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District III
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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

AS DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-46272	² Pool Code 98220	³ Pool Name Purple Sage; Wolfcamp (Gas)
⁴ Property Code 329313	⁵ Property Name THOR 28 WOMB FEE	
⁷ GRID NO. 14744	⁸ Operator Name MEWBOURNE OIL COMPANY	⁶ Well Number 1H
		⁹ Elevation 3083'

¹⁰ Surface Location

UL or lot no. M	Section 28	Township 23S	Range 28E	Lot Idn	Feet from the 612	North/South line SOUTH	Feet From the 1222	East/West line WEST	County EDDY
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. D	Section 28	Township 23S	Range 28E	Lot Idn	Feet from the 321	North/South line NORTH	Feet from the 640	East/West line WEST	County EDDY
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¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

GEODETIC DATA
NAD 83 GRID - NM EAST

SURFACE LOCATION
N: 462206.4 - E: 614389.4
LAT: 32.2704589° N
LONG: 104.0969767° W

BOTTOM HOLE LOCATION
N: 466555.9 - E: 613804.4
LAT: 32.2824187° N
LONG: 104.0988388° W

CORNER DATA
NAD 83 GRID - NM EAST

A: FOUND COTTON SPINDLE
N: 461584.9 - E: 613170.7

B: FOUND 1/2\" REBAR
N: 464230.5 - E: 613156.6

C: FOUND 1/2\" REBAR
N: 466881.6 - E: 613142.8

D: FOUND COTTON SPINDLE
N: 466898.7 - E: 615806.4

E: FOUND COTTON SPINDLE
N: 466918.0 - E: 618471.2

F: FOUND 1/2\" REBAR
N: 461626.4 - E: 618520.2

¹⁷ 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 a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Jackie Lathan 01/11/2021
Signature Date
Jackie Lathan
Printed Name
jlathan@mewbourne.com
E-mail Address

¹⁸ SURVEYOR 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.

07-02-20
Date of Survey
Signature and Seal of Professional Surveyor
19680
Certificate Number

Job No.: LS20070309



Project: Eddy County, NM (WAD83)

Site: Sec 28-T23S-R28E

Well: Thor 28 WOMB Fee #1H

Error creating XSL parser for script .

Wellbore: Wellbore #1 is incorrect.

Design: Wellbore #1

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone



Approximate Grid North
True North: -8.13°
Magnetic North: 8.91°
Magnetic Field
Strength: 6778.5 nT
Dip Angle: 68.98°
Date: 6/27/2020
Model: IGRF 2020

