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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 329930

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

1. Operator Name and Address	2. OGRID Number
APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	873
	3. API Number 30-015-50213

4. Property Code	5. Property Name	6. Well No.
333585	PALMILLO 29 30 STATE COM	273H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
I	25	19S	27E		2630	N	750	E	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
I	29	19S	28E	I	1790	S	50	E	Eddy

9. Pool Information

WINCHESTER; BONE SPRING, WEST	97569

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3470
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	17500	2nd Bone Spring Sand		12/14/2022
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	375	265	0
Int1	12.25	9.625	40	3350	625	0
Prod	8.5	5.5	20	17500	2380	2500

Casing/Cement Program: Additional Comments

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:		**OIL CONSERVATION DIVISION**	
Printed Name:	Electronically filed by Sorina Flores	Approved By:	Katherine Pickford
Title:	Supv of Drilling Services	Title:	Geoscientist
Email Address:	sorina.flores@apachecorp.com	Approved Date:	12/9/2022 Expiration Date: 12/9/2024
Date:	12/6/2022 Phone: 432-818-1167	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	2 Pool Code	3 Pool Name
30-025- 50213	97569	WINCHESTER; BONE SPRING, WEST

4 Property Code	5 Property Name	6 Well Number
333585	PALMILLO 29-30 STATE COM	273H

7 OGRID NO.	8 Operator Name	9 Elevation
873	APACHE CORPORATION	3470'

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
I	25	19S	27E		2630	NORTH	750	EAST	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	29	19S	28E		1790	SOUTH	50	EAST	EDDY

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
322.92			

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: 593374.9 – E: 574278.9
LAT: 32.6311915° N
LONG: 104.2263272° W

FIRST TAKE POINT (FTP)
1790' FSL & 100' FWL – SEC 30
N: 592515.8 – E: 575120.4
LAT: 32.6288278° N
LONG: 104.2235964° W

LAST TAKE POINT (LTP)
1790' FSL & 100' FEL – SEC 29
N: 592694.1 – E: 585454.2
LAT: 32.6292840° N
LONG: 104.1900284° W

BOTTOM HOLE (BH)
N: 592695.2 – E: 585504.2
LAT: 32.6292868° N
LONG: 104.1898661° W

CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1941"
N: 590834.2 – E: 569728.4

B: FOUND BRASS CAP "1941"
N: 593464.9 – E: 569747.2

C: FOUND BRASS CAP "1941"
N: 596098.3 – E: 569768.4

D: FOUND BRASS CAP "1941"
N: 596043.6 – E: 572411.3

E: FOUND BRASS CAP "1941"
N: 595988.5 – E: 575053.3

F: FOUND BRASS CAP "1941"
N: 596055.5 – E: 577761.8

G: FOUND BRASS CAP "1941"
N: 596120.3 – E: 580368.7

H: FOUND BRASS CAP "1941"
N: 596144.1 – E: 582974.0

I: FOUND BRASS CAP "1941"
N: 596170.1 – E: 585579.7

J: FOUND BRASS CAP "1941"
N: 593538.2 – E: 585560.2

K: FOUND BRASS CAP "1941"
N: 590906.8 – E: 585541.3

L: FOUND BRASS CAP " 1941"
N: 590849.0 – E: 582921.0

M: FOUND BRASS CAP "1941"
N: 590871.3 – E: 580314.9

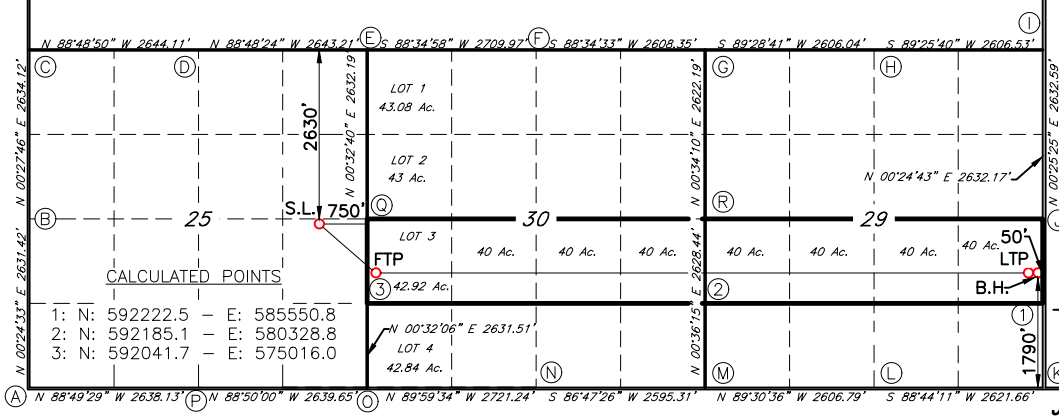
N: FOUND BRASS CAP "1941"
N: 590726.0 – E: 577724.3

O: FOUND BRASS CAP "1941"
N: 590726.4 – E: 575003.7

P: FOUND BRASS CAP "1941"
N: 590780.1 – E: 572365.3

Q: FOUND BRASS CAP "1941"
N: 593357.1 – E: 575028.3

R: FOUND BRASS CAP "1941"
N: 593498.9 – E: 580342.6



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 12/6/2022
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.

04/28/2021
Date of Survey

Signature and Seal of Professional Surveyor:

DALE E. BELL
NEW MEXICO
14400
PROFESSIONAL SURVEYOR
12/06/2022

14400
Certificate Number

REV: SL MOVE – 09/26/2022

Job No.: LS21040401R1

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1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Comments

Permit 329930

PERMIT COMMENTS

Operator Name and Address:	API Number:
APACHE CORPORATION [873] 303 Veterans Airpark Ln Midland, TX 79705	30-015-50213
	Well: PALMILLO 29 30 STATE COM #273H

Created By	Comment	Comment Date
sflores	Apache will utilize a spudder rig to pre-set surface casing. Procedure attached.	12/5/2022

