

Submit 1 Copy To Appropriate District Office

District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88202
District III - (505) 334-6173
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico

Energy, Minerals and Natural Resources

Form C-103

Revised July 18, 2013

HOBBS OCE
FEB 03 2020
RECEIVED

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.

30-025-46756

5. Indicate Type of Lease

STATE ☒ FEE ☐

6. State Oil & Gas Lease No.

320561

7. Lease Name or Unit Agreement Name

HEMLOCK 32 STATE

8. Well Number 503H

9. OGRID Number

7377

10. Pool name or Wildcat

59900 TRIPLE X; BONE SPRING

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐

2. Name of Operator

EOG RESOURCES

3. Address of Operator

P O BOX 2267, MIDLAND TX 79702

4. Well Location

Unit Letter M : 304 feet from the SOUTH line and 567 feet from the WEST line

Section 32 Township 23S Range 33E NMPM County LEA CO, NM

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

3661 GL

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☒
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☒ P AND A ☐
CASING/CEMENT JOB ☒
OTHER: CEMENT CHANGE ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

EOG respectfully requests an amendment to our approved APD for this well to reflect the following changes:
Updated cement design to reflect R-111-P and ensure cement integrity in production string.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

TITLE Sr. Regulatory Administrator

DATE 01/30/2020

Type or print name Emily Follis

E-mail address: emily_follis@eogresources.com PHONE: 432-848-9163

For State Use Only

APPROVED BY:

TITLE Petroleum Engineer

DATE 02/02/2020

Conditions of Approval (if any):

Hemlock 32 State #503H
Lea County, New Mexico

304' FSL
567' FWL
Section 32
T-23-S, R-33-E

Revised Wellbore
1/30/2020
API: 30-025-46756

KB: 3,686'
GL: 3,661'

Bit Size: 17-1/2"

13-3/8", 54.5#, J-55, STC 0' - 1,275'

Bit Size: 12-1/4"

9-5/8", 40#, J-55, LTC 0' - 4000'
9-5/8", 40#, HCK-55, LTC 4000' - 4,980'

Bit Size: 8-3/4"

5-1/2", 17#, P-110 or HCP110, LTC @ 0' - 15,874'

TOC: Surface

KOP: 10,470'

Bit Size: 8-1/2"

Lateral: 15,874' MD, 10,895' TVD
BH Location: 100' FNL & 1310' FWL
Section 32
T-23-S, R-33-E

EOG RESOURCES, INC.
HEMLOCK 32 STATE #503H

Revised Permit Information:

Well Name: Hemlock 32 State #503H

Location:

SHL: 304' FSL & 567' FWL, Section 32, T-23-S, R-33-E, Lea Co., N.M.

BHL: 100' FNL & 1310' FWL, Section 32, T-23-S, R-33-E, Lea Co., N.M.

Cement Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /ft	Slurry Description
1,275'	790	13.5	1.73	Lead: Class C + 4.0% Bentonite + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	160	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
4,980'	500	9.0	3.5	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	350	14.4	1.20	Tail: Class C + 10% NaCl + 3% MagOx
15,874'	2,050	14.4	1.31	1 st Stage (Tail): Class H + 5% Salt (TOC @ 7,400')
	1,400	12.7	3.21	2 nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ Surface)



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Hemlock 32 State

#503H

OH

Plan: Plan #0.1

Standard Planning Report

13 January, 2020



Planning Report

Database: EDM
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Hemlock 32 State
Well: #503H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #503H
TVD Reference: KB = 25 @ 3686.0usft
MD Reference: KB = 25 @ 3686.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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

Site	Hemlock 32 State			
Site Position:		Northing:	457,257.00 usft	Latitude: 32° 15' 17.825 N
From:	Map	Easting:	767,769.00 usft	Longitude: 103° 36' 3.080 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence: 0.39 °

Well	#503H			
Well Position	+N/-S	-60.0 usft	Northing: 457,197.00 usft	Latitude: 32° 15' 17.235 N
	+E/-W	-60.0 usft	Easting: 767,709.00 usft	Longitude: 103° 36' 3.783 W
Position Uncertainty	0.0 usft	Wellhead Elevation:		Ground Level: 3,661.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/13/2020	6.69	60.05	47,686.72368160