WELL DETAILS

3083 GL + 28 KB @ 3111.08 (Pat 595)

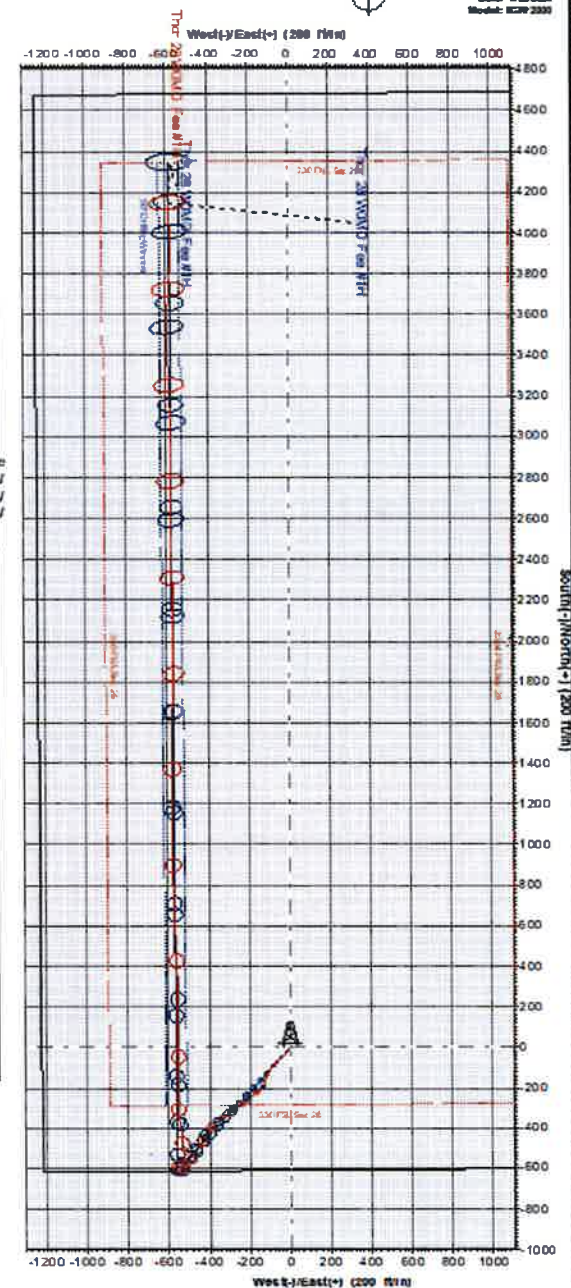
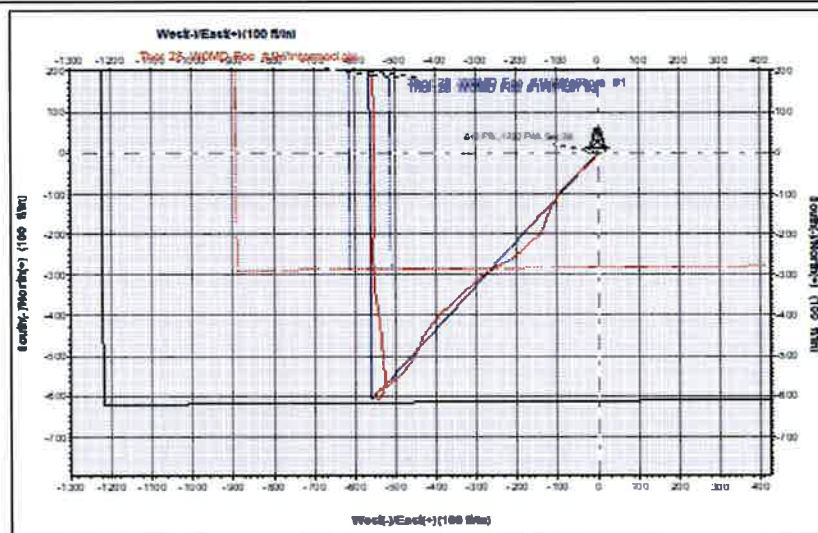
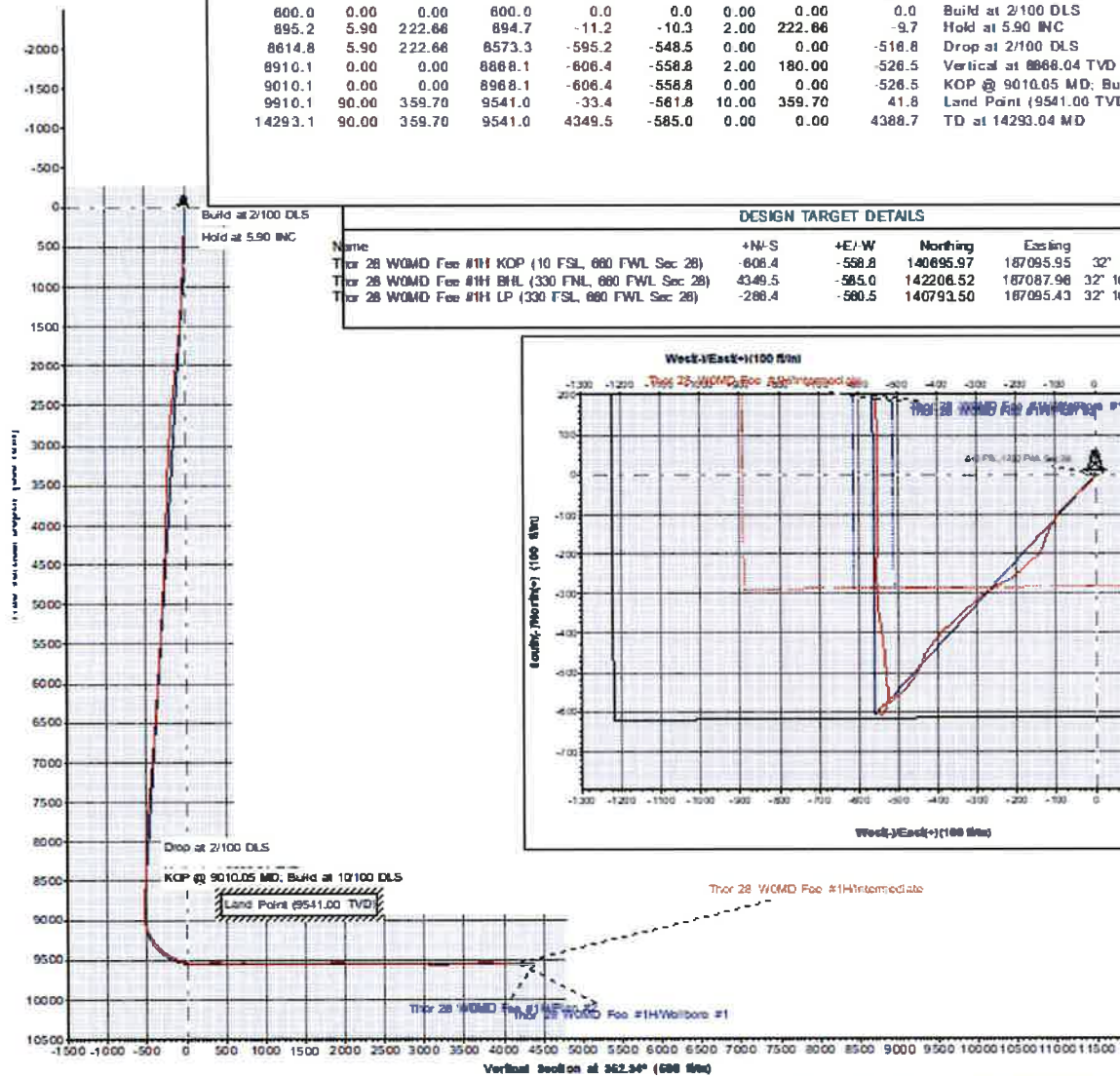
+N/-S	+E/-W	Northing	Eastng	Latitude	Longitude
0.0	0.0	140680.79	187268.26	32° 16' 13.652 N	104° 5' 49.117 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	Build at 2/100 DLS
895.2	5.90	222.66	894.7	-11.2	-10.3	2.00	222.66	-9.7	Hold at 5.90 INC
8614.8	5.90	222.66	8573.3	-595.2	-548.5	0.00	0.00	-518.8	Drop at 2/100 DLS
8910.1	0.00	0.00	8868.1	-606.4	-558.8	2.00	180.00	-526.5	Vertical at 8868.04 TVD
9010.1	0.00	0.00	8968.1	-606.4	-558.8	0.00	0.00	-526.5	KOP @ 9010.05 MD; Build at 10/100 DLS
9910.1	90.00	359.70	9541.0	-33.4	-581.8	10.00	359.70	41.8	Land Point (9541.00 TVD)
14293.1	90.00	359.70	9541.0	4349.5	-585.0	0.00	0.00	4388.7	TD at 14293.04 MD

DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Eastng	Latitude	Longitude
Thor 28 WOMB Fee #1H KOP (10 FSL, 680 FWL Sec 28)	-606.4	-558.8	140695.97	187095.95	32° 16' 7.664 N	104° 5' 55.640 W
Thor 28 WOMB Fee #1H BHL (330 FNL, 680 FWL Sec 28)	4349.5	-585.0	142206.52	187087.96	32° 16' 58.707 N	104° 5' 55.820 W
Thor 28 WOMB Fee #1H LP (330 FSL, 680 FWL Sec 28)	-286.4	-560.5	140793.50	187095.43	32° 16' 10.830 N	104° 5' 55.852 W



HALLIBURTON | Sperry Drilling



Project: Eddy County, NM (NAD83)
Site: Sec 28-T23S-R28E
Well: Thor 28 W0MD Fee #1H
612 FSL, 1222 FWL Sec 28
Wellbore: Wellbore #1
Design: Plan #2

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone



Azimuths to Grid North
True North: -0.13°
Magnetic North: 6.91°
Magnetic Field
Strength: 47711.5nT
Dip Angle: 60.00°
Date: 8/29/2020
Model: BGGM2020

