

**NM OIL CONSERVATION
ARTESIA DISTRICT**

OCT 31 2018

RECEIVED

PERMIAN

NW DISTRICT - NM EZ NAD 83

PALMILLO 14-15 STATE COM PAD (302H, 303H)

PALMILLO 14-15 STATE COM 303H

30-015-45380

PALMILLO 14-15 STATE COM 303H

Plan: Design 1 w/ lateral targets

Standard Planning Report

12 October, 2018

apachecorp
Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well PALMILLO 14-15 STATE COM 303H
Company:	PERMIAN	TVD Reference:	WELL @ 3501.0ft (Original Well Elev)
Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3501.0ft (Original Well Elev)
Site:	PALMILLO 14-15 STATE COM PAD (302H, 303H)	North Reference:	Grid
Well:	PALMILLO 14-15 STATE COM 303H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PALMILLO 14-15 STATE COM 303H		
Design:	Design 1 w/ lateral targets		

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 (302H, 303H)			
Site Position:		Northing:	603,265.20 ft	Latitude: 32° 39' 29.935 N
From:	Map	Easting:	591,093.60 ft	Longitude: 104° 10' 17.982 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence: 0.09 °

Well	PALMILLO 14-15 STATE COM 303H			
Well Position	+N/-S	21.2 ft	Northing:	603,286.40 ft
	+E/-W	21.1 ft	Easting:	591,114.70 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level: 3,475.0 ft

Wellbore	PALMILLO 14-15 STATE COM 303H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	10/11/2018	7.30	60.45	48,027

Design	Design 1 w/ lateral targets			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	86.83

apachecorp
Planning Report

Database: PEDM
Company: PERMIAN
Project: NW DISTRICT - NM EZ NAD 83
Site: PALMILLO 14-15 STATE COM PAD (302H, 303H)
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Local Co-ordinate Reference: Well PALMILLO 14-15 STATE COM 303H
TVD Reference: WELL @ 3501.0ft (Original Well Elev)
MD Reference: WELL @ 3501.0ft (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	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,327.6	8.28	333.54	3,324.8	53.4	-26.6	1.00	1.00	0.00	333.54	
6,698.7	8.28	333.54	6,660.7	487.8	-242.8	0.00	0.00	0.00	0.00	
7,526.4	0.00	0.00	7,485.5	541.3	-269.4	1.00	-1.00	0.00	180.00	
8,026.4	0.00	0.00	7,985.5	541.3	-269.4	0.00	0.00	0.00	0.00	kop PALMILLO 14-15
8,776.3	89.99	89.92	8,463.0	541.9	208.0	12.00	12.00	11.99	89.92	
9,039.0	89.99	89.92	8,463.0	542.3	470.7	0.00	0.00	0.00	0.00	t1 PALMILLO 14-15 S
9,196.8	86.84	89.92	8,467.4	542.5	628.4	2.00	-2.00	0.00	-179.99	
10,041.8	86.84	89.92	8,514.0	543.7	1,472.2	0.00	0.00	0.00	0.00	t2 PALMILLO 14-15 S
10,132.2	88.64	89.92	8,517.6	543.8	1,562.4	2.00	2.00	0.00	0.01	
11,544.5	88.64	89.92	8,551.0	545.7	2,974.3	0.00	0.00	0.00	0.00	t3 PALMILLO 14-15 S
11,574.5	89.24	89.92	8,551.6	545.8	3,004.3	2.00	2.00	0.00	-0.04	
13,046.8	89.24	89.92	8,571.0	547.8	4,476.5	0.00	0.00	0.00	0.00	t4 PALMILLO 14-15 S
13,077.9	88.62	89.92	8,571.6	547.8	4,507.7	2.00	-2.00	0.00	179.96	
14,549.4	88.62	89.92	8,607.0	549.8	5,978.7	0.00	0.00	0.00	0.00	t5 PALMILLO 14-15 S
14,576.7	89.17	89.92	8,607.5	549.9	6,006.0	2.00	2.00	0.00	-0.04	
16,051.8	89.17	89.92	8,629.0	551.9	7,480.9	0.00	0.00	0.00	0.00	t6 PALMILLO 14-15 S
16,076.5	89.66	89.92	8,629.3	552.0	7,505.7	2.00	2.00	0.00	0.04	
17,554.0	89.66	89.92	8,638.0	554.0	8,983.1	0.00	0.00	0.00	0.00	t7 PALMILLO 14-15 S
17,677.5	87.19	89.92	8,641.4	554.1	9,106.5	2.00	-2.00	0.00	-179.99	
18,587.8	87.19	89.92	8,686.0	555.4	10,015.8	0.00	0.00	0.00	0.00	bhl PALMILLO 14-15

