

NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 19 2019

RECEIVED

PERMIAN

NW DISTRICT - NM EZ NAD 83
PALMILLO 3 STATE COM PAD (243, 354)
PALMILLO 3 STATE COM 243H

PALMILLO 3 STATE COM 243H

30.015.45801

Plan: Design #1

Standard Planning Report

04 March, 2019

Planning Report

Database:	REDM	Local Co-ordinate Reference:	Well PALMILLO 3 STATE COM 243H
Company:	PERMIAN	TVD Reference:	WELL @ 3509.0ft (Original Well Elev)
Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3509.0ft (Original Well Elev)
Site:	PALMILLO 3 STATE COM PAD (243, 354)	North Reference:	Grid
Well:	PALMILLO 3 STATE COM 243H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PALMILLO 3 STATE COM 243H		
Design:	Design #1		

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 (243, 354)				
Site Position:		Northing:	615,331.80 ft	Latitude:	32° 41' 29.263 N
From:	Map	Easting:	595,825.40 ft	Longitude:	104° 9' 22.396 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.10 °

Well	PALMILLO 3 STATE COM 243H					
Well Position	+N/-S	0.0 ft	Northing:	615,331.80 ft	Latitude:	32° 41' 29.263 N
	+E/-W	0.0 ft	Easting:	595,825.40 ft	Longitude:	104° 9' 22.396 W
Position Uncertainty		0.0 ft	Wellhead Elevation:		Ground Level:	3,483.0 ft

Wellbore	PALMILLO 3 STATE COM 243H				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM_FILE	12/28/2018	7.30	60.47	48,000.80000000

Design	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	272.22

Plan Survey Tool Program	Date	3/1/2019		
Depth From	Depth To	Survey (Wellbore)	Tool Name	Remarks
(ft)	(ft)			
1	0.0	12,313.8 Design #1 (PALMILLO 3 STATE C	MWD+HDGM (MWD)	
			OWSG MWD + HDGM	

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Site:	PALMILLO 3 STATE COM PAD (243, 354)	North Reference:	Grid
Well:	PALMILLO 3 STATE COM 243H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PALMILLO 3 STATE COM 243H		
Design:	Design #1		

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	
1,533.3	8.00	27.18	1,531.6	33.1	17.0	1.50	1.50	0.00	27.18	
3,079.9	8.00	27.18	3,063.1	224.5	115.3	0.00	0.00	0.00	0.00	
3,613.2	0.00	0.00	3,594.7	257.6	132.3	1.50	-1.50	0.00	180.00	
6,960.0	0.00	0.00	6,941.5	257.6	132.3	0.00	0.00	0.00	0.00	
7,739.5	93.54	269.26	7,418.1	251.0	-374.6	12.00	12.00	-11.64	269.26	
8,859.1	93.54	269.26	7,349.0	236.5	-1,492.0	0.00	0.00	0.00	0.00	T2 PALMILLO 3 STAT
8,942.9	91.86	269.26	7,345.1	235.4	-1,575.7	2.00	-2.00	0.00	-179.99	
10,361.9	91.86	269.26	7,299.0	217.0	-2,993.8	0.00	0.00	0.00	0.00	T3 PALMILLO 3 STAT
10,369.2	91.72	269.26	7,298.8	216.9	-3,001.0	2.00	-2.00	0.01	179.84	
11,864.6	91.72	269.26	7,254.0	197.5	-4,495.7	0.00	0.00	0.00	0.00	T4 PALMILLO 3 STAT
11,960.7	89.79	269.26	7,252.7	196.3	-4,591.8	2.00	-2.00	0.00	-179.99	
12,313.8	89.79	269.26	7,254.0	191.7	-4,944.8	0.00	0.00	0.00	0.00	BHL PALMILLO 3 ST/