WELL DETAILS

3083 GL + 28 KB @ 3111.00usft (Pat 595)

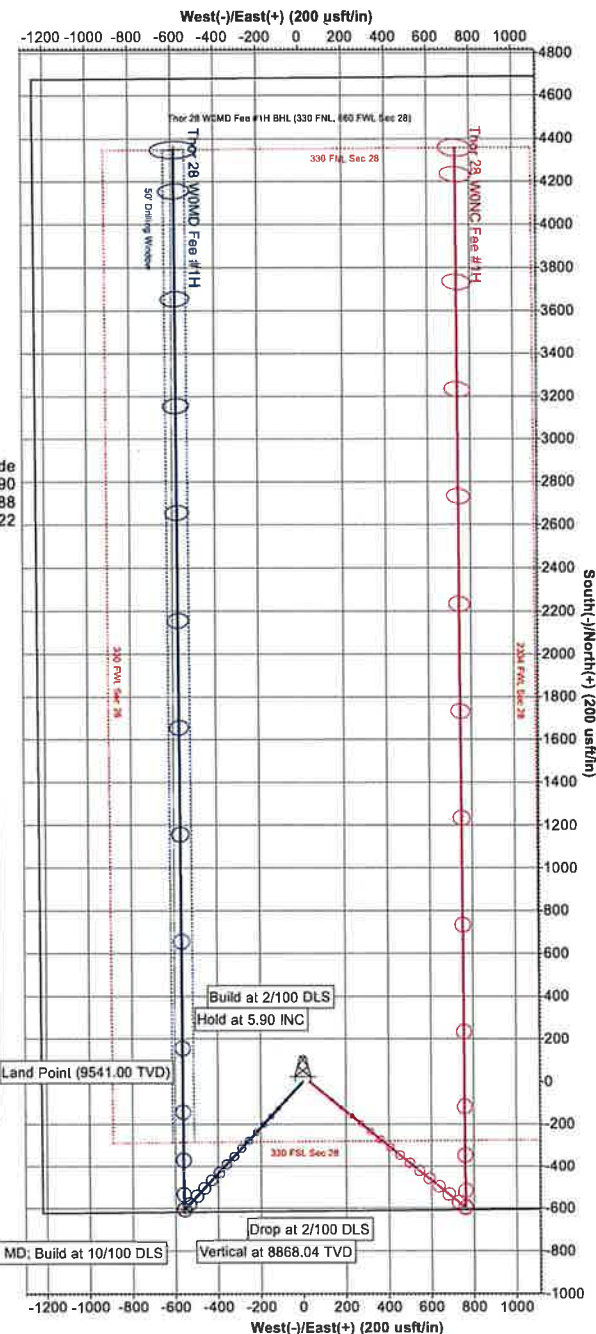
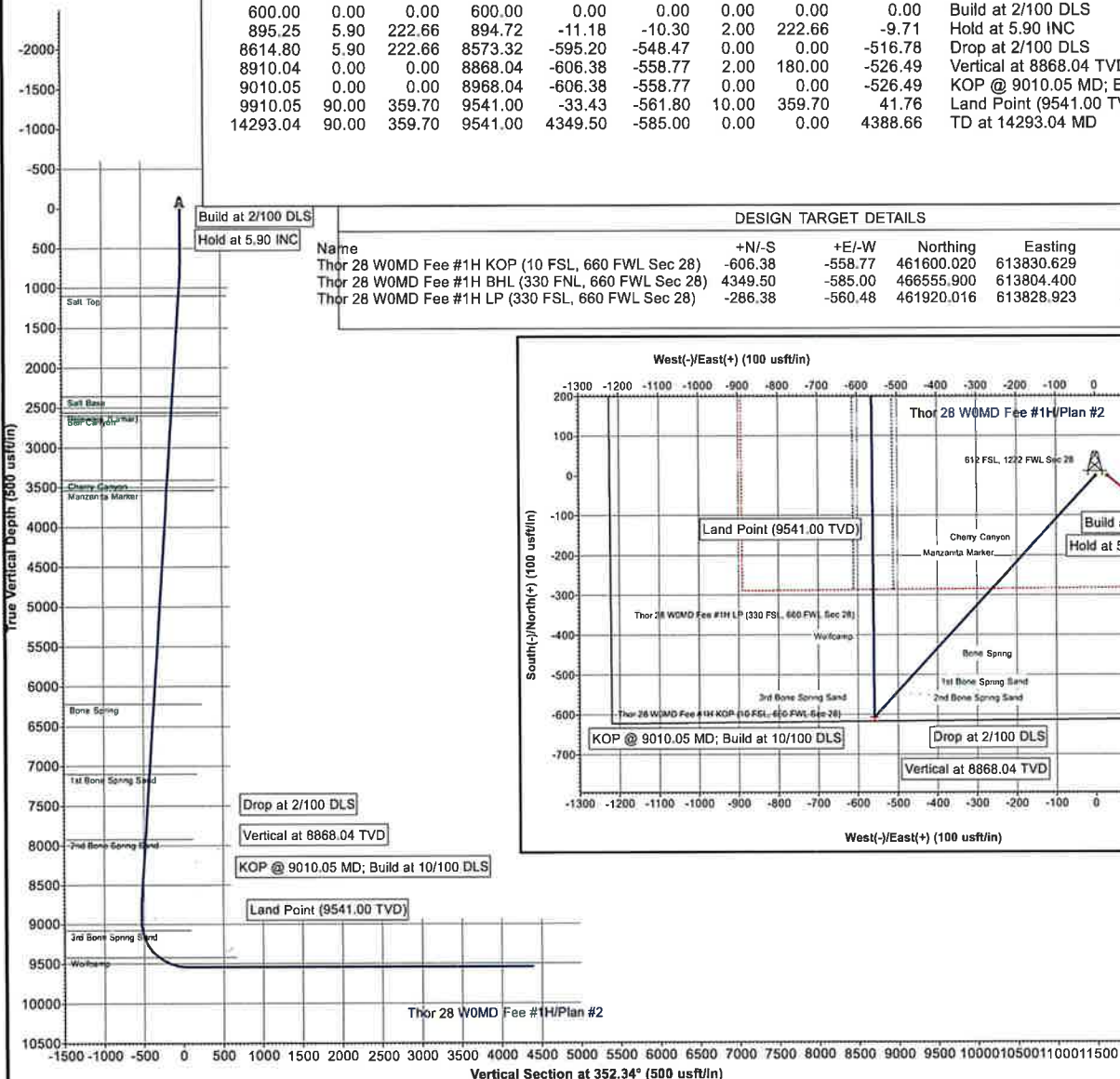
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	462206.400	614389.400	32.2704589	-104.0969768