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

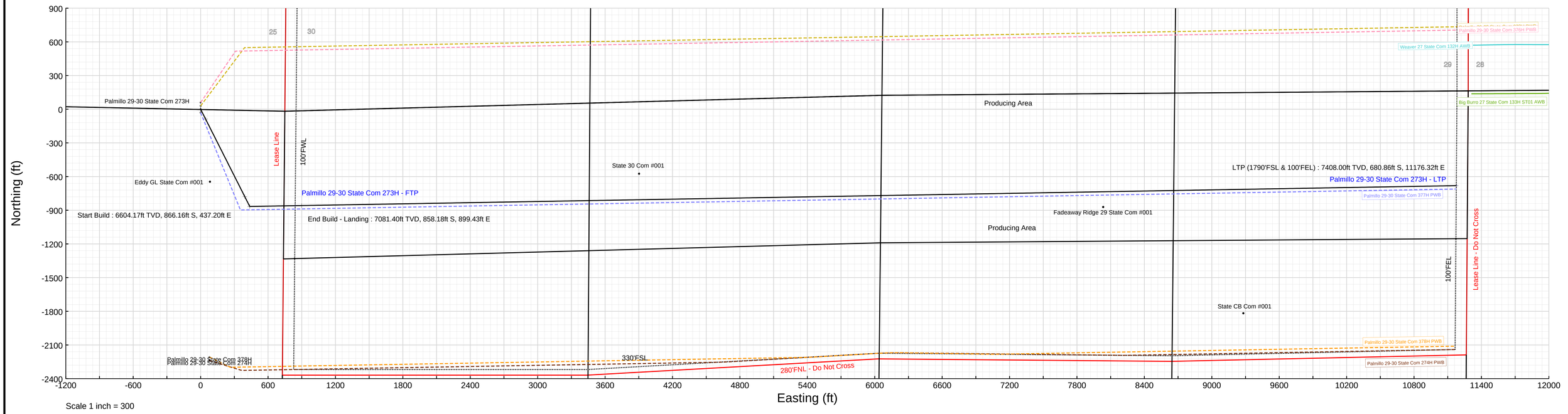
Form APD Conditions

Permit 329930

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
APACHE CORPORATION [873] 303 Veterans Airpark Ln Midland, TX 79705	30-015-50213
	Well: PALMILLO 29 30 STATE COM #273H

OCD Reviewer	Condition
kpickford	Notify OCD 24 hours prior to casing & cement
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system



Apache Corporation

Location:	Eddy County, NM	Slot:	Palmillo 29-30 State Com 273H
Field:	Eddy County, NM (NAD-83)	Well:	Palmillo 29-30 State Com 273H
Facility:	Palmillo 29-30 State Com Pad	Wellbore:	Palmillo 29-30 State Com 273H PWB

Plot reference wellpath is Palmillo 29-30 State Com 273H Rev-A.0	Grid System: NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet
True vertical depths are referenced to H&P 656 (KB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 656 (KB)	Scale: True distance
H&P 656 (KB) to Mean Sea Level: 3496.3 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Palmillo 29-30 State Com 273H): -3470 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: moyagusa on 2022-12-01; Database: WA_HOU_Midland_Defn

Location Information

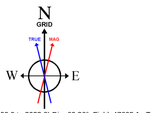
Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Palmillo 29-30 State Com Pad			574601.600	595268.000	32°38'11.0191"N	104°13'30.9815"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Palmillo 29-30 State Com 273H	-1893.27	-322.73	574278.900	593374.900	32°37'52.2893"N	104°13'34.7777"W
H&P 656 (KB) to Ground level (At Slot: Palmillo 29-30 State Com 273H)					26.3ft	
Mean Sea Level to Ground level (At Slot: Palmillo 29-30 State Com 273H)					-3470ft	
H&P 656 (KB) to Mean Sea Level					3496.3ft	

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.30	0.000	153.217	26.30	0.00	0.00	0.00	0.00
Start Build	1000.00	0.000	153.217	1000.00	0.00	0.00	0.00	0.00
End Build	1866.67	13.000	153.217	1859.25	-87.40	44.11	1.50	49.35
Start Drop	5309.39	13.000	153.217	5213.73	-778.76	393.09	0.00	439.76
End Drop	6176.06	0.000	89.012	6072.98	-866.16	437.20	1.50	489.12
Start Build	6707.24	0.000	89.012	6604.17	-866.16	437.20	0.00	489.12
End Build - Landing	7442.08	88.180	89.012	7081.40	-858.18	899.43	12.00	950.00
LTP (1790'FSL & 100'FEL)	17725.69	88.180	89.012	7408.00	-680.86	11176.32	0.00	11197.04

Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
17725.69	88.180	89.012	7408.00	-680.86	11176.32	585454.20	592694.10	32°37'45.4223"N	104°11'24.1029"W



HDGM2022v1.0 (1900.0 to 2023.0) Dip: 60.26° Field: 47605.1 nT
Magnetic North is 6.87 degrees East of True North (at 11/30/2022)
Grid North is 0.06 degrees East of True North
To correct azimuth from True to Grid subtract 0.06 degrees
To correct azimuth from Magnetic to Grid add 6.81 degrees

Planned Wellpath Report

Palmillo 29-30 State Com 273H Rev-A.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Apache Corporation**	Well	**Palmillo 29-30 State Com 273H**
Field	**Eddy County, NM (NAD-83)**	API/Legal	
Facility	**Palmillo 29-30 State Com Pad**	Wellbore	**Palmillo 29-30 State Com 273H PWB**
Slot	**Palmillo 29-30 State Com 273H**		

REPORT SETUP INFORMATION			
Projection System	**NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet**	Software System	**WellArchitect® 6.0**
North Reference	**Grid**	User	**Moyagusa**
Scale	**0.999910**	Report Generated	**11/30/2022** at **11:28:29 PM**
Convergence at slot	**0.06° East**	Database	**WA_HOU_Midland_Defn**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[US ft]**	**Northing[US ft]**	**Latitude**	**Longitude**
Slot Location	-1893.27	-322.73	**574278.90**	**593374.90**	32°37'52.2893"N	104°13'34.7777"W
Facility Reference Pt			**574601.60**	**595268.00**	32°38'11.0191"N	104°13'30.9815"W
Field Reference Pt			**165000.00**	**0.00**	30°59'39.8929"N	105°32'3.8657"W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	H&P 656 (KB) to Facility Vertical Datum	**3496.30ft**
Horizontal Reference Pt	**Slot**	H&P 656 (KB) to Mean Sea Level	**3496.30ft**
Vertical Reference Pt	**H&P 656 (KB)**	H&P 656 (KB) to Ground Level at Slot (Palmillo 29-30 State Com 273H)	**26.30ft**
MD Reference Pt	**H&P 656 (KB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**93.49°**

Planned Wellpath Report

Palmillo 29-30 State Com 273H Rev-A.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Apache Corporation**	Well	**Palmillo 29-30 State Com 273H**
Field	**Eddy County, NM (NAD-83)**	API/Legal	
Facility	**Palmillo 29-30 State Com Pad**	Wellbore	**Palmillo 29-30 State Com 273H PWB**
Slot	**Palmillo 29-30 State Com 273H**		