Design	Plan #0.1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	8.28

Plan Survey Tool Program	Date 1/13/2020			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	15,873.6 Plan #0.1 (OH)	EOG MWD+IFR1	
			MWD + IFR1	

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	
1,790.7	7.81	108.62	1,789.5	-8.5	25.2	2.00	2.00	0.00	108.62	
7,181.8	7.81	108.62	7,130.5	-242.5	719.8	0.00	0.00	0.00	0.00	
7,572.5	0.00	0.00	7,520.0	-251.0	745.0	2.00	-2.00	0.00	180.00	
10,470.0	0.00	0.00	10,417.5	-251.0	745.0	0.00	0.00	0.00	0.00	KOP(Hemlock 32 Stat
11,220.0	90.00	359.61	10,895.0	226.5	741.7	12.00	12.00	-0.05	359.61	
15,873.6	90.00	359.61	10,895.0	4,880.0	710.0	0.00	0.00	0.00	0.00	PBHL(Hemlock 32 St



Planning Report

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Site: Hemlock 32 State
Well: #503H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #503H
TVD Reference: KB = 25 @ 3686.0usft
MD Reference: KB = 25 @ 3686.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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	108.62	1,500.0	-0.6	1.7	-0.3	2.00	2.00	0.00
1,600.0	4.00	108.62	1,599.8	-2.2	6.6	-1.3	2.00	2.00	0.00
1,700.0	6.00	108.62	1,699.5	-5.0	14.9	-2.8	2.00	2.00	0.00
1,790.7	7.81	108.62	1,789.5	-8.5	25.2	-4.8	2.00	2.00	0.00
1,800.0	7.81	108.62	1,798.7	-8.9	26.4	-5.0	0.00	0.00	0.00
1,900.0	7.81	108.62	1,897.8	-13.2	39.3	-7.4	0.00	0.00	0.00
2,000.0	7.81	108.62	1,996.8	-17.6	52.2	-9.9	0.00	0.00	0.00
2,100.0	7.81	108.62	2,095.9	-21.9	65.1	-12.3	0.00	0.00	0.00
2,200.0	7.81	108.62	2,195.0	-26.3	77.9	-14.8	0.00	0.00	0.00
2,300.0	7.81	108.62	2,294.1	-30.6	90.8	-17.2	0.00	0.00	0.00
2,400.0	7.81	108.62	2,393.1	-34.9	103.7	-19.6	0.00	0.00	0.00
2,500.0	7.81	108.62	2,492.2	-39.3	116.6	-22.1	0.00	0.00	0.00
2,600.0	7.81	108.62	2,591.3	-43.6	129.5	-24.5	0.00	0.00	0.00
2,700.0	7.81	108.62	2,690.3	-48.0	142.4	-27.0	0.00	0.00	0.00
2,800.0	7.81	108.62	2,789.4	-52.3	155.2	-29.4	0.00	0.00	0.00
2,900.0	7.81	108.62	2,888.5	-56.6	168.1	-31.8	0.00	0.00	0.00
3,000.0	7.81	108.62	2,987.6	-61.0	181.0	-34.3	0.00	0.00	0.00
3,100.0	7.81	108.62	3,086.6	-65.3	193.9	-36.7	0.00	0.00	0.00
3,200.0	7.81	108.62	3,185.7	-69.7	206.8	-39.2	0.00	0.00	0.00
3,300.0	7.81	108.62	3,284.8	-74.0	219.7	-41.6	0.00	0.00	0.00
3,400.0	7.81	108.62	3,383.8	-78.3	232.5	-44.1	0.00	0.00	0.00
3,500.0	7.81	108.62	3,482.9	-82.7	245.4	-46.5	0.00	0.00	0.00
3,600.0	7.81	108.62	3,582.0	-87.0	258.3	-48.9	0.00	0.00	0.00
3,700.0	7.81	108.62	3,681.1	-91.4	271.2	-51.4	0.00	0.00	0.00
3,800.0	7.81	108.62	3,780.1	-95.7	284.1	-53.8	0.00	0.00	0.00
3,900.0	7.81	108.62	3,879.2	-100.1	297.0	-56.3	0.00	0.00	0.00
4,000.0	7.81	108.62	3,978.3	-104.4	309.9	-58.7	0.00	0.00	0.00
4,100.0	7.81	108.62	4,077.3	-108.7	322.7	-61.1	0.00	0.00	0.00
4,200.0	7.81	108.62	4,176.4	-113.1	335.6	-63.6	0.00	0.00	0.00
4,300.0	7.81	108.62	4,275.5	-117.4	348.5	-66.0	0.00	0.00	0.00
4,400.0	7.81	108.62	4,374.6	-121.8	361.4	-68.5	0.00	0.00	0.00
4,500.0	7.81	108.62	4,473.6	-126.1	374.3	-70.9	0.00	0.00	0.00
4,600.0	7.81	108.62	4,572.7	-130.4	387.2	-73.3	0.00	0.00	0.00
4,700.0	7.81	108.62	4,671.8	-134.8	400.0	-75.8	0.00	0.00	0.00
4,800.0	7.81	108.62	4,770.8	-139.1	412.9	-78.2	0.00	0.00	0.00
4,900.0	7.81	108.62	4,869.9	-143.5	425.8	-80.7	0.00	0.00	0.00
5,000.0	7.81	108.62	4,969.0	-147.8	438.7	-83.1	0.00	0.00	0.00
5,100.0	7.81	108.62	5,068.1	-152.1	451.6	-85.5	0.00	0.00	0.00
5,200.0	7.81	108.62	5,167.1	-156.5	464.5	-88.0	0.00	0.00	0.00