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Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3509.0ft (Original Well Elev)
Site:	PALMILLO 3 STATE COM PAD (243, 354)	North Reference:	Grid
Well:	PALMILLO 3 STATE COM 243H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PALMILLO 3 STATE COM 243H		
Design:	Design #1		

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	27.18	1,100.0	1.2	0.6	-0.6	1.50	1.50	0.00
1,200.0	3.00	27.18	1,199.9	4.7	2.4	-2.2	1.50	1.50	0.00
1,300.0	4.50	27.18	1,299.7	10.5	5.4	-5.0	1.50	1.50	0.00
1,400.0	6.00	27.18	1,399.3	18.6	9.6	-8.8	1.50	1.50	0.00
1,500.0	7.50	27.18	1,498.6	29.1	14.9	-13.8	1.50	1.50	0.00
1,533.3	8.00	27.18	1,531.6	33.1	17.0	-15.7	1.50	1.50	0.00
1,600.0	8.00	27.18	1,597.6	41.3	21.2	-19.6	0.00	0.00	0.00
1,700.0	8.00	27.18	1,696.6	53.7	27.6	-25.5	0.00	0.00	0.00
1,800.0	8.00	27.18	1,795.7	66.1	33.9	-31.4	0.00	0.00	0.00
1,900.0	8.00	27.18	1,894.7	78.5	40.3	-37.2	0.00	0.00	0.00
2,000.0	8.00	27.18	1,993.7	90.8	46.7	-43.1	0.00	0.00	0.00
2,100.0	8.00	27.18	2,092.8	103.2	53.0	-49.0	0.00	0.00	0.00
2,200.0	8.00	27.18	2,191.8	115.6	59.4	-54.8	0.00	0.00	0.00
2,300.0	8.00	27.18	2,290.8	128.0	65.7	-60.7	0.00	0.00	0.00
2,400.0	8.00	27.18	2,389.8	140.4	72.1	-66.6	0.00	0.00	0.00
2,500.0	8.00	27.18	2,488.9	152.7	78.4	-72.5	0.00	0.00	0.00
2,600.0	8.00	27.18	2,587.9	165.1	84.8	-78.3	0.00	0.00	0.00
2,700.0	8.00	27.18	2,686.9	177.5	91.2	-84.2	0.00	0.00	0.00
2,800.0	8.00	27.18	2,785.9	189.9	97.5	-90.1	0.00	0.00	0.00
2,900.0	8.00	27.18	2,885.0	202.3	103.9	-96.0	0.00	0.00	0.00
3,000.0	8.00	27.18	2,984.0	214.6	110.2	-101.8	0.00	0.00	0.00
3,079.9	8.00	27.18	3,063.1	224.5	115.3	-106.5	0.00	0.00	0.00
3,100.0	7.70	27.18	3,083.0	227.0	116.6	-107.7	1.50	-1.50	0.00
3,200.0	6.20	27.18	3,182.3	237.7	122.1	-112.8	1.50	-1.50	0.00
3,300.0	4.70	27.18	3,281.8	246.2	126.4	-116.8	1.50	-1.50	0.00
3,400.0	3.20	27.18	3,381.6	252.3	129.6	-119.7	1.50	-1.50	0.00
3,500.0	1.70	27.18	3,481.5	256.1	131.5	-121.5	1.50	-1.50	0.00
3,600.0	0.20	27.18	3,581.5	257.6	132.3	-122.2	1.50	-1.50	0.00
3,613.2	0.00	0.00	3,594.7	257.6	132.3	-122.2	1.50	-1.50	0.00
3,700.0	0.00	0.00	3,681.5	257.6	132.3	-122.2	0.00	0.00	0.00
3,800.0	0.00	0.00	3,781.5	257.6	132.3	-122.2	0.00	0.00	0.00
3,900.0	0.00	0.00	3,881.5	257.6	132.3	-122.2	0.00	0.00	0.00
4,000.0	0.00	0.00	3,981.5	257.6	132.3	-122.2	0.00	0.00	0.00
4,100.0	0.00	0.00	4,081.5	257.6	132.3	-122.2	0.00	0.00	0.00
4,200.0	0.00	0.00	4,181.5	257.6	132.3	-122.2	0.00	0.00	0.00
4,300.0	0.00	0.00	4,281.5	257.6	132.3	-122.2	0.00	0.00	0.00
4,400.0	0.00	0.00	4,381.5	257.6	132.3	-122.2	0.00	0.00	0.00
4,500.0	0.00	0.00	4,481.5	257.6	132.3	-122.2	0.00	0.00	0.00
4,600.0	0.00	0.00	4,581.5	257.6	132.3	-122.2	0.00	0.00	0.00
4,700.0	0.00	0.00	4,681.5	257.6	132.3	-122.2	0.00	0.00	0.00
4,800.0	0.00	0.00	4,781.5	257.6	132.3	-122.2	0.00	0.00	0.00
4,900.0	0.00	0.00	4,881.5	257.6	132.3	-122.2	0.00	0.00	0.00
5,000.0	0.00	0.00	4,981.5	257.6	132.3	-122.2	0.00	0.00	0.00