apache corp
Planning Report

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Company: PERMIAN
Project: NW DISTRICT - NM EZ NAD 83
Site: PALMILLO 14-15 STATE COM PAD (302H, 303H)
Well: PALMILLO 14-15 STATE COM 303H
Wellbore: PALMILLO 14-15 STATE COM 303H
Design: Design 1 w/ lateral targets

Local Co-ordinate Reference: Well PALMILLO 14-15 STATE COM 303H
TVD Reference: WELL @ 3501.0ft (Original Well Elev)
MD Reference: WELL @ 3501.0ft (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)
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	1.00	333.54	2,600.0	0.8	-0.4	-0.3	1.00	1.00	0.00
2,700.0	2.00	333.54	2,700.0	3.1	-1.6	-1.4	1.00	1.00	0.00
2,800.0	3.00	333.54	2,799.9	7.0	-3.5	-3.1	1.00	1.00	0.00
2,900.0	4.00	333.54	2,899.7	12.5	-6.2	-5.5	1.00	1.00	0.00
3,000.0	5.00	333.54	2,999.4	19.5	-9.7	-8.6	1.00	1.00	0.00
3,100.0	6.00	333.54	3,098.9	28.1	-14.0	-12.4	1.00	1.00	0.00
3,200.0	7.00	333.54	3,198.3	38.2	-19.0	-16.9	1.00	1.00	0.00
3,300.0	8.00	333.54	3,297.4	49.9	-24.8	-22.0	1.00	1.00	0.00
3,327.6	8.28	333.54	3,324.8	53.4	-26.6	-23.6	1.00	1.00	0.00
3,400.0	8.28	333.54	3,396.4	62.7	-31.2	-27.7	0.00	0.00	0.00
3,500.0	8.28	333.54	3,495.3	75.6	-37.6	-33.4	0.00	0.00	0.00
3,600.0	8.28	333.54	3,594.3	88.5	-44.1	-39.1	0.00	0.00	0.00
3,700.0	8.28	333.54	3,693.2	101.4	-50.5	-44.8	0.00	0.00	0.00
3,800.0	8.28	333.54	3,792.2	114.3	-56.9	-50.5	0.00	0.00	0.00
3,900.0	8.28	333.54	3,891.2	127.2	-63.3	-56.2	0.00	0.00	0.00
4,000.0	8.28	333.54	3,990.1	140.1	-69.7	-61.9	0.00	0.00	0.00
4,100.0	8.28	333.54	4,089.1	153.0	-76.1	-67.5	0.00	0.00	0.00
4,200.0	8.28	333.54	4,188.0	165.8	-82.5	-73.2	0.00	0.00	0.00
4,300.0	8.28	333.54	4,287.0	178.7	-89.0	-78.9	0.00	0.00	0.00
4,400.0	8.28	333.54	4,386.0	191.6	-95.4	-84.6	0.00	0.00	0.00
4,500.0	8.28	333.54	4,484.9	204.5	-101.8	-90.3	0.00	0.00	0.00
4,600.0	8.28	333.54	4,583.9	217.4	-108.2	-96.0	0.00	0.00	0.00
4,700.0	8.28	333.54	4,682.8	230.3	-114.6	-101.7	0.00	0.00	0.00
4,800.0	8.28	333.54	4,781.8	243.2	-121.0	-107.4	0.00	0.00	0.00
4,900.0	8.28	333.54	4,880.7	256.0	-127.4	-113.1	0.00	0.00	0.00
5,000.0	8.28	333.54	4,979.7	268.9	-133.9	-118.8	0.00	0.00	0.00
5,100.0	8.28	333.54	5,078.7	281.8	-140.3	-124.4	0.00	0.00	0.00