Planning Report

Database: EDM
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Hemlock 32 State
 Well: #503H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #503H
 TVD Reference: KB = 25 @ 3686.0usft
 MD Reference: KB = 25 @ 3686.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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	7.81	108.62	5,266.2	-160.8	477.3	-90.4	0.00	0.00	0.00
5,400.0	7.81	108.62	5,365.3	-165.2	490.2	-92.9	0.00	0.00	0.00
5,500.0	7.81	108.62	5,464.3	-169.5	503.1	-95.3	0.00	0.00	0.00
5,600.0	7.81	108.62	5,563.4	-173.8	516.0	-97.7	0.00	0.00	0.00
5,700.0	7.81	108.62	5,662.5	-178.2	528.9	-100.2	0.00	0.00	0.00
5,800.0	7.81	108.62	5,761.6	-182.5	541.8	-102.6	0.00	0.00	0.00
5,900.0	7.81	108.62	5,860.6	-186.9	554.6	-105.1	0.00	0.00	0.00
6,000.0	7.81	108.62	5,959.7	-191.2	567.5	-107.5	0.00	0.00	0.00
6,100.0	7.81	108.62	6,058.8	-195.5	580.4	-109.9	0.00	0.00	0.00
6,200.0	7.81	108.62	6,157.8	-199.9	593.3	-112.4	0.00	0.00	0.00
6,300.0	7.81	108.62	6,256.9	-204.2	606.2	-114.8	0.00	0.00	0.00
6,400.0	7.81	108.62	6,356.0	-208.6	619.1	-117.3	0.00	0.00	0.00
6,500.0	7.81	108.62	6,455.1	-212.9	632.0	-119.7	0.00	0.00	0.00
6,600.0	7.81	108.62	6,554.1	-217.3	644.8	-122.1	0.00	0.00	0.00
6,700.0	7.81	108.62	6,653.2	-221.6	657.7	-124.6	0.00	0.00	0.00
6,800.0	7.81	108.62	6,752.3	-225.9	670.6	-127.0	0.00	0.00	0.00
6,900.0	7.81	108.62	6,851.3	-230.3	683.5	-129.5	0.00	0.00	0.00
7,000.0	7.81	108.62	6,950.4	-234.6	696.4	-131.9	0.00	0.00	0.00
7,100.0	7.81	108.62	7,049.5	-239.0	709.3	-134.4	0.00	0.00	0.00
7,181.8	7.81	108.62	7,130.5	-242.5	719.8	-136.3	0.00	0.00	0.00
7,200.0	7.45	108.62	7,148.6	-243.3	722.1	-136.8	2.00	-2.00	0.00
7,300.0	5.45	108.62	7,247.9	-246.9	732.7	-138.8	2.00	-2.00	0.00
7,400.0	3.45	108.62	7,347.6	-249.3	740.1	-140.2	2.00	-2.00	0.00
7,500.0	1.45	108.62	7,447.5	-250.7	744.1	-141.0	2.00	-2.00	0.00
