

**NM OIL CONSERVATION
ARTESIA DISTRICT**

OCT 17 2018

RECEIVED

PERMIAN

NW DISTRICT - NM EZ NAD 83

PALMILLO 14-15 STATE COM PAD (304H, 305H)

PALMILLO 14-15 STATE COM 305H

PALMILLO 14-15 STATE COM 305H *30-015-45343*

Plan: design 1 with lateral targets

Standard Planning Report

12 October, 2018

apachecorp
Planning Report

Database: PEDM
Company: PERMIAN
Project: NW DISTRICT - NM EZ NAD 83
Site: PALMILLO 14-15 STATE COM PAD (304H, 305H)
Well: PALMILLO 14-15 STATE COM 305H
Wellbore: PALMILLO 14-15 STATE COM 305H
Design: design 1 with lateral targets

Local Co-ordinate Reference: Well PALMILLO 14-15 STATE COM 305H
TVD Reference: WELL @ 3539.0ft (Original Well Elev)
MD Reference: WELL @ 3539.0ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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 14-15 STATE COM PAD (304H, 305H)			
Site Position:		Northing:	605,009.70 ft	Latitude: 32° 39' 47.199 N
From:	Map	Easting:	590,999.90 ft	Longitude: 104° 10' 19.047 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence: 0.09 °

Well	PALMILLO 14-15 STATE COM 305H			
Well Position	+N/-S	30.0 ft	Northing:	605,039.70 ft
	+E/-W	0.1 ft	Easting:	591,000.00 ft
Position Uncertainty	0.0 ft		Wellhead Elevation:	0.0 ft
			Ground Level:	3,513.0 ft

Wellbore	PALMILLO 14-15 STATE COM 305H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	10/11/2018	7.30	60.45	48,026

Design	design 1 with lateral targets			
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	86.64

apachecorp
Planning Report

Database: PEDM
Company: PERMIAN
Project: NW DISTRICT - NM EZ NAD 83
Site: PALMILLO 14-15 STATE COM PAD (304H, 305H)
Well: PALMILLO 14-15 STATE COM 305H
Wellbore: PALMILLO 14-15 STATE COM 305H
Design: design 1 with lateral targets

Local Co-ordinate Reference: Well PALMILLO 14-15 STATE COM 305H
TVD Reference: WELL @ 3539.0ft (Original Well Elev)
MD Reference: WELL @ 3539.0ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,781.0	7.81	343.29	3,778.5	50.9	-15.3	1.00	1.00	0.00	343.29	
6,789.3	7.81	343.29	6,759.0	442.4	-132.8	0.00	0.00	0.00	0.00	
7,570.2	0.00	0.00	7,537.5	493.3	-148.1	1.00	-1.00	0.00	180.00	
8,070.2	0.00	0.00	8,037.5	493.3	-148.1	0.00	0.00	0.00	0.00	KOP PALMILLO 14-15
8,820.1	89.99	89.43	8,515.0	498.1	329.2	12.00	12.00	11.93	89.43	
8,962.4	89.99	89.43	8,515.0	499.5	471.5	0.00	0.00	0.00	0.00	T1 PALMILLO 14-15
9,051.5	88.20	89.43	8,516.4	500.4	560.5	2.00	-2.00	0.00	-179.99	
9,964.0	88.20	89.43	8,545.0	509.4	1,472.6	0.00	0.00	0.00	0.00	T2 PALMILLO 14-15
9,977.6	88.48	89.43	8,545.4	509.6	1,486.2	2.00	2.00	0.00	-0.04	
11,466.4	88.48	89.43	8,585.0	524.4	2,974.3	0.00	0.00	0.00	0.00	T3 PALMILLO 14-15
11,526.6	89.68	89.43	8,586.0	525.0	3,034.6	2.00	2.00	0.00	0.02	
12,968.2	89.68	89.43	8,594.0	539.3	4,476.1	0.00	0.00	0.00	0.00	T4 PALMILLO 14-15
12,976.5	89.85	89.43	8,594.0	539.4	4,484.4	2.00	2.00	0.00	-0.13	
14,470.0	89.85	89.43	8,598.0	554.3	5,977.8	0.00	0.00	0.00	0.00	T5 PALMILLO 14-15
14,502.8	89.19	89.43	8,598.3	554.6	6,010.6	2.00	-2.00	0.00	179.97	
15,971.9	89.19	89.43	8,619.0	569.3	7,479.5	0.00	0.00	0.00	0.00	T6 PALMILLO 14-15
16,005.1	89.85	89.43	8,619.3	569.6	7,512.6	2.00	2.00	0.00	0.00	
17,473.7	89.85	89.43	8,623.0	584.2	8,981.2	0.00	0.00	0.00	0.00	T7 PALMILLO 14-15
17,540.4	88.52	89.43	8,623.9	584.9	9,047.9	2.00	-2.00	0.00	-179.98	
18,627.5	88.52	89.43	8,652.0	595.7	10,134.6	0.00	0.00	0.00	0.00	BHL PALMILLO 14-15