WELLPATH DATA (185 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
0.00†	0.000	153.217	0.00	0.00	0.00	0.00	574278.90	593374.90	32°37'52.2893"N	104°13'34.7777"W	0.00	0.00	0.00	
26.30	0.000	153.217	26.30	0.00	0.00	0.00	574278.90	593374.90	32°37'52.2893"N	104°13'34.7777"W	0.00	0.00	0.00	Tie On
126.30†	0.000	153.217	126.30	0.00	0.00	0.00	574278.90	593374.90	32°37'52.2893"N	104°13'34.7777"W	0.00	0.00	0.00	
226.30†	0.000	153.217	226.30	0.00	0.00	0.00	574278.90	593374.90	32°37'52.2893"N	104°13'34.7777"W	0.00	0.00	0.00	
326.30†	0.000	153.217	326.30	0.00	0.00	0.00	574278.90	593374.90	32°37'52.2893"N	104°13'34.7777"W	0.00	0.00	0.00	
426.30†	0.000	153.217	426.30	0.00	0.00	0.00	574278.90	593374.90	32°37'52.2893"N	104°13'34.7777"W	0.00	0.00	0.00	
526.30†	0.000	153.217	526.30	0.00	0.00	0.00	574278.90	593374.90	32°37'52.2893"N	104°13'34.7777"W	0.00	0.00	0.00	
626.30†	0.000	153.217	626.30	0.00	0.00	0.00	574278.90	593374.90	32°37'52.2893"N	104°13'34.7777"W	0.00	0.00	0.00	
726.30†	0.000	153.217	726.30	0.00	0.00	0.00	574278.90	593374.90	32°37'52.2893"N	104°13'34.7777"W	0.00	0.00	0.00	
826.30†	0.000	153.217	826.30	0.00	0.00	0.00	574278.90	593374.90	32°37'52.2893"N	104°13'34.7777"W	0.00	0.00	0.00	
926.30†	0.000	153.217	926.30	0.00	0.00	0.00	574278.90	593374.90	32°37'52.2893"N	104°13'34.7777"W	0.00	0.00	0.00	
1000.00	0.000	153.217	1000.00	0.00	0.00	0.00	574278.90	593374.90	32°37'52.2893"N	104°13'34.7777"W	0.00	0.00	0.00	Start Build
1026.30†	0.394	153.217	1026.30	0.05	-0.08	0.04	574278.94	593374.82	32°37'52.2885"N	104°13'34.7773"W	1.50	1.50	0.00	
1126.30†	1.894	153.217	1126.28	1.05	-1.86	0.94	574279.84	593373.04	32°37'52.2709"N	104°13'34.7668"W	1.50	1.50	0.00	
1226.30†	3.394	153.217	1226.17	3.38	-5.98	3.02	574281.92	593368.92	32°37'52.2301"N	104°13'34.7425"W	1.50	1.50	0.00	
1326.30†	4.894	153.217	1325.90	7.02	-12.43	6.28	574285.18	593362.47	32°37'52.1662"N	104°13'34.7045"W	1.50	1.50	0.00	
1426.30†	6.394	153.217	1425.42	11.98	-21.21	10.71	574289.61	593353.69	32°37'52.0793"N	104°13'34.6528"W	1.50	1.50	0.00	
1526.30†	7.894	153.217	1524.64	18.25	-32.32	16.31	574295.21	593342.59	32°37'51.9694"N	104°13'34.5874"W	1.50	1.50	0.00	
1626.30†	9.394	153.217	1623.50	25.83	-45.73	23.09	574301.98	593329.17	32°37'51.8366"N	104°13'34.5083"W	1.50	1.50	0.00	
1726.30†	10.895	153.217	1721.93	34.71	-61.46	31.02	574309.92	593313.45	32°37'51.6809"N	104°13'34.4157"W	1.50	1.50	0.00	
1766.67	11.500	153.217	1761.53	38.66	-68.46	34.55	574313.45	593306.45	32°37'51.6116"N	104°13'34.3745"W	1.50	1.50	0.00	End Build
1826.30†	11.500	153.217	1819.97	44.65	-79.07	39.91	574318.81	593295.84	32°37'51.5066"N	104°13'34.3120"W	0.00	0.00	0.00	
1926.30†	11.500	153.217	1917.96	54.70	-96.87	48.89	574327.79	593278.04	32°37'51.3304"N	104°13'34.2071"W	0.00	0.00	0.00	
2026.30†	11.500	153.217	2015.95	64.75	-114.67	57.88	574336.77	593260.25	32°37'51.1542"N	104°13'34.1023"W	0.00	0.00	0.00	
2126.30†	11.500	153.217	2113.94	74.80	-132.46	66.86	574345.76	593242.45	32°37'50.9780"N	104°13'33.9975"W	0.00	0.00	0.00	
2226.30†	11.500	153.217	2211.94	84.85	-150.26	75.85	574354.74	593224.65	32°37'50.8018"N	104°13'33.8926"W	0.00	0.00	0.00	
2326.30†	11.500	153.217	2309.93	94.90	-168.06	84.83	574363.72	593206.86	32°37'50.6256"N	104°13'33.7878"W	0.00	0.00	0.00	
2426.30†	11.500	153.217	2407.92	104.95	-185.86	93.81	574372.70	593189.06	32°37'50.4494"N	104°13'33.6830"W	0.00	0.00	0.00	
2526.30†	11.500	153.217	2505.91	115.00	-203.66	102.80	574381.69	593171.26	32°37'50.2732"N	104°13'33.5781"W	0.00	0.00	0.00	
2626.30†	11.500	153.217	2603.91	125.05	-221.45	111.78	574390.67	593153.47	32°37'50.0970"N	104°13'33.4733"W	0.00	0.00	0.00	

Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	**Apache Corporation**	Well	**Palmillo 29-30 State Com 273H**
Field	**Eddy County, NM (NAD-83)**	API/Legal	
Facility	**Palmillo 29-30 State Com Pad**	Wellbore	**Palmillo 29-30 State Com 273H PWB**
Slot	**Palmillo 29-30 State Com 273H**		