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Well:	PALMILLO 3 STATE COM 243H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PALMILLO 3 STATE COM 243H		
Design:	Design #1		

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	5,081.5	257.6	132.3	-122.2	0.00	0.00	0.00	
5,200.0	0.00	0.00	5,181.5	257.6	132.3	-122.2	0.00	0.00	0.00	
5,300.0	0.00	0.00	5,281.5	257.6	132.3	-122.2	0.00	0.00	0.00	
5,400.0	0.00	0.00	5,381.5	257.6	132.3	-122.2	0.00	0.00	0.00	
5,500.0	0.00	0.00	5,481.5	257.6	132.3	-122.2	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,581.5	257.6	132.3	-122.2	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,681.5	257.6	132.3	-122.2	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,781.5	257.6	132.3	-122.2	0.00	0.00	0.00	
5,900.0	0.00	0.00	5,881.5	257.6	132.3	-122.2	0.00	0.00	0.00	
6,000.0	0.00	0.00	5,981.5	257.6	132.3	-122.2	0.00	0.00	0.00	
6,100.0	0.00	0.00	6,081.5	257.6	132.3	-122.2	0.00	0.00	0.00	
6,200.0	0.00	0.00	6,181.5	257.6	132.3	-122.2	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,281.5	257.6	132.3	-122.2	0.00	0.00	0.00	
6,400.0	0.00	0.00	6,381.5	257.6	132.3	-122.2	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,481.5	257.6	132.3	-122.2	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,581.5	257.6	132.3	-122.2	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,681.5	257.6	132.3	-122.2	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,781.5	257.6	132.3	-122.2	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,881.5	257.6	132.3	-122.2	0.00	0.00	0.00	
6,960.0	0.00	0.00	6,941.5	257.6	132.3	-122.2	0.00	0.00	0.00	
7,000.0	4.80	269.26	6,981.4	257.6	130.6	-120.6	12.00	12.00	0.00	
7,100.0	16.80	269.26	7,079.5	257.3	111.9	-101.9	12.00	12.00	0.00	
7,200.0	28.80	269.26	7,171.5	256.8	73.3	-63.2	12.00	12.00	0.00	
7,300.0	40.80	269.26	7,253.5	256.1	16.3	-6.4	12.00	12.00	0.00	
7,400.0	52.80	269.26	7,321.8	255.2	-56.5	66.3	12.00	12.00	0.00	
7,500.0	64.80	269.26	7,373.5	254.0	-141.8	151.6	12.00	12.00	0.00	
