

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101

August 1, 2011

Permit 279831

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705		2. OGRID Number 873
		3. API Number 30-015-47004
4. Property Code 328103	5. Property Name PALMILLO 29 28 STATE COM	6. Well No. 378H

7. Surface Location

UL - Lot M	Section 29	Township 19S	Range 28E	Lot Idn	Feet From 1115	N/S Line S	Feet From 240	E/W Line W	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot P	Section 28	Township 19S	Range 28E	Lot Idn P	Feet From 357	N/S Line S	Feet From 57	E/W Line E	County Eddy
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9. Pool Information

WINCHESTER; BONE SPRING, WEST	97569
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3414
16. Multiple N	17. Proposed Depth 18658	18. Formation 3rd Bone Spring Sand	19. Contractor	20. Spud Date 6/30/2020
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	48	350	250	0
Int1	12.25	9.625	36	3000	625	0
Prod	8.75	5.5	17	8783	705	2500
Prod	8.5	5.5	17	18658	1850	8783

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3000	1500	
Double Ram	3000	3000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.

Signature:

Printed Name: Electronically filed by Sorina Flores

Title: Supv of Drilling Services

Email Address: sorina.flores@apachecorp.com

Date: 4/8/2020

Phone: 432-818-1167

OIL CONSERVATION DIVISION

Approved By: Raymond Podany

Title: Geologist

Approved Date: 4/9/2020 Expiration Date: 4/9/2022

Conditions of Approval Attached

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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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-	² Pool Code 97569	³ Pool Name WINCHESTER; BONE SPRING, W
⁴ Property Code	⁵ Property Name PALMILLO 29 28 STATE COM	⁶ Well Number 378H
⁷ OGRID NO. 873	⁸ Operator Name APACHE CORPORATION	⁹ Elevation 3414'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
M	29	19S	28E		1155	SOUTH	240	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	28	19S	28E		357	SOUTH	57	EAST	EDDY

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
320			

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.

¹⁶ GEODETIC DATA NAD 83 GRID - NM EAST SURFACE LOCATION (SL) N:592023.9 - E:580567.0 LAT:32.6274588° N - LONG:104.2059063° W KICK OFF POINT (KOP) 423° FSL - 50° FWL (SEC.29) N:591293.9 - E:580368.7 LAT:32.6254530° N - LONG:104.2065533° W MD:6634.4 TVD:6577.3 PENETRATION POINT/ FIRST TAKE POINT (PP/FTP) 424° FSL - 100° FWL (SEC.29) N:591294.0 - E:580419.3 LAT:32.6254530° N - LONG:104.2063888° W MD:8263.9 TVD:8198.5 LAST TAKE POINT (SLTP) 358° FSL - 100° FWL (SEC.28) N:591302.0 - E:590662.7 LAT:32.6254371° N - LONG:104.1731167° W MD:18615.5 TVD:8614.9	BOTTOM HOLE (BH) N:591302.1 - E:590705.8 LAT:32.6254371° N - LONG:104.1729766° W MD:18658.6 TVD:8614.5 CORNER DATA NAD 83 GRID - NM EAST A: FOUND BRASS CAP "1941" N:590871.3 - E:580314.9 B: FOUND BRASS CAP "1941" N:593498.9 - E:580342.6 C: FOUND BRASS CAP "1941" N:596120.3 - E:580368.7 D: FOUND BRASS CAP "1941" N:596144.1 - E:582974.0 E: FOUND BRASS CAP "1941" N:596170.1 - E:585579.7 F: FOUND BRASS CAP "1941" N:596193.2 - E:588185.2 G: FOUND BRASS CAP "1941" N:596216.2 - E:590790.1 H: FOUND BRASS CAP "1941" N:593580.2 - E:590775.8 I: FOUND BRASS CAP "1941" N:590945.1 - E:590760.7	J: FOUND BRASS CAP "1941" N:590906.8 - E:585541.3 K: FOUND BRASS CAP "1941" N:593538.2 - E:585560.2 L: FOUND BRASS CAP "1941" N:590849.0 - E:582921.0 CALCULATED POINTS 1: N:592185.1 - E:580328.8 2: N:592222.5 - E:585550.8 3: N:592262.6 - E:590768.2	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. Sorina L Flores 3/23/2020 Signature SORINA L FLORES Printed Name sorina.flores@apachecorp.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. 9-20-19 Date of Survey Signature and Seal of Professional Surveyor 10034 Certificate Number REV 3/13/2020: DRILL PLAN Job No.: LS19090904
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Santa Fe, NM 87505

GAS CAPTURE PLAN

Date: 4/9/2020

☒ Original

Operator & OGRID No.: [873] APACHE CORPORATION

☐ Amended - Reason for
Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
PALMILLO 29 28 STATE COM #378H	30-015-47004	M-29-19S-28E	1115S 0240W	2000	Flared	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to DURANGO TRUCKING DBA JOSE C AVILA and will be connected to DURANGO TRUCKING DBA JOSE C AVILA Low Pressure gathering system located in Lea County, New Mexico. It will require 2500' of pipeline to connect the facility to Low Pressure gathering system. APACHE CORPORATION provides (periodically) to DURANGO TRUCKING DBA JOSE C AVILA a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, APACHE CORPORATION and DURANGO TRUCKING DBA JOSE C AVILA have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DURANGO TRUCKING DBA JOSE C AVILA Processing Plant located in Sec. 28, Twn. 17S, Rng. 32E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on DURANGO TRUCKING DBA JOSE C AVILA system at that time. Based on current information, it is APACHE CORPORATION's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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Form APD Comments

Permit 279831

PERMIT COMMENTS

Operator Name and Address: APACHE CORPORATION [873] 303 Veterans Airpark Ln Midland, TX 79705		API Number: 30-015-47004
		Well: PALMILLO 29 28 STATE COM #378H