apache
Planning Report

Database: PEDM
Company: PERMIAN
Project: NW DISTRICT - NM EZ NAD 83
Site: PALMILLO 14-15 STATE COM PAD (304H, 305H)
Well: PALMILLO 14-15 STATE COM 305H
Wellbore: PALMILLO 14-15 STATE COM 305H
Design: design 1 with lateral targets

Local Co-ordinate Reference: Well PALMILLO 14-15 STATE COM 305H
TVD Reference: WELL @ 3539.0ft (Original Well Elev)
MD Reference: WELL @ 3539.0ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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	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	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	1.00	343.29	3,100.0	0.8	-0.3	-0.2	1.00	1.00	0.00
3,200.0	2.00	343.29	3,200.0	3.3	-1.0	-0.8	1.00	1.00	0.00
3,300.0	3.00	343.29	3,299.9	7.5	-2.3	-1.8	1.00	1.00	0.00
3,400.0	4.00	343.29	3,399.7	13.4	-4.0	-3.2	1.00	1.00	0.00
3,500.0	5.00	343.29	3,499.4	20.9	-6.3	-5.0	1.00	1.00	0.00
3,600.0	6.00	343.29	3,598.9	30.1	-9.0	-7.2	1.00	1.00	0.00
3,700.0	7.00	343.29	3,698.3	40.9	-12.3	-9.9	1.00	1.00	0.00
3,781.0	7.81	343.29	3,778.5	50.9	-15.3	-12.3	1.00	1.00	0.00
3,800.0	7.81	343.29	3,797.4	53.4	-16.0	-12.9	0.00	0.00	0.00
3,900.0	7.81	343.29	3,896.5	66.4	-19.9	-16.0	0.00	0.00	0.00
4,000.0	7.81	343.29	3,995.6	79.4	-23.8	-19.1	0.00	0.00	0.00
4,100.0	7.81	343.29	4,094.6	92.4	-27.7	-22.3	0.00	0.00	0.00
4,200.0	7.81	343.29	4,193.7	105.4	-31.7	-25.4	0.00	0.00	0.00
4,300.0	7.81	343.29	4,292.8	118.4	-35.6	-28.5	0.00	0.00	0.00
4,400.0	7.81	343.29	4,391.8	131.5	-39.5	-31.7	0.00	0.00	0.00
4,500.0	7.81	343.29	4,490.9	144.5	-43.4	-34.8	0.00	0.00	0.00
4,600.0	7.81	343.29	4,590.0	157.5	-47.3	-38.0	0.00	0.00	0.00
4,700.0	7.81	343.29	4,689.1	170.5	-51.2	-41.1	0.00	0.00	0.00
4,800.0	7.81	343.29	4,788.1	183.5	-55.1	-44.2	0.00	0.00	0.00
4,900.0	7.81	343.29	4,887.2	196.5	-59.0	-47.4	0.00	0.00	0.00
5,000.0	7.81	343.29	4,986.3	209.5	-62.9	-50.5	0.00	0.00	0.00
5,100.0	7.81	343.29	5,085.4	222.6	-66.8	-53.6	0.00	0.00	0.00

apachecorp
Planning Report

Database: PEDM
Company: PERMIAN
Project: NW DISTRICT - NM EZ NAD 83
Site: PALMILLO 14-15 STATE COM PAD (304H, 305H)
Well: PALMILLO 14-15 STATE COM 305H
Wellbore: PALMILLO 14-15 STATE COM 305H
Design: design 1 with lateral targets