WELLPATH DATA (185 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
2726.30†	11.500	153.217	2701.90	135.10	-239.25	120.76	574399.65	593135.67	32°37'49.9208"N	104°13'33.3685"W	0.00	0.00	0.00	
2826.30†	11.500	153.217	2799.89	145.15	-257.05	129.75	574408.64	593117.87	32°37'49.7447"N	104°13'33.2636"W	0.00	0.00	0.00	
2926.30†	11.500	153.217	2897.88	155.21	-274.85	138.73	574417.62	593100.08	32°37'49.5685"N	104°13'33.1588"W	0.00	0.00	0.00	
3026.30†	11.500	153.217	2995.88	165.26	-292.65	147.72	574426.60	593082.28	32°37'49.3923"N	104°13'33.0540"W	0.00	0.00	0.00	
3126.30†	11.500	153.217	3093.87	175.31	-310.44	156.70	574435.58	593064.49	32°37'49.2161"N	104°13'32.9491"W	0.00	0.00	0.00	
3226.30†	11.500	153.217	3191.86	185.36	-328.24	165.68	574444.57	593046.69	32°37'49.0399"N	104°13'32.8443"W	0.00	0.00	0.00	
3326.30†	11.500	153.217	3289.85	195.41	-346.04	174.67	574453.55	593028.89	32°37'48.8637"N	104°13'32.7394"W	0.00	0.00	0.00	
3426.30†	11.500	153.217	3387.85	205.46	-363.84	183.65	574462.53	593011.10	32°37'48.6875"N	104°13'32.6346"W	0.00	0.00	0.00	
3526.30†	11.500	153.217	3485.84	215.51	-381.64	192.63	574471.52	592993.30	32°37'48.5113"N	104°13'32.5298"W	0.00	0.00	0.00	
3626.30†	11.500	153.217	3583.83	225.56	-399.43	201.62	574480.50	592975.50	32°37'48.3351"N	104°13'32.4249"W	0.00	0.00	0.00	
3726.30†	11.500	153.217	3681.82	235.61	-417.23	210.60	574489.48	592957.71	32°37'48.1589"N	104°13'32.3201"W	0.00	0.00	0.00	
3826.30†	11.500	153.217	3779.81	245.66	-435.03	219.58	574498.46	592939.91	32°37'47.9827"N	104°13'32.2153"W	0.00	0.00	0.00	
3926.30†	11.500	153.217	3877.81	255.71	-452.83	228.57	574507.45	592922.11	32°37'47.8065"N	104°13'32.1104"W	0.00	0.00	0.00	
4026.30†	11.500	153.217	3975.80	265.76	-470.63	237.55	574516.43	592904.32	32°37'47.6303"N	104°13'32.0056"W	0.00	0.00	0.00	
4126.30†	11.500	153.217	4073.79	275.81	-488.42	246.54	574525.41	592886.52	32°37'47.4541"N	104°13'31.9008"W	0.00	0.00	0.00	
4226.30†	11.500	153.217	4171.78	285.86	-506.22	255.52	574534.40	592868.73	32°37'47.2780"N	104°13'31.7959"W	0.00	0.00	0.00	
4326.30†	11.500	153.217	4269.78	295.91	-524.02	264.50	574543.38	592850.93	32°37'47.1018"N	104°13'31.6911"W	0.00	0.00	0.00	
4426.30†	11.500	153.217	4367.77	305.96	-541.82	273.49	574552.36	592833.13	32°37'46.9256"N	104°13'31.5863"W	0.00	0.00	0.00	
4526.30†	11.500	153.217	4465.76	316.01	-559.62	282.47	574561.34	592815.34	32°37'46.7494"N	104°13'31.4814"W	0.00	0.00	0.00	
4626.30†	11.500	153.217	4563.75	326.06	-577.41	291.45	574570.33	592797.54	32°37'46.5732"N	104°13'31.3766"W	0.00	0.00	0.00	
4726.30†	11.500	153.217	4661.75	336.11	-595.21	300.44	574579.31	592779.74	32°37'46.3970"N	104°13'31.2718"W	0.00	0.00	0.00	
4826.30†	11.500	153.217	4759.74	346.16	-613.01	309.42	574588.29	592761.95	32°37'46.2208"N	104°13'31.1669"W	0.00	0.00	0.00	
4926.30†	11.500	153.217	4857.73	356.21	-630.81	318.41	574597.28	592744.15	32°37'46.0446"N	104°13'31.0621"W	0.00	0.00	0.00	
5026.30†	11.500	153.217	4955.72	366.27	-648.61	327.39	574606.26	592726.35	32°37'45.8684"N	104°13'30.9573"W	0.00	0.00	0.00	
5126.30†	11.500	153.217	5053.72	376.32	-666.40	336.37	574615.24	592708.56	32°37'45.6922"N	104°13'30.8524"W	0.00	0.00	0.00	
5226.30†	11.500	153.217	5151.71	386.37	-684.20	345.36	574624.22	592690.76	32°37'45.5160"N	104°13'30.7476"W	0.00	0.00	0.00	
5326.30†	11.500	153.217	5249.70	396.42	-702.00	354.34	574633.21	592672.97	32°37'45.3398"N	104°13'30.6428"W	0.00	0.00	0.00	
5426.30†	11.500	153.217	5347.69	406.47	-719.80	363.32	574642.19	592655.17	32°37'45.1636"N	104°13'30.5379"W	0.00	0.00	0.00	
5526.30†	11.500	153.217	5445.69	416.52	-737.60	372.31	574651.17	592637.37	32°37'44.9875"N	104°13'30.4331"W	0.00	0.00	0.00	
5626.30†	11.500	153.217	5543.68	426.57	-755.39	381.29	574660.16	592619.58	32°37'44.8113"N	104°13'30.3283"W	0.00	0.00	0.00	

Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	**Apache Corporation**	Well	**Palmillo 29-30 State Com 273H**
Field	**Eddy County, NM (NAD-83)**	API/Legal	
Facility	**Palmillo 29-30 State Com Pad**	Wellbore	**Palmillo 29-30 State Com 273H PWB**
Slot	**Palmillo 29-30 State Com 273H**		

