90.00	179.98	11,038.0	-6,958.7	-31.0	6,958.7	0.01	0.00	0.01
18,200.0	90.00	179.99	11,038.0	-7,058.7	-31.0	7,058.7	0.01	0.00	0.01
18,300.0	90.00	180.00	11,038.0	-7,158.7	-31.0	7,158.7	0.01	0.00	0.01
18,400.0	90.00	180.01	11,038.0	-7,258.7	-31.0	7,258.7	0.01	0.00	0.01
18,500.0	90.00	180.02	11,038.0	-7,358.7	-31.0	7,358.7	0.01	0.00	0.01
18,539.3	90.00	180.02	11,038.0	-7,398.0	-31.0	7,398.1	0.01	0.00	0.01

Design Targets									
Target Name - hit/miss target I - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP(RM 10 FC #733H) - plan hits target cente - Point	0.00 r	0.00	10,560.5	298.0	-53.0	384,809.00	683,487.00	32° 3' 25.521 N	103° 52' 28.151 W
FTP(RM 10 FC #733H) - plan hits target cente - Point	0.00 er	0.00	10,995.2	18.0	-53.0	384,529.00	683,487.00	32° 3' 22.751 N	103° 52' 28.165 W
PBHL(RM 10 FC #733F - plan hits target cente - Point	0.00 er	0.00	11,038.0	-7,398.0	-31.0	377,113.00	683,509.00	32° 2' 9.361 N	103° 52' 28.276 W
FED PP(RM 10 FC #73 - plan hits target cente - Point	0.00 er	0.00	11,038.0	-4,968.0	-35.0	379,543.00	683,505.00	32° 2' 33.408 N	103° 52' 28.202 W