

NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 19 2019

RECEIVED

PERMIAN

NW DISTRICT - NM EZ NAD 83

PALMILLO 3 STATE COM PAD (244,355,356)

PALMILLO 3 STATE COM 244H

PALMILLO 3 STATE COM 244H

30.015-45802

Plan: 3d curve option

Standard Planning Report

04 March, 2019

Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well PALMILLO 3 STATE COM 244H
Company:	PERMIAN	TVD Reference:	WELL @ 3582.0ft (Original Well Elev)
Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3582.0ft (Original Well Elev)
Site:	PALMILLO 3 STATE COM PAD (244,355,356)	North Reference:	Grid
Well:	PALMILLO 3 STATE COM 244H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PALMILLO 3 STATE COM 244H		
Design:	3d curve option		

Project	NW DISTRICT - NM EZ NAD 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	PALMILLO 3 STATE COM PAD (244,355,356)		
Site Position:	Northing:	616,534.90 ft	Latitude: 32° 41' 41.243 N
From: Map	Easting:	591,079.90 ft	Longitude: 104° 10' 17.906 W
Position Uncertainty: 0.0 ft	Slot Radius:	13.200 in	Grid Convergence: 0.09 °

Well	PALMILLO 3 STATE COM 244H		
Well Position	+N/-S	0.0 ft	Northing: 616,534.90 ft
	+E/-W	0.0 ft	Easting: 591,079.90 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	Latitude: 32° 41' 41.243 N
			Longitude: 104° 10' 17.906 W
			Ground Level: 3,556.0 ft

Wellbore	PALMILLO 3 STATE COM 244H		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM_FILE	12/28/2018	7.28
			Dip Angle
			(°)
			60.47
			Field Strength
			(nT)
			47,997.80000000

Design	3d curve option		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
			Direction
			(°)
			84.53

Plan Survey Tool Program	Date	3/4/2019		
Depth From	Depth To	Survey (Wellbore)	Tool Name	Remarks
(ft)	(ft)			
1	0.0	12,197.2	3d curve option (PALMILLO 3 ST	MWD+HDGM (MWD)
				OWSG MWD + HDGM

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Wellbore:	PALMILLO 3 STATE COM 244H		
Design:	3d curve option		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,666.7	10.00	333.63	1,663.3	52.0	-25.8	1.50	1.50	0.00	333.63	
3,412.5	10.00	333.63	3,382.6	323.6	-160.4	0.00	0.00	0.00	0.00	
4,079.2	0.00	0.00	4,045.9	375.6	-186.2	1.50	-1.50	0.00	180.00	
6,839.8	0.00	0.00	6,806.5	375.6	-186.2	0.00	0.00	0.00	0.00	
7,253.4	49.74	83.95	7,170.1	393.4	-18.6	12.03	12.03	0.00	83.95	
7,565.5	86.96	89.26	7,283.3	408.5	265.9	12.03	11.93	1.70	8.73	
8,767.7	86.96	89.26	7,347.0	424.0	1,466.2	0.00	0.00	0.00	0.00	T2 PALMILLO 3 STAT
8,776.9	87.15	89.26	7,347.5	424.2	1,475.5	2.00	2.00	-0.01	-0.40	
10,274.7	87.15	89.26	7,422.0	443.6	2,971.2	0.00	0.00	0.00	0.00	T3 PALMILLO 3 STAT
10,299.6	86.65	89.26	7,423.3	443.9	2,996.1	2.00	-2.00	0.00	-179.96	
11,782.3	86.65	89.26	7,510.0	463.1	4,476.2	0.00	0.00	0.00	0.00	T4 PALMILLO 3 STAT
12,015.2	91.31	89.26	7,514.2	466.1	4,709.0	2.00	2.00	0.00	0.01	
12,197.2	91.31	89.26	7,510.0	468.5	4,890.9	0.00	0.00	0.00	0.00	BHL PALMILLO 3 ST/