7,572.5	0.00	0.00	7,520.0	-251.0	745.0	-141.1	2.00	-2.00	0.00
7,600.0	0.00	0.00	7,547.5	-251.0	745.0	-141.1	0.00	0.00	0.00
7,700.0	0.00	0.00	7,647.5	-251.0	745.0	-141.1	0.00	0.00	0.00
7,800.0	0.00	0.00	7,747.5	-251.0	745.0	-141.1	0.00	0.00	0.00
7,900.0	0.00	0.00	7,847.5	-251.0	745.0	-141.1	0.00	0.00	0.00
8,000.0	0.00	0.00	7,947.5	-251.0	745.0	-141.1	0.00	0.00	0.00
8,100.0	0.00	0.00	8,047.5	-251.0	745.0	-141.1	0.00	0.00	0.00
8,200.0	0.00	0.00	8,147.5	-251.0	745.0	-141.1	0.00	0.00	0.00
8,300.0	0.00	0.00	8,247.5	-251.0	745.0	-141.1	0.00	0.00	0.00
8,400.0	0.00	0.00	8,347.5	-251.0	745.0	-141.1	0.00	0.00	0.00
8,500.0	0.00	0.00	8,447.5	-251.0	745.0	-141.1	0.00	0.00	0.00
8,600.0	0.00	0.00	8,547.5	-251.0	745.0	-141.1	0.00	0.00	0.00
8,700.0	0.00	0.00	8,647.5	-251.0	745.0	-141.1	0.00	0.00	0.00
8,800.0	0.00	0.00	8,747.5	-251.0	745.0	-141.1	0.00	0.00	0.00
8,900.0	0.00	0.00	8,847.5	-251.0	745.0	-141.1	0.00	0.00	0.00
9,000.0	0.00	0.00	8,947.5	-251.0	745.0	-141.1	0.00	0.00	0.00
9,100.0	0.00	0.00	9,047.5	-251.0	745.0	-141.1	0.00	0.00	0.00
9,200.0	0.00	0.00	9,147.5	-251.0	745.0	-141.1	0.00	0.00	0.00
9,300.0	0.00	0.00	9,247.5	-251.0	745.0	-141.1	0.00	0.00	0.00
9,400.0	0.00	0.00	9,347.5	-251.0	745.0	-141.1	0.00	0.00	0.00
9,500.0	0.00	0.00	9,447.5	-251.0	745.0	-141.1	0.00	0.00	0.00
9,600.0	0.00	0.00	9,547.5	-251.0	745.0	-141.1	0.00	0.00	0.00
9,700.0	0.00	0.00	9,647.5	-251.0	745.0	-141.1	0.00	0.00	0.00
9,800.0	0.00	0.00	9,747.5	-251.0	745.0	-141.1	0.00	0.00	0.00
9,900.0	0.00	0.00	9,847.5	-251.0	745.0	-141.1	0.00	0.00	0.00
10,000.0	0.00	0.00	9,947.5	-251.0	745.0	-141.1	0.00	0.00	0.00
10,100.0	0.00	0.00	10,047.5	-251.0	745.0	-141.1	0.00	0.00	0.00
10,200.0	0.00	0.00	10,147.5	-251.0	745.0	-141.1	0.00	0.00	0.00
10,300.0	0.00	0.00	10,247.5	-251.0	745.0	-141.1	0.00	0.00	0.00
10,400.0	0.00	0.00	10,347.5	-251.0	745.0	-141.1	0.00	0.00	0.00