WELLPATH DATA (185 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
5726.30†	11.500	153.217	5641.67	436.62	-773.19	390.28	574669.14	592601.78	32°37'44.6351"N	104°13'30.2234"W	0.00	0.00	0.00	
5826.30†	11.500	153.217	5739.66	446.67	-790.99	399.26	574678.12	592583.98	32°37'44.4589"N	104°13'30.1186"W	0.00	0.00	0.00	
5864.01	11.500	153.217	5776.61	450.46	-797.70	402.65	574681.51	592577.27	32°37'44.3924"N	104°13'30.0791"W	0.00	0.00	0.00	Start Drop
5926.30†	10.566	153.217	5837.76	456.47	-808.34	408.02	574686.88	592566.63	32°37'44.2871"N	104°13'30.0164"W	1.50	-1.50	0.00	
6026.30†	9.066	153.217	5936.29	465.06	-823.56	415.70	574694.56	592551.41	32°37'44.1364"N	104°13'29.9267"W	1.50	-1.50	0.00	
6126.30†	7.566	153.217	6035.23	472.35	-836.47	422.22	574701.08	592538.51	32°37'44.0086"N	104°13'29.8507"W	1.50	-1.50	0.00	
6226.30†	6.066	153.217	6134.53	478.34	-847.07	427.56	574706.42	592527.91	32°37'43.9037"N	104°13'29.7883"W	1.50	-1.50	0.00	
6326.30†	4.566	153.217	6234.09	483.01	-855.34	431.74	574710.60	592519.64	32°37'43.8219"N	104°13'29.7396"W	1.50	-1.50	0.00	
6426.30†	3.066	153.217	6333.87	486.36	-861.28	434.74	574713.60	592513.70	32°37'43.7631"N	104°13'29.7046"W	1.50	-1.50	0.00	
6526.30†	1.566	153.217	6433.78	488.40	-864.88	436.56	574715.42	592510.10	32°37'43.7274"N	104°13'29.6834"W	1.50	-1.50	0.00	
6626.30†	0.066	153.217	6533.77	489.11	-866.15	437.20	574716.06	592508.83	32°37'43.7148"N	104°13'29.6759"W	1.50	-1.50	0.00	
6630.67	0.000	89.012	6538.14	489.12	-866.16	437.20	574716.06	592508.82	32°37'43.7148"N	104°13'29.6759"W	1.50	-1.50	0.00	End Drop
6696.70	0.000	89.012	6604.17	489.12	-866.16	437.20	574716.06	592508.82	32°37'43.7148"N	104°13'29.6759"W	0.00	0.00	0.00	Start Build
6726.30†	3.552	89.012	6633.75	490.03	-866.14	438.12	574716.98	592508.84	32°37'43.7149"N	104°13'29.6651"W	12.00	12.00	0.00	
6826.30†	15.552	89.012	6732.18	506.54	-865.85	454.68	574733.54	592509.12	32°37'43.7176"N	104°13'29.4715"W	12.00	12.00	0.00	
6926.30†	27.552	89.012	6825.02	543.10	-865.22	491.34	574770.19	592509.76	32°37'43.7234"N	104°13'29.0428"W	12.00	12.00	0.00	
7026.30†	39.552	89.012	6908.21	598.10	-864.27	546.50	574825.35	592510.71	32°37'43.7323"N	104°13'28.3978"W	12.00	12.00	0.00	
7126.30†	51.552	89.012	6978.11	669.14	-863.04	617.75	574896.59	592511.94	32°37'43.7437"N	104°13'27.5647"W	12.00	12.00	0.00	
7226.30†	63.552	89.012	7031.66	753.11	-861.59	701.97	574980.80	592513.39	32°37'43.7573"N	104°13'26.5799"W	12.00	12.00	0.00	
7326.30†	75.552	89.012	7066.54	846.36	-859.97	795.48	575074.31	592515.00	32°37'43.7723"N	104°13'25.4865"W	12.00	12.00	0.00	
7426.30†	87.552	89.012	7081.20	944.79	-858.27	894.20	575173.02	592516.71	32°37'43.7881"N	104°13'24.3322"W	12.00	12.00	0.00	
7431.54	88.180	89.012	7081.40	950.00	-858.18	899.43	575178.25	592516.80	32°37'43.7890"N	104°13'24.2710"W	12.00	12.00	0.00	End Build - Landing
7526.30†	88.180	89.012	7084.41	1044.43	-856.55	994.13	575272.94	592518.43	32°37'43.8042"N	104°13'23.1636"W	0.00	0.00	0.00	
7626.30†	88.180	89.012	7087.58	1144.08	-854.82	1094.07	575372.87	592520.16	32°37'43.8202"N	104°13'21.9951"W	0.00	0.00	0.00	
7726.30†	88.180	89.012	7090.76	1243.72	-853.10	1194.00	575472.79	592521.88	32°37'43.8362"N	104°13'20.8266"W	0.00	0.00	0.00	
7826.30†	88.180	89.012	7093.93	1343.37	-851.37	1293.94	575572.72	592523.60	32°37'43.8523"N	104°13'19.6580"W	0.00	0.00	0.00	
7926.30†	88.180	89.012	7097.11	1443.01	-849.65	1393.87	575672.65	592525.33	32°37'43.8683"N	104°13'18.4895"W	0.00	0.00	0.00	
8026.30†	88.180	89.012	7100.29	1542.65	-847.93	1493.81	575772.57	592527.05	32°37'43.8843"N	104°13'17.3210"W	0.00	0.00	0.00	
8126.30†	88.180	89.012	7103.46	1642.30	-846.20	1593.74	575872.50	592528.78	32°37'43.9003"N	104°13'16.1524"W	0.00	0.00	0.00	
8226.30†	88.180	89.012	7106.64	1741.94	-844.48	1693.68	575972.42	592530.50	32°37'43.9163"N	104°13'14.9839"W	0.00	0.00	0.00	

Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	**Apache Corporation**	Well	**Palmillo 29-30 State Com 273H**
Field	**Eddy County, NM (NAD-83)**	API/Legal	
Facility	**Palmillo 29-30 State Com Pad**	Wellbore	**Palmillo 29-30 State Com 273H PWB**
Slot	**Palmillo 29-30 State Com 273H**		