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Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well PALMILLO 14-15 STATE COM 303H
Company:	PERMIAN	TVD Reference:	WELL @ 3501.0ft (Original Well Elev)
Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3501.0ft (Original Well Elev)
Site:	PALMILLO 14-15 STATE COM PAD (302H, 303H)	North Reference:	Grid
Well:	PALMILLO 14-15 STATE COM 303H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PALMILLO 14-15 STATE COM 303H		
Design:	Design 1 w/ lateral targets		

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	8.28	333.54	5,177.6	294.7	-146.7	-130.1	0.00	0.00	0.00
5,300.0	8.28	333.54	5,276.6	307.6	-153.1	-135.8	0.00	0.00	0.00
5,400.0	8.28	333.54	5,375.5	320.5	-159.5	-141.5	0.00	0.00	0.00
5,500.0	8.28	333.54	5,474.5	333.4	-165.9	-147.2	0.00	0.00	0.00
5,600.0	8.28	333.54	5,573.5	346.3	-172.3	-152.9	0.00	0.00	0.00
5,700.0	8.28	333.54	5,672.4	359.1	-178.8	-158.6	0.00	0.00	0.00
5,800.0	8.28	333.54	5,771.4	372.0	-185.2	-164.3	0.00	0.00	0.00
5,900.0	8.28	333.54	5,870.3	384.9	-191.6	-170.0	0.00	0.00	0.00
6,000.0	8.28	333.54	5,969.3	397.8	-198.0	-175.7	0.00	0.00	0.00
6,100.0	8.28	333.54	6,068.3	410.7	-204.4	-181.4	0.00	0.00	0.00
6,200.0	8.28	333.54	6,167.2	423.6	-210.8	-187.0	0.00	0.00	0.00
6,300.0	8.28	333.54	6,266.2	436.5	-217.2	-192.7	0.00	0.00	0.00
6,400.0	8.28	333.54	6,365.1	449.3	-223.6	-198.4	0.00	0.00	0.00
6,500.0	8.28	333.54	6,464.1	462.2	-230.1	-204.1	0.00	0.00	0.00
6,600.0	8.28	333.54	6,563.0	475.1	-236.5	-209.8	0.00	0.00	0.00
6,698.7	8.28	333.54	6,660.7	487.8	-242.8	-215.4	0.00	0.00	0.00
6,700.0	8.26	333.54	6,662.0	488.0	-242.9	-215.5	1.00	-1.00	0.00
6,800.0	7.26	333.54	6,761.1	500.1	-248.9	-220.8	1.00	-1.00	0.00
6,900.0	6.26	333.54	6,860.4	510.6	-254.2	-225.5	1.00	-1.00	0.00
7,000.0	5.26	333.54	6,959.9	519.6	-258.6	-229.5	1.00	-1.00	0.00
7,100.0	4.26	333.54	7,059.5	527.1	-262.3	-232.7	1.00	-1.00	0.00
7,200.0	3.26	333.54	7,159.3	532.9	-265.3	-235.3	1.00	-1.00	0.00
7,300.0	2.26	333.54	7,259.2	537.3	-267.4	-237.2	1.00	-1.00	0.00
7,400.0	1.26	333.54	7,359.2	540.0	-268.8	-238.5	1.00	-1.00	0.00
7,500.0	0.26	333.54	7,459.1	541.2	-269.4	-239.0	1.00	-1.00	0.00
7,526.4	0.00	0.00	7,485.5	541.3	-269.4	-239.0	1.00	-1.00	0.00
7,600.0	0.00	0.00	7,559.1	541.3	-269.4	-239.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,659.1	541.3	-269.4	-239.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,759.1	541.3	-269.4	-239.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,859.1	541.3	-269.4	-239.0	0.00	0.00	0.00
8,000.0	0.00	0.00	7,959.1	541.3	-269.4	-239.0	0.00	0.00	0.00
8,026.4	0.00	0.00	7,985.5	541.3	-269.4	-239.0	0.00	0.00	0.00
8,100.0	8.84	89.92	8,058.8	541.3	-263.7	-233.4	12.00	12.00	0.00
8,200.0	20.84	89.92	8,155.3	541.3	-238.2	-207.8	12.00	12.00	0.00
8,300.0	32.84	89.92	8,244.4	541.4	-193.1	-162.8	12.00	12.00	0.00
8,400.0	44.84	89.92	8,322.2	541.5	-130.5	-100.3	12.00	12.00	0.00
8,500.0	56.84	89.92	8,385.2	541.6	-53.1	-23.1	12.00	12.00	0.00
8,600.0	68.84	89.92	8,430.8	541.7	35.7	65.6	12.00	12.00	0.00
8,700.0	80.84	89.92	8,456.9	541.8	132.0	161.8	12.00	12.00	0.00
8,776.3	89.99	89.92	8,463.0	541.9	208.0	237.7	12.00	12.00	0.00
8,800.0	89.99	89.92	8,463.0	542.0	231.7	261.4	0.00	0.00	0.00
8,900.0	89.99	89.92	8,463.0	542.1	331.7	361.2	0.00	0.00	0.00
9,000.0	89.99	89.92	8,463.0	542.2	431.7	461.1	0.00	0.00	0.00
9,039.0	89.99	89.92	8,463.0	542.3	470.7	500.0	0.00	0.00	0.00
9,100.0	88.77	89.92	8,463.7	542.4	531.7	560.9	2.00	-2.00	0.00
9,196.8	86.84	89.92	8,467.4	542.5	628.4	657.5	2.00	-2.00	0.00
9,200.0	86.84	89.92	8,467.5	542.5	631.6	660.7	0.00	0.00	0.00
9,300.0	86.84	89.92	8,473.1	542.6	731.5	760.4	0.00	0.00	0.00
9,400.0	86.84	89.92	8,478.6	542.8	831.3	860.1	0.00	0.00	0.00
9,500.0	86.84	89.92	8,484.1	542.9	931.2	959.8	0.00	0.00	0.00
9,600.0	86.84	89.92	8,489.6	543.1	1,031.0	1,059.5	0.00	0.00	0.00
9,700.0	86.84	89.92	8,495.1	543.2	1,130.9	1,159.2	0.00	0.00	0.00
9,800.0	86.84	89.92	8,500.7	543.3	1,230.7	1,258.9	0.00	0.00	0.00

