

<b>Well Name:</b> DAUNTLESS 7 FED	<b>Well Location:</b> T25S / R33E / SEC 7 / LOT 4 /	<b>County or Parish/State:</b> /
<b>Well Number:</b> 512H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM122619	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b> 3002551273	<b>Well Status:</b> Drilling Well	<b>Operator:</b> EOG RESOURCES INCORPORATED

**Notice of Intent**

**Sundry ID:** 2725063

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 04/10/2023

**Time Sundry Submitted:** 02:36

**Date proposed operation will begin:** 04/28/2023

**Procedure Description:** Dauntless 7 Fed 512H (FKA 503H) API #: 30-025-51273 EOG respectfully requests an amendment to our approved APD for this well to reflect the following changes: Change name from Dauntless 7 Fed 503H to Dauntless 7 Fed 512H. Change BHL from T-25-S, R-33-E, Sec 6, 100' FNL, 1250' FWL, Lea Co., NM, to T-25-S, R-33-E, Sec 6, 100' FNL, 715' FWL, Lea Co., N.M. Change target formation to Second Bone Spring Sand. Update casing and cement program to current design.

**NOI Attachments**

**Procedure Description**

DAUNTLESS\_7\_FED\_512H\_C102\_20230418095400.pdf

Dauntless\_7\_Fed\_512H\_Planning\_Wall\_Report\_20230418095305.pdf

Dauntless\_7\_Fed\_512H\_Sundry\_Info\_Dual\_Rev\_Name\_BHL\_tgt\_csg\_20230418095247.pdf

EOG\_BLM\_Variance\_4a\_Salt\_Section\_Annular\_Clearance\_11.8.2022\_20230410143554.pdf

EOG\_BLM\_Variance\_3a\_Offline\_Cement\_Intermediate\_Operational\_Procedure\_20230410143553.pdf

Dauntless\_7\_Fed\_Well\_Package\_TVD\_2.28.2023\_20230410143538.pdf

Well Name: DAUNTLESS 7 FED

Well Location: T25S / R33E / SEC 7 / LOT 4 /

County or Parish/State: /

Well Number: 512H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM122619

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002551273

Well Status: Drilling Well

Operator: EOG RESOURCES INCORPORATED

Conditions of Approval

Additional

DAUNTLESS\_7\_FED\_512H\_\_SUNDRY\_COA\_20230425104134.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: STAR HARRELL

Signed on: APR 18, 2023 09:54 AM

Name: EOG RESOURCES INCORPORATED

Title: Regulatory Specialist

Street Address: 5509 CHAMPIONS DRIVE

City: MIDLAND

State: TX

Phone: (432) 848-9161

Email address: STAR\_HARRELL@EOGRESOURCES.COM

Field

Representative Name: Eric Brorman

Street Address: 5509 Champions Dr

City: Midland

State: TX

Zip: 79706

Phone: (432)686-3600

Email address: eric\_brorman@eogresources.com

BLM Point of Contact

BLM POC Name: KEITH P IMMATTY

BLM POC Title: ENGINEER

BLM POC Phone: 5759884722

BLM POC Email Address: KIMMATTY@BLM.GOV

Disposition: Approved

Disposition Date: 04/25/2023

Signature: Keith Immatty

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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

FORM C-102

Revised August 1, 2011

Submit one copy to appropriate  
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-025-51273</b>		<sup>2</sup> Pool Code <b>97903</b>		<sup>3</sup> Pool Name <b>WC-025 G-08 S253235G; Lower Bone Spring</b>	
<sup>4</sup> Property Code <b>324978</b>		<sup>5</sup> Property Name <b>DAUNTLESS 7 FED</b>			<sup>6</sup> Well Number <b>512H</b>
<sup>7</sup> OGRID No. <b>7377</b>		<sup>8</sup> Operator Name <b>EOG RESOURCES, INC.</b>			<sup>9</sup> Elevation <b>3493'</b>

<sup>10</sup>Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	7	25	33	-	310'	SOUTH	821'	WEST	LEA

<sup>11</sup>Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	6	25	33	-	100'	NORTH	715'	WEST	LEA

<sup>12</sup> Dedicated Acres <b>638.40</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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.

	<p>NEW MEXICO EAST NAD 1983</p> <p><u>SURFACE LOCATION (SHL)</u></p> <p>310' FSL - SEC. 7 821' FWL - SEC. 7 X=762987 Y=414935 LAT.: N 32.1387102 LONG.: W 103.6172360</p> <p><u>UPPER MOST PERF. (UMP)</u></p> <p>100' FSL - SEC. 7 715' FWL - SEC. 7 X=762882 Y=414725 LAT.: N 32.1381340 LONG.: W 103.6175794</p> <p><u>LOWER MOST PERF. (LMP)/ BOTTOM HOLE LOCATION (BHL)</u></p> <p>100' FNL - SEC. 6 715' FWL - SEC. 6 X=762832 Y=425086 LAT.: N 32.1666148 LONG.: W 103.6175179</p>	<p><sup>17</sup>OPERATOR CERTIFICATION</p> <p><i>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 a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p><i>Star L Harrell</i> 4/10/2023 Signature Date</p> <p>Star L Harrell Printed Name</p> <p>star_harrell@eogresources.com E-mail Address</p>		
	<p><sup>18</sup>SURVEYOR CERTIFICATION</p> <p><i>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 to the best of my belief.</i></p> <p>07/19/2019 Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p>Certificate Number</p> <p>NEW MEXICO EAST NAD 1927</p> <table border="1"> <tr> <td><u>SURFACE LOCATION (SHL)</u> X=721801 Y=414877 LAT.: N 32.1385859 LONG.: W 103.6167617</td> <td><u>UPPER MOST PERF. (UMP)</u> X=721696 Y=414867 LAT.: N 32.1380096 LONG.: W 103.6171052</td> </tr> <tr> <td><u>LOWER MOST PERF. (LMP)/ BOTTOM HOLE LOCATION (BHL)</u> X=721647 Y=425028 LAT.: N 32.1664906 LONG.: W 103.6170420</td> <td></td> </tr> </table>	<u>SURFACE LOCATION (SHL)</u> X=721801 Y=414877 LAT.: N 32.1385859 LONG.: W 103.6167617	<u>UPPER MOST PERF. (UMP)</u> X=721696 Y=414867 LAT.: N 32.1380096 LONG.: W 103.6171052	<u>LOWER MOST PERF. (LMP)/ BOTTOM HOLE LOCATION (BHL)</u> X=721647 Y=425028 LAT.: N 32.1664906 LONG.: W 103.6170420
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## Midland

Lea County, NM (NAD 83 NME)

Dauntless 7 Fed

#512H

OH

Plan: Plan #0.1 RT

## Standard Planning Report

30 March, 2023



Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #512H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3519.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3519.0usft
<b>Site:</b>	Dauntless 7 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#512H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1 RT		

<b>Project</b>	Lea County, NM (NAD 83 NME)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Dauntless 7 Fed				
<b>Site Position:</b>		<b>Northing:</b>	414,874.00 usft	<b>Latitude:</b>	32° 8' 18.763 N
<b>From:</b>	Map	<b>Easting:</b>	762,795.00 usft	<b>Longitude:</b>	103° 37' 4.285 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "		

<b>Well</b>	#512H					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	414,935.00 usft	<b>Latitude:</b>	32° 8' 19.354 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	762,987.00 usft	<b>Longitude:</b>	103° 37' 2.047 W
<b>Position Uncertainty</b>	0.0 usft		<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	3,493.0 usft
<b>Grid Convergence:</b>	0.38 °					

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	3/29/2023	6.35	59.76	47,252.20694074

<b>Design</b>	Plan #0.1 RT			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	359.13