7,600.0	76.80	269.26	7,406.3	252.8	-236.1	245.7	12.00	12.00	0.00	
7,700.0	88.80	269.26	7,418.9	251.5	-335.1	344.6	12.00	12.00	0.00	
7,739.5	93.54	269.26	7,418.1	251.0	-374.6	384.0	12.00	12.00	0.00	
7,800.0	93.54	269.26	7,414.3	250.2	-435.0	444.3	0.00	0.00	0.00	
7,900.0	93.54	269.26	7,408.2	248.9	-534.8	544.0	0.00	0.00	0.00	
8,000.0	93.54	269.26	7,402.0	247.6	-634.6	643.7	0.00	0.00	0.00	
8,100.0	93.54	269.26	7,395.8	246.4	-734.4	743.4	0.00	0.00	0.00	
8,200.0	93.54	269.26	7,389.7	245.1	-834.2	843.0	0.00	0.00	0.00	
8,300.0	93.54	269.26	7,383.5	243.8	-934.0	942.7	0.00	0.00	0.00	
8,400.0	93.54	269.26	7,377.3	242.5	-1,033.8	1,042.4	0.00	0.00	0.00	
8,500.0	93.54	269.26	7,371.1	241.2	-1,133.6	1,142.1	0.00	0.00	0.00	
8,600.0	93.54	269.26	7,365.0	239.9	-1,233.4	1,241.7	0.00	0.00	0.00	
8,700.0	93.54	269.26	7,358.8	238.6	-1,333.2	1,341.4	0.00	0.00	0.00	
8,800.0	93.54	269.26	7,352.6	237.3	-1,433.0	1,441.1	0.00	0.00	0.00	
8,859.1	93.54	269.26	7,349.0	236.5	-1,492.0	1,500.0	0.00	0.00	0.00	
8,900.0	92.72	269.26	7,346.8	236.0	-1,532.8	1,540.8	2.00	-2.00	0.00	
8,942.9	91.86	269.26	7,345.1	235.4	-1,575.7	1,583.6	2.00	-2.00	0.00	
9,000.0	91.86	269.26	7,343.2	234.7	-1,632.7	1,640.6	0.00	0.00	0.00	
9,100.0	91.86	269.26	7,340.0	233.4	-1,732.7	1,740.4	0.00	0.00	0.00	
9,200.0	91.86	269.26	7,336.7	232.1	-1,832.6	1,840.2	0.00	0.00	0.00	
9,300.0	91.86	269.26	7,333.5	230.8	-1,932.5	1,940.0	0.00	0.00	0.00	
9,400.0	91.86	269.26	7,330.2	229.5	-2,032.5	2,039.8	0.00	0.00	0.00	
9,500.0	91.86	269.26	7,327.0	228.2	-2,132.4	2,139.7	0.00	0.00	0.00	
9,600.0	91.86	269.26	7,323.7	226.9	-2,232.4	2,239.5	0.00	0.00	0.00	
9,700.0	91.86	269.26	7,320.5	225.6	-2,332.3	2,339.3	0.00	0.00	0.00	
9,800.0	91.86	269.26	7,317.2	224.3	-2,432.2	2,439.1	0.00	0.00	0.00	
9,900.0	91.86	269.26	7,314.0	223.0	-2,532.2	2,538.9	0.00	0.00	0.00	
10,000.0	91.86	269.26	7,310.7	221.7	-2,632.1	2,638.7	0.00	0.00	0.00	

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Wellbore:	PALMILLO 3 STATE COM 243H		
Design:	Design #1		