Local Co-ordinate Reference: Well PALMILLO 14-15 STATE COM 305H
TVD Reference: WELL @ 3539.0ft (Original Well Elev)
MD Reference: WELL @ 3539.0ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
5,200.0	7.81	343.29	5,184.4	235.6	-70.7	-56.8	0.00	0.00	0.00
5,300.0	7.81	343.29	5,283.5	248.6	-74.6	-59.9	0.00	0.00	0.00
5,400.0	7.81	343.29	5,382.6	261.6	-78.5	-63.1	0.00	0.00	0.00
5,500.0	7.81	343.29	5,481.6	274.6	-82.4	-66.2	0.00	0.00	0.00
5,600.0	7.81	343.29	5,580.7	287.6	-86.4	-69.3	0.00	0.00	0.00
5,700.0	7.81	343.29	5,679.8	300.6	-90.3	-72.5	0.00	0.00	0.00
5,800.0	7.81	343.29	5,778.9	313.7	-94.2	-75.6	0.00	0.00	0.00
5,900.0	7.81	343.29	5,877.9	326.7	-98.1	-78.7	0.00	0.00	0.00
6,000.0	7.81	343.29	5,977.0	339.7	-102.0	-81.9	0.00	0.00	0.00
6,100.0	7.81	343.29	6,076.1	352.7	-105.9	-85.0	0.00	0.00	0.00
6,200.0	7.81	343.29	6,175.1	365.7	-109.8	-88.1	0.00	0.00	0.00
6,300.0	7.81	343.29	6,274.2	378.7	-113.7	-91.3	0.00	0.00	0.00
6,400.0	7.81	343.29	6,373.3	391.7	-117.6	-94.4	0.00	0.00	0.00
6,500.0	7.81	343.29	6,472.4	404.8	-121.5	-97.6	0.00	0.00	0.00
6,600.0	7.81	343.29	6,571.4	417.8	-125.4	-100.7	0.00	0.00	0.00
6,700.0	7.81	343.29	6,670.5	430.8	-129.3	-103.8	0.00	0.00	0.00
6,789.3	7.81	343.29	6,759.0	442.4	-132.8	-106.6	0.00	0.00	0.00
6,800.0	7.70	343.29	6,769.6	443.8	-133.2	-107.0	1.00	-1.00	0.00
6,900.0	6.70	343.29	6,868.8	455.8	-136.8	-109.9	1.00	-1.00	0.00
7,000.0	5.70	343.29	6,968.2	466.1	-139.9	-112.4	1.00	-1.00	0.00
7,100.0	4.70	343.29	7,067.8	474.8	-142.6	-114.4	1.00	-1.00	0.00
7,200.0	3.70	343.29	7,167.5	481.8	-144.7	-116.1	1.00	-1.00	0.00
7,300.0	2.70	343.29	7,267.4	487.2	-146.3	-117.4	1.00	-1.00	0.00
7,400.0	1.70	343.29	7,367.3	490.9	-147.4	-118.3	1.00	-1.00	0.00
7,500.0	0.70	343.29	7,467.3	492.9	-148.0	-118.8	1.00	-1.00	0.00
7,570.2	0.00	0.00	7,537.5	493.3	-148.1	-118.9	1.00	-1.00	0.00
7,600.0	0.00	0.00	7,567.3	493.3	-148.1	-118.9	0.00	0.00	0.00
7,700.0	0.00	0.00	7,667.3	493.3	-148.1	-118.9	0.00	0.00	0.00
7,800.0	0.00	0.00	7,767.3	493.3	-148.1	-118.9	0.00	0.00	0.00
7,900.0	0.00	0.00	7,867.3	493.3	-148.1	-118.9	0.00	0.00	0.00
8,000.0	0.00	0.00	7,967.3	493.3	-148.1	-118.9	0.00	0.00	0.00
8,070.2	0.00	0.00	8,037.5	493.3	-148.1	-118.9	0.00	0.00	0.00
8,100.0	3.57	89.43	8,067.2	493.3	-147.2	-118.0	12.00	12.00	0.00
8,200.0	15.57	89.43	8,165.7	493.5	-130.6	-101.4	12.00	12.00	0.00
8,300.0	27.57	89.43	8,258.5	493.8	-93.9	-64.7	12.00	12.00	0.00
8,400.0	39.57	89.43	8,341.7	494.4	-38.7	-9.6	12.00	12.00	0.00
8,500.0	51.57	89.43	8,411.5	495.1	32.6	61.6	12.00	12.00	0.00
8,600.0	63.57	89.43	8,465.1	495.9	116.8	145.7	12.00	12.00	0.00
8,700.0	75.57	89.43	8,499.9	496.9	210.4	239.2	12.00	12.00	0.00
8,800.0	87.57	89.43	8,514.5	497.9	309.1	337.8	12.00	12.00	0.00
8,820.1	89.99	89.43	8,515.0	498.1	329.2	357.9	12.00	12.00	0.00
8,900.0	89.99	89.43	8,515.0	498.8	409.1	437.7	0.00	0.00	0.00
8,962.4	89.99	89.43	8,515.0	499.5	471.5	500.0	0.00	0.00	0.00
9,000.0	89.23	89.43	8,515.3	499.8	509.1	537.6	2.00	-2.00	0.00
9,051.5	88.20	89.43	8,516.4	500.4	560.5	588.9	2.00	-2.00	0.00
9,100.0	88.20	89.43	8,517.9	500.8	609.1	637.4	0.00	0.00	0.00
9,200.0	88.20	89.43	8,521.1	501.8	709.0	737.2	0.00	0.00	0.00
9,300.0	88.20	89.43	8,524.2	502.8	808.9	837.1	0.00	0.00	0.00
9,400.0	88.20	89.43	8,527.3	503.8	908.9	936.9	0.00	0.00	0.00
9,500.0	88.20	89.43	8,530.5	504.8	1,008.8	1,036.7	0.00	0.00	0.00
9,600.0	88.20	89.43	8,533.6	505.8	1,108.8	1,136.6	0.00	0.00	0.00
9,700.0	88.20	89.43	8,536.7	506.8	1,208.7	1,236.4	0.00	0.00	0.00
9,800.0	88.20	89.43	8,539.9	507.8	1,308.7	1,336.2	0.00	0.00	0.00