<b>Plan Survey Tool Program</b>	<b>Date</b>	3/30/2023		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.0	20,937.6 Plan #0.1 RT (OH)	EOG MWD+IFR1 MWD + IFR1	



Planning Report

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<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3519.0usft
<b>Site:</b>	Dauntless 7 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#512H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1 RT		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,533.1	2.66	201.99	1,533.1	-2.9	-1.2	2.00	2.00	0.00	201.99	
7,436.3	2.66	201.99	7,429.9	-257.1	-103.8	0.00	0.00	0.00	0.00	
7,569.5	0.00	0.01	7,563.0	-260.0	-105.0	2.00	-2.00	0.00	180.00	
10,254.0	0.00	0.01	10,247.5	-260.0	-105.0	0.00	0.00	0.00	0.00	0.00 KOP(Dauntless 7 Fed
10,474.4	26.46	0.00	10,460.2	-210.0	-105.0	12.00	12.00	0.00	0.00	0.00 FTP(Dauntless 7 Fed
11,003.9	90.00	359.72	10,724.9	217.5	-106.4	12.00	12.00	-0.05	-0.31	
20,937.6	90.00	359.72	10,725.0	10,151.0	-155.0	0.00	0.00	0.00	0.00	0.00 PBHL(Dauntless 7 Fe



Planning Report

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<b>Site:</b>	Dauntless 7 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#512H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	2.00	201.99	1,500.0	-1.6	-0.7	-1.6	2.00	2.00	0.00
1,533.1	2.66	201.99	1,533.1	-2.9	-1.2	-2.8	2.00	2.00	0.00
1,600.0	2.66	201.99	1,599.9	-5.7	-2.3	-5.7	0.00	0.00	0.00
1,700.0	2.66	201.99	1,699.8	-10.1	-4.1	-10.0	0.00	0.00	0.00
1,800.0	2.66	201.99	1,799.7	-14.4	-5.8	-14.3	0.00	0.00	0.00
1,900.0	2.66	201.99	1,899.6	-18.7	-7.5	-18.6	0.00	0.00	0.00
2,000.0	2.66	201.99	1,999.4	-23.0	-9.3	-22.8	0.00	0.00	0.00
2,100.0	2.66	201.99	2,099.3	-27.3	-11.0	-27.1	0.00	0.00	0.00
2,200.0	2.66	201.99	2,199.2	-31.6	-12.8	-31.4	0.00	0.00	0.00
2,300.0	2.66	201.99	2,299.1	-35.9	-14.5	-35.7	0.00	0.00	0.00
2,400.0	2.66	201.99	2,399.0	-40.2	-16.2	-40.0	0.00	0.00	0.00
2,500.0	2.66	201.99	2,498.9	-44.5	-18.0	-44.2	0.00	0.00	0.00
2,600.0	2.66	201.99	2,598.8	-48.8	-19.7	-48.5	0.00	0.00	0.00
2,700.0	2.66	201.99	2,698.7	-53.1	-21.5	-52.8	0.00	0.00	0.00
2,800.0	2.66	201.99	2,798.6	-57.4	-23.2	-57.1	0.00	0.00	0.00
2,900.0	2.66	201.99	2,898.5	-61.7	-24.9	-61.4	0.00	0.00	0.00
3,000.0	2.66	201.99	2,998.4	-66.0	-26.7	-65.6	0.00	0.00	0.00
3,100.0	2.66	201.99	3,098.3	-70.4	-28.4	-69.9	0.00	0.00	0.00
3,200.0	2.66	201.99	3,198.2	-74.7	-30.2	-74.2	0.00	0.00	0.00
3,300.0	2.66	201.99	3,298.0	-79.0	-31.9	-78.5	0.00	0.00	0.00
3,400.0	2.66	201.99	3,397.9	-83.3	-33.6	-82.8	0.00	0.00	0.00
3,500.0	2.66	201.99	3,497.8	-87.6	-35.4	-87.0	0.00	0.00	0.00
3,600.0	2.66	201.99	3,597.7	-91.9	-37.1	-91.3	0.00	0.00	0.00
3,700.0	2.66	201.99	3,697.6	-96.2	-38.8	-95.6	0.00	0.00	0.00
3,800.0	2.66	201.99	3,797.5	-100.5	-40.6	-99.9	0.00	0.00	0.00
3,900.0	2.66	201.99	3,897.4	-104.8	-42.3	-104.2	0.00	0.00	0.00
4,000.0	2.66	201.99	3,997.3	-109.1	-44.1	-108.4	0.00	0.00	0.00
4,100.0	2.66	201.99	4,097.2	-113.4	-45.8	-112.7	0.00	0.00	0.00
4,200.0	2.66	201.99	4,197.1	-117.7	-47.5	-117.0	0.00	0.00	0.00
4,300.0	2.66	201.99	4,297.0	-122.0	-49.3	-121.3	0.00	0.00	0.00
4,400.0	2.66	201.99	4,396.9	-126.4	-51.0	-125.6	0.00	0.00	0.00
4,500.0	2.66	201.99	4,496.7	-130.7	-52.8	-129.8	0.00	0.00	0.00
4,600.0	2.66	201.99	4,596.6	-135.0	-54.5	-134.1	0.00	0.00	0.00
4,700.0	2.66	201.99	4,696.5	-139.3	-56.2	-138.4	0.00	0.00	0.00
4,800.0	2.66	201.99	4,796.4	-143.6	-58.0	-142.7	0.00	0.00	0.00
4,900.0	2.66	201.99	4,896.3	-147.9	-59.7	-147.0	0.00	0.00	0.00
5,000.0	2.66	201.99	4,996.2	-152.2	-61.5	-151.2	0.00	0.00	0.00
5,100.0	2.66	201.99	5,096.1	-156.5	-63.2	-155.5	0.00	0.00	0.00
5,200.0	2.66	201.99	5,196.0	-160.8	-64.9	-159.8	0.00	0.00	0.00



Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #512H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3519.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3519.0usft
<b>Site:</b>	Dauntless 7 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#512H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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	2.66	201.99	5,295.9	-165.1	-66.7	-164.1	0.00	0.00	0.00	
5,400.0	2.66	201.99	5,395.8	-169.4	-68.4	-168.4	0.00	0.00	0.00	
5,500.0	2.66	201.99	5,495.7	-173.7	-70.2	-172.6	0.00	0.00	0.00	
5,600.0	2.66	201.99	5,595.6	-178.0	-71.9	-176.9	0.00	0.00	0.00	
5,700.0	2.66	201.99	5,695.5	-182.3	-73.6	-181.2	0.00	0.00	0.00	
5,800.0	2.66	201.99	5,795.3	-186.7	-75.4	-185.5	0.00	0.00	0.00	
5,900.0	2.66	201.99	5,895.2	-191.0	-77.1	-189.8	0.00	0.00	0.00	
6,000.0	2.66	201.99	5,995.1	-195.3	-78.9	-194.0	0.00	0.00	0.00	
6,100.0	2.66	201.99	6,095.0	-199.6	-80.6	-198.3	0.00	0.00	0.00	
6,200.0	2.66	201.99	6,194.9	-203.9	-82.3	-202.6	0.00	0.00	0.00	
6,300.0	2.66	201.99	6,294.8	-208.2	-84.1	-206.9	0.00	0.00	0.00	
6,400.0	2.66	201.99	6,394.7	-212.5	-85.8	-211.2	0.00	0.00	0.00	
6,500.0	2.66	201.99	6,494.6	-216.8	-87.6	-215.4	0.00	0.00	0.00	
6,600.0	2.66	201.99	6,594.5	-221.1	-89.3	-219.7	0.00	0.00	0.00	
6,700.0	2.66	201.99	6,694.4	-225.4	-91.0	-224.0	0.00	0.00	0.00	
6,800.0	2.66	201.99	6,794.3	-229.7	-92.8	-228.3	0.00	0.00	0.00	
6,900.0	2.66	201.99	6,894.2	-234.0	-94.5	-232.6	0.00	0.00	0.00	
7,000.0	2.66	201.99	6,994.1	-238.3	-96.3	-236.8	0.00	0.00	0.00	
7,100.0	2.66	201.99	7,093.9	-242.6	-98.0	-241.1	0.00	0.00	0.00	
7,200.0	2.66	201.99	7,193.8	-247.0	-99.7	-245.4	0.00	0.00	0.00	
7,300.0	2.66	201.99	7,293.7	-251.3	-101.5	-249.7	0.00	0.00	0.00	
7,400.0	2.66	201.99	7,393.6	-255.6	-103.2	-254.0	0.00	0.00	0.00	
7,436.3	2.66	201.99	7,429.9	-257.1	-103.8	-255.5	0.00	0.00	0.00	
7,500.0	1.39	201.99	7,493.5	-259.2	-104.7	-257.6	2.00	-2.00	0.00	
7,569.5	0.00	0.01	7,563.0	-260.0	-105.0	-258.4	2.00	-2.00	0.00	
7,600.0	0.00	0.00	7,593.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,693.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,793.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,893.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
8,000.0	0.00	0.00	7,993.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
8,100.0	0.00	0.00	8,093.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,193.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,293.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,393.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,493.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,593.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,693.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,793.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,893.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,993.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
9,100.0	0.00	0.00	9,093.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
9,200.0	0.00	0.00	9,193.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,293.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,393.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,493.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,593.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,693.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,793.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,893.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
10,000.0	0.00	0.00	9,993.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
10,100.0	0.00	0.00	10,093.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
10,200.0	0.00	0.00	10,193.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
10,254.0	0.00	0.01	10,247.5	-260.0	-105.0	-258.4	0.00	0.00	0.00	
10,275.0	2.52	0.00	10,268.5	-259.5	-105.0	-257.9	12.00	12.00	0.00	



Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #512H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3519.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3519.0usft
<b>Site:</b>	Dauntless 7 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#512H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)	
10,300.0	5.52	0.00	10,293.5	-257.8	-105.0	-256.1	12.00	12.00	0.00	
10,325.0	8.52	0.00	10,318.3	-254.7	-105.0	-253.1	12.00	12.00	0.00	
10,350.0	11.53	0.00	10,342.9	-250.4	-105.0	-248.7	12.00	12.00	0.00	
10,375.0	14.53	0.00	10,367.2	-244.7	-105.0	-243.1	12.00	12.00	0.00	
10,400.0	17.53	0.00	10,391.3	-237.8	-105.0	-236.2	12.00	12.00	0.00	
10,425.0	20.53	0.00	10,414.9	-229.7	-105.0	-228.1	12.00	12.00	0.00	
10,450.0	23.53	0.00	10,438.1	-220.3	-105.0	-218.7	12.00	12.00	0.00	
10,474.4	26.46	0.00	10,460.2	-210.0	-105.0	-208.4	12.00	12.00	0.00	
10,500.0	29.53	359.97	10,482.8	-198.0	-105.0	-196.4	12.00	12.00	-0.13	
10,525.0	32.53	359.94	10,504.2	-185.1	-105.0	-183.5	12.00	12.00	-0.11	
10,550.0	35.53	359.92	10,524.9	-171.1	-105.0	-169.5	12.00	12.00	-0.09	
10,575.0	38.53	359.89	10,544.9	-156.1	-105.1	-154.4	12.00	12.00	-0.08	
10,600.0	41.53	359.88	10,564.0	-140.0	-105.1	-138.4	12.00	12.00	-0.07	
10,625.0	44.53	359.86	10,582.3	-122.9	-105.1	-121.3	12.00	12.00	-0.06	
10,650.0	47.53	359.85	10,599.7	-104.9	-105.2	-103.3	12.00	12.00	-0.06	
10,675.0	50.53	359.83	10,616.0	-86.1	-105.2	-84.5	12.00	12.00	-0.05	
10,700.0	53.53	359.82	10,631.4	-66.4	-105.3	-64.8	12.00	12.00	-0.05	
10,725.0	56.53	359.81	10,645.8	-45.9	-105.4	-44.3	12.00	12.00	-0.04	
10,750.0	59.53	359.80	10,659.0	-24.7	-105.4	-23.1	12.00	12.00	-0.04	
10,775.0	62.53	359.79	10,671.1	-2.8	-105.5	-1.2	12.00	12.00	-0.04	
10,800.0	65.53	359.78	10,682.0	19.7	-105.6	21.3	12.00	12.00	-0.04	
10,825.0	68.53	359.77	10,691.8	42.7	-105.7	44.3	12.00	12.00	-0.03	
10,850.0	71.53	359.77	10,700.3	66.2	-105.8	67.8	12.00	12.00	-0.03	
10,875.0	74.53	359.76	10,707.6	90.1	-105.9	91.7	12.00	12.00	-0.03	
10,900.0	77.53	359.75	10,713.7	114.3	-106.0	115.9	12.00	12.00	-0.03	
10,925.0	80.53	359.74	10,718.4	138.9	-106.1	140.5	12.00	12.00	-0.03	
10,950.0	83.53	359.74	10,721.9	163.6	-106.2	165.2	12.00	12.00	-0.03	
10,975.0	86.53	359.73	10,724.1	188.5	-106.3	190.1	12.00	12.00	-0.03	
11,000.0	89.53	359.72	10,724.9	213.5	-106.4	215.1	12.00	12.00	-0.03	
11,003.9	90.00	359.72	10,724.9	217.5	-106.4	219.1	12.00	12.00	-0.03	
11,100.0	90.00	359.72	10,724.9	313.5	-106.9	315.1	0.00	0.00	0.00	
11,200.0	90.00	359.72	10,724.9	413.5	-107.4	415.1	0.00	0.00	0.00	
11,300.0	90.00	359.72	10,724.9	513.5	-107.9	515.1	0.00	0.00	0.00	
11,400.0	90.00	359.72	10,724.9	613.5	-108.4	615.1	0.00	0.00	0.00	
11,500.0	90.00	359.72	10,724.9	713.5	-108.9	715.1	0.00	0.00	0.00	
11,600.0	90.00	359.72	10,724.9	813.5	-109.4	815.1	0.00	0.00	0.00	
11,700.0	90.00	359.72	10,724.9	913.5	-109.8	915.1	0.00	0.00	0.00	
11,800.0	90.00	359.72	10,724.9	1,013.5	-110.3	1,015.1	0.00	0.00	0.00	
11,900.0	90.00	359.72	10,724.9	1,113.5	-110.8	1,115.1	0.00	0.00	0.00	
12,000.0	90.00	359.72	10,724.9	1,213.5	-111.3	1,215.1	0.00	0.00	0.00	
12,100.0	90.00	359.72	10,724.9	1,313.5	-111.8	1,315.1	0.00	0.00	0.00	
12,200.0	90.00	359.72	10,725.0	1,413.5	-112.3	1,415.0	0.00	0.00	0.00	
12,300.0	90.00	359.72	10,725.0	1,513.5	-112.8	1,515.0	0.00	0.00	0.00	
12,400.0	90.00	359.72	10,725.0	1,613.5	-113.3	1,615.0	0.00	0.00	0.00	
12,500.0	90.00	359.72	10,725.0	1,713.5	-113.8	1,715.0	0.00	0.00	0.00	
12,600.0	90.00	359.72	10,725.0	1,813.5	-114.2	1,815.0	0.00	0.00	0.00	
12,700.0	90.00	359.72	10,725.0	1,913.5	-114.7	1,915.0	0.00	0.00	0.00	
12,800.0	90.00	359.72	10,725.0	2,013.5	-115.2	2,015.0	0.00	0.00	0.00	
12,900.0	90.00	359.72	10,725.0	2,113.5	-115.7	2,115.0	0.00	0.00	0.00	
13,000.0	90.00	359.72	10,725.0	2,213.5	-116.2	2,215.0	0.00	0.00	0.00	
13,100.0	90.00	359.72	10,725.0	2,313.5	-116.7	2,315.0	0.00	0.00	0.00	
13,200.0	90.00	359.72	10,725.0	2,413.5	-117.2	2,415.0	0.00	0.00	0.00	
13,300.0	90.00	359.72	10,725.0	2,513.5	-117.7	2,515.0	0.00	0.00	0.00	
13,400.0	90.00	359.72	10,725.0	2,613.5	-118.2	2,615.0	0.00	0.00	0.00	



Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #512H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3519.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3519.0usft
<b>Site:</b>	Dauntless 7 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#512H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
13,500.0	90.00	359.72	10,725.0	2,713.5	-118.6	2,715.0	0.00	0.00	0.00
13,600.0	90.00	359.72	10,725.0	2,813.5	-119.1	2,815.0	0.00	0.00	0.00
13,700.0	90.00	359.72	10,725.0	2,913.5	-119.6	2,915.0	0.00	0.00	0.00
13,800.0	90.00	359.72	10,725.0	3,013.5	-120.1	3,015.0	0.00	0.00	0.00
13,900.0	90.00	359.72	10,725.0	3,113.5	-120.6	3,115.0	0.00	0.00	0.00
14,000.0	90.00	359.72	10,725.0	3,213.5	-121.1	3,214.9	0.00	0.00	0.00
14,100.0	90.00	359.72	10,725.0	3,313.5	-121.6	3,314.9	0.00	0.00	0.00
14,200.0	90.00	359.72	10,725.0	3,413.5	-122.1	3,414.9	0.00	0.00	0.00
14,300.0	90.00	359.72	10,725.0	3,513.5	-122.6	3,514.9	0.00	0.00	0.00
14,400.0	90.00	359.72	10,725.0	3,613.5	-123.0	3,614.9	0.00	0.00	0.00
14,500.0	90.00	359.72	10,725.0	3,713.5	-123.5	3,714.9	0.00	0.00	0.00
14,600.0	90.00	359.72	10,725.0	3,813.5	-124.0	3,814.9	0.00	0.00	0.00
14,700.0	90.00	359.72	10,725.0	3,913.5	-124.5	3,914.9	0.00	0.00	0.00
14,800.0	90.00	359.72	10,725.0	4,013.5	-125.0	4,014.9	0.00	0.00	0.00
14,900.0	90.00	359.72	10,725.0	4,113.5	-125.5	4,114.9	0.00	0.00	0.00
15,000.0	90.00	359.72	10,725.0	4,213.5	-126.0	4,214.9	0.00	0.00	0.00
15,100.0	90.00	359.72	10,725.0	4,313.5	-126.5	4,314.9	0.00	0.00	0.00
15,200.0	90.00	359.72	10,725.0	4,413.5	-127.0	4,414.9	0.00	0.00	0.00
15,300.0	90.00	359.72	10,725.0	4,513.5	-127.4	4,514.9	0.00	0.00	0.00
15,400.0	90.00	359.72	10,725.0	4,613.5	-127.9	4,614.9	0.00	0.00	0.00
15,500.0	90.00	359.72	10,725.0	4,713.5	-128.4	4,714.9	0.00	0.00	0.00
15,600.0	90.00	359.72	10,725.0	4,813.5	-128.9	4,814.9	0.00	0.00	0.00
15,700.0	90.00	359.72	10,725.0	4,913.5	-129.4	4,914.9	0.00	0.00	0.00
15,800.0	90.00	359.72	10,725.0	5,013.5	-129.9	5,014.9	0.00	0.00	0.00
15,900.0	90.00	359.72	10,725.0	5,113.5	-130.4	5,114.8	0.00	0.00	0.00
16,000.0	90.00	359.72	10,725.0	5,213.5	-130.9	5,214.8	0.00	0.00	0.00
16,100.0	90.00	359.72	10,725.0	5,313.5	-131.4	5,314.8	0.00	0.00	0.00
16,200.0	90.00	359.72	10,725.0	5,413.4	-131.8	5,414.8	0.00	0.00	0.00
16,300.0	90.00	359.72	10,725.0	5,513.4	-132.3	5,514.8	0.00	0.00	0.00
16,400.0	90.00	359.72	10,725.0	5,613.4	-132.8	5,614.8	0.00	0.00	0.00
16,500.0	90.00	359.72	10,725.0	5,713.4	-133.3	5,714.8	0.00	0.00	0.00
16,600.0	90.00	359.72	10,725.0	5,813.4	-133.8	5,814.8	0.00	0.00	0.00
16,700.0	90.00	359.72	10,725.0	5,913.4	-134.3	5,914.8	0.00	0.00	0.00
16,800.0	90.00	359.72	10,725.0	6,013.4	-134.8	6,014.8	0.00	0.00	0.00
16,900.0	90.00	359.72	10,725.0	6,113.4	-135.3	6,114.8	0.00	0.00	0.00
17,000.0	90.00	359.72	10,725.0	6,213.4	-135.8	6,214.8	0.00	0.00	0.00
17,100.0	90.00	359.72	10,725.0	6,313.4	-136.2	6,314.8	0.00	0.00	0.00
17,200.0	90.00	359.72	10,725.0	6,413.4	-136.7	6,414.8	0.00	0.00	0.00
17,300.0	90.00	359.72	10,725.0	6,513.4	-137.2	6,514.8	0.00	0.00	0.00
17,400.0	90.00	359.72	10,725.0	6,613.4	-137.7	6,614.8	0.00	0.00	0.00
17,500.0	90.00	359.72	10,725.0	6,713.4	-138.2	6,714.8	0.00	0.00	0.00
17,600.0	90.00	359.72	10,725.0	6,813.4	-138.7	6,814.8	0.00	0.00	0.00
17,700.0	90.00	359.72	10,725.0	6,913.4	-139.2	6,914.8	0.00	0.00	0.00
17,800.0	90.00	359.72	10,725.0	7,013.4	-139.7	7,014.7	0.00	0.00	0.00
17,900.0	90.00	359.72	10,725.0	7,113.4	-140.2	7,114.7	0.00	0.00	0.00
18,000.0	90.00	359.72	10,725.0	7,213.4	-140.6	7,214.7	0.00	0.00	0.00
18,100.0	90.00	359.72	10,725.0	7,313.4	-141.1	7,314.7	0.00	0.00	0.00
18,200.0	90.00	359.72	10,725.0	7,413.4	-141.6	7,414.7	0.00	0.00	0.00
18,300.0	90.00	359.72	10,725.0	7,513.4	-142.1	7,514.7	0.00	0.00	0.00
18,400.0	90.00	359.72	10,725.0	7,613.4	-142.6	7,614.7	0.00	0.00	0.00
18,500.0	90.00	359.72	10,725.0	7,713.4	-143.1	7,714.7	0.00	0.00	0.00
18,600.0	90.00	359.72	10,725.0	7,813.4	-143.6	7,814.7	0.00	0.00	0.00
18,700.0	90.00	359.72	10,725.0	7,913.4	-144.1	7,914.7	0.00	0.00	0.00
18,800.0	90.00	359.72	10,725.0	8,013.4	-144.6	8,014.7	0.00	0.00	0.00



Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #512H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3519.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3519.0usft
<b>Site:</b>	Dauntless 7 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#512H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
18,900.0	90.00	359.72	10,725.0	8,113.4	-145.0	8,114.7	0.00	0.00	0.00
19,000.0	90.00	359.72	10,725.0	8,213.4	-145.5	8,214.7	0.00	0.00	0.00
19,100.0	90.00	359.72	10,725.0	8,313.4	-146.0	8,314.7	0.00	0.00	0.00
19,200.0	90.00	359.72	10,725.0	8,413.4	-146.5	8,414.7	0.00	0.00	0.00
19,300.0	90.00	359.72	10,725.0	8,513.4	-147.0	8,514.7	0.00	0.00	0.00
19,400.0	90.00	359.72	10,725.0	8,613.4	-147.5	8,614.7	0.00	0.00	0.00
19,500.0	90.00	359.72	10,725.0	8,713.4	-148.0	8,714.7	0.00	0.00	0.00
19,600.0	90.00	359.72	10,725.0	8,813.4	-148.5	8,814.6	0.00	0.00	0.00
19,700.0	90.00	359.72	10,725.0	8,913.4	-149.0	8,914.6	0.00	0.00	0.00
19,800.0	90.00	359.72	10,725.0	9,013.4	-149.4	9,014.6	0.00	0.00	0.00
19,900.0	90.00	359.72	10,725.0	9,113.4	-149.9	9,114.6	0.00	0.00	0.00
20,000.0	90.00	359.72	10,725.0	9,213.4	-150.4	9,214.6	0.00	0.00	0.00
20,100.0	90.00	359.72	10,725.0	9,313.4	-150.9	9,314.6	0.00	0.00	0.00
20,200.0	90.00	359.72	10,725.0	9,413.4	-151.4	9,414.6	0.00	0.00	0.00
20,300.0	90.00	359.72	10,725.0	9,513.4	-151.9	9,514.6	0.00	0.00	0.00
20,400.0	90.00	359.72	10,725.0	9,613.4	-152.4	9,614.6	0.00	0.00	0.00
20,500.0	90.00	359.72	10,725.0	9,713.4	-152.9	9,714.6	0.00	0.00	0.00
20,600.0	90.00	359.72	10,725.0	9,813.4	-153.3	9,814.6	0.00	0.00	0.00
20,700.0	90.00	359.72	10,725.0	9,913.4	-153.8	9,914.6	0.00	0.00	0.00
20,800.0	90.00	359.72	10,725.0	10,013.4	-154.3	10,014.6	0.00	0.00	0.00
20,900.0	90.00	359.72	10,725.0	10,113.4	-154.8	10,114.6	0.00	0.00	0.00
20,937.6	90.00	359.72	10,725.0	10,151.0	-155.0	10,152.2	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP(Dauntless 7 Fed #1 - plan hits target center - Point	0.00	0.01	10,247.5	-260.0	-105.0	414,675.00	762,882.00	32° 8' 16.788 N	103° 37' 3.289 W
FTP(Dauntless 7 Fed #5 - plan hits target center - Point	0.00	0.01	10,460.2	-210.0	-105.0	414,725.00	762,882.00	32° 8' 17.283 N	103° 37' 3.285 W
PBHL(Dauntless 7 Fed # - plan hits target center - Point	0.00	0.00	10,725.0	10,151.0	-155.0	425,086.00	762,832.00	32° 9' 59.812 N	103° 37' 3.065 W

Lea County, NM (NAD 83 NME)

Dauntless 7 Fed #512H

Plan #0.1 RT



To convert a Magnetic Direction to a Grid Direction, Add 5.97°  
 To convert a Magnetic Direction to a True Direction, Add 6.35° East  
 To convert a True Direction to a Grid Direction, Subtract 0.38°

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

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

WELL DETAILS: #512H

kb = 26' @ 3519.0usft 3493.0  
 Northing 414935.00 Easting 762987.00 Latitude 32° 8' 19.354 N Longitude 103° 37' 2.047 W