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	Build at 2/100 DLS
895.25	5.90	222.66	894.72	-11.18	-10.30	2.00	222.66	-9.71	Hold at 5.90 INC
8614.80	5.90	222.66	8573.32	-595.20	-548.47	0.00	0.00	-516.78	Drop at 2/100 DLS
8910.04	0.00	0.00	8868.04	-606.38	-558.77	2.00	180.00	-526.49	Vertical at 8868.04 TVD
9010.05	0.00	0.00	8968.04	-606.38	-558.77	0.00	0.00	-526.49	KOP @ 9010.05 MD; Build at 10/100 DLS
9910.05	90.00	359.70	9541.00	-33.43	-561.80	10.00	359.70	41.76	Land Point (9541.00 TVD)
14293.04	90.00	359.70	9541.00	4349.50	-585.00	0.00	0.00	4388.66	TD at 14293.04 MD

DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Thor 28 W0MD Fee #1H KOP (10 FSL, 660 FWL Sec 28)	-606.38	-558.77	461600.020	613830.629	32.2687954	-104.0987890
Thor 28 W0MD Fee #1H BHL (330 FNL, 660 FWL Sec 28)	4349.50	-585.00	466555.900	613804.400	32.2824186	-104.0988388
Thor 28 W0MD Fee #1H LP (330 FSL, 660 FWL Sec 28)	-286.38	-560.48	461920.016	613828.923	32.2696751	-104.0987922



Pat 595

Mewbourne Oil Company

Eddy County, NM (NAD83) Sec 28-T23S-R28E

API#

Thor 28 W0MD Fee #1H

612 FSL, 1222 FWL Sec 28

Wellbore #1

Plan: Plan #2

Please review plan for Magnetic Toolface Switchover.

Highlighted inclination-tangent sections are between 4 and 6°.

Sperry Drilling Services

Combo Report

31 August, 2020

Well Coordinates: 32.2704589
-104.0969768

North American Datum 1983
New Mexico Eastern Zone
462,206.40 N
614,389.40 E

Ground Level: 3,083.00 usft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Centered on Well Thor 28 W0MD Fee #1H

3083 GL + 28 KB @ 3111.00usft (Pat 595)

N

Grid

Midcon (2 decimal)

Version: 5000.15 Build: 91E

Report Version: Midcon Combo v1.15

HALLIBURTON

Plan Report for Thor 28 W0MD Fee #1H - Plan #2

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
				Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)				
0.00	0.00	0.00	0.00	0.00 N	0.00 E	462,206.400	614,389.400	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00 N	0.00 E	462,206.400	614,389.400	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00 N	0.00 E	462,206.400	614,389.400	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00 N	0.00 E	462,206.400	614,389.400	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00 N	0.00 E	462,206.400	614,389.400	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00 N	0.00 E	462,206.400	614,389.400	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00 N	0.00 E	462,206.400	614,389.400	0.00	0.00	0.00	Build at 2/100 DLS
700.00	2.00	222.66	699.98	1.28 S	1.18 W	462,205.117	614,388.217	2.00	-1.11	222.66	
800.00	4.00	222.66	799.84	5.13 S	4.73 W	462,201.268	614,384.671	2.00	-4.46	0.00	
895.25	5.90	222.66	894.72	11.18 S	10.30 W	462,195.222	614,379.099	2.00	-9.71	0.00	Hold at 5.90 INC
900.00	5.90	222.66	899.45	11.54 S	10.63 W	462,194.862	614,378.768	0.00	-10.02	0.00	
1,000.00	5.90	222.66	998.92	19.10 S	17.60 W	462,187.297	614,371.796	0.00	-16.59	0.00	
1,100.00	5.90	222.66	1,098.39	26.67 S	24.58 W	462,179.731	614,364.825	0.00	-23.16	0.00	
1,101.62	5.90	222.66	1,100.00	26.79 S	24.69 W	462,179.609	614,364.712	0.00	-23.26	0.00	Salt Top
1,200.00	5.90	222.66	1,197.86	34.23 S	31.55 W	462,172.165	614,357.853	0.00	-29.72	0.00	
1,300.00	5.90	222.66	1,297.33	41.80 S	38.52 W	462,164.600	614,350.882	0.00	-36.29	0.00	
1,400.00	5.90	222.66	1,396.80	49.37 S	45.49 W	462,157.034	614,343.910	0.00	-42.86	0.00	
1,500.00	5.90	222.66	1,496.27	56.93 S	52.46 W	462,149.469	614,336.939	0.00	-49.43	0.00	
1,600.00	5.90	222.66	1,595.74	64.50 S	59.43 W	462,141.903	614,329.967	0.00	-56.00	0.00	
1,700.00	5.90	222.66	1,695.21	72.06 S	66.40 W	462,134.338	614,322.996	0.00	-62.57	0.00	
1,800.00	5.90	222.66	1,794.68	79.63 S	73.38 W	462,126.772	614,316.024	0.00	-69.14	0.00	
1,900.00	5.90	222.66	1,894.15	87.19 S	80.35 W	462,119.207	614,309.053	0.00	-75.70	0.00	
2,000.00	5.90	222.66	1,993.62	94.76 S	87.32 W	462,111.641	614,302.081	0.00	-82.27	0.00	
2,100.00	5.90	222.66	2,093.09	102.32 S	94.29 W	462,104.076	614,295.110	0.00	-88.84	0.00	
2,200.00	5.90	222.66	2,192.55	109.89 S	101.26 W	462,096.510	614,288.138	0.00	-95.41	0.00	
2,300.00	5.90	222.66	2,292.02	117.46 S	108.23 W	462,088.945	614,281.167	0.00	-101.98	0.00	
2,368.34	5.90	222.66	2,360.00	122.63 S	113.00 W	462,083.775	614,276.402	0.00	-106.47	0.00	Salt Base
2,400.00	5.90	222.66	2,391.49	125.02 S	115.20 W	462,081.379	614,274.195	0.00	-108.55	0.00	
2,500.00	5.90	222.66	2,490.96	132.59 S	122.18 W	462,073.814	614,267.224	0.00	-115.12	0.00	
2,569.41	5.90	222.66	2,560.00	137.84 S	127.01 W	462,068.563	614,262.385	0.00	-119.68	0.00	Delaware (Lamar)
2,600.00	5.90	222.66	2,590.43	140.15 S	129.15 W	462,066.248	614,260.252	0.00	-121.69	0.00	
2,609.62	5.90	222.66	2,600.00	140.88 S	129.82 W	462,065.521	614,259.582	0.00	-122.32	0.00	Bell Canyon
2,700.00	5.90	222.66	2,689.90	147.72 S	136.12 W	462,058.683	614,253.281	0.00	-128.25	0.00	
2,800.00	5.90	222.66	2,789.37	155.28 S	143.09 W	462,051.117	614,246.309	0.00	-134.82	0.00	
2,900.00	5.90	222.66	2,888.84	162.85 S	150.06 W	462,043.552	614,239.338	0.00	-141.39	0.00	
3,000.00	5.90	222.66	2,988.31	170.41 S	157.03 W	462,035.986	614,232.366	0.00	-147.96	0.00	