Created By	Comment	Comment Date
sflores	Apache respectfully requests approval to utilize spudder rig to pre-set surf csg. Procedure attached.	3/23/2020
sflores	Durango Midstream will be gathering system for Gas Capture Plan. Durango Midstream not available in pick list.	3/23/2020

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Form APD Conditions

Permit 279831

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: APACHE CORPORATION [873] 303 Veterans Airpark Ln Midland, TX 79705		API Number: 30-015-47004
		Well: PALMILLO 29 28 STATE COM #378H

OCD Reviewer	Condition
rpodany	Will require a directional survey with the C-104
rpodany	Cement is required to circulate on both surface and intermediate1 strings of casing

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Revised August 1, 2011
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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-	² Pool Code 97569	³ Pool Name WINCHESTER; BONE SPRING, W
⁴ Property Code	⁵ Property Name PALMILO 29 28 STATE COM	⁶ Well Number 273H
⁷ OGRID NO. 873	⁸ Operator Name APACHE CORPORATION	⁹ Elevation 3414'

¹⁰ Surface Location

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M	29	19S	28E		1185	SOUTH	240	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	28	19S	28E		1760	SOUTH	50	EAST	EDDY

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.

¹⁶ GEODETIC DATA NAD 83 GRID - NM EAST SURFACE LOCATION (SL) N:592053.9 - E:580567.3 LAT:32.6275413° N - LONG:104.2059051° W KICK OFF POINT (KOP) 1699' FSL - 51' FWL (SEC.29) N:592568.9 - E:580383.4 LAT:32.6289575° N - LONG:104.2065006° W MD:5294.5 TVD:5253.9 PENETRATION POINT/ FIRST TAKE POINT (PP/FTP) 1700' FSL - 100' FWL (SEC.29) N:592569.6 - E:580432.8 LAT:32.6289592° N - LONG:104.2063401° W MD:6943.1 TVD:6894.4 LAST TAKE POINT (LTP) 1760' FSL - 100' FWL (SEC.28) N:592704.0 - E:590670.5 LAT:32.6292908° N - LONG:104.1730844° W MD:17296.1 TVD:7464.4	BOTTOM HOLE (BH) N:592704.7 - E:590720.6 LAT:32.6292924° N - LONG:104.1729217° W MD:17346.2 TVD:7465.0 CORNER DATA NAD 83 GRID - NM EAST A: FOUND BRASS CAP "1941" N:590871.3 - E:580314.9 B: FOUND BRASS CAP "1941" N:593498.9 - E:580342.6 C: FOUND BRASS CAP "1941" N:596120.3 - E:580368.7 D: FOUND BRASS CAP "1941" N:596144.1 - E:582974.0 E: FOUND BRASS CAP "1941" N:596170.1 - E:585579.7 F: FOUND BRASS CAP "1941" N:596193.2 - E:588185.2 G: FOUND BRASS CAP "1941" N:596216.2 - E:590790.1 H: FOUND BRASS CAP "1941" N:593580.2 - E:590775.8 I: FOUND BRASS CAP "1941" N:590945.1 - E:590760.7 J: FOUND BRASS CAP "1941" N:590906.8 - E:585541.3 K: FOUND BRASS CAP "1941" N:593538.2 - E:585560.2 L: FOUND BRASS CAP "1941" N:590849.0 - E:582921.0 CALCULATED POINTS 1: N:590860.1 - E:581617.9 2: N:592184.4 - E:581631.5 3: N:592222.5 - E:585550.8 4: N:592262.6 - E:590768.2	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. Sorina L Flores 3/23/2020 Signature _____ Date _____ Sorina L Flores Printed Name sorina.flores@apachecorp.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. 9-20-19 Date of Survey Signature and Seal of Professional Surveyor 10034 Certificate Number ① REV 3/13/2020: DRILL PLAN		NEW MEXICO JEFFREY L. FANSLER 10034 PROFESSIONAL SURVEYOR

Job No.: LS19090904

PERMIAN

NW DISTRICT - NM EZ NAD 83

PALMILLO 29-28 STATE COM

PALMILLO 29-28 STATE COM 378H

Wellbore #1

Plan: Design #1

Standard Planning Report

19 March, 2020

Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well PALMILLO 29-28 STATE COM 378H
Company:	PERMIAN	TVD Reference:	WELL @ 3440.0ft (Original Well Elev)
Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3440.0ft (Original Well Elev)
Site:	PALMILLO 29-28 STATE COM	North Reference:	Grid
Well:	PALMILLO 29-28 STATE COM 378H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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 29-28 STATE COM			
Site Position:		Northing:	594,542.70 ft	Latitude: 32° 38' 3.764 N
From: Map		Easting:	580,592.90 ft	Longitude: 104° 12' 20.938 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence: 0.07 °

Well	PALMILLO 29-28 STATE COM 378H			
Well Position	+N/-S	-2,518.8 ft	Northing:	592,023.90 ft
	+E/-W	-25.9 ft	Easting:	580,567.00 ft
Position Uncertainty		0.0 ft	Wellhead Elevation:	Latitude: 32° 37' 38.840 N
				Longitude: 104° 12' 21.276 W
				Ground Level: 3,414.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	12/31/2019	7.13	60.37	47,904.60000000

Design	Design #1			
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	94.07

Plan Survey Tool Program	Date	3/11/2020		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	18,658.6	Design #1 (Wellbore #1)	MWD+HDGM (MWD)
				OWSG MWD + HDGM

Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well PALMILLO 29-28 STATE COM 378H
Company:	PERMIAN	TVD Reference:	WELL @ 3440.0ft (Original Well Elev)
Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3440.0ft (Original Well Elev)
Site:	PALMILLO 29-28 STATE COM	North Reference:	Grid
Well:	PALMILLO 29-28 STATE COM 378H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,800.0	9.00	195.20	1,797.5	-45.4	-12.3	1.50	1.50	0.00	195.20	
6,034.4	9.00	195.20	5,979.8	-684.6	-186.0	0.00	0.00	0.00	0.00	
6,634.4	0.00	0.00	6,577.3	-730.0	-198.3	1.50	-1.50	0.00	180.00	
8,047.0	0.00	0.00	7,989.9	-730.0	-198.3	0.00	0.00	0.00	0.00	
8,783.3	88.36	89.95	8,467.2	-729.6	265.5	12.00	12.00	12.22	89.95	
9,878.9	88.36	89.95	8,498.5	-728.8	1,360.7	0.00	0.00	0.00	0.00	T2 PALMILLO 29 STA
9,948.1	89.75	89.95	8,499.6	-728.7	1,429.9	2.00	2.00	0.00	0.00	
11,350.9	89.75	89.95	8,505.9	-727.6	2,832.7	0.00	0.00	0.00	0.00	T3 PALMILLO 29 STA
11,374.8	89.27	89.95	8,506.1	-727.6	2,856.5	2.00	-2.00	0.00	-180.00	
13,265.4	89.27	89.95	8,530.2	-726.1	4,747.0	0.00	0.00	0.00	0.00	T4 PALMILLO 29 STA
13,322.9	88.12	89.95	8,531.5	-726.1	4,804.4	2.00	-2.00	0.00	180.00	
15,007.9	88.12	89.95	8,586.8	-724.7	6,488.5	0.00	0.00	0.00	0.00	T5 PALMILLO 29 STA
15,047.5	88.91	89.95	8,587.8	-724.7	6,528.2	2.00	2.00	0.00	0.00	
17,183.8	88.91	89.95	8,628.3	-723.0	8,664.0	0.00	0.00	0.00	0.00	T6 PALMILLO 29 STA
17,267.3	90.58	89.95	8,628.7	-722.9	8,747.5	2.00	2.00	0.00	0.00	
18,658.6	90.58	89.95	8,614.5	-721.8	10,138.8	0.00	0.00	0.00	0.00	BHL PALMILLO 29 STA

Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well PALMILLO 29-28 STATE COM 378H
Company:	PERMIAN	TVD Reference:	WELL @ 3440.0ft (Original Well Elev)
Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3440.0ft (Original Well Elev)
Site:	PALMILLO 29-28 STATE COM	North Reference:	Grid
Well:	PALMILLO 29-28 STATE COM 378H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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	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	1.50	195.20	1,300.0	-1.3	-0.3	-0.3	1.50	1.50	0.00
1,400.0	3.00	195.20	1,399.9	-5.1	-1.4	-1.0	1.50	1.50	0.00
1,500.0	4.50	195.20	1,499.7	-11.4	-3.1	-2.3	1.50	1.50	0.00
1,600.0	6.00	195.20	1,599.3	-20.2	-5.5	-4.0	1.50	1.50	0.00
1,700.0	7.50	195.20	1,698.6	-31.5	-8.6	-6.3	1.50	1.50	0.00
1,800.0	9.00	195.20	1,797.5	-45.4	-12.3	-9.1	1.50	1.50	0.00
1,900.0	9.00	195.20	1,896.3	-60.5	-16.4	-12.1	0.00	0.00	0.00
2,000.0	9.00	195.20	1,995.1	-75.6	-20.5	-15.1	0.00	0.00	0.00
2,100.0	9.00	195.20	2,093.8	-90.7	-24.6	-18.1	0.00	0.00	0.00
2,200.0	9.00	195.20	2,192.6	-105.8	-28.7	-21.1	0.00	0.00	0.00
2,300.0	9.00	195.20	2,291.4	-120.9	-32.8	-24.2	0.00	0.00	0.00
2,400.0	9.00	195.20	2,390.1	-136.0	-36.9	-27.2	0.00	0.00	0.00
2,500.0	9.00	195.20	2,488.9	-151.1	-41.0	-30.2	0.00	0.00	0.00
2,600.0	9.00	195.20	2,587.7	-166.2	-45.1	-33.2	0.00	0.00	0.00
2,700.0	9.00	195.20	2,686.5	-181.2	-49.2	-36.2	0.00	0.00	0.00
2,800.0	9.00	195.20	2,785.2	-196.3	-53.3	-39.3	0.00	0.00	0.00
2,900.0	9.00	195.20	2,884.0	-211.4	-57.4	-42.3	0.00	0.00	0.00
3,000.0	9.00	195.20	2,982.8	-226.5	-61.5	-45.3	0.00	0.00	0.00
3,100.0	9.00	195.20	3,081.5	-241.6	-65.6	-48.3	0.00	0.00	0.00
3,200.0	9.00	195.20	3,180.3	-256.7	-69.7	-51.3	0.00	0.00	0.00
3,300.0	9.00	195.20	3,279.1	-271.8	-73.8	-54.3	0.00	0.00	0.00
3,400.0	9.00	195.20	3,377.8	-286.9	-77.9	-57.4	0.00	0.00	0.00
3,500.0	9.00	195.20	3,476.6	-302.0	-82.0	-60.4	0.00	0.00	0.00
3,600.0	9.00	195.20	3,575.4	-317.1	-86.1	-63.4	0.00	0.00	0.00
3,700.0	9.00	195.20	3,674.1	-332.2	-90.2	-66.4	0.00	0.00	0.00
3,800.0	9.00	195.20	3,772.9	-347.3	-94.3	-69.4	0.00	0.00	0.00
3,900.0	9.00	195.20	3,871.7	-362.4	-98.4	-72.5	0.00	0.00	0.00
4,000.0	9.00	195.20	3,970.4	-377.5	-102.5	-75.5	0.00	0.00	0.00
4,100.0	9.00	195.20	4,069.2	-392.6	-106.6	-78.5	0.00	0.00	0.00
4,200.0	9.00	195.20	4,168.0	-407.7	-110.7	-81.5	0.00	0.00	0.00
4,300.0	9.00	195.20	4,266.8	-422.8	-114.8	-84.5	0.00	0.00	0.00
4,400.0	9.00	195.20	4,365.5	-437.9	-118.9	-87.6	0.00	0.00	0.00
4,500.0	9.00	195.20	4,464.3	-453.0	-123.1	-90.6	0.00	0.00	0.00
4,600.0	9.00	195.20	4,563.1	-468.1	-127.2	-93.6	0.00	0.00	0.00
4,700.0	9.00	195.20	4,661.8	-483.2	-131.3	-96.6	0.00	0.00	0.00
4,800.0	9.00	195.20	4,760.6	-498.3	-135.4	-99.6	0.00	0.00	0.00
4,900.0	9.00	195.20	4,859.4	-513.4	-139.5	-102.6	0.00	0.00	0.00
5,000.0	9.00	195.20	4,958.1	-528.5	-143.6	-105.7	0.00	0.00	0.00
5,100.0	9.00	195.20	5,056.9	-543.6	-147.7	-108.7	0.00	0.00	0.00
5,200.0	9.00	195.20	5,155.7	-558.7	-151.8	-111.7	0.00	0.00	0.00
5,300.0	9.00	195.20	5,254.4	-573.8	-155.9	-114.7	0.00	0.00	0.00

Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well PALMILLO 29-28 STATE COM 378H
Company:	PERMIAN	TVD Reference:	WELL @ 3440.0ft (Original Well Elev)
Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3440.0ft (Original Well Elev)
Site:	PALMILLO 29-28 STATE COM	North Reference:	Grid
Well:	PALMILLO 29-28 STATE COM 378H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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)
5,400.0	9.00	195.20	5,353.2	-588.9	-160.0	-117.7	0.00	0.00	0.00
5,500.0	9.00	195.20	5,452.0	-603.9	-164.1	-120.8	0.00	0.00	0.00
5,600.0	9.00	195.20	5,550.8	-619.0	-168.2	-123.8	0.00	0.00	0.00
5,700.0	9.00	195.20	5,649.5	-634.1	-172.3	-126.8	0.00	0.00	0.00
5,800.0	9.00	195.20	5,748.3	-649.2	-176.4	-129.8	0.00	0.00	0.00
5,900.0	9.00	195.20	5,847.1	-664.3	-180.5	-132.8	0.00	0.00	0.00
6,000.0	9.00	195.20	5,945.8	-679.4	-184.6	-135.8	0.00	0.00	0.00
6,034.4	9.00	195.20	5,979.8	-684.6	-186.0	-136.9	0.00	0.00	0.00
6,100.0	8.02	195.20	6,044.7	-694.0	-188.5	-138.8	1.50	-1.50	0.00
6,200.0	6.52	195.20	6,143.9	-706.2	-191.8	-141.2	1.50	-1.50	0.00
6,300.0	5.02	195.20	6,243.4	-715.9	-194.5	-143.1	1.50	-1.50	0.00
6,400.0	3.52	195.20	6,343.1	-723.1	-196.4	-144.6	1.50	-1.50	0.00
6,500.0	2.02	195.20	6,443.0	-727.7	-197.7	-145.5	1.50	-1.50	0.00
6,600.0	0.52	195.20	6,542.9	-729.9	-198.3	-145.9	1.50	-1.50	0.00
6,634.4	0.00	0.00	6,577.3	-730.0	-198.3	-146.0	1.50	-1.50	0.00
6,700.0	0.00	0.00	6,642.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,742.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,842.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,942.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,042.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,142.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,242.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,342.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,442.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,542.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,642.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,742.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,842.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
8,000.0	0.00	0.00	7,942.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
8,047.0	0.00	0.00	7,989.9	-730.0	-198.3	-146.0	0.00	0.00	0.00
8,100.0	6.36	89.95	8,042.8	-730.0	-195.4	-143.0	12.00	12.00	0.00
8,200.0	18.36	89.95	8,140.3	-730.0	-174.0	-121.7	12.00	12.00	0.00
8,300.0	30.36	89.95	8,231.3	-729.9	-132.8	-80.6	12.00	12.00	0.00
8,400.0	42.36	89.95	8,311.6	-729.9	-73.6	-21.6	12.00	12.00	0.00
8,500.0	54.36	89.95	8,378.0	-729.8	1.0	52.8	12.00	12.00	0.00
8,600.0	66.36	89.95	8,427.3	-729.8	87.7	139.3	12.00	12.00	0.00
8,700.0	78.36	89.95	8,457.6	-729.7	182.9	234.2	12.00	12.00	0.00
8,783.3	88.36	89.95	8,467.2	-729.6	265.5	316.7	12.00	12.00	0.00
8,800.0	88.36	89.95	8,467.6	-729.6	282.2	333.3	0.00	0.00	0.00
8,900.0	88.36	89.95	8,470.5	-729.5	382.2	433.0	0.00	0.00	0.00
9,000.0	88.36	89.95	8,473.4	-729.5	482.1	532.7	0.00	0.00	0.00
9,100.0	88.36	89.95	8,476.2	-729.4	582.1	632.4	0.00	0.00	0.00
9,200.0	88.36	89.95	8,479.1	-729.3	682.0	732.1	0.00	0.00	0.00
9,300.0	88.36	89.95	8,481.9	-729.2	782.0	831.8	0.00	0.00	0.00
9,400.0	88.36	89.95	8,484.8	-729.1	882.0	931.5	0.00	0.00	0.00
9,500.0	88.36	89.95	8,487.7	-729.1	981.9	1,031.2	0.00	0.00	0.00
9,600.0	88.36	89.95	8,490.5	-729.0	1,081.9	1,130.9	0.00	0.00	0.00
9,700.0	88.36	89.95	8,493.4	-728.9	1,181.8	1,230.6	0.00	0.00	0.00
9,800.0	88.36	89.95	8,496.2	-728.8	1,281.8	1,330.3	0.00	0.00	0.00
9,878.9	88.36	89.95	8,498.5	-728.8	1,360.7	1,409.0	0.00	0.00	0.00
9,900.0	88.78	89.95	8,499.0	-728.8	1,381.8	1,430.0	2.00	2.00	0.00
9,948.1	89.75	89.95	8,499.6	-728.7	1,429.9	1,478.0	2.00	2.00	0.00
10,000.0	89.75	89.95	8,499.9	-728.7	1,481.7	1,529.8	0.00	0.00	0.00
10,100.0	89.75	89.95	8,500.3	-728.6	1,581.7	1,629.5	0.00	0.00	0.00

Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well PALMILLO 29-28 STATE COM 378H
Company:	PERMIAN	TVD Reference:	WELL @ 3440.0ft (Original Well Elev)
Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3440.0ft (Original Well Elev)
Site:	PALMILLO 29-28 STATE COM	North Reference:	Grid
Well:	PALMILLO 29-28 STATE COM 378H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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)
10,200.0	89.75	89.95	8,500.8	-728.5	1,681.7	1,729.2	0.00	0.00	0.00
10,300.0	89.75	89.95	8,501.2	-728.4	1,781.7	1,829.0	0.00	0.00	0.00
10,400.0	89.75	89.95	8,501.7	-728.4	1,881.7	1,928.7	0.00	0.00	0.00
10,500.0	89.75	89.95	8,502.1	-728.3	1,981.7	2,028.5	0.00	0.00	0.00
10,600.0	89.75	89.95	8,502.5	-728.2	2,081.7	2,128.2	0.00	0.00	0.00
10,700.0	89.75	89.95	8,503.0	-728.1	2,181.7	2,227.9	0.00	0.00	0.00
10,800.0	89.75	89.95	8,503.4	-728.0	2,281.7	2,327.7	0.00	0.00	0.00
10,900.0	89.75	89.95	8,503.9	-728.0	2,381.7	2,427.4	0.00	0.00	0.00
11,000.0	89.75	89.95	8,504.3	-727.9	2,481.7	2,527.2	0.00	0.00	0.00
11,100.0	89.75	89.95	8,504.8	-727.8	2,581.7	2,626.9	0.00	0.00	0.00
11,200.0	89.75	89.95	8,505.2	-727.7	2,681.7	2,726.6	0.00	0.00	0.00
11,300.0	89.75	89.95	8,505.7	-727.6	2,781.7	2,826.4	0.00	0.00	0.00
11,350.9	89.75	89.95	8,505.9	-727.6	2,832.7	2,877.2	0.00	0.00	0.00
11,374.8	89.27	89.95	8,506.1	-727.6	2,856.5	2,900.9	2.00	-2.00	0.00
11,400.0	89.27	89.95	8,506.4	-727.6	2,881.7	2,926.1	0.00	0.00	0.00
11,500.0	89.27	89.95	8,507.7	-727.5	2,981.7	3,025.9	0.00	0.00	0.00
11,600.0	89.27	89.95	8,509.0	-727.4	3,081.7	3,125.6	0.00	0.00	0.00
11,700.0	89.27	89.95	8,510.2	-727.3	3,181.7	3,225.3	0.00	0.00	0.00
11,800.0	89.27	89.95	8,511.5	-727.3	3,281.7	3,325.1	0.00	0.00	0.00
11,900.0	89.27	89.95	8,512.8	-727.2	3,381.7	3,424.8	0.00	0.00	0.00
12,000.0	89.27	89.95	8,514.1	-727.1	3,481.7	3,524.5	0.00	0.00	0.00
12,100.0	89.27	89.95	8,515.3	-727.0	3,581.7	3,624.3	0.00	0.00	0.00
12,200.0	89.27	89.95	8,516.6	-726.9	3,681.7	3,724.0	0.00	0.00	0.00
12,300.0	89.27	89.95	8,517.9	-726.9	3,781.7	3,823.7	0.00	0.00	0.00
12,400.0	89.27	89.95	8,519.2	-726.8	3,881.6	3,923.5	0.00	0.00	0.00
12,500.0	89.27	89.95	8,520.4	-726.7	3,981.6	4,023.2	0.00	0.00	0.00
12,600.0	89.27	89.95	8,521.7	-726.6	4,081.6	4,122.9	0.00	0.00	0.00
12,700.0	89.27	89.95	8,523.0	-726.5	4,181.6	4,222.7	0.00	0.00	0.00
12,800.0	89.27	89.95	8,524.3	-726.5	4,281.6	4,322.4	0.00	0.00	0.00
12,900.0	89.27	89.95	8,525.5	-726.4	4,381.6	4,422.1	0.00	0.00	0.00
13,000.0	89.27	89.95	8,526.8	-726.3	4,481.6	4,521.9	0.00	0.00	0.00
13,100.0	89.27	89.95	8,528.1	-726.2	4,581.6	4,621.6	0.00	0.00	0.00
13,200.0	89.27	89.95	8,529.4	-726.2	4,681.6	4,721.3	0.00	0.00	0.00
13,265.4	89.27	89.95	8,530.2	-726.1	4,747.0	4,786.6	0.00	0.00	0.00
13,300.0	88.58	89.95	8,530.8	-726.1	4,781.6	4,821.1	2.00	-2.00	0.00
13,322.9	88.12	89.95	8,531.5	-726.1	4,804.4	4,843.9	2.00	-2.00	0.00
13,400.0	88.12	89.95	8,534.0	-726.0	4,881.5	4,920.8	0.00	0.00	0.00
13,500.0	88.12	89.95	8,537.3	-725.9	4,981.5	5,020.4	0.00	0.00	0.00
13,600.0	88.12	89.95	8,540.6	-725.8	5,081.4	5,120.1	0.00	0.00	0.00
13,700.0	88.12	89.95	8,543.9	-725.8	5,181.4	5,219.8	0.00	0.00	0.00
13,800.0	88.12	89.95	8,547.2	-725.7	5,281.3	5,319.5	0.00	0.00	0.00
13,900.0	88.12	89.95	8,550.4	-725.6	5,381.3	5,419.2	0.00	0.00	0.00
14,000.0	88.12	89.95	8,553.7	-725.5	5,481.2	5,518.9	0.00	0.00	0.00
14,100.0	88.12	89.95	8,557.0	-725.4	5,581.1	5,618.6	0.00	0.00	0.00
14,200.0	88.12	89.95	8,560.3	-725.4	5,681.1	5,718.3	0.00	0.00	0.00
14,300.0	88.12	89.95	8,563.6	-725.3	5,781.0	5,817.9	0.00	0.00	0.00
14,400.0	88.12	89.95	8,566.8	-725.2	5,881.0	5,917.6	0.00	0.00	0.00
14,500.0	88.12	89.95	8,570.1	-725.1	5,980.9	6,017.3	0.00	0.00	0.00
14,600.0	88.12	89.95	8,573.4	-725.0	6,080.9	6,117.0	0.00	0.00	0.00
14,700.0	88.12	89.95	8,576.7	-725.0	6,180.8	6,216.7	0.00	0.00	0.00
14,800.0	88.12	89.95	8,580.0	-724.9	6,280.8	6,316.4	0.00	0.00	0.00
14,900.0	88.12	89.95	8,583.2	-724.8	6,380.7	6,416.1	0.00	0.00	0.00
15,000.0	88.12	89.95	8,586.5	-724.7	6,480.7	6,515.8	0.00	0.00	0.00
15,007.9	88.12	89.95	8,586.8	-724.7	6,488.5	6,523.6	0.00	0.00	0.00

Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well PALMILLO 29-28 STATE COM 378H
Company:	PERMIAN	TVD Reference:	WELL @ 3440.0ft (Original Well Elev)
Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3440.0ft (Original Well Elev)
Site:	PALMILLO 29-28 STATE COM	North Reference:	Grid
Well:	PALMILLO 29-28 STATE COM 378H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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)	
15,047.5	88.91	89.95	8,587.8	-724.7	6,528.2	6,563.1	2.00	2.00	0.00	
15,100.0	88.91	89.95	8,588.8	-724.7	6,580.6	6,615.5	0.00	0.00	0.00	
15,200.0	88.91	89.95	8,590.7	-724.6	6,680.6	6,715.2	0.00	0.00	0.00	
15,300.0	88.91	89.95	8,592.6	-724.5	6,780.6	6,814.9	0.00	0.00	0.00	
15,400.0	88.91	89.95	8,594.5	-724.4	6,880.6	6,914.6	0.00	0.00	0.00	
15,500.0	88.91	89.95	8,596.4	-724.3	6,980.6	7,014.4	0.00	0.00	0.00	
15,600.0	88.91	89.95	8,598.3	-724.3	7,080.5	7,114.1	0.00	0.00	0.00	
15,700.0	88.91	89.95	8,600.2	-724.2	7,180.5	7,213.8	0.00	0.00	0.00	
15,800.0	88.91	89.95	8,602.1	-724.1	7,280.5	7,313.5	0.00	0.00	0.00	
15,900.0	88.91	89.95	8,604.0	-724.0	7,380.5	7,413.3	0.00	0.00	0.00	
16,000.0	88.91	89.95	8,605.9	-723.9	7,480.5	7,513.0	0.00	0.00	0.00	
16,100.0	88.91	89.95	8,607.8	-723.9	7,580.5	7,612.7	0.00	0.00	0.00	
16,200.0	88.91	89.95	8,609.6	-723.8	7,680.4	7,712.4	0.00	0.00	0.00	
16,300.0	88.91	89.95	8,611.5	-723.7	7,780.4	7,812.2	0.00	0.00	0.00	
16,400.0	88.91	89.95	8,613.4	-723.6	7,880.4	7,911.9	0.00	0.00	0.00	
16,500.0	88.91	89.95	8,615.3	-723.5	7,980.4	8,011.6	0.00	0.00	0.00	
16,600.0	88.91	89.95	8,617.2	-723.5	8,080.4	8,111.3	0.00	0.00	0.00	
16,700.0	88.91	89.95	8,619.1	-723.4	8,180.3	8,211.1	0.00	0.00	0.00	
16,800.0	88.91	89.95	8,621.0	-723.3	8,280.3	8,310.8	0.00	0.00	0.00	
16,900.0	88.91	89.95	8,622.9	-723.2	8,380.3	8,410.5	0.00	0.00	0.00	
17,000.0	88.91	89.95	8,624.8	-723.2	8,480.3	8,510.2	0.00	0.00	0.00	
17,100.0	88.91	89.95	8,626.7	-723.1	8,580.3	8,610.0	0.00	0.00	0.00	
17,183.8	88.91	89.95	8,628.3	-723.0	8,664.0	8,693.5	0.00	0.00	0.00	
17,200.0	89.24	89.95	8,628.6	-723.0	8,680.3	8,709.7	2.00	2.00	0.00	
17,267.3	90.58	89.95	8,628.7	-722.9	8,747.5	8,776.8	2.00	2.00	0.00	
17,300.0	90.58	89.95	8,628.3	-722.9	8,780.2	8,809.4	0.00	0.00	0.00	
17,400.0	90.58	89.95	8,627.3	-722.8	8,880.2	8,909.2	0.00	0.00	0.00	
17,500.0	90.58	89.95	8,626.3	-722.8	8,980.2	9,008.9	0.00	0.00	0.00	
17,600.0	90.58	89.95	8,625.3	-722.7	9,080.2	9,108.6	0.00	0.00	0.00	
17,700.0	90.58	89.95	8,624.3	-722.6	9,180.2	9,208.4	0.00	0.00	0.00	
17,800.0	90.58	89.95	8,623.2	-722.5	9,280.2	9,308.1	0.00	0.00	0.00	
17,900.0	90.58	89.95	8,622.2	-722.4	9,380.2	9,407.8	0.00	0.00	0.00	
18,000.0	90.58	89.95	8,621.2	-722.4	9,480.2	9,507.6	0.00	0.00	0.00	
18,100.0	90.58	89.95	8,620.2	-722.3	9,580.2	9,607.3	0.00	0.00	0.00	
18,200.0	90.58	89.95	8,619.2	-722.2	9,680.2	9,707.1	0.00	0.00	0.00	
18,300.0	90.58	89.95	8,618.2	-722.1	9,780.2	9,806.8	0.00	0.00	0.00	
18,400.0	90.58	89.95	8,617.1	-722.0	9,880.2	9,906.5	0.00	0.00	0.00	
18,500.0	90.58	89.95	8,616.1	-722.0	9,980.2	10,006.3	0.00	0.00	0.00	
18,600.0	90.58	89.95	8,615.1	-721.9	10,080.2	10,106.0	0.00	0.00	0.00	
18,658.6	90.58	89.95	8,614.5	-721.8	10,138.8	10,164.4	0.00	0.00	0.00	