SECTION DETAILS

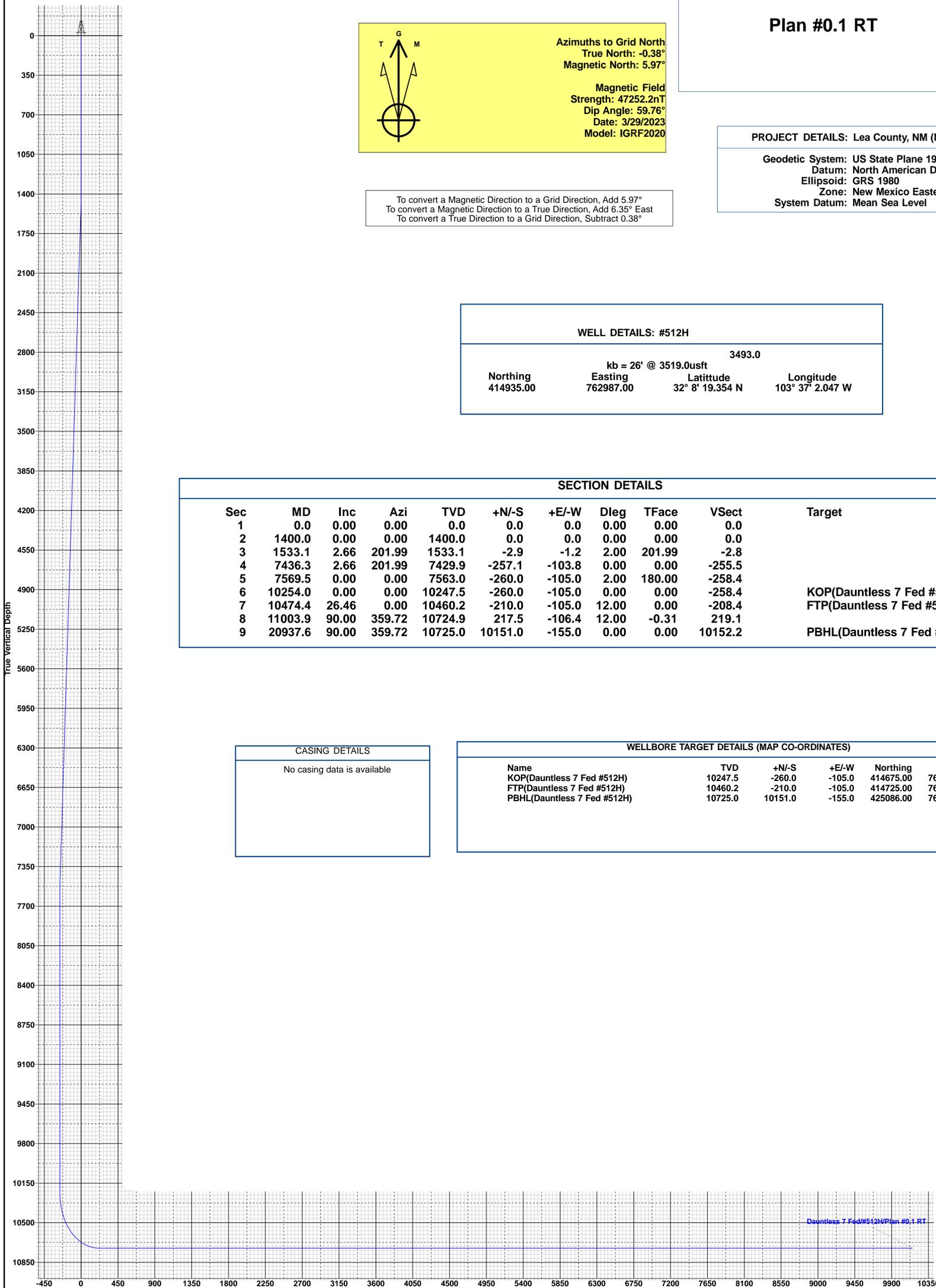
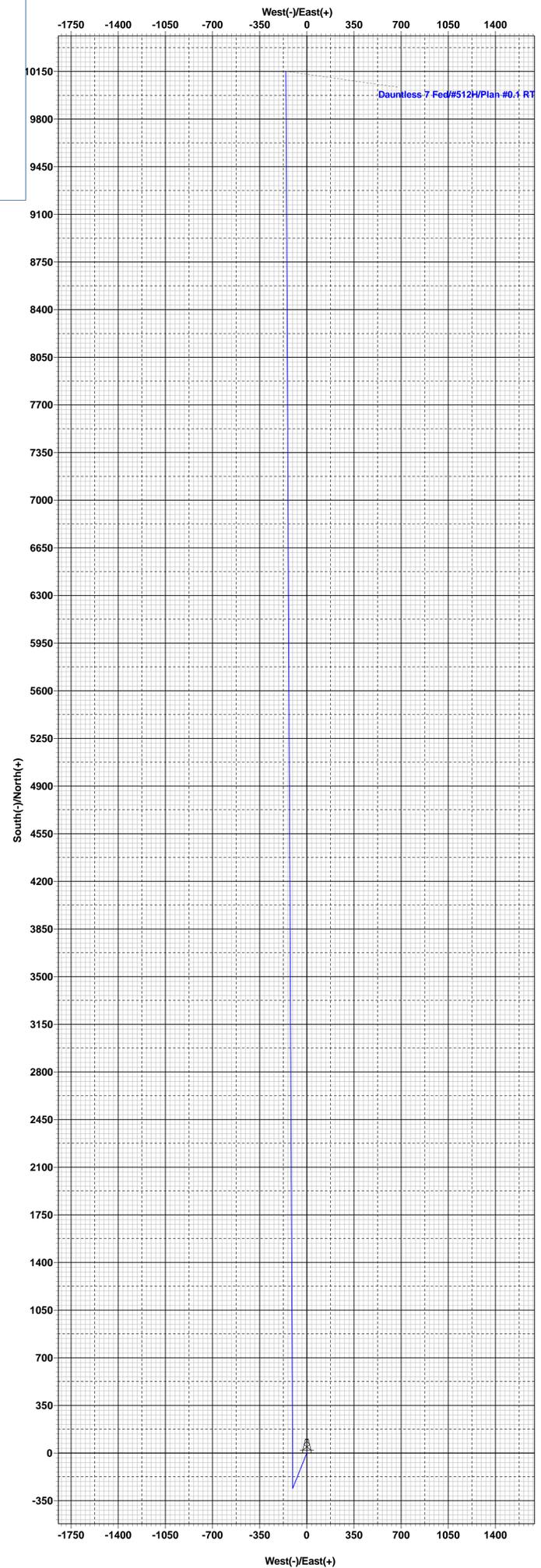
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1400.0	0.00	0.00	1400.0	0.0	0.0	0.00	0.00	0.0	
3	1533.1	2.66	201.99	1533.1	-2.9	-1.2	2.00	201.99	-2.8	
4	7436.3	2.66	201.99	7429.9	-257.1	-103.8	0.00	0.00	-255.5	
5	7569.5	0.00	0.00	7563.0	-260.0	-105.0	2.00	180.00	-258.4	
6	10254.0	0.00	0.00	10247.5	-260.0	-105.0	0.00	0.00	-258.4	KOP(Dauntless 7 Fed #512H)
7	10474.4	26.46	0.00	10460.2	-210.0	-105.0	12.00	0.00	-208.4	FTP(Dauntless 7 Fed #512H)
8	11003.9	90.00	359.72	10724.9	217.5	-106.4	12.00	-0.31	219.1	
9	20937.6	90.00	359.72	10725.0	10151.0	-155.0	0.00	0.00	10152.2	PBHL(Dauntless 7 Fed #512H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP(Dauntless 7 Fed #512H)	10247.5	-260.0	-105.0	414675.00	762882.00
FTP(Dauntless 7 Fed #512H)	10460.2	-210.0	-105.0	414725.00	762882.00
PBHL(Dauntless 7 Fed #512H)	10725.0	10151.0	-155.0	425086.00	762832.00



Vertical Section at 359.13°

**Revised Permit Information 01/00/1900:**

Well Name: Dauntless 7 Fed 512H

Location: SHL: 310' FSL &amp; 821' FWL, Section 7, T-25-S, R-33-E, Lea Co., N.M.

BHL: 100' FNL &amp; 715' FWL, Section 6, T-25-S, R-33-E, Lea Co., N.M.

**Casing Program A:**

Hole Size	Interval MD		Interval TVD		Csg OD	Weight	Grade	Conn
	From (ft)	To (ft)	From (ft)	To (ft)				
16"	0	1,150	0	1,150	13-3/8"	54.5#	J-55	STC
11"	0	4,007	0	4,000	9-5/8"	40#	J-55	LTC
11"	4,007	4,857	4,000	4,850	9-5/8"	40#	HCK-55	LTC
6-3/4"	0	20,938	0	10,725	5-1/2"	17#	HCP-110	LTC

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

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

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

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

**Cementing Program:**

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
1,150' 13-3/8"	350	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	100	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 950')
4,850' 9-5/8"	460	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	160	14.8	1.32	Tail: Class C + 10% NaCl + 3% MagOx (TOC @ 3,880')
20,938' 5-1/2"	360	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 4,350')
	750	13.2	1.52	Tail: Class H + 5% NEX-020 + 0.2% NAC-102 + 0.15% NAS-725 + 0.5% NFL-549 + 0.2% NFP-703 + 1% NBE-737 + 0.3% NRT-241 (TOC @ 10260')


**eog resources**  
**Dauntless 7 Fed 512H**

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

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

**Mud Program:**

Depth (TVD)	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,150'	Fresh - Gel	8.6-8.8	28-34	N/c
1,150' – 4,850'	Brine	8.6-8.8	28-34	N/c
4,850' – 20,938'	Oil Base	8.8-9.5	58-68	N/c - 6