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Site:	PALMILLO 3 STATE COM PAD (244,355,356)	North Reference:	Grid
Well:	PALMILLO 3 STATE COM 244H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PALMILLO 3 STATE COM 244H		
Design:	3d curve option		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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	1.50	333.63	1,100.0	1.2	-0.6	-0.5	1.50	1.50	0.00
1,200.0	3.00	333.63	1,199.9	4.7	-2.3	-1.9	1.50	1.50	0.00
1,300.0	4.50	333.63	1,299.7	10.5	-5.2	-4.2	1.50	1.50	0.00
1,400.0	6.00	333.63	1,399.3	18.7	-9.3	-7.5	1.50	1.50	0.00
1,500.0	7.50	333.63	1,498.6	29.3	-14.5	-11.7	1.50	1.50	0.00
1,600.0	9.00	333.63	1,597.5	42.1	-20.9	-16.8	1.50	1.50	0.00
1,666.7	10.00	333.63	1,663.3	52.0	-25.8	-20.7	1.50	1.50	0.00
1,700.0	10.00	333.63	1,696.1	57.2	-28.3	-22.8	0.00	0.00	0.00
1,800.0	10.00	333.63	1,794.6	72.7	-36.1	-29.0	0.00	0.00	0.00
1,900.0	10.00	333.63	1,893.1	88.3	-43.8	-35.2	0.00	0.00	0.00
2,000.0	10.00	333.63	1,991.6	103.9	-51.5	-41.3	0.00	0.00	0.00
2,100.0	10.00	333.63	2,090.0	119.4	-59.2	-47.5	0.00	0.00	0.00
2,200.0	10.00	333.63	2,188.5	135.0	-66.9	-53.7	0.00	0.00	0.00
2,300.0	10.00	333.63	2,287.0	150.5	-74.6	-59.9	0.00	0.00	0.00
2,400.0	10.00	333.63	2,385.5	166.1	-82.3	-66.1	0.00	0.00	0.00
2,500.0	10.00	333.63	2,484.0	181.6	-90.0	-72.3	0.00	0.00	0.00
2,600.0	10.00	333.63	2,582.4	197.2	-97.8	-78.5	0.00	0.00	0.00
2,700.0	10.00	333.63	2,680.9	212.8	-105.5	-84.7	0.00	0.00	0.00
2,800.0	10.00	333.63	2,779.4	228.3	-113.2	-90.9	0.00	0.00	0.00
2,900.0	10.00	333.63	2,877.9	243.9	-120.9	-97.1	0.00	0.00	0.00
3,000.0	10.00	333.63	2,976.4	259.4	-128.6	-103.3	0.00	0.00	0.00
3,100.0	10.00	333.63	3,074.8	275.0	-136.3	-109.5	0.00	0.00	0.00
3,200.0	10.00	333.63	3,173.3	290.5	-144.0	-115.7	0.00	0.00	0.00
3,300.0	10.00	333.63	3,271.8	306.1	-151.7	-121.9	0.00	0.00	0.00
3,400.0	10.00	333.63	3,370.3	321.7	-159.5	-128.1	0.00	0.00	0.00
3,412.5	10.00	333.63	3,382.6	323.6	-160.4	-128.8	0.00	0.00	0.00
3,500.0	8.69	333.63	3,468.9	336.3	-166.7	-133.9	1.50	-1.50	0.00
3,600.0	7.19	333.63	3,568.0	348.7	-172.9	-138.8	1.50	-1.50	0.00
3,700.0	5.69	333.63	3,667.3	358.8	-177.8	-142.8	1.50	-1.50	0.00
3,800.0	4.19	333.63	3,767.0	366.5	-181.7	-145.9	1.50	-1.50	0.00
3,900.0	2.69	333.63	3,866.8	371.8	-184.3	-148.0	1.50	-1.50	0.00
4,000.0	1.19	333.63	3,966.7	374.9	-185.8	-149.2	1.50	-1.50	0.00
4,079.2	0.00	0.00	4,045.9	375.6	-186.2	-149.5	1.50	-1.50	0.00
4,100.0	0.00	0.00	4,066.7	375.6	-186.2	-149.5	0.00	0.00	0.00
4,200.0	0.00	0.00	4,166.7	375.6	-186.2	-149.5	0.00	0.00	0.00
4,300.0	0.00	0.00	4,266.7	375.6	-186.2	-149.5	0.00	0.00	0.00
4,400.0	0.00	0.00	4,366.7	375.6	-186.2	-149.5	0.00	0.00	0.00
4,500.0	0.00	0.00	4,466.7	375.6	-186.2	-149.5	0.00	0.00	0.00
4,600.0	0.00	0.00	4,566.7	375.6	-186.2	-149.5	0.00	0.00	0.00
4,700.0	0.00	0.00	4,666.7	375.6	-186.2	-149.5	0.00	0.00	0.00
4,800.0	0.00	0.00	4,766.7	375.6	-186.2	-149.5	0.00	0.00	0.00
4,900.0	0.00	0.00	4,866.7	375.6	-186.2	-149.5	0.00	0.00	0.00
5,000.0	0.00	0.00	4,966.7	375.6	-186.2	-149.5	0.00	0.00	0.00