Planning Report

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Company:	PERMIAN	TVD Reference:	WELL @ 3440.0ft (Original Well Elev)
Project:	NW DISTRICT - NM EZ NAD 83	MD Reference:	WELL @ 3440.0ft (Original Well Elev)
Site:	PALMILLO 29-28 STATE COM	North Reference:	Grid
Well:	PALMILLO 29-28 STATE COM 378H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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
T2 PALMILLO 29 STATE - plan hits target center - Point	0.00	0.00	8,498.5	-728.8	1,360.7	591,295.13	581,927.68	32° 37' 31.612 N	104° 12' 5.376 W
T3 PALMILLO 29 STATE - plan hits target center - Point	0.00	0.00	8,505.9	-727.6	2,832.7	591,296.29	583,399.68	32° 37' 31.605 N	104° 11' 48.163 W
T4 PALMILLO 29 STATE - plan hits target center - Point	0.00	0.00	8,530.2	-726.1	4,747.0	591,297.80	585,314.02	32° 37' 31.596 N	104° 11' 25.778 W
T5 PALMILLO 29 STATE - plan hits target center - Point	0.00	0.00	8,586.8	-724.7	6,488.5	591,299.18	587,055.52	32° 37' 31.585 N	104° 11' 5.414 W
BHL PALMILLO 29 STA1 - plan hits target center - Point	0.00	0.00	8,614.5	-721.8	10,138.8	591,302.06	590,705.78	32° 37' 31.562 N	104° 10' 22.730 W
T6 PALMILLO 29 STATE - plan hits target center - Point	0.00	0.00	8,628.3	-723.0	8,664.0	591,300.89	589,231.03	32° 37' 31.572 N	104° 10' 39.975 W

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

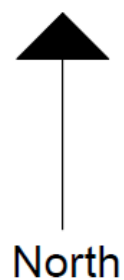
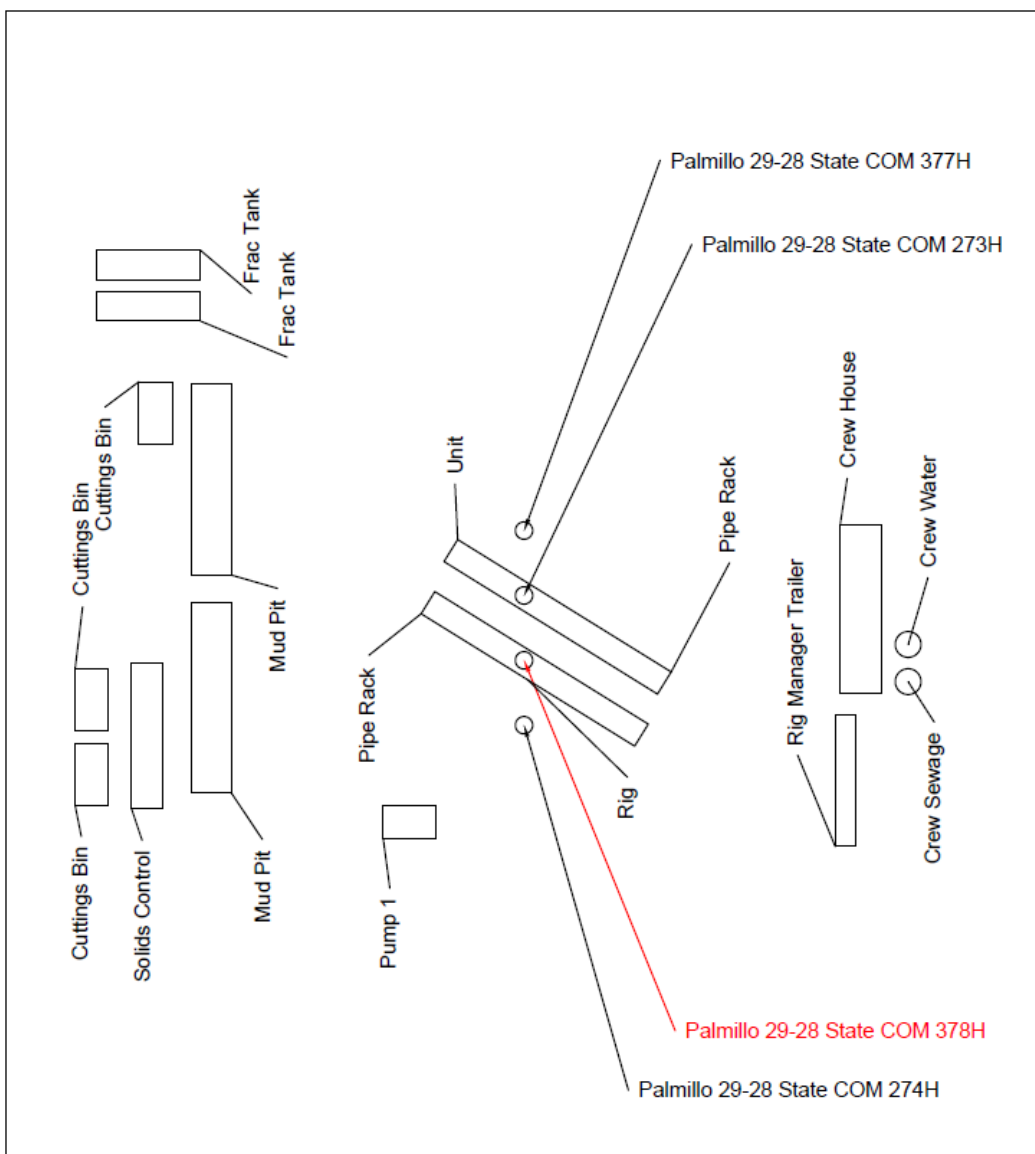
If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