apachecorp
Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well PALMILLO 14-15 STATE COM 303H
Company:	PERMIAN	TVD Reference:	WELL @ 3501.0ft (Original Well Elev)
Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3501.0ft (Original Well Elev)
Site:	PALMILLO 14-15 STATE COM PAD (302H, 303H)	North Reference:	Grid
Well:	PALMILLO 14-15 STATE COM 303H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PALMILLO 14-15 STATE COM 303H		
Design:	Design 1 w/ lateral targets		

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	86.84	89.92	8,506.2	543.5	1,330.6	1,358.6	0.00	0.00	0.00
10,000.0	86.84	89.92	8,511.7	543.6	1,430.4	1,458.3	0.00	0.00	0.00
10,041.8	86.84	89.92	8,514.0	543.7	1,472.2	1,500.0	0.00	0.00	0.00
10,100.0	88.00	89.92	8,516.6	543.7	1,530.3	1,558.0	2.00	2.00	0.00
10,132.2	88.64	89.92	8,517.6	543.8	1,562.4	1,590.1	2.00	2.00	0.00
10,200.0	88.64	89.92	8,519.2	543.9	1,630.2	1,657.9	0.00	0.00	0.00
10,300.0	88.64	89.92	8,521.5	544.0	1,730.2	1,757.7	0.00	0.00	0.00
10,400.0	88.64	89.92	8,523.9	544.2	1,830.2	1,857.5	0.00	0.00	0.00
10,500.0	88.64	89.92	8,526.3	544.3	1,930.2	1,957.3	0.00	0.00	0.00
10,600.0	88.64	89.92	8,528.6	544.4	2,030.1	2,057.2	0.00	0.00	0.00
10,700.0	88.64	89.92	8,531.0	544.6	2,130.1	2,157.0	0.00	0.00	0.00
10,800.0	88.64	89.92	8,533.4	544.7	2,230.1	2,256.8	0.00	0.00	0.00
10,900.0	88.64	89.92	8,535.7	544.8	2,330.0	2,356.6	0.00	0.00	0.00
11,000.0	88.64	89.92	8,538.1	545.0	2,430.0	2,456.5	0.00	0.00	0.00
11,100.0	88.64	89.92	8,540.5	545.1	2,530.0	2,556.3	0.00	0.00	0.00
11,200.0	88.64	89.92	8,542.8	545.2	2,630.0	2,656.1	0.00	0.00	0.00
11,300.0	88.64	89.92	8,545.2	545.4	2,729.9	2,755.9	0.00	0.00	0.00
11,400.0	88.64	89.92	8,547.6	545.5	2,829.9	2,855.8	0.00	0.00	0.00
11,500.0	88.64	89.92	8,549.9	545.7	2,929.9	2,955.6	0.00	0.00	0.00
11,544.5	88.64	89.92	8,551.0	545.7	2,974.3	3,000.0	0.00	0.00	0.00
11,574.5	89.24	89.92	8,551.6	545.8	3,004.3	3,029.9	2.00	2.00	0.00
11,600.0	89.24	89.92	8,551.9	545.8	3,029.9	3,055.4	0.00	0.00	0.00
11,700.0	89.24	89.92	8,553.2	545.9	3,129.9	3,155.3	0.00	0.00	0.00
11,800.0	89.24	89.92	8,554.5	546.1	3,229.8	3,255.1	0.00	0.00	0.00
11,900.0	89.24	89.92	8,555.9	546.2	3,329.8	3,355.0	0.00	0.00	0.00
12,000.0	89.24	89.92	8,557.2	546.3	3,429.8	3,454.8	0.00	0.00	0.00