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)	
10,100.0	91.86	269.26	7,307.5	220.4	-2,732.1	2,738.5	0.00	0.00	0.00	
10,200.0	91.86	269.26	7,304.3	219.1	-2,832.0	2,838.4	0.00	0.00	0.00	
10,300.0	91.86	269.26	7,301.0	217.8	-2,931.9	2,938.2	0.00	0.00	0.00	
10,361.9	91.86	269.26	7,299.0	217.0	-2,993.8	3,000.0	0.00	0.00	0.00	
10,369.2	91.72	269.26	7,298.8	216.9	-3,001.0	3,007.2	2.00	-2.00	0.01	
10,400.0	91.72	269.26	7,297.9	216.5	-3,031.9	3,038.0	0.00	0.00	0.00	
10,500.0	91.72	269.26	7,294.9	215.2	-3,131.8	3,137.8	0.00	0.00	0.00	
10,600.0	91.72	269.26	7,291.9	213.9	-3,231.8	3,237.6	0.00	0.00	0.00	
10,700.0	91.72	269.26	7,288.9	212.6	-3,331.7	3,337.5	0.00	0.00	0.00	
10,800.0	91.72	269.26	7,285.9	211.3	-3,431.7	3,437.3	0.00	0.00	0.00	
10,900.0	91.72	269.26	7,282.9	210.0	-3,531.6	3,537.1	0.00	0.00	0.00	
11,000.0	91.72	269.26	7,279.9	208.7	-3,631.6	3,636.9	0.00	0.00	0.00	
11,100.0	91.72	269.26	7,276.9	207.4	-3,731.5	3,736.7	0.00	0.00	0.00	
11,200.0	91.72	269.26	7,273.9	206.2	-3,831.4	3,836.6	0.00	0.00	0.00	
11,300.0	91.72	269.26	7,270.9	204.9	-3,931.4	3,936.4	0.00	0.00	0.00	
11,400.0	91.72	269.26	7,267.9	203.6	-4,031.3	4,036.2	0.00	0.00	0.00	
11,500.0	91.72	269.26	7,264.9	202.3	-4,131.3	4,136.0	0.00	0.00	0.00	
11,600.0	91.72	269.26	7,261.9	201.0	-4,231.2	4,235.8	0.00	0.00	0.00	
11,700.0	91.72	269.26	7,258.9	199.7	-4,331.2	4,335.7	0.00	0.00	0.00	
11,800.0	91.72	269.26	7,255.9	198.4	-4,431.1	4,435.5	0.00	0.00	0.00	
11,864.6	91.72	269.26	7,254.0	197.5	-4,495.7	4,500.0	0.00	0.00	0.00	
11,900.0	91.01	269.26	7,253.2	197.1	-4,531.1	4,535.3	2.00	-2.00	0.00	
11,960.7	89.79	269.26	7,252.7	196.3	-4,591.8	4,595.9	2.00	-2.00	0.00	
12,000.0	89.79	269.26	7,252.9	195.8	-4,631.1	4,635.2	0.00	0.00	0.00	
12,100.0	89.79	269.26	7,253.2	194.5	-4,731.1	4,735.0	0.00	0.00	0.00	
12,200.0	89.79	269.26	7,253.6	193.2	-4,831.1	4,834.9	0.00	0.00	0.00	
12,300.0	89.79	269.26	7,254.0	191.9	-4,931.0	4,934.8	0.00	0.00	0.00	
12,313.8	89.79	269.26	7,254.0	191.7	-4,944.8	4,948.5	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	
T4 PALMILLO 3 STATE - plan hits target center - Point	0.00	0.00	7,254.0	197.5	-4,495.7	615,529.33	591,329.68	32° 41' 31.289 N	104° 10' 15.001 W	
BHL PALMILLO 3 STATE - plan hits target center - Point	0.00	0.00	7,254.0	191.7	-4,944.8	615,523.50	590,880.60	32° 41' 31.238 N	104° 10' 20.256 W	
T3 PALMILLO 3 STATE - plan hits target center - Point	0.00	0.00	7,299.0	217.0	-2,993.8	615,548.82	592,831.56	32° 41' 31.459 N	104° 9' 57.426 W	
T2 PALMILLO 3 STATE - plan hits target center - Point	0.00	0.00	7,349.0	236.5	-1,492.0	615,568.32	594,333.44	32° 41' 31.628 N	104° 9' 39.850 W	