WELLPATH DATA (185 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
8326.30†	88.180	89.012	7109.81	1841.59	-842.75	1793.61	576072.35	592532.22	32°37'43.9323"N	104°13'13.8154"W	0.00	0.00	0.00	
8426.30†	88.180	89.012	7112.99	1941.23	-841.03	1893.55	576172.27	592533.95	32°37'43.9484"N	104°13'12.6468"W	0.00	0.00	0.00	
8526.30†	88.180	89.012	7116.17	2040.88	-839.30	1993.48	576272.20	592535.67	32°37'43.9644"N	104°13'11.4783"W	0.00	0.00	0.00	
8626.30†	88.180	89.012	7119.34	2140.52	-837.58	2093.42	576372.12	592537.40	32°37'43.9804"N	104°13'10.3098"W	0.00	0.00	0.00	
8726.30†	88.180	89.012	7122.52	2240.17	-835.86	2193.35	576472.05	592539.12	32°37'43.9964"N	104°13'9.1412"W	0.00	0.00	0.00	
8826.30†	88.180	89.012	7125.69	2339.81	-834.13	2293.29	576571.98	592540.85	32°37'44.0124"N	104°13'7.9727"W	0.00	0.00	0.00	
8926.30†	88.180	89.012	7128.87	2439.45	-832.41	2393.22	576671.90	592542.57	32°37'44.0284"N	104°13'6.8041"W	0.00	0.00	0.00	
9026.30†	88.180	89.012	7132.05	2539.10	-830.68	2493.15	576771.83	592544.29	32°37'44.0444"N	104°13'5.6356"W	0.00	0.00	0.00	
9126.30†	88.180	89.012	7135.22	2638.74	-828.96	2593.09	576871.75	592546.02	32°37'44.0603"N	104°13'4.4671"W	0.00	0.00	0.00	
9226.30†	88.180	89.012	7138.40	2738.39	-827.23	2693.02	576971.68	592547.74	32°37'44.0763"N	104°13'3.2985"W	0.00	0.00	0.00	
9326.30†	88.180	89.012	7141.57	2838.03	-825.51	2792.96	577071.60	592549.47	32°37'44.0923"N	104°13'2.1300"W	0.00	0.00	0.00	
9426.30†	88.180	89.012	7144.75	2937.68	-823.79	2892.89	577171.53	592551.19	32°37'44.1083"N	104°13'0.9615"W	0.00	0.00	0.00	
9526.30†	88.180	89.012	7147.93	3037.32	-822.06	2992.83	577271.45	592552.91	32°37'44.1243"N	104°12'59.7929"W	0.00	0.00	0.00	
9626.30†	88.180	89.012	7151.10	3136.96	-820.34	3092.76	577371.38	592554.64	32°37'44.1402"N	104°12'58.6244"W	0.00	0.00	0.00	
9726.30†	88.180	89.012	7154.28	3236.61	-818.61	3192.70	577471.30	592556.36	32°37'44.1562"N	104°12'57.4559"W	0.00	0.00	0.00	
9826.30†	88.180	89.012	7157.45	3336.25	-816.89	3292.63	577571.23	592558.09	32°37'44.1722"N	104°12'56.2873"W	0.00	0.00	0.00	
9926.30†	88.180	89.012	7160.63	3435.90	-815.16	3392.57	577671.16	592559.81	32°37'44.1881"N	104°12'55.1188"W	0.00	0.00	0.00	
10026.30†	88.180	89.012	7163.80	3535.54	-813.44	3492.50	577771.08	592561.53	32°37'44.2041"N	104°12'53.9502"W	0.00	0.00	0.00	
10126.30†	88.180	89.012	7166.98	3635.19	-811.72	3592.44	577871.01	592563.26	32°37'44.2201"N	104°12'52.7817"W	0.00	0.00	0.00	
10226.30†	88.180	89.012	7170.16	3734.83	-809.99	3692.37	577970.93	592564.98	32°37'44.2360"N	104°12'51.6132"W	0.00	0.00	0.00	
10326.30†	88.180	89.012	7173.33	3834.48	-808.27	3792.31	578070.86	592566.71	32°37'44.2520"N	104°12'50.4446"W	0.00	0.00	0.00	
10426.30†	88.180	89.012	7176.51	3934.12	-806.54	3892.24	578170.78	592568.43	32°37'44.2679"N	104°12'49.2761"W	0.00	0.00	0.00	
10526.30†	88.180	89.012	7179.68	4033.76	-804.82	3992.17	578270.71	592570.16	32°37'44.2839"N	104°12'48.1076"W	0.00	0.00	0.00	
10626.30†	88.180	89.012	7182.86	4133.41	-803.09	4092.11	578370.63	592571.88	32°37'44.2998"N	104°12'46.9390"W	0.00	0.00	0.00	
10726.30†	88.180	89.012	7186.04	4233.05	-801.37	4192.04	578470.56	592573.60	32°37'44.3157"N	104°12'45.7705"W	0.00	0.00	0.00	
10826.30†	88.180	89.012	7189.21	4332.70	-799.65	4291.98	578570.49	592575.33	32°37'44.3317"N	104°12'44.6019"W	0.00	0.00	0.00	
10926.30†	88.180	89.012	7192.39	4432.34	-797.92	4391.91	578670.41	592577.05	32°37'44.3476"N	104°12'43.4334"W	0.00	0.00	0.00	
11026.30†	88.180	89.012	7195.56	4531.99	-796.20	4491.85	578770.34	592578.78	32°37'44.3635"N	104°12'42.2649"W	0.00	0.00	0.00	
11126.30†	88.180	89.012	7198.74	4631.63	-794.47	4591.78	578870.26	592580.50	32°37'44.3795"N	104°12'41.0963"W	0.00	0.00	0.00	
11226.30†	88.180	89.012	7201.92	4731.27	-792.75	4691.72	578970.19	592582.22	32°37'44.3954"N	104°12'39.9278"W	0.00	0.00	0.00	

Planned Wellpath Report

Palmillo 29-30 State Com 273H Rev-A.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Apache Corporation**	Well	**Palmillo 29-30 State Com 273H**
Field	**Eddy County, NM (NAD-83)**	API/Legal	
Facility	**Palmillo 29-30 State Com Pad**	Wellbore	**Palmillo 29-30 State Com 273H PWB**
Slot	**Palmillo 29-30 State Com 273H**		