12,100.0	89.24	89.92	8,558.5	546.5	3,529.8	3,554.7	0.00	0.00	0.00
12,200.0	89.24	89.92	8,559.8	546.6	3,629.8	3,654.5	0.00	0.00	0.00
12,300.0	89.24	89.92	8,561.1	546.8	3,729.8	3,754.3	0.00	0.00	0.00
12,400.0	89.24	89.92	8,562.5	546.9	3,829.8	3,854.2	0.00	0.00	0.00
12,500.0	89.24	89.92	8,563.8	547.0	3,929.8	3,954.0	0.00	0.00	0.00
12,600.0	89.24	89.92	8,565.1	547.2	4,029.8	4,053.9	0.00	0.00	0.00
12,700.0	89.24	89.92	8,566.4	547.3	4,129.8	4,153.7	0.00	0.00	0.00
12,800.0	89.24	89.92	8,567.7	547.4	4,229.8	4,253.6	0.00	0.00	0.00
12,900.0	89.24	89.92	8,569.1	547.6	4,329.7	4,353.4	0.00	0.00	0.00
13,000.0	89.24	89.92	8,570.4	547.7	4,429.7	4,453.3	0.00	0.00	0.00
13,046.8	89.24	89.92	8,571.0	547.8	4,476.5	4,500.0	0.00	0.00	0.00
13,077.9	88.62	89.92	8,571.6	547.8	4,507.7	4,531.1	2.00	-2.00	0.00
13,100.0	88.62	89.92	8,572.1	547.9	4,529.7	4,553.1	0.00	0.00	0.00
13,200.0	88.62	89.92	8,574.5	548.0	4,629.7	4,652.9	0.00	0.00	0.00
13,300.0	88.62	89.92	8,576.9	548.1	4,729.7	4,752.8	0.00	0.00	0.00
13,400.0	88.62	89.92	8,579.3	548.3	4,829.6	4,852.6	0.00	0.00	0.00
13,500.0	88.62	89.92	8,581.7	548.4	4,929.6	4,952.4	0.00	0.00	0.00
13,600.0	88.62	89.92	8,584.1	548.5	5,029.6	5,052.2	0.00	0.00	0.00
13,700.0	88.62	89.92	8,586.6	548.7	5,129.5	5,152.1	0.00	0.00	0.00
13,800.0	88.62	89.92	8,589.0	548.8	5,229.5	5,251.9	0.00	0.00	0.00
13,900.0	88.62	89.92	8,591.4	549.0	5,329.5	5,351.7	0.00	0.00	0.00
14,000.0	88.62	89.92	8,593.8	549.1	5,429.5	5,451.5	0.00	0.00	0.00
14,100.0	88.62	89.92	8,596.2	549.2	5,529.4	5,551.4	0.00	0.00	0.00
14,200.0	88.62	89.92	8,598.6	549.4	5,629.4	5,651.2	0.00	0.00	0.00
14,300.0	88.62	89.92	8,601.0	549.5	5,729.4	5,751.0	0.00	0.00	0.00
14,400.0	88.62	89.92	8,603.4	549.6	5,829.3	5,850.8	0.00	0.00	0.00
14,500.0	88.62	89.92	8,605.8	549.8	5,929.3	5,950.7	0.00	0.00	0.00

apachecorp
Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well PALMILLO 14-15 STATE COM 303H
Company:	PERMIAN	TVD Reference:	WELL @ 3501.0ft (Original Well Elev)
Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3501.0ft (Original Well Elev)
Site:	PALMILLO 14-15 STATE COM PAD (302H, 303H)	North Reference:	Grid
Well:	PALMILLO 14-15 STATE COM 303H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PALMILLO 14-15 STATE COM 303H		
Design:	Design 1 w/ lateral targets		