apachecorp
Planning Report

Database: PEDM
Company: PERMIAN
Project: NW DISTRICT - NM EZ NAD 83
Site: PALMILLO 14-15 STATE COM PAD (304H, 305H)
Well: PALMILLO 14-15 STATE COM 305H
Wellbore: PALMILLO 14-15 STATE COM 305H
Design: design 1 with lateral targets

Local Co-ordinate Reference: Well PALMILLO 14-15 STATE COM 305H
TVD Reference: WELL @ 3539.0ft (Original Well Elev)
MD Reference: WELL @ 3539.0ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
9,900.0	88.20	89.43	8,543.0	508.8	1,408.6	1,436.1	0.00	0.00	0.00
9,964.0	88.20	89.43	8,545.0	509.4	1,472.6	1,500.0	0.00	0.00	0.00
9,977.6	88.48	89.43	8,545.4	509.6	1,486.2	1,513.5	2.00	2.00	0.00
10,000.0	88.48	89.43	8,546.0	509.8	1,508.6	1,535.9	0.00	0.00	0.00
10,100.0	88.48	89.43	8,548.6	510.8	1,608.5	1,635.7	0.00	0.00	0.00
10,200.0	88.48	89.43	8,551.3	511.8	1,708.5	1,735.6	0.00	0.00	0.00
10,300.0	88.48	89.43	8,554.0	512.8	1,808.5	1,835.4	0.00	0.00	0.00
10,400.0	88.48	89.43	8,556.6	513.8	1,908.4	1,935.3	0.00	0.00	0.00
10,500.0	88.48	89.43	8,559.3	514.8	2,008.4	2,035.1	0.00	0.00	0.00
10,600.0	88.48	89.43	8,562.0	515.8	2,108.3	2,135.0	0.00	0.00	0.00
10,700.0	88.48	89.43	8,564.6	516.8	2,208.3	2,234.8	0.00	0.00	0.00
10,800.0	88.48	89.43	8,567.3	517.8	2,308.3	2,334.7	0.00	0.00	0.00
10,900.0	88.48	89.43	8,569.9	518.8	2,408.2	2,434.5	0.00	0.00	0.00
11,000.0	88.48	89.43	8,572.6	519.8	2,508.2	2,534.3	0.00	0.00	0.00
11,100.0	88.48	89.43	8,575.3	520.8	2,608.1	2,634.2	0.00	0.00	0.00
11,200.0	88.48	89.43	8,577.9	521.7	2,708.1	2,734.0	0.00	0.00	0.00
11,300.0	88.48	89.43	8,580.6	522.7	2,808.1	2,833.9	0.00	0.00	0.00
11,400.0	88.48	89.43	8,583.2	523.7	2,908.0	2,933.7	0.00	0.00	0.00
11,466.4	88.48	89.43	8,585.0	524.4	2,974.3	3,000.0	0.00	0.00	0.00
11,500.0	89.15	89.43	8,585.7	524.7	3,008.0	3,033.6	2.00	2.00	0.00
11,526.6	89.68	89.43	8,586.0	525.0	3,034.6	3,060.2	2.00	2.00	0.00
11,600.0	89.68	89.43	8,586.4	525.7	3,108.0	3,133.5	0.00	0.00	0.00
11,700.0	89.68	89.43	8,586.9	526.7	3,208.0	3,233.3	0.00	0.00	0.00
11,800.0	89.68	89.43	8,587.5	527.7	3,308.0	3,333.2	0.00	0.00	0.00
11,900.0	89.68	89.43	8,588.0	528.7	3,407.9	3,433.1	0.00	0.00	0.00