Plan Report for Thor 28 W0MD Fee #1H - Plan #2

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
				Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)				
3,100.00	5.90	222.66	3,087.78	177.98 S	164.01 W	462,028.421	614,225.395	0.00	-154.53	0.00	
3,200.00	5.90	222.66	3,187.25	185.54 S	170.98 W	462,020.855	614,218.423	0.00	-161.10	0.00	
3,300.00	5.90	222.66	3,286.72	193.11 S	177.95 W	462,013.290	614,211.452	0.00	-167.67	0.00	
3,400.00	5.90	222.66	3,386.19	200.68 S	184.92 W	462,005.724	614,204.480	0.00	-174.24	0.00	
3,423.94	5.90	222.66	3,410.00	202.49 S	186.59 W	462,003.913	614,202.811	0.00	-175.81	0.00	Cherry Canyon
3,500.00	5.90	222.66	3,485.66	208.24 S	191.89 W	461,998.159	614,197.508	0.00	-180.80	0.00	
3,554.63	5.90	222.66	3,540.00	212.37 S	195.70 W	461,994.026	614,193.700	0.00	-184.39	0.00	Manzanita Marker
3,600.00	5.90	222.66	3,585.13	215.81 S	198.86 W	461,990.593	614,190.537	0.00	-187.37	0.00	
3,700.00	5.90	222.66	3,684.60	223.37 S	205.83 W	461,983.028	614,183.565	0.00	-193.94	0.00	
3,800.00	5.90	222.66	3,784.06	230.94 S	212.81 W	461,975.462	614,176.594	0.00	-200.51	0.00	
3,900.00	5.90	222.66	3,883.53	238.50 S	219.78 W	461,967.897	614,169.622	0.00	-207.08	0.00	
4,000.00	5.90	222.66	3,983.00	246.07 S	226.75 W	461,960.331	614,162.651	0.00	-213.65	0.00	
4,100.00	5.90	222.66	4,082.47	253.63 S	233.72 W	461,952.766	614,155.679	0.00	-220.22	0.00	
4,200.00	5.90	222.66	4,181.94	261.20 S	240.69 W	461,945.200	614,148.708	0.00	-226.79	0.00	
4,300.00	5.90	222.66	4,281.41	268.77 S	247.66 W	461,937.635	614,141.736	0.00	-233.35	0.00	
4,400.00	5.90	222.66	4,380.88	276.33 S	254.64 W	461,930.069	614,134.765	0.00	-239.92	0.00	
4,500.00	5.90	222.66	4,480.35	283.90 S	261.61 W	461,922.504	614,127.793	0.00	-246.49	0.00	
4,600.00	5.90	222.66	4,579.82	291.46 S	268.58 W	461,914.938	614,120.822	0.00	-253.06	0.00	
4,700.00	5.90	222.66	4,679.29	299.03 S	275.55 W	461,907.373	614,113.850	0.00	-259.63	0.00	
4,800.00	5.90	222.66	4,778.76	306.59 S	282.52 W	461,899.807	614,106.879	0.00	-266.20	0.00	
4,900.00	5.90	222.66	4,878.23	314.16 S	289.49 W	461,892.242	614,099.907	0.00	-272.77	0.00	
5,000.00	5.90	222.66	4,977.70	321.72 S	296.46 W	461,884.676	614,092.936	0.00	-279.33	0.00	
5,100.00	5.90	222.66	5,077.17	329.29 S	303.44 W	461,877.111	614,085.964	0.00	-285.90	0.00	
5,200.00	5.90	222.66	5,176.64	336.85 S	310.41 W	461,869.545	614,078.993	0.00	-292.47	0.00	
5,300.00	5.90	222.66	5,276.11	344.42 S	317.38 W	461,861.980	614,072.021	0.00	-299.04	0.00	
5,400.00	5.90	222.66	5,375.58	351.99 S	324.35 W	461,854.414	614,065.050	0.00	-305.61	0.00	
5,500.00	5.90	222.66	5,475.04	359.55 S	331.32 W	461,846.849	614,058.078	0.00	-312.18	0.00	
5,600.00	5.90	222.66	5,574.51	367.12 S	338.29 W	461,839.283	614,051.107	0.00	-318.75	0.00	
5,700.00	5.90	222.66	5,673.98	374.68 S	345.26 W	461,831.718	614,044.135	0.00	-325.32	0.00	
5,800.00	5.90	222.66	5,773.45	382.25 S	352.24 W	461,824.152	614,037.164	0.00	-331.88	0.00	
5,900.00	5.90	222.66	5,872.92	389.81 S	359.21 W	461,816.587	614,030.192	0.00	-338.45	0.00	
6,000.00	5.90	222.66	5,972.39	397.38 S	366.18 W	461,809.021	614,023.221	0.00	-345.02	0.00	
6,100.00	5.90	222.66	6,071.86	404.94 S	373.15 W	461,801.456	614,016.249	0.00	-351.59	0.00	
6,200.00	5.90	222.66	6,171.33	412.51 S	380.12 W	461,793.890	614,009.278	0.00	-358.16	0.00	
6,248.93	5.90	222.66	6,220.00	416.21 S	383.53 W	461,790.188	614,005.866	0.00	-361.37	0.00	Bone Spring
6,300.00	5.90	222.66	6,270.80	420.08 S	387.09 W	461,786.325	614,002.306	0.00	-364.73	0.00	
6,400.00	5.90	222.66	6,370.27	427.64 S	394.07 W	461,778.759	613,995.335	0.00	-371.30	0.00	