WELLPATH DATA (185 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
11326.30†	88.180	89.012	7205.09	4830.92	-791.02	4791.65	579070.11	592583.95	32°37'44.4113"N	104°12'38.7593"W	0.00	0.00	0.00	
11426.30†	88.180	89.012	7208.27	4930.56	-789.30	4891.59	579170.04	592585.67	32°37'44.4272"N	104°12'37.5907"W	0.00	0.00	0.00	
11526.30†	88.180	89.012	7211.44	5030.21	-787.58	4991.52	579269.96	592587.40	32°37'44.4432"N	104°12'36.4222"W	0.00	0.00	0.00	
11626.30†	88.180	89.012	7214.62	5129.85	-785.85	5091.46	579369.89	592589.12	32°37'44.4591"N	104°12'35.2536"W	0.00	0.00	0.00	
11726.30†	88.180	89.012	7217.80	5229.50	-784.13	5191.39	579469.82	592590.85	32°37'44.4750"N	104°12'34.0851"W	0.00	0.00	0.00	
11826.30†	88.180	89.012	7220.97	5329.14	-782.40	5291.33	579569.74	592592.57	32°37'44.4909"N	104°12'32.9166"W	0.00	0.00	0.00	
11926.30†	88.180	89.012	7224.15	5428.79	-780.68	5391.26	579669.67	592594.29	32°37'44.5068"N	104°12'31.7480"W	0.00	0.00	0.00	
12026.30†	88.180	89.012	7227.32	5528.43	-778.95	5491.20	579769.59	592596.02	32°37'44.5227"N	104°12'30.5795"W	0.00	0.00	0.00	
12126.30†	88.180	89.012	7230.50	5628.07	-777.23	5591.13	579869.52	592597.74	32°37'44.5386"N	104°12'29.4109"W	0.00	0.00	0.00	
12226.30†	88.180	89.012	7233.68	5727.72	-775.51	5691.06	579969.44	592599.47	32°37'44.5545"N	104°12'28.2424"W	0.00	0.00	0.00	
12326.30†	88.180	89.012	7236.85	5827.36	-773.78	5791.00	580069.37	592601.19	32°37'44.5704"N	104°12'27.0739"W	0.00	0.00	0.00	
12426.30†	88.180	89.012	7240.03	5927.01	-772.06	5890.93	580169.29	592602.91	32°37'44.5863"N	104°12'25.9053"W	0.00	0.00	0.00	
12526.30†	88.180	89.012	7243.20	6026.65	-770.33	5990.87	580269.22	592604.64	32°37'44.6021"N	104°12'24.7368"W	0.00	0.00	0.00	
12626.30†	88.180	89.012	7246.38	6126.30	-768.61	6090.80	580369.14	592606.36	32°37'44.6180"N	104°12'23.5683"W	0.00	0.00	0.00	
12726.30†	88.180	89.012	7249.56	6225.94	-766.88	6190.74	580469.07	592608.09	32°37'44.6339"N	104°12'22.3997"W	0.00	0.00	0.00	
12826.30†	88.180	89.012	7252.73	6325.58	-765.16	6290.67	580569.00	592609.81	32°37'44.6498"N	104°12'21.2312"W	0.00	0.00	0.00	
12926.30†	88.180	89.012	7255.91	6425.23	-763.44	6390.61	580668.92	592611.53	32°37'44.6657"N	104°12'20.0626"W	0.00	0.00	0.00	
13026.30†	88.180	89.012	7259.08	6524.87	-761.71	6490.54	580768.85	592613.26	32°37'44.6815"N	104°12'18.8941"W	0.00	0.00	0.00	
13126.30†	88.180	89.012	7262.26	6624.52	-759.99	6590.48	580868.77	592614.98	32°37'44.6974"N	104°12'17.7256"W	0.00	0.00	0.00	
13226.30†	88.180	89.012	7265.44	6724.16	-758.26	6690.41	580968.70	592616.71	32°37'44.7133"N	104°12'16.5570"W	0.00	0.00	0.00	
13326.30†	88.180	89.012	7268.61	6823.81	-756.54	6790.35	581068.62	592618.43	32°37'44.7291"N	104°12'15.3885"W	0.00	0.00	0.00	
13426.30†	88.180	89.012	7271.79	6923.45	-754.81	6890.28	581168.55	592620.16	32°37'44.7450"N	104°12'14.2199"W	0.00	0.00	0.00	
13526.30†	88.180	89.012	7274.96	7023.10	-753.09	6990.22	581268.47	592621.88	32°37'44.7608"N	104°12'13.0514"W	0.00	0.00	0.00	
13626.30†	88.180	89.012	7278.14	7122.74	-751.37	7090.15	581368.40	592623.60	32°37'44.7767"N	104°12'11.8828"W	0.00	0.00	0.00	
13726.30†	88.180	89.012	7281.32	7222.38	-749.64	7190.08	581468.33	592625.33	32°37'44.7925"N	104°12'10.7143"W	0.00	0.00	0.00	
13826.30†	88.180	89.012	7284.49	7322.03	-747.92	7290.02	581568.25	592627.05	32°37'44.8084"N	104°12'9.5458"W	0.00	0.00	0.00	
13926.30†	88.180	89.012	7287.67	7421.67	-746.19	7389.95	581668.18	592628.78	32°37'44.8242"N	104°12'8.3772"W	0.00	0.00	0.00	
14026.30†	88.180	89.012	7290.84	7521.32	-744.47	7489.89	581768.10	592630.50	32°37'44.8401"N	104°12'7.2087"W	0.00	0.00	0.00	
14126.30†	88.180	89.012	7294.02	7620.96	-742.74	7589.82	581868.03	592632.22	32°37'44.8559"N	104°12'6.0401"W	0.00	0.00	0.00	
14226.30†	88.180	89.012	7297.20	7720.61	-741.02	7689.76	581967.95	592633.95	32°37'44.8717"N	104°12'4.8716"W	0.00	0.00	0.00	

Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	**Apache Corporation**	Well	**Palmillo 29-30 State Com 273H**
Field	**Eddy County, NM (NAD-83)**	API/Legal	
Facility	**Palmillo 29-30 State Com Pad**	Wellbore	**Palmillo 29-30 State Com 273H PWB**
Slot	**Palmillo 29-30 State Com 273H**		