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)
14,549.4	88.62	89.92	8,607.0	549.8	5,978.7	6,000.0	0.00	0.00	0.00
14,576.7	89.17	89.92	8,607.5	549.9	6,006.0	6,027.2	2.00	2.00	0.00
14,600.0	89.17	89.92	8,607.9	549.9	6,029.3	6,050.5	0.00	0.00	0.00
14,700.0	89.17	89.92	8,609.3	550.1	6,129.3	6,150.3	0.00	0.00	0.00
14,800.0	89.17	89.92	8,610.8	550.2	6,229.3	6,250.2	0.00	0.00	0.00
14,900.0	89.17	89.92	8,612.2	550.3	6,329.3	6,350.0	0.00	0.00	0.00
15,000.0	89.17	89.92	8,613.7	550.5	6,429.2	6,449.9	0.00	0.00	0.00
15,100.0	89.17	89.92	8,615.1	550.6	6,529.2	6,549.7	0.00	0.00	0.00
15,200.0	89.17	89.92	8,616.6	550.7	6,629.2	6,649.6	0.00	0.00	0.00
15,300.0	89.17	89.92	8,618.1	550.9	6,729.2	6,749.4	0.00	0.00	0.00
15,400.0	89.17	89.92	8,619.5	551.0	6,829.2	6,849.2	0.00	0.00	0.00
15,500.0	89.17	89.92	8,621.0	551.2	6,929.2	6,949.1	0.00	0.00	0.00
15,600.0	89.17	89.92	8,622.4	551.3	7,029.2	7,048.9	0.00	0.00	0.00
15,700.0	89.17	89.92	8,623.9	551.4	7,129.2	7,148.8	0.00	0.00	0.00
15,800.0	89.17	89.92	8,625.3	551.6	7,229.2	7,248.6	0.00	0.00	0.00
15,900.0	89.17	89.92	8,626.8	551.7	7,329.2	7,348.5	0.00	0.00	0.00
16,000.0	89.17	89.92	8,628.2	551.8	7,429.1	7,448.3	0.00	0.00	0.00
16,051.8	89.17	89.92	8,629.0	551.9	7,480.9	7,500.0	0.00	0.00	0.00
16,076.5	89.66	89.92	8,629.3	552.0	7,505.7	7,524.7	2.00	2.00	0.00
16,100.0	89.66	89.92	8,629.4	552.0	7,529.1	7,548.1	0.00	0.00	0.00
16,200.0	89.66	89.92	8,630.0	552.1	7,629.1	7,648.0	0.00	0.00	0.00
16,300.0	89.66	89.92	8,630.6	552.3	7,729.1	7,747.9	0.00	0.00	0.00
16,400.0	89.66	89.92	8,631.2	552.4	7,829.1	7,847.7	0.00	0.00	0.00
16,500.0	89.66	89.92	8,631.8	552.5	7,929.1	7,947.6	0.00	0.00	0.00
16,600.0	89.66	89.92	8,632.4	552.7	8,029.1	8,047.4	0.00	0.00	0.00
16,700.0	89.66	89.92	8,632.9	552.8	8,129.1	8,147.3	0.00	0.00	0.00
16,800.0	89.66	89.92	8,633.5	552.9	8,229.1	8,247.1	0.00	0.00	0.00
16,900.0	89.66	89.92	8,634.1	553.1	8,329.1	8,347.0	0.00	0.00	0.00
17,000.0	89.66	89.92	8,634.7	553.2	8,429.1	8,446.8	0.00	0.00	0.00
17,100.0	89.66	89.92	8,635.3	553.4	8,529.1	8,546.7	0.00	0.00	0.00
17,200.0	89.66	89.92	8,635.9	553.5	8,629.1	8,646.5	0.00	0.00	0.00
17,300.0	89.66	89.92	8,636.5	553.6	8,729.1	8,746.4	0.00	0.00	0.00
17,400.0	89.66	89.92	8,637.1	553.8	8,829.1	8,846.2	0.00	0.00	0.00
17,500.0	89.66	89.92	8,637.7	553.9	8,929.1	8,946.1	0.00	0.00	0.00
17,554.0	89.66	89.92	8,638.0	554.0	8,983.1	9,000.0	0.00	0.00	0.00
17,600.0	88.74	89.92	8,638.6	554.0	9,029.1	9,045.9	2.00	-2.00	0.00
17,677.5	87.19	89.92	8,641.4	554.1	9,106.5	9,123.2	2.00	-2.00	0.00
17,700.0	87.19	89.92	8,642.5	554.2	9,129.0	9,145.7	0.00	0.00	0.00
17,800.0	87.19	89.92	8,647.4	554.3	9,228.9	9,245.4	0.00	0.00	0.00
17,900.0	87.19	89.92	8,652.3	554.5	9,328.8	9,345.2	0.00	0.00	0.00
18,000.0	87.19	89.92	8,657.2	554.6	9,428.7	9,444.9	0.00	0.00	0.00
18,100.0	87.19	89.92	8,662.1	554.7	9,528.5	9,544.6	0.00	0.00	0.00
18,200.0	87.19	89.92	8,667.0	554.9	9,628.4	9,644.4	0.00	0.00	0.00
18,300.0	87.19	89.92	8,671.9	555.0	9,728.3	9,744.1	0.00	0.00	0.00
18,400.0	87.19	89.92	8,676.8	555.1	9,828.2	9,843.8	0.00	0.00	0.00
18,500.0	87.19	89.92	8,681.7	555.3	9,928.1	9,943.6	0.00	0.00	0.00
18,587.8	87.19	89.92	8,686.0	555.4	10,015.8	10,031.2	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 (302H, 303H)
Well: PALMILLO 14-15 STATE COM 303H
Wellbore: PALMILLO 14-15 STATE COM 303H
Design: Design 1 w/ lateral targets