Planning Report

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Well:	PALMILLO 3 STATE COM 244H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PALMILLO 3 STATE COM 244H		
Design:	3d curve option		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,100.0	0.00	0.00	5,066.7	375.6	-186.2	-149.5	0.00	0.00	0.00
5,200.0	0.00	0.00	5,166.7	375.6	-186.2	-149.5	0.00	0.00	0.00
5,300.0	0.00	0.00	5,266.7	375.6	-186.2	-149.5	0.00	0.00	0.00
5,400.0	0.00	0.00	5,366.7	375.6	-186.2	-149.5	0.00	0.00	0.00
5,500.0	0.00	0.00	5,466.7	375.6	-186.2	-149.5	0.00	0.00	0.00
5,600.0	0.00	0.00	5,566.7	375.6	-186.2	-149.5	0.00	0.00	0.00
5,700.0	0.00	0.00	5,666.7	375.6	-186.2	-149.5	0.00	0.00	0.00
5,800.0	0.00	0.00	5,766.7	375.6	-186.2	-149.5	0.00	0.00	0.00
5,900.0	0.00	0.00	5,866.7	375.6	-186.2	-149.5	0.00	0.00	0.00
6,000.0	0.00	0.00	5,966.7	375.6	-186.2	-149.5	0.00	0.00	0.00
6,100.0	0.00	0.00	6,066.7	375.6	-186.2	-149.5	0.00	0.00	0.00
6,200.0	0.00	0.00	6,166.7	375.6	-186.2	-149.5	0.00	0.00	0.00
6,300.0	0.00	0.00	6,266.7	375.6	-186.2	-149.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,366.7	375.6	-186.2	-149.5	0.00	0.00	0.00
6,500.0	0.00	0.00	6,466.7	375.6	-186.2	-149.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,566.7	375.6	-186.2	-149.5	0.00	0.00	0.00
6,700.0	0.00	0.00	6,666.7	375.6	-186.2	-149.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,766.7	375.6	-186.2	-149.5	0.00	0.00	0.00
6,839.8	0.00	0.00	6,806.5	375.6	-186.2	-149.5	0.00	0.00	0.00
6,900.0	7.24	83.95	6,866.6	376.0	-182.4	-145.7	12.03	12.03	0.00
7,000.0	19.27	83.95	6,963.7	378.4	-159.7	-122.9	12.03	12.03	0.00
7,100.0	31.29	83.95	7,054.0	382.9	-117.3	-80.2	12.03	12.03	0.00
7,200.0	43.32	83.95	7,133.4	389.3	-57.1	-19.7	12.03	12.03	0.00
7,253.4	49.74	83.95	7,170.1	393.4	-18.6	19.0	12.03	12.03	0.00
7,300.0	55.28	84.98	7,198.4	396.9	18.2	55.9	12.03	11.90	2.22