12,000.0	89.68	89.43	8,588.6	529.7	3,507.9	3,533.0	0.00	0.00	0.00
12,100.0	89.68	89.43	8,589.2	530.7	3,607.9	3,632.9	0.00	0.00	0.00
12,200.0	89.68	89.43	8,589.7	531.7	3,707.9	3,732.7	0.00	0.00	0.00
12,300.0	89.68	89.43	8,590.3	532.7	3,807.9	3,832.6	0.00	0.00	0.00
12,400.0	89.68	89.43	8,590.8	533.7	3,907.9	3,932.5	0.00	0.00	0.00
12,500.0	89.68	89.43	8,591.4	534.7	4,007.9	4,032.4	0.00	0.00	0.00
12,600.0	89.68	89.43	8,591.9	535.7	4,107.9	4,132.3	0.00	0.00	0.00
12,700.0	89.68	89.43	8,592.5	536.7	4,207.9	4,232.1	0.00	0.00	0.00
12,800.0	89.68	89.43	8,593.1	537.7	4,307.9	4,332.0	0.00	0.00	0.00
12,900.0	89.68	89.43	8,593.6	538.7	4,407.9	4,431.9	0.00	0.00	0.00
12,968.2	89.68	89.43	8,594.0	539.3	4,476.1	4,500.0	0.00	0.00	0.00
12,976.5	89.85	89.43	8,594.0	539.4	4,484.4	4,508.3	2.00	2.00	0.00
13,000.0	89.85	89.43	8,594.1	539.7	4,507.9	4,531.8	0.00	0.00	0.00
13,100.0	89.85	89.43	8,594.4	540.7	4,607.9	4,631.7	0.00	0.00	0.00
13,200.0	89.85	89.43	8,594.6	541.7	4,707.9	4,731.5	0.00	0.00	0.00
13,300.0	89.85	89.43	8,594.9	542.7	4,807.9	4,831.4	0.00	0.00	0.00
13,400.0	89.85	89.43	8,595.2	543.7	4,907.9	4,931.3	0.00	0.00	0.00
13,500.0	89.85	89.43	8,595.4	544.6	5,007.8	5,031.2	0.00	0.00	0.00
13,600.0	89.85	89.43	8,595.7	545.6	5,107.8	5,131.1	0.00	0.00	0.00
13,700.0	89.85	89.43	8,596.0	546.6	5,207.8	5,230.9	0.00	0.00	0.00
13,800.0	89.85	89.43	8,596.2	547.6	5,307.8	5,330.8	0.00	0.00	0.00
13,900.0	89.85	89.43	8,596.5	548.6	5,407.8	5,430.7	0.00	0.00	0.00
14,000.0	89.85	89.43	8,596.8	549.6	5,507.8	5,530.6	0.00	0.00	0.00
14,100.0	89.85	89.43	8,597.0	550.6	5,607.8	5,630.5	0.00	0.00	0.00
14,200.0	89.85	89.43	8,597.3	551.6	5,707.8	5,730.3	0.00	0.00	0.00
14,300.0	89.85	89.43	8,597.5	552.6	5,807.8	5,830.2	0.00	0.00	0.00
14,400.0	89.85	89.43	8,597.8	553.6	5,907.8	5,930.1	0.00	0.00	0.00
14,470.0	89.85	89.43	8,598.0	554.3	5,977.8	6,000.0	0.00	0.00	0.00

apachecorp
Planning Report

Database: PEDM
Company: PERMIAN
Project: NW DISTRICT - NM EZ NAD 83
Site: PALMILLO 14-15 STATE COM PAD (304H, 305H)
Well: PALMILLO 14-15 STATE COM 305H
Wellbore: PALMILLO 14-15 STATE COM 305H
Design: design 1 with lateral targets