Planning Report

Database: EDM
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Hemlock 32 State
Well: #503H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #503H
TVD Reference: KB = 25 @ 3686.0usft
MD Reference: KB = 25 @ 3686.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
10,470.0	0.00	0.00	10,417.5	-251.0	745.0	-141.1	0.00	0.00	0.00
10,475.0	0.60	359.61	10,422.5	-251.0	745.0	-141.1	12.00	12.00	0.00
10,500.0	3.60	359.61	10,447.5	-250.1	745.0	-140.2	12.00	12.00	0.00
10,525.0	6.60	359.61	10,472.4	-247.8	745.0	-138.0	12.00	12.00	0.00
10,550.0	9.60	359.61	10,497.1	-244.3	745.0	-134.5	12.00	12.00	0.00
10,575.0	12.60	359.61	10,521.7	-239.5	744.9	-129.8	12.00	12.00	0.00
10,600.0	15.60	359.61	10,545.9	-233.4	744.9	-123.7	12.00	12.00	0.00
10,625.0	18.60	359.61	10,569.8	-226.1	744.8	-116.5	12.00	12.00	0.00
10,650.0	21.60	359.61	10,593.3	-217.5	744.8	-108.0	12.00	12.00	0.00
10,675.0	24.60	359.61	10,616.3	-207.7	744.7	-98.3	12.00	12.00	0.00
10,700.0	27.60	359.61	10,638.7	-196.7	744.6	-87.4	12.00	12.00	0.00
10,725.0	30.60	359.61	10,660.6	-184.5	744.5	-75.4	12.00	12.00	0.00
10,750.0	33.60	359.61	10,681.7	-171.2	744.5	-62.2	12.00	12.00	0.00
10,775.0	36.60	359.61	10,702.2	-156.8	744.4	-48.0	12.00	12.00	0.00
10,800.0	39.60	359.61	10,721.9	-141.4	744.3	-32.8	12.00	12.00	0.00
10,825.0	42.60	359.61	10,740.7	-125.0	744.1	-16.5	12.00	12.00	0.00
10,850.0	45.60	359.61	10,758.7	-107.6	744.0	0.7	12.00	12.00	0.00
10,875.0	48.60	359.61	10,775.7	-89.3	743.9	18.8	12.00	12.00	0.00
10,900.0	51.60	359.61	10,791.7	-70.1	743.8	37.7	12.00	12.00	0.00
10,925.0	54.60	359.61	10,806.7	-50.1	743.6	57.5	12.00	12.00	0.00
10,950.0	57.60	359.61	10,820.6	-29.4	743.5	78.0	12.00	12.00	0.00
10,975.0	60.60	359.61	10,833.5	-7.9	743.3	99.2	12.00	12.00	0.00
11,000.0	63.60	359.61	10,845.2	14.2	743.2	121.0	12.00	12.00	0.00
11,025.0	66.60	359.61	10,855.7	36.9	743.0	143.5	12.00	12.00	0.00
11,050.0	69.60	359.61	10,865.0	60.0	742.9	166.4	12.00	12.00	0.00