7,400.0	67.20	86.80	7,246.5	403.1	105.5	143.4	12.03	11.92	1.82
7,500.0	79.14	88.33	7,275.4	407.1	200.9	238.8	12.03	11.94	1.53
7,565.5	86.96	89.26	7,283.3	408.5	265.9	303.6	12.03	11.94	1.42
7,600.0	86.96	89.26	7,285.1	408.9	300.3	337.9	0.00	0.00	0.00
7,700.0	86.96	89.26	7,290.4	410.2	400.2	437.5	0.00	0.00	0.00
7,800.0	86.96	89.26	7,295.7	411.5	500.0	537.0	0.00	0.00	0.00
7,900.0	86.96	89.26	7,301.0	412.8	599.9	636.5	0.00	0.00	0.00
8,000.0	86.96	89.26	7,306.3	414.1	699.7	736.0	0.00	0.00	0.00
8,100.0	86.96	89.26	7,311.6	415.4	799.6	835.5	0.00	0.00	0.00
8,200.0	86.96	89.26	7,316.9	416.7	899.4	935.1	0.00	0.00	0.00
8,300.0	86.96	89.26	7,322.2	418.0	999.3	1,034.6	0.00	0.00	0.00
8,400.0	86.96	89.26	7,327.5	419.3	1,099.1	1,134.1	0.00	0.00	0.00
8,500.0	86.96	89.26	7,332.8	420.6	1,199.0	1,233.6	0.00	0.00	0.00
8,600.0	86.96	89.26	7,338.1	421.9	1,298.8	1,333.1	0.00	0.00	0.00
8,700.0	86.96	89.26	7,343.4	423.2	1,398.7	1,432.7	0.00	0.00	0.00
8,767.7	86.96	89.26	7,347.0	424.0	1,466.2	1,500.0	0.00	0.00	0.00
8,776.9	87.15	89.26	7,347.5	424.2	1,475.5	1,509.2	2.00	2.00	-0.01
8,800.0	87.15	89.26	7,348.6	424.5	1,498.5	1,532.2	0.00	0.00	0.00
8,900.0	87.15	89.26	7,353.6	425.8	1,598.4	1,631.7	0.00	0.00	0.00
9,000.0	87.15	89.26	7,358.6	427.1	1,698.3	1,731.3	0.00	0.00	0.00
9,100.0	87.15	89.26	7,363.6	428.4	1,798.1	1,830.8	0.00	0.00	0.00
9,200.0	87.15	89.26	7,368.5	429.7	1,898.0	1,930.3	0.00	0.00	0.00
9,300.0	87.15	89.26	7,373.5	430.9	1,997.9	2,029.9	0.00	0.00	0.00
9,400.0	87.15	89.26	7,378.5	432.2	2,097.7	2,129.4	0.00	0.00	0.00
9,500.0	87.15	89.26	7,383.5	433.5	2,197.6	2,228.9	0.00	0.00	0.00
9,600.0	87.15	89.26	7,388.4	434.8	2,297.5	2,328.5	0.00	0.00	0.00
9,700.0	87.15	89.26	7,393.4	436.1	2,397.3	2,428.0	0.00	0.00	0.00
9,800.0	87.15	89.26	7,398.4	437.4	2,497.2	2,527.5	0.00	0.00	0.00
9,900.0	87.15	89.26	7,403.4	438.7	2,597.1	2,627.1	0.00	0.00	0.00