Local Co-ordinate Reference: Well PALMILLO 14-15 STATE COM 305H
TVD Reference: WELL @ 3539.0ft (Original Well Elev)
MD Reference: WELL @ 3539.0ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Bulld Rate (°/100ft)	Turn Rate (°/100ft)
14,500.0	89.25	89.43	8,598.2	554.6	6,007.8	6,030.0	2.00	-2.00	0.00
14,502.8	89.19	89.43	8,598.3	554.6	6,010.6	6,032.8	2.00	-2.00	0.00
14,600.0	89.19	89.43	8,599.6	555.6	6,107.8	6,129.9	0.00	0.00	0.00
14,700.0	89.19	89.43	8,601.1	556.6	6,207.8	6,229.7	0.00	0.00	0.00
14,800.0	89.19	89.43	8,602.5	557.6	6,307.8	6,329.6	0.00	0.00	0.00
14,900.0	89.19	89.43	8,603.9	558.6	6,407.7	6,429.5	0.00	0.00	0.00
15,000.0	89.19	89.43	8,605.3	559.6	6,507.7	6,529.3	0.00	0.00	0.00
15,100.0	89.19	89.43	8,606.7	560.6	6,607.7	6,629.2	0.00	0.00	0.00
15,200.0	89.19	89.43	8,608.1	561.6	6,707.7	6,729.1	0.00	0.00	0.00
15,300.0	89.19	89.43	8,609.5	562.6	6,807.7	6,829.0	0.00	0.00	0.00
15,400.0	89.19	89.43	8,610.9	563.6	6,907.7	6,928.8	0.00	0.00	0.00
15,500.0	89.19	89.43	8,612.3	564.6	7,007.6	7,028.7	0.00	0.00	0.00
15,600.0	89.19	89.43	8,613.8	565.6	7,107.6	7,128.6	0.00	0.00	0.00
15,700.0	89.19	89.43	8,615.2	566.6	7,207.6	7,228.4	0.00	0.00	0.00
15,800.0	89.19	89.43	8,616.6	567.5	7,307.6	7,328.3	0.00	0.00	0.00
15,900.0	89.19	89.43	8,618.0	568.5	7,407.6	7,428.2	0.00	0.00	0.00
15,971.9	89.19	89.43	8,619.0	569.3	7,479.5	7,500.0	0.00	0.00	0.00
16,000.0	89.75	89.43	8,619.3	569.5	7,507.6	7,528.1	2.00	2.00	0.00
16,005.1	89.85	89.43	8,619.3	569.6	7,512.6	7,533.1	2.00	2.00	0.00
16,100.0	89.85	89.43	8,619.5	570.5	7,607.6	7,627.9	0.00	0.00	0.00
16,200.0	89.85	89.43	8,619.8	571.5	7,707.6	7,727.8	0.00	0.00	0.00
16,300.0	89.85	89.43	8,620.0	572.5	7,807.6	7,827.7	0.00	0.00	0.00
16,400.0	89.85	89.43	8,620.3	573.5	7,907.6	7,927.6	0.00	0.00	0.00
16,500.0	89.85	89.43	8,620.5	574.5	8,007.5	8,027.5	0.00	0.00	0.00
16,600.0	89.85	89.43	8,620.8	575.5	8,107.5	8,127.3	0.00	0.00	0.00
16,700.0	89.85	89.43	8,621.0	576.5	8,207.5	8,227.2	0.00	0.00	0.00
16,800.0	89.85	89.43	8,621.3	577.5	8,307.5	8,327.1	0.00	0.00	0.00
16,900.0	89.85	89.43	8,621.5	578.5	8,407.5	8,427.0	0.00	0.00	0.00
17,000.0	89.85	89.43	8,621.8	579.5	8,507.5	8,526.9	0.00	0.00	0.00
17,100.0	89.85	89.43	8,622.1	580.5	8,607.5	8,626.7	0.00	0.00	0.00
17,200.0	89.85	89.43	8,622.3	581.5	8,707.5	8,726.6	0.00	0.00	0.00
17,300.0	89.85	89.43	8,622.6	582.5	8,807.5	8,826.5	0.00	0.00	0.00
17,400.0	89.85	89.43	8,622.8	583.5	8,907.5	8,926.4	0.00	0.00	0.00
17,473.7	89.85	89.43	8,623.0	584.2	8,981.2	9,000.0	0.00	0.00	0.00
17,500.0	89.33	89.43	8,623.2	584.5	9,007.5	9,026.3	2.00	-2.00	0.00
17,540.4	88.52	89.43	8,623.9	584.9	9,047.9	9,066.6	2.00	-2.00	0.00
17,600.0	88.52	89.43	8,625.5	585.5	9,107.5	9,126.1	0.00	0.00	0.00
17,700.0	88.52	89.43	8,628.1	586.5	9,207.4	9,226.0	0.00	0.00	0.00
17,800.0	88.52	89.43	8,630.6	587.5	9,307.4	9,325.8	0.00	0.00	0.00
17,900.0	88.52	89.43	8,633.2	588.5	9,407.3	9,425.7	0.00	0.00	0.00
18,000.0	88.52	89.43	8,635.8	589.5	9,507.3	9,525.5	0.00	0.00	0.00
18,100.0	88.52	89.43	8,638.4	590.4	9,607.3	9,625.4	0.00	0.00	0.00
18,200.0	88.52	89.43	8,641.0	591.4	9,707.2	9,725.2	0.00	0.00	0.00
18,300.0	88.52	89.43	8,643.5	592.4	9,807.2	9,825.1	0.00	0.00	0.00
18,400.0	88.52	89.43	8,646.1	593.4	9,907.2	9,924.9	0.00	0.00	0.00
18,500.0	88.52	89.43	8,648.7	594.4	10,007.1	10,024.8	0.00	0.00	0.00
18,600.0	88.52	89.43	8,651.3	595.4	10,107.1	10,124.6	0.00	0.00	0.00
18,627.5	88.52	89.43	8,652.0	595.7	10,134.6	10,152.1	0.00	0.00	0.00