**Wellhead & Offline Cementing:**

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

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



## **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).

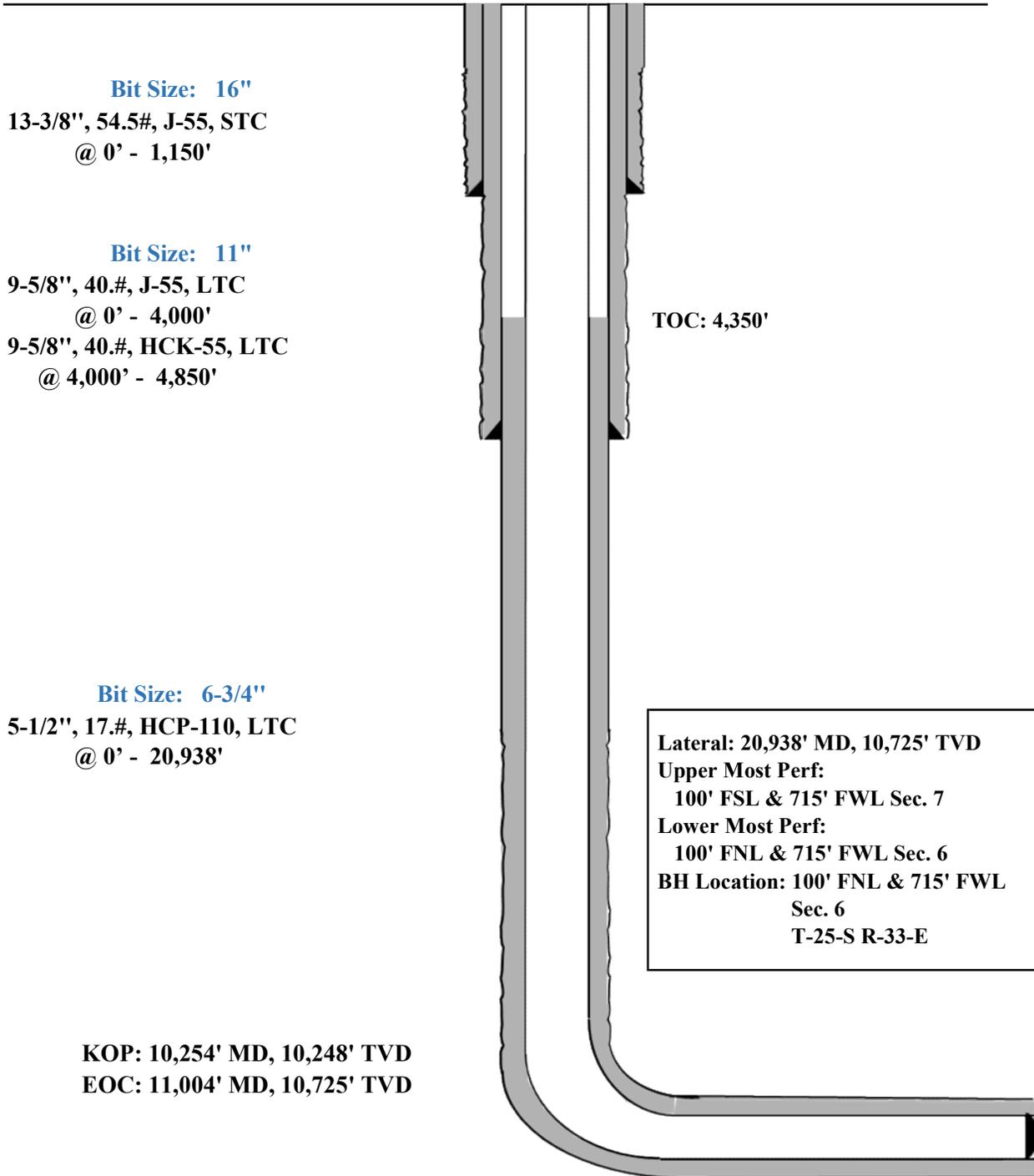
Keeping the EOT above KOP is an industry best practice for those respective forms of artificial lift.



310' FSL  
821' FWL  
Section 7  
T-25-S, R-33-E

Revised Wellbore A:  
  
API: 30-025-51273

KB: 3518'  
GL: 3493'



**Bit Size: 16"**

13-3/8", 54.5#, J-55, STC  
@ 0' - 1,150'

**Bit Size: 11"**

9-5/8", 40.#, J-55, LTC  
@ 0' - 4,000'  
9-5/8", 40.#, HCK-55, LTC  
@ 4,000' - 4,850'

TOC: 4,350'

**Bit Size: 6-3/4"**

5-1/2", 17.#, HCP-110, LTC  
@ 0' - 20,938'

Lateral: 20,938' MD, 10,725' TVD  
Upper Most Perf:  
100' FSL & 715' FWL Sec. 7  
Lower Most Perf:  
100' FNL & 715' FWL Sec. 6  
BH Location: 100' FNL & 715' FWL  
Sec. 6  
T-25-S R-33-E

KOP: 10,254' MD, 10,248' TVD  
EOC: 11,004' MD, 10,725' TVD

**Revised Permit Information 01/00/1900:**

Well Name: Dauntless 7 Fed 512H

Location: SHL: 310' FSL &amp; 821' FWL, Section 7, T-25-S, R-33-E, Lea Co., N.M.

BHL: 100' FNL &amp; 715' FWL, Section 6, T-25-S, R-33-E, Lea Co., N.M.

**Casing Program B:**

Hole Size	Interval MD		Interval TVD		Csg OD	Weight	Grade	Conn
	From (ft)	To (ft)	From (ft)	To (ft)				
13-1/2"	0	1,150	0	1,150	10-3/4"	40.5#	J-55	STC
9-7/8"	0	4,007	0	4,000	8-5/8"	32#	J-55	BTC-SC
9-7/8"	4,007	4,857	4,000	4,850	8-5/8"	32#	P110-EC	BTC-SC
6-3/4"	0	20,938	0	10,725	5-1/2"	17#	HCP-110	LTC

**Cementing Program:**

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
1,150' 10-3/4"	380	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	110	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 950')
4,850' 8-5/8"	330	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	160	14.8	1.32	Tail: Class C + 10% NaCl + 3% MagOx (TOC @ 3,880')
20,938' 5-1/2"	580	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 4,350')
	770	13.2	1.52	Tail: Class H + 5% NEX-020 + 0.2% NAC-102 + 0.15% NAS-725 + 0.5% NFL-549 + 0.2% NFP-703 + 1% NBE-737 + 0.3% NRT-241 (TOC @ 10260')


**eog resources**  
**Dauntless 7 Fed 512H**

<b>Additive</b>	<b>Purpose</b>
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

**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:

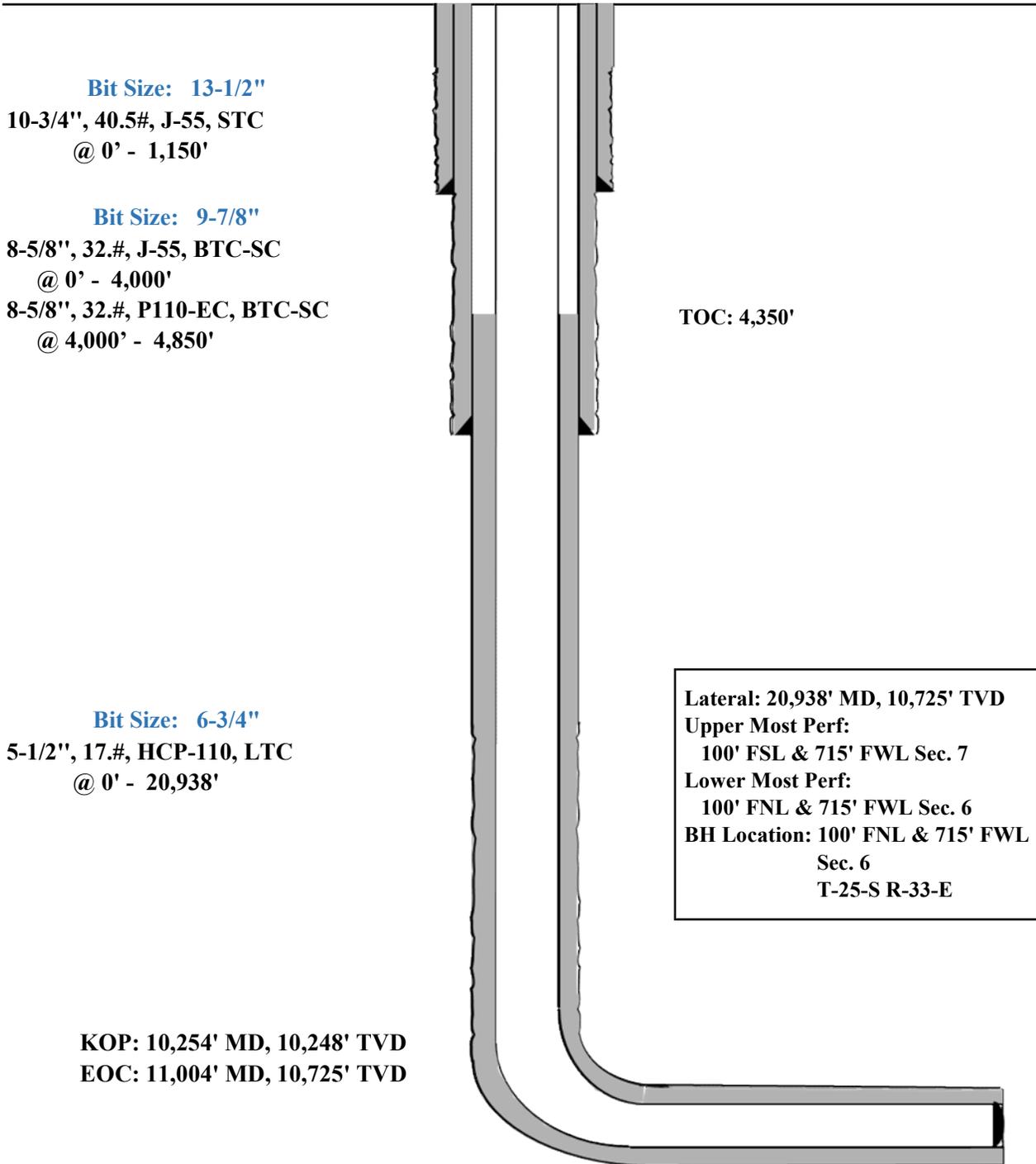
- Full BOPE test at first installation on the pad.
- Full BOPE test every 21 days per Onshore Order No. 2.
- Function test BOP elements per Onshore Order No. 2.
- Break testing BOP and BOPE coupled with batch drilling operations and option to offline cement and/or remediate (if needed) any surface or 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"