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Wellbore:	PALMILLO 3 STATE COM 244H		
Design:	3d curve option		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,000.0	87.15	89.26	7,408.3	440.0	2,697.0	2,726.6	0.00	0.00	0.00
10,100.0	87.15	89.26	7,413.3	441.3	2,796.8	2,826.2	0.00	0.00	0.00
10,200.0	87.15	89.26	7,418.3	442.6	2,896.7	2,925.7	0.00	0.00	0.00
10,274.7	87.15	89.26	7,422.0	443.6	2,971.2	3,000.0	0.00	0.00	0.00
10,299.6	86.65	89.26	7,423.3	443.9	2,996.1	3,024.8	2.00	-2.00	0.00
10,300.0	86.65	89.26	7,423.4	443.9	2,996.6	3,025.2	0.00	0.00	0.00
10,400.0	86.65	89.26	7,429.2	445.2	3,096.4	3,124.7	0.00	0.00	0.00
10,500.0	86.65	89.26	7,435.1	446.5	3,196.2	3,224.2	0.00	0.00	0.00
10,600.0	86.65	89.26	7,440.9	447.8	3,296.0	3,323.7	0.00	0.00	0.00
10,700.0	86.65	89.26	7,446.7	449.1	3,395.8	3,423.2	0.00	0.00	0.00
10,800.0	86.65	89.26	7,452.6	450.4	3,495.7	3,522.7	0.00	0.00	0.00
10,900.0	86.65	89.26	7,458.4	451.7	3,595.5	3,622.2	0.00	0.00	0.00
11,000.0	86.65	89.26	7,464.3	453.0	3,695.3	3,721.7	0.00	0.00	0.00
11,100.0	86.65	89.26	7,470.1	454.3	3,795.1	3,821.1	0.00	0.00	0.00
11,200.0	86.65	89.26	7,476.0	455.6	3,894.9	3,920.6	0.00	0.00	0.00
11,300.0	86.65	89.26	7,481.8	456.9	3,994.8	4,020.1	0.00	0.00	0.00
11,400.0	86.65	89.26	7,487.7	458.2	4,094.6	4,119.6	0.00	0.00	0.00
11,500.0	86.65	89.26	7,493.5	459.5	4,194.4	4,219.1	0.00	0.00	0.00
11,600.0	86.65	89.26	7,499.3	460.8	4,294.2	4,318.6	0.00	0.00	0.00
11,700.0	86.65	89.26	7,505.2	462.1	4,394.0	4,418.1	0.00	0.00	0.00
11,782.3	86.65	89.26	7,510.0	463.1	4,476.2	4,500.0	0.00	0.00	0.00
11,800.0	87.00	89.26	7,511.0	463.3	4,493.9	4,517.6	2.00	2.00	0.00
11,900.0	89.00	89.26	7,514.5	464.6	4,593.8	4,617.2	2.00	2.00	0.00
12,000.0	91.00	89.26	7,514.5	465.9	4,693.8	4,716.8	2.00	2.00	0.00
12,015.2	91.31	89.26	7,514.2	466.1	4,709.0	4,732.0	2.00	2.00	0.00
12,100.0	91.31	89.26	7,512.2	467.2	4,793.7	4,816.5	0.00	0.00	0.00
12,197.2	91.31	89.26	7,510.0	468.5	4,890.9	4,913.3	0.00	0.00	0.00

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
T2 PALMILLO 3 STATE - plan hits target center - Point	0.00	0.00	7,347.0	424.0	1,466.2	616,958.95	592,546.15	32° 41' 45.417 N	104° 10' 0.740 W
T3 PALMILLO 3 STATE - plan hits target center - Point	0.00	0.00	7,422.0	443.6	2,971.2	616,978.48	594,051.14	32° 41' 45.586 N	104° 9' 43.127 W
BHL PALMILLO 3 STATE - plan hits target center - Point	0.00	0.00	7,510.0	468.5	4,890.9	617,003.40	595,970.80	32° 41' 45.801 N	104° 9' 20.662 W
T4 PALMILLO 3 STATE - plan hits target center - Point	0.00	0.00	7,510.0	463.1	4,476.2	616,998.02	595,556.14	32° 41' 45.755 N	104° 9' 25.514 W