11,075.0	72.60	359.61	10,873.1	83.7	742.7	189.8	12.00	12.00	0.00
11,100.0	75.60	359.61	10,880.0	107.7	742.6	213.5	12.00	12.00	0.00
11,125.0	78.60	359.61	10,885.5	132.1	742.4	237.6	12.00	12.00	0.00
11,150.0	81.60	359.61	10,889.8	156.7	742.2	262.0	12.00	12.00	0.00
11,175.0	84.60	359.61	10,892.8	181.5	742.0	286.5	12.00	12.00	0.00
11,200.0	87.60	359.61	10,894.5	206.5	741.9	311.1	12.00	12.00	0.00
11,220.0	90.00	359.61	10,895.0	226.5	741.7	330.9	12.00	12.00	0.00
11,300.0	90.00	359.61	10,895.0	306.5	741.2	410.0	0.00	0.00	0.00
11,400.0	90.00	359.61	10,895.0	406.5	740.5	508.9	0.00	0.00	0.00
11,500.0	90.00	359.61	10,895.0	506.5	739.8	607.7	0.00	0.00	0.00
11,600.0	90.00	359.61	10,895.0	606.5	739.2	706.6	0.00	0.00	0.00
11,700.0	90.00	359.61	10,895.0	706.5	738.5	805.4	0.00	0.00	0.00
11,800.0	90.00	359.61	10,895.0	806.5	737.8	904.3	0.00	0.00	0.00
11,900.0	90.00	359.61	10,895.0	906.5	737.1	1,003.1	0.00	0.00	0.00
12,000.0	90.00	359.61	10,895.0	1,006.5	736.4	1,102.0	0.00	0.00	0.00
12,100.0	90.00	359.61	10,895.0	1,106.5	735.7	1,200.9	0.00	0.00	0.00
12,200.0	90.00	359.61	10,895.0	1,206.5	735.1	1,299.7	0.00	0.00	0.00
12,300.0	90.00	359.61	10,895.0	1,306.5	734.4	1,398.6	0.00	0.00	0.00
12,400.0	90.00	359.61	10,895.0	1,406.4	733.7	1,497.4	0.00	0.00	0.00
12,500.0	90.00	359.61	10,895.0	1,506.4	733.0	1,596.3	0.00	0.00	0.00
12,600.0	90.00	359.61	10,895.0	1,606.4	732.3	1,695.1	0.00	0.00	0.00
12,700.0	90.00	359.61	10,895.0	1,706.4	731.6	1,794.0	0.00	0.00	0.00
12,800.0	90.00	359.61	10,895.0	1,806.4	731.0	1,892.9	0.00	0.00	0.00
12,900.0	90.00	359.61	10,895.0	1,906.4	730.3	1,991.7	0.00	0.00	0.00
13,000.0	90.00	359.61	10,895.0	2,006.4	729.6	2,090.6	0.00	0.00	0.00
13,100.0	90.00	359.61	10,895.0	2,106.4	728.9	2,189.4	0.00	0.00	0.00
13,200.0	90.00	359.61	10,895.0	2,206.4	728.2	2,288.3	0.00	0.00	0.00
13,300.0	90.00	359.61	10,895.0	2,306.4	727.6	2,387.1	0.00	0.00	0.00
13,400.0	90.00	359.61	10,895.0	2,406.4	726.9	2,486.0	0.00	0.00	0.00