Plan Report for Thor 28 W0MD Fee #1H - Plan #2

Measured		Grid	Vertical	Local Coordinates		Map Coordinates		Dogleg	Vertical	Toolface	
Depth	Inclination	Azimuth	Depth	Northing	Easting	Northing	Easting	Rate	Section	Angle	Comments
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(usft)	(°)	
6,500.00	5.90	222.66	6,469.74	435.21 S	401.04 W	461,771.194	613,988.363	0.00	-377.87	0.00	
6,600.00	5.90	222.66	6,569.21	442.77 S	408.01 W	461,763.628	613,981.391	0.00	-384.43	0.00	
6,700.00	5.90	222.66	6,668.68	450.34 S	414.98 W	461,756.063	613,974.420	0.00	-391.00	0.00	
6,800.00	5.90	222.66	6,768.15	457.90 S	421.95 W	461,748.497	613,967.448	0.00	-397.57	0.00	
6,900.00	5.90	222.66	6,867.62	465.47 S	428.92 W	461,740.932	613,960.477	0.00	-404.14	0.00	
7,000.00	5.90	222.66	6,967.09	473.03 S	435.89 W	461,733.366	613,953.505	0.00	-410.71	0.00	
7,100.00	5.90	222.66	7,066.56	480.60 S	442.87 W	461,725.801	613,946.534	0.00	-417.28	0.00	
7,133.62	5.90	222.66	7,100.00	483.14 S	445.21 W	461,723.257	613,944.190	0.00	-419.49	0.00	1st Bone Spring Sand
7,200.00	5.90	222.66	7,166.02	488.16 S	449.84 W	461,718.235	613,939.562	0.00	-423.85	0.00	
7,300.00	5.90	222.66	7,265.49	495.73 S	456.81 W	461,710.670	613,932.591	0.00	-430.41	0.00	
7,400.00	5.90	222.66	7,364.96	503.30 S	463.78 W	461,703.104	613,925.619	0.00	-436.98	0.00	
7,500.00	5.90	222.66	7,464.43	510.86 S	470.75 W	461,695.539	613,918.648	0.00	-443.55	0.00	
7,600.00	5.90	222.66	7,563.90	518.43 S	477.72 W	461,687.973	613,911.676	0.00	-450.12	0.00	
7,700.00	5.90	222.66	7,663.37	525.99 S	484.70 W	461,680.407	613,904.705	0.00	-456.69	0.00	
7,800.00	5.90	222.66	7,762.84	533.56 S	491.67 W	461,672.842	613,897.733	0.00	-463.26	0.00	
7,900.00	5.90	222.66	7,862.31	541.12 S	498.64 W	461,665.276	613,890.762	0.00	-469.83	0.00	
7,958.00	5.90	222.66	7,920.00	545.51 S	502.68 W	461,660.889	613,886.718	0.00	-473.64	0.00	2nd Bone Spring Sand
8,000.00	5.90	222.66	7,961.78	548.69 S	505.61 W	461,657.711	613,883.790	0.00	-476.40	0.00	
8,100.00	5.90	222.66	8,061.25	556.25 S	512.58 W	461,650.145	613,876.819	0.00	-482.96	0.00	
8,200.00	5.90	222.66	8,160.72	563.82 S	519.55 W	461,642.580	613,869.847	0.00	-489.53	0.00	
8,300.00	5.90	222.66	8,260.19	571.39 S	526.52 W	461,635.014	613,862.876	0.00	-496.10	0.00	
8,400.00	5.90	222.66	8,359.66	578.95 S	533.50 W	461,627.449	613,855.904	0.00	-502.67	0.00	
8,500.00	5.90	222.66	8,459.13	586.52 S	540.47 W	461,619.883	613,848.933	0.00	-509.24	0.00	
8,600.00	5.90	222.66	8,558.60	594.08 S	547.44 W	461,612.318	613,841.961	0.00	-515.81	0.00	
8,614.80	5.90	222.66	8,573.32	595.20 S	548.47 W	461,611.198	613,840.929	0.00	-516.78	0.00	Drop at 2/100 DLS
8,700.00	4.20	222.66	8,658.18	600.72 S	553.56 W	461,605.680	613,835.844	2.00	-521.57	180.00	
8,800.00	2.20	222.66	8,758.02	604.83 S	557.34 W	461,601.574	613,832.061	2.00	-525.14	180.00	
8,900.00	0.20	222.66	8,858.00	606.37 S	558.76 W	461,600.033	613,830.641	2.00	-526.47	180.00	
8,910.04	0.00	0.00	8,868.04	606.38 S	558.77 W	461,600.020	613,830.629	2.00	-526.49	180.00	Vertical at 8868.04 TVD
9,000.00	0.00	0.00	8,958.00	606.38 S	558.77 W	461,600.020	613,830.629	0.00	-526.49	0.00	
9,010.05	0.00	0.00	8,968.04	606.38 S	558.77 W	461,600.020	613,830.629	0.00	-526.49	0.00	KOP @ 9010.05 MD; Build at 10/100 DLS
9,050.00	4.00	359.70	9,007.96	604.99 S	558.78 W	461,601.412	613,830.621	10.00	-525.10	359.70	
9,100.00	9.00	359.70	9,057.63	599.33 S	558.81 W	461,607.067	613,830.592	10.00	-519.50	0.00	
9,122.73	11.27	359.70	9,080.00	595.34 S	558.83 W	461,611.065	613,830.570	10.00	-515.53	0.00	3rd Bone Spring Sand
9,150.00	14.00	359.70	9,106.61	589.37 S	558.86 W	461,617.028	613,830.539	10.00	-509.62	0.00	
9,200.00	19.00	359.70	9,154.53	575.18 S	558.94 W	461,631.220	613,830.464	10.00	-495.54	0.00	
9,250.00	24.00	359.70	9,201.04	556.87 S	559.03 W	461,649.535	613,830.367	10.00	-477.38	0.00	