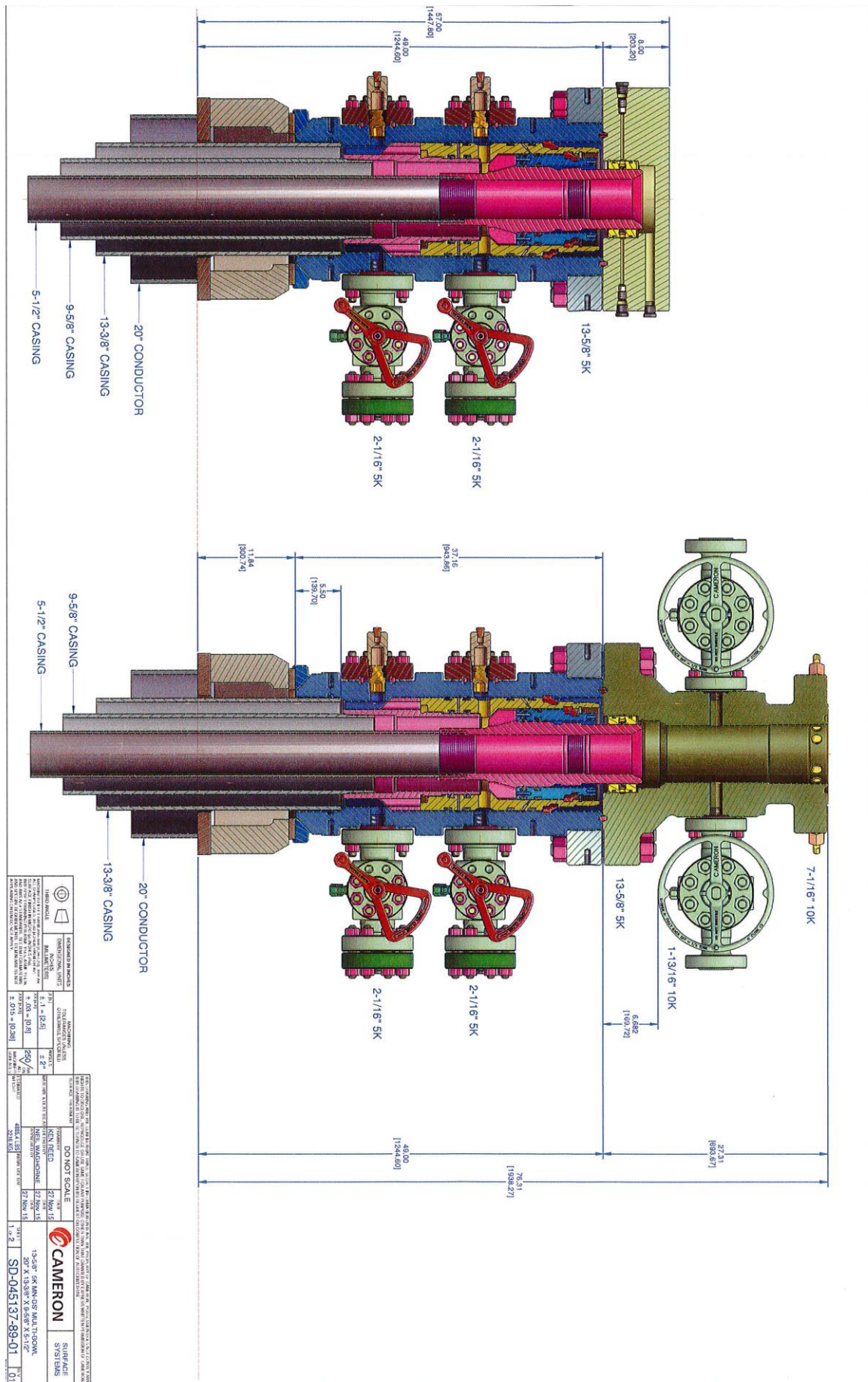
API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

Apache Corp respectfully requests approval for the following changes and additions to the drilling plan:

1. Utilize a spudder rig to pre-set surface casing.
2. Description of Operations
 1. Spudder rig will move in their rig to drill the surface hole section and pre-set surface casing on the Palmillo 29-28 State COM 378H.
 - a. After drilling the surface hole section, the rig will run casing and cement following all the applicable rules and regulations (19.15.16 NMAC Drilling and Production).
 - b. Rig will utilize fresh water based mud to drill 17-1/2" surface hole to TD. Solids control will be handled entirely on a closed loop basis.
 2. The wellhead (page 3) will be installed and tested once the 13-3/8" surface casing is cut off and the WOC time has been reached.
 3. A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
 - a. A means for intervention will be maintained while the drilling rig is not over the well.
 4. Spudder rig operations is expected to take 1-2 days on a single well pad.
 5. The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
 6. Drilling operations will be performed with the drilling rig. At that time an approved BOP stack will be nipped up and tested on the wellhead before drilling operations commences on each well.
 - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.
 7. Apache Corp will have supervision over the rig to ensure compliance with all NMOCD regulations and to oversee operations.
 8. Once the rig is removed, Apache Corp will secure the wellhead area by placing a guard rail around the cellar area.





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1. Utilize a spudder rig to pre-set surface casing.
2. Description of Operations
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