Local Co-ordinate Reference: Well PALMILLO 14-15 STATE COM 303H
TVD Reference: WELL @ 3501.0ft (Original Well Elev)
MD Reference: WELL @ 3501.0ft (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 S1 - plan misses target center by 75.0ft at 8026.4ft MD (7985.5 TVD, 541.3 N, -269.4 E) - Point	0.00	0.00	7,985.5	466.3	-269.4	603,752.67	590,845.31	32° 39' 34.763 N	104° 10' 20.878 W
t1 PALMILLO 14-15 STA - plan hits target center - Point	0.00	0.00	8,463.0	542.3	470.7	603,828.68	591,585.40	32° 39' 35.504 N	104° 10' 12.219 W
t2 PALMILLO 14-15 STA - plan hits target center - Point	0.00	0.01	8,514.0	543.7	1,472.2	603,830.06	592,586.86	32° 39' 35.502 N	104° 10' 0.504 W
t3 PALMILLO 14-15 STA - plan hits target center - Point	0.00	0.00	8,551.0	545.7	2,974.3	603,832.12	594,089.05	32° 39' 35.499 N	104° 9' 42.932 W
t4 PALMILLO 14-15 STA - plan hits target center - Point	0.00	0.00	8,571.0	547.8	4,476.5	603,834.19	595,591.24	32° 39' 35.495 N	104° 9' 25.359 W
t5 PALMILLO 14-15 STA - plan hits target center - Point	0.00	0.00	8,607.0	549.8	5,978.7	603,836.25	597,093.43	32° 39' 35.490 N	104° 9' 7.787 W
t6 PALMILLO 14-15 STA - plan hits target center - Point	0.00	0.00	8,629.0	551.9	7,480.9	603,838.32	598,595.62	32° 39' 35.485 N	104° 8' 50.215 W
t7 PALMILLO 14-15 STA - plan hits target center - Point	0.00	0.00	8,638.0	554.0	8,983.1	603,840.38	600,097.81	32° 39' 35.479 N	104° 8' 32.642 W
bhl PALMILLO 14-15 ST - plan hits target center - Point	0.00	0.00	8,686.0	555.4	10,015.8	603,841.80	601,130.50	32° 39' 35.474 N	104° 8' 20.562 W