Plan Report for Thor 28 W0MD Fee #1H - Plan #2

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
				Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)				
9,300.00	29.00	359.70	9,245.78	534.57 S	559.15 W	461,671.834	613,830.249	10.00	-455.26	0.00	
9,350.00	34.00	359.70	9,288.40	508.45 S	559.29 W	461,697.947	613,830.111	10.00	-429.36	0.00	
9,400.00	39.00	359.70	9,328.58	478.73 S	559.45 W	461,727.675	613,829.953	10.00	-399.88	0.00	
9,450.00	44.00	359.70	9,366.02	445.61 S	559.62 W	461,760.791	613,829.778	10.00	-367.04	0.00	
9,500.00	49.00	359.70	9,400.43	409.35 S	559.81 W	461,797.045	613,829.586	10.00	-331.08	0.00	
9,530.80	52.07	359.70	9,420.00	385.58 S	559.94 W	461,820.817	613,829.460	10.00	-307.50	0.00	Wolfcamp
9,550.00	54.00	359.70	9,431.55	370.24 S	560.02 W	461,836.160	613,829.379	10.00	-292.29	0.00	
9,600.00	59.00	359.70	9,459.14	328.56 S	560.24 W	461,877.838	613,829.158	10.00	-250.95	0.00	
9,650.00	64.00	359.70	9,482.99	284.64 S	560.47 W	461,921.763	613,828.926	10.00	-207.39	0.00	
9,700.00	69.00	359.70	9,502.93	238.80 S	560.72 W	461,967.599	613,828.683	10.00	-161.93	0.00	
9,750.00	74.00	359.70	9,518.79	191.40 S	560.97 W	462,014.998	613,828.433	10.00	-114.92	0.00	
9,800.00	79.00	359.70	9,530.46	142.80 S	561.22 W	462,063.600	613,828.175	10.00	-66.72	0.00	
9,850.00	84.00	359.70	9,537.86	93.37 S	561.49 W	462,113.033	613,827.914	10.00	-17.69	0.00	
9,900.00	89.00	359.70	9,540.91	43.48 S	561.75 W	462,162.923	613,827.650	10.00	31.79	0.00	
9,910.05	90.00	359.70	9,541.00	33.43 S	561.80 W	462,172.970	613,827.596	10.00	41.76	0.00	Land Point (9541.00 TVD)
10,000.00	90.00	359.70	9,541.00	56.52 N	562.28 W	462,262.921	613,827.120	0.00	130.97	-0.03	
10,100.00	90.00	359.70	9,541.00	156.52 N	562.81 W	462,362.920	613,826.591	0.00	230.14	0.00	
10,200.00	90.00	359.70	9,541.00	256.52 N	563.34 W	462,462.919	613,826.062	0.00	329.32	0.00	
10,300.00	90.00	359.70	9,541.00	356.52 N	563.87 W	462,562.917	613,825.533	0.00	428.50	0.00	
10,400.00	90.00	359.70	9,541.00	456.52 N	564.40 W	462,662.916	613,825.003	0.00	527.67	0.00	
10,500.00	90.00	359.70	9,541.00	556.51 N	564.93 W	462,762.914	613,824.474	0.00	626.85	0.00	
10,600.00	90.00	359.70	9,541.00	656.51 N	565.46 W	462,862.913	613,823.945	0.00	726.03	0.00	
10,700.00	90.00	359.70	9,541.00	756.51 N	565.98 W	462,962.912	613,823.416	0.00	825.21	0.00	
10,800.00	90.00	359.70	9,541.00	856.51 N	566.51 W	463,062.910	613,822.887	0.00	924.38	0.00	
10,900.00	90.00	359.70	9,541.00	956.51 N	567.04 W	463,162.909	613,822.357	0.00	1,023.56	0.00	
11,000.00	90.00	359.70	9,541.00	1,056.51 N	567.57 W	463,262.907	613,821.828	0.00	1,122.74	0.00	
11,100.00	90.00	359.70	9,541.00	1,156.51 N	568.10 W	463,362.906	613,821.299	0.00	1,221.91	0.00	
11,200.00	90.00	359.70	9,541.00	1,256.50 N	568.63 W	463,462.905	613,820.770	0.00	1,321.09	0.00	
11,300.00	90.00	359.70	9,541.00	1,356.50 N	569.16 W	463,562.903	613,820.240	0.00	1,420.27	0.00	
11,400.00	90.00	359.70	9,541.00	1,456.50 N	569.69 W	463,662.902	613,819.711	0.00	1,519.44	0.00	
11,500.00	90.00	359.70	9,541.00	1,556.50 N	570.22 W	463,762.900	613,819.182	0.00	1,618.62	0.00	
11,600.00	90.00	359.70	9,541.00	1,656.50 N	570.75 W	463,862.899	613,818.653	0.00	1,717.80	0.00	
11,700.00	90.00	359.70	9,541.00	1,756.50 N	571.28 W	463,962.898	613,818.123	0.00	1,816.97	0.00	
11,800.00	90.00	359.70	9,541.00	1,856.50 N	571.81 W	464,062.896	613,817.594	0.00	1,916.15	0.00	
11,900.00	90.00	359.70	9,541.00	1,956.49 N	572.34 W	464,162.895	613,817.065	0.00	2,015.33	0.00	
12,000.00	90.00	359.70	9,541.00	2,056.49 N	572.86 W	464,262.893	613,816.536	0.00	2,114.50	0.00	