**eogresources**  
Dauntless 7 Fed 512H

310'  
821'  
Section 7  
T-25-S, R-33-E

Revised Wellbore B:  
  
API: 30-025-51273

KB: 3518'  
GL: 3493'



Bit Size: 13-1/2"

10-3/4", 40.5#, J-55, STC  
@ 0' - 1,150'

Bit Size: 9-7/8"

8-5/8", 32.#, J-55, BTC-SC  
@ 0' - 4,000'  
8-5/8", 32.#, P110-EC, BTC-SC  
@ 4,000' - 4,850'

TOC: 4,350'

Bit Size: 6-3/4"

5-1/2", 17.#, HCP-110, LTC  
@ 0' - 20,938'

Lateral: 20,938' MD, 10,725' TVD  
Upper Most Perf:  
100' FSL & 715' FWL Sec. 7  
Lower Most Perf:  
100' FNL & 715' FWL Sec. 6  
BH Location: 100' FNL & 715' FWL  
Sec. 6  
T-25-S R-33-E

KOP: 10,254' MD, 10,248' TVD  
EOC: 11,004' MD, 10,725' TVD

**GEOLOGIC NAME OF SURFACE FORMATION:**

Permian

**ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:**

Rustler	1,051'
Tamarisk Anhydrite	1,129'
Top of Salt	1,402'
Base of Salt	4,745'
Lamar	4,980'
Bell Canyon	5,005'
Cherry Canyon	6,006'
Brushy Canyon	7,563'
Bone Spring Lime	9,110'
Leonard (Avalon) Shale	9,185'
1st Bone Spring Sand	10,109'
2nd Bone Spring Shale	10,315'
2nd Bone Spring Sand	10,674'
3rd Bone Spring Carb	11,184'
3rd Bone Spring Sand	11,854'
Wolfcamp	12,286'
TD	10,725'

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

Upper Permian Sands	0- 400'	Fresh Water
Bell Canyon	5,005'	Oil
Cherry Canyon	6,006'	Oil
Brushy Canyon	7,563'	Oil
Leonard (Avalon) Shale	9,185'	Oil
1st Bone Spring Sand	10,109'	Oil
2nd Bone Spring Shale	10,315'	Oil
2nd Bone Spring Sand	10,674'	Oil

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

### ALL PREVIOUS COAs STILL APPLY

OPERATOR'S NAME:	EOG Resources Incorporated
LEASE NO.:	NMNM122619
WELL NAME & NO.:	Dauntless 7 Fed 512H
SURFACE HOLE FOOTAGE:	310'/S & 821'/W
BOTTOM HOLE FOOTAGE:	100'/N & 715'/W
LOCATION:	Section 7, T.25 S., R.33 E.
COUNTY:	Lea County, New Mexico

COA

H2S	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input type="checkbox"/> Fluid Filled	<input type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input type="checkbox"/> Unit

### A. CASING

#### Primary Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **1,150** feet (a minimum of 25 feet (Lea 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 **8 hours** 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.
2. The **9-5/8** inch intermediate casing shall be set at approximately **4,857** feet. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

**Option 1 (Single Stage):**

- Cement to surface. If cement does not circulate see B.1.a, c-d above.  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

**Option 2:**

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
  - b. Second stage above DV tool:
    - Cement to surface. If cement does not circulate, contact the appropriate BLM office.  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**
3. The **5-1/2** inch production casing shall be set at approximately **20,938** feet. The minimum required fill of cement behind the **5-1/2** inch production casing is:

**Option 1 (Single Stage):**

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

**Option 2:**

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

### **Alternate Casing Design:**

1. The **10-3/4** inch surface casing shall be set at approximately **1,150** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - e. 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.
  - f. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - g. 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.
  - h. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The **8-3/4** inch intermediate casing shall be set at approximately **4,857** feet. The minimum required fill of cement behind the **8-3/4** inch intermediate casing is:

### **Option 1 (Single Stage):**

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

### **Option 2:**

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- c. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
  - d. Second stage above DV tool:
    - Cement to surface. If cement does not circulate, contact the appropriate BLM office.  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**
3. The 5-1/2 inch production casing shall be set at approximately **20,938** feet. The minimum required fill of cement behind the 5-1/2 inch production casing is:

**Option 1 (Single Stage):**

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

**Option 2:**

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- c. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- d. Second stage above DV tool:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

**BOPE Break Testing Variance (Note: For 5M BOPE or less)**

- BOPE Break Testing is ONLY permitted for 5M BOPE or less.
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required.
- The BLM is to be contacted (575-689-5981 Lea County) 4 hours prior to BOPE tests.

- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.

OFFLINE CEMENTING AND BREAK TESTING IS APPROVED FOR THE SURFACE AND INTERMEDIATE SECTIONS.

ANNULAR VARIANCE FOR INTERMEDIATE CASING – SALT HOLE SECTION IN PLACE FOR BOTH DESIGNS PROPOSED IN THIS SUNDRY.

## 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)

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)  
689-5981

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 2<sup>nd</sup> 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.
2. Wait on cement (WOC) for Potash Areas: 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 24 hours. WOC time will be recorded in the driller's log. The casing integrity 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 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity 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: The flex line must meet the requirements of API 16C. 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 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, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
  - 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.

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.

**KPI – 4/25/2023**



**Dauntless 7 Fed Package**

<b>Wells in package:</b>	<b>Tgt TVD</b>
Dauntless 7 Fed #512H	10,725
Dauntless 7 Fed #513H	10,725
Dauntless 7 Fed #514H	10,725
Dauntless 7 Fed #515H	10,725
Dauntless 7 Fed #521H	10,725
Dauntless 7 Fed #583H	11,400
Dauntless 7 Fed #584H	11,400

**District I**  
 1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
 811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 255497

**CONDITIONS**

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 255497
	Action Type: [C-103] NOI Change of Plans (C-103A)

**CONDITIONS**

Created By	Condition	Condition Date
pkautz	IF ON ANY STRING CEMENT DOES NOT CIRCULATE, A RCBL MUST BE RUN ON THAT STRING OF CASING.	8/22/2023