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North Reference: Grid
Survey Calculation Method: Minimum Curvature

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	359.61	10,895.0	2,506.4	726.2	2,584.9	0.00	0.00	0.00
13,600.0	90.00	359.61	10,895.0	2,606.4	725.5	2,683.7	0.00	0.00	0.00
13,700.0	90.00	359.61	10,895.0	2,706.4	724.8	2,782.6	0.00	0.00	0.00
13,800.0	90.00	359.61	10,895.0	2,806.4	724.1	2,881.4	0.00	0.00	0.00
13,900.0	90.00	359.61	10,895.0	2,906.4	723.5	2,980.3	0.00	0.00	0.00
14,000.0	90.00	359.61	10,895.0	3,006.4	722.8	3,079.2	0.00	0.00	0.00
14,100.0	90.00	359.61	10,895.0	3,106.4	722.1	3,178.0	0.00	0.00	0.00
14,200.0	90.00	359.61	10,895.0	3,206.4	721.4	3,276.9	0.00	0.00	0.00
14,300.0	90.00	359.61	10,895.0	3,306.4	720.7	3,375.7	0.00	0.00	0.00
14,400.0	90.00	359.61	10,895.0	3,406.4	720.1	3,474.6	0.00	0.00	0.00
14,500.0	90.00	359.61	10,895.0	3,506.4	719.4	3,573.4	0.00	0.00	0.00
14,600.0	90.00	359.61	10,895.0	3,606.4	718.7	3,672.3	0.00	0.00	0.00
14,700.0	90.00	359.61	10,895.0	3,706.4	718.0	3,771.2	0.00	0.00	0.00
14,800.0	90.00	359.61	10,895.0	3,806.4	717.3	3,870.0	0.00	0.00	0.00
14,900.0	90.00	359.61	10,895.0	3,906.4	716.6	3,968.9	0.00	0.00	0.00
15,000.0	90.00	359.61	10,895.0	4,006.4	716.0	4,067.7	0.00	0.00	0.00
15,100.0	90.00	359.61	10,895.0	4,106.4	715.3	4,166.6	0.00	0.00	0.00
15,200.0	90.00	359.61	10,895.0	4,206.4	714.6	4,265.4	0.00	0.00	0.00
15,300.0	90.00	359.61	10,895.0	4,306.4	713.9	4,364.3	0.00	0.00	0.00
15,400.0	90.00	359.61	10,895.0	4,406.4	713.2	4,463.2	0.00	0.00	0.00
15,500.0	90.00	359.61	10,895.0	4,506.4	712.5	4,562.0	0.00	0.00	0.00
15,600.0	90.00	359.61	10,895.0	4,606.4	711.9	4,660.9	0.00	0.00	0.00
15,700.0	90.00	359.61	10,895.0	4,706.4	711.2	4,759.7	0.00	0.00	0.00
15,800.0	90.00	359.61	10,895.0	4,806.4	710.5	4,858.6	0.00	0.00	0.00
15,873.6	90.00	359.61	10,895.0	4,880.0	710.0	4,931.4	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(Hemlock 32 State #1) - hit/miss target - Shape - Point	0.00	0.00	10,417.5	-251.0	745.0	456,946.00	768,454.00	32° 15' 14.701 N	103° 35' 55.128 W
FTP(Hemlock 32 State #) - plan misses target center by 163.5usft at 10874.4usft MD (10775.3 TVD, -89.7 N, 743.9 E) - Point	0.00	0.00	10,895.0	-201.0	745.0	456,996.00	768,454.00	32° 15' 15.196 N	103° 35' 55.124 W
PBHL(Hemlock 32 State #) - plan hits target center - Point	0.00	0.00	10,895.0	4,880.0	710.0	462,077.00	768,419.00	32° 16' 5.475 N	103° 35' 55.127 W



Lea County, NM (NAD 83 NME)

Hemlock 32 State #503H

Plan #0.1



To convert a Magnetic Direction to a Grid Direction, Add 6.30°
To convert a Magnetic Direction to a True Direction, Add 6.29° East
To convert a True Direction to a Grid Direction, Subtract 0.30°

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: #503H

KB = 25 @ 3886.0usft 3681.0
Northing 487187.00 Easting 787709.00 Latitude 32° 16' 17.235 N Longitude 103° 36' 3.783 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VSec	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	1790.7	7.81	108.62	1789.5	-8.5	25.2	2.00	108.62	-4.8	
4	7181.8	7.81	108.62	7130.5	-242.5	719.8	0.00	0.00	-138.3	
5	7572.5	0.00	0.00	7520.0	-251.0	745.0	2.00	180.00	-141.1	
6	10470.0	0.00	0.00	10417.5	-251.0	745.0	0.00	0.00	-141.1	KOP(Hemlock 32 State #503H)
7	11220.0	80.00	359.61	10895.0	226.5	741.7	12.00	359.61	330.9	PBHL(Hemlock 32 State #503H)
8	15873.6	80.00	359.61	10895.0	4880.0	710.0	0.00	0.00	4931.4	

CASING DETAILS

No casing data is available

WELLSBØRE YARDEY DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
KOP(Hemlock 32 State #503H)	10417.5	-251.0	745.0	482377.00	783454.00
PBHL(Hemlock 32 State #503H)	10895.0	4880.0	710.0	482377.00	783418.00
FTPL(Hemlock 32 State #503H)	10895.0	-201.0	745.0	482377.00	783454.00