Plan Report for Thor 28 W0MD Fee #1H - Plan #2

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
				Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)				
12,100.00	90.00	359.70	9,541.00	2,156.49 N	573.39 W	464,362.892	613,816.006	0.00	2,213.68	0.00	
12,200.00	90.00	359.70	9,541.00	2,256.49 N	573.92 W	464,462.891	613,815.477	0.00	2,312.86	0.00	
12,300.00	90.00	359.70	9,541.00	2,356.49 N	574.45 W	464,562.889	613,814.948	0.00	2,412.03	0.00	
12,400.00	90.00	359.70	9,541.00	2,456.49 N	574.98 W	464,662.888	613,814.419	0.00	2,511.21	0.00	
12,500.00	90.00	359.70	9,541.00	2,556.49 N	575.51 W	464,762.886	613,813.889	0.00	2,610.39	0.00	
12,600.00	90.00	359.70	9,541.00	2,656.48 N	576.04 W	464,862.885	613,813.360	0.00	2,709.56	0.00	
12,700.00	90.00	359.70	9,541.00	2,756.48 N	576.57 W	464,962.884	613,812.831	0.00	2,808.74	0.00	
12,800.00	90.00	359.70	9,541.00	2,856.48 N	577.10 W	465,062.882	613,812.302	0.00	2,907.92	0.00	
12,900.00	90.00	359.70	9,541.00	2,956.48 N	577.63 W	465,162.881	613,811.772	0.00	3,007.09	0.00	
13,000.00	90.00	359.70	9,541.00	3,056.48 N	578.16 W	465,262.879	613,811.243	0.00	3,106.27	0.00	
13,100.00	90.00	359.70	9,541.00	3,156.48 N	578.69 W	465,362.878	613,810.714	0.00	3,205.45	0.00	
13,200.00	90.00	359.70	9,541.00	3,256.48 N	579.22 W	465,462.877	613,810.185	0.00	3,304.62	0.00	
13,300.00	90.00	359.70	9,541.00	3,356.48 N	579.74 W	465,562.875	613,809.656	0.00	3,403.80	0.00	
13,400.00	90.00	359.70	9,541.00	3,456.47 N	580.27 W	465,662.874	613,809.126	0.00	3,502.98	0.00	
13,500.00	90.00	359.70	9,541.00	3,556.47 N	580.80 W	465,762.872	613,808.597	0.00	3,602.15	0.00	
13,600.00	90.00	359.70	9,541.00	3,656.47 N	581.33 W	465,862.871	613,808.068	0.00	3,701.33	0.00	
13,700.00	90.00	359.70	9,541.00	3,756.47 N	581.86 W	465,962.870	613,807.539	0.00	3,800.51	0.00	
13,800.00	90.00	359.70	9,541.00	3,856.47 N	582.39 W	466,062.868	613,807.009	0.00	3,899.68	0.00	
13,900.00	90.00	359.70	9,541.00	3,956.47 N	582.92 W	466,162.867	613,806.480	0.00	3,998.86	0.00	
14,000.00	90.00	359.70	9,541.00	4,056.47 N	583.45 W	466,262.865	613,805.951	0.00	4,098.04	0.00	
14,100.00	90.00	359.70	9,541.00	4,156.46 N	583.98 W	466,362.864	613,805.422	0.00	4,197.21	0.00	
14,200.00	90.00	359.70	9,541.00	4,256.46 N	584.51 W	466,462.863	613,804.892	0.00	4,296.39	0.00	
14,293.04	90.00	359.70	9,541.00	4,349.50 N	585.00 W	466,555.900	613,804.400	0.00	4,388.66	0.00	TD at 14293.04 MD

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
600.00	600.00	0.00	0.00	Build at 2/100 DLS
895.25	894.72	-11.18	-10.30	Hold at 5.90 INC
8,614.80	8,573.32	-595.20	-548.47	Drop at 2/100 DLS
8,910.04	8,868.04	-606.38	-558.77	Vertical at 8868.04 TVD
9,010.05	8,968.04	-606.38	-558.77	KOP @ 9010.05 MD; Build at 10/100 DLS
9,910.05	9,541.00	-33.43	-561.80	Land Point (9541.00 TVD)
14,293.04	9,541.00	4,349.50	-585.00	TD at 14293.04 MD

Plan Report for Thor 28 W0MD Fee #1H - Plan #2

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (usft)	Origin +E/-W (usft)	Start TVD (usft)
TD	No Target (Freehand)	352.34	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	14,292.54	Plan #2	3_MWD+HRGM

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
2,400.00	2,391.49	11 7/8"	11-7/8	12-1/4
8,910.00	8,868.00	7"	7	8-3/4
14,293.04	9,541.00	4 1/2"	4-1/2	6-1/8

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	TVDSS (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,101.62	1,100.00	-2,011.00	Salt Top			
2,368.34	2,360.00	-751.00	Salt Base			
2,569.41	2,560.00	-551.00	Delaware (Lamar)			
2,609.62	2,600.00	-511.00	Bell Canyon			
3,423.94	3,410.00	299.00	Cherry Canyon			
3,554.63	3,540.00	429.00	Manzanita Marker			
6,248.93	6,220.00	3,109.00	Bone Spring			
7,133.62	7,100.00	3,989.00	1st Bone Spring Sand			
7,958.00	7,920.00	4,809.00	2nd Bone Spring Sand			
9,122.73	9,080.00	5,969.00	3rd Bone Spring Sand			
9,530.80	9,420.00	6,309.00	Wolfcamp			

Plan Report for Thor 28 W0MD Fee #1H - Plan #2

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Thor 28 W0MD Fee #1H KOP (10 FSL, 660 FWL Sec 28) ()	0.00	0.00	9,117.16	-606.38	-558.77	461,600.020	613,830.629	32.2687954	-104.0987890
- plan misses target center by 19.10usft at 9155.29usft MD (9111.74 TVD, -588.07 N, -558.87 E)									
- Point									
Thor 28 W0MD Fee #1H LP (330 FSL, 660 FWL Sec 28) ()	0.00	0.00	9,541.00	-286.38	-560.48	461,920.016	613,828.923	32.2696751	-104.0987922
- plan misses target center by 53.36usft at 9671.54usft MD (9492.07 TVD, -265.11 N, -560.58 E)									
- Point									
Thor 28 W0MD Fee #1H BHL (330 FNL, 660 FWL Sec 28) ()	0.00	0.00	9,541.00	4,349.50	-585.00	466,555.900	613,804.400	32.2824186	-104.0988388
- plan hits target center									
- Point									

Directional Difficulty Index

Average Dogleg over Survey:	0.71 °/100usft	Maximum Dogleg over Survey:	10.00 °/100usft at 9,910.05 usft
Net Tortousity applicable to Plans:	0.71 °/100usft	Directional Difficulty Index:	6.157

Audit Info

North Reference Sheet for Sec 28-T23S-R28E - Thor 28 W0MD Fee #1H - Wellbore #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to 3083 GL + 28 KB @ 3111.00usft (Pat 595). Northing and Easting are relative to Thor 28 W0MD Fee #1H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is -104.333333°, Longitude Origin:0.000000°, Latitude Origin:0.000000°

False Easting: 541,337.500usft, False Northing: 0.000usft, Scale Reduction: 0.99991520

Grid Coordinates of Well: 462,206.400 usft N, 614,389.400 usft E

Geographical Coordinates of Well: 32.2704589, -104.0969768

Grid Convergence at Surface is: 0.13°

Based upon Minimum Curvature type calculations, at a Measured Depth of 14,293.04usft

the Bottom Hole Displacement is 4,388.66usft in the Direction of 352.34° (Grid).

Magnetic Convergence at surface is: -6.91° (29 August 2020, , BGGM2020)