apachecorp
Planning Report

Database: PEDM
Company: PERMIAN
Project: NW DISTRICT - NM EZ NAD 83
Site: PALMILLO 14-15 STATE COM PAD (304H, 305H)
Well: PALMILLO 14-15 STATE COM 305H
Wellbore: PALMILLO 14-15 STATE COM 305H
Design: design 1 with lateral targets

Local Co-ordinate Reference: Well PALMILLO 14-15 STATE COM 305H
TVD Reference: WELL @ 3539.0ft (Original Well Elev)
MD Reference: WELL @ 3539.0ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
KOP PALMILLO 14-15 S - plan hits target center - Point	0.00	0.00	8,037.5	493.3	-148.1	605,533.01	590,851.91	32° 39' 52.379 N	104° 10' 20.769 W
T1 PALMILLO 14-15 ST, - plan hits target center - Point	0.00	0.00	8,515.0	499.5	471.5	605,539.17	591,471.50	32° 39' 52.431 N	104° 10' 13.521 W
T2 PALMILLO 14-15 ST, - plan hits target center - Point	0.00	0.00	8,545.0	509.4	1,472.6	605,549.14	592,472.64	32° 39' 52.514 N	104° 10' 1.809 W
T3 PALMILLO 14-15 ST, - plan hits target center - Point	0.00	0.00	8,585.0	524.4	2,974.3	605,564.10	593,974.35	32° 39' 52.639 N	104° 9' 44.241 W
T4 PALMILLO 14-15 ST, - plan hits target center - Point	0.00	0.00	8,594.0	539.3	4,476.1	605,579.05	595,476.06	32° 39' 52.763 N	104° 9' 26.673 W
T5 PALMILLO 14-15 ST, - plan hits target center - Point	0.00	0.00	8,598.0	554.3	5,977.8	605,594.01	596,977.77	32° 39' 52.886 N	104° 9' 9.105 W
T6 PALMILLO 14-15 ST, - plan hits target center - Point	0.00	0.00	8,619.0	569.3	7,479.5	605,608.96	598,479.48	32° 39' 53.008 N	104° 8' 51.537 W
T7 PALMILLO 14-15 ST, - plan hits target center - Point	0.00	0.00	8,623.0	584.2	8,981.2	605,623.91	599,981.19	32° 39' 53.129 N	104° 8' 33.969 W
BHL PALMILLO 14-15 S - plan hits target center - Point	0.00	0.00	8,652.0	595.7	10,134.6	605,635.40	601,134.60	32° 39' 53.222 N	104° 8' 20.476 W