WELLPATH DATA (185 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
14326.30†	88.180	89.012	7300.37	7820.25	-739.30	7789.69	582067.88	592635.67	32°37'44.8876"N	104°12'3.7031"W	0.00	0.00	0.00	
14426.30†	88.180	89.012	7303.55	7919.89	-737.57	7889.63	582167.80	592637.40	32°37'44.9034"N	104°12'2.5345"W	0.00	0.00	0.00	
14526.30†	88.180	89.012	7306.72	8019.54	-735.85	7989.56	582267.73	592639.12	32°37'44.9192"N	104°12'1.3660"W	0.00	0.00	0.00	
14626.30†	88.180	89.012	7309.90	8119.18	-734.12	8089.50	582367.66	592640.84	32°37'44.9350"N	104°12'0.1974"W	0.00	0.00	0.00	
14726.30†	88.180	89.012	7313.08	8218.83	-732.40	8189.43	582467.58	592642.57	32°37'44.9509"N	104°11'59.0289"W	0.00	0.00	0.00	
14826.30†	88.180	89.012	7316.25	8318.47	-730.67	8289.37	582567.51	592644.29	32°37'44.9667"N	104°11'57.8604"W	0.00	0.00	0.00	
14926.30†	88.180	89.012	7319.43	8418.12	-728.95	8389.30	582667.43	592646.02	32°37'44.9825"N	104°11'56.6918"W	0.00	0.00	0.00	
15026.30†	88.180	89.012	7322.60	8517.76	-727.23	8489.24	582767.36	592647.74	32°37'44.9983"N	104°11'55.5233"W	0.00	0.00	0.00	
15126.30†	88.180	89.012	7325.78	8617.41	-725.50	8589.17	582867.28	592649.47	32°37'45.0141"N	104°11'54.3547"W	0.00	0.00	0.00	
15226.30†	88.180	89.012	7328.96	8717.05	-723.78	8689.10	582967.21	592651.19	32°37'45.0299"N	104°11'53.1862"W	0.00	0.00	0.00	
15326.30†	88.180	89.012	7332.13	8816.69	-722.05	8789.04	583067.13	592652.91	32°37'45.0457"N	104°11'52.0176"W	0.00	0.00	0.00	
15426.30†	88.180	89.012	7335.31	8916.34	-720.33	8888.97	583167.06	592654.64	32°37'45.0615"N	104°11'50.8491"W	0.00	0.00	0.00	
15526.30†	88.180	89.012	7338.48	9015.98	-718.60	8988.91	583266.98	592656.36	32°37'45.0773"N	104°11'49.6806"W	0.00	0.00	0.00	
15626.30†	88.180	89.012	7341.66	9115.63	-716.88	9088.84	583366.91	592658.09	32°37'45.0931"N	104°11'48.5120"W	0.00	0.00	0.00	
15726.30†	88.180	89.012	7344.83	9215.27	-715.16	9188.78	583466.84	592659.81	32°37'45.1089"N	104°11'47.3435"W	0.00	0.00	0.00	
15826.30†	88.180	89.012	7348.01	9314.92	-713.43	9288.71	583566.76	592661.53	32°37'45.1247"N	104°11'46.1749"W	0.00	0.00	0.00	
15926.30†	88.180	89.012	7351.19	9414.56	-711.71	9388.65	583666.69	592663.26	32°37'45.1405"N	104°11'45.0064"W	0.00	0.00	0.00	
16026.30†	88.180	89.012	7354.36	9514.20	-709.98	9488.58	583766.61	592664.98	32°37'45.1562"N	104°11'43.8378"W	0.00	0.00	0.00	
16126.30†	88.180	89.012	7357.54	9613.85	-708.26	9588.52	583866.54	592666.71	32°37'45.1720"N	104°11'42.6693"W	0.00	0.00	0.00	
16226.30†	88.180	89.012	7360.71	9713.49	-706.53	9688.45	583966.46	592668.43	32°37'45.1878"N	104°11'41.5008"W	0.00	0.00	0.00	
16326.30†	88.180	89.012	7363.89	9813.14	-704.81	9788.39	584066.39	592670.15	32°37'45.2036"N	104°11'40.3322"W	0.00	0.00	0.00	
16426.30†	88.180	89.012	7367.07	9912.78	-703.09	9888.32	584166.31	592671.88	32°37'45.2193"N	104°11'39.1637"W	0.00	0.00	0.00	
16526.30†	88.180	89.012	7370.24	10012.43	-701.36	9988.26	584266.24	592673.60	32°37'45.2351"N	104°11'37.9951"W	0.00	0.00	0.00	
16626.30†	88.180	89.012	7373.42	10112.07	-699.64	10088.19	584366.17	592675.33	32°37'45.2509"N	104°11'36.8266"W	0.00	0.00	0.00	
16726.30†	88.180	89.012	7376.59	10211.72	-697.91	10188.13	584466.09	592677.05	32°37'45.2666"N	104°11'35.6580"W	0.00	0.00	0.00	
16826.30†	88.180	89.012	7379.77	10311.36	-696.19	10288.06	584566.02	592678.78	32°37'45.2824"N	104°11'34.4895"W	0.00	0.00	0.00	
16926.30†	88.180	89.012	7382.95	10411.00	-694.46	10387.99	584665.94	592680.50	32°37'45.2981"N	104°11'33.3210"W	0.00	0.00	0.00	
17026.30†	88.180	89.012	7386.12	10510.65	-692.74	10487.93	584765.87	592682.22	32°37'45.3139"N	104°11'32.1524"W	0.00	0.00	0.00	
17126.30†	88.180	89.012	7389.30	10610.29	-691.02	10587.86	584865.79	592683.95	32°37'45.3296"N	104°11'30.9839"W	0.00	0.00	0.00	
17226.30†	88.180	89.012	7392.47	10709.94	-689.29	10687.80	584965.72	592685.67	32°37'45.3454"N	104°11'29.8153"W	0.00	0.00	0.00	

Planned Wellpath Report

Palmillo 29-30 State Com 273H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
Operator	**Apache Corporation**	Well	**Palmillo 29-30 State Com 273H**
Field	**Eddy County, NM (NAD-83)**	API/Legal	
Facility	**Palmillo 29-30 State Com Pad**	Wellbore	**Palmillo 29-30 State Com 273H PWB**
Slot	**Palmillo 29-30 State Com 273H**		

WELLPATH DATA (185 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
17326.30†	88.180	89.012	7395.65	10809.58	-687.57	10787.73	585065.64	592687.40	32°37'45.3611"N	104°11'28.6468"W	0.00	0.00	0.00	
17426.30†	88.180	89.012	7398.83	10909.23	-685.84	10887.67	585165.57	592689.12	32°37'45.3768"N	104°11'27.4782"W	0.00	0.00	0.00	
17526.30†	88.180	89.012	7402.00	11008.87	-684.12	10987.60	585265.50	592690.84	32°37'45.3926"N	104°11'26.3097"W	0.00	0.00	0.00	
17626.30†	88.180	89.012	7405.18	11108.51	-682.39	11087.54	585365.42	592692.57	32°37'45.4083"N	104°11'25.1411"W	0.00	0.00	0.00	
17715.15	88.180	89.012	7408.00[1]	11197.04	-680.86	11176.32	585454.20	592694.10	32°37'45.4223"N	104°11'24.1029"W	0.00	0.00	0.00	LTP (1790'FSL & 100'FEL)

HOLE & CASING SECTIONS - Ref Wellbore: Palmillo 29-30 State Com 273H PWB Ref Wellpath: Palmillo 29-30 State Com 273H Rev-A.0

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing	26.30	6575.00	6548.70	26.30	6482.47	0.00	0.00	-865.79	437.02

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Palmillo 29-30 State Com 273H - FTP	N/A	7080.56	-859.18	841.58	**575120.40**	**592515.80**	32°37'43.7797"N	104°13'24.9475"W	point
1) Palmillo 29-30 State Com 273H - LTP	17715.15	7408.00	-680.86	11176.32	**585454.20**	**592694.10**	32°37'45.4223"N	104°11'24.1029"W	point

SURVEY PROGRAM - Ref Wellbore: Palmillo 29-30 State Com 273H PWB Ref Wellpath: Palmillo 29-30 State Com 273H Rev-A.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.30	17715.15	Custom OWSG MWD+IFR1+SAG+FDIR (Approximation)		Palmillo 29-30 State Com 273H PWB

Planned Wellpath Report

Palmillo 29-30 State Com 273H Rev-A.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Apache Corporation**	Well	**Palmillo 29-30 State Com 273H**
Field	**Eddy County, NM (NAD-83)**	API/Legal	
Facility	**Palmillo 29-30 State Com Pad**	Wellbore	**Palmillo 29-30 State Com 273H PWB**
Slot	**Palmillo 29-30 State Com 273H**		

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
26.30	0.000	153.217	26.30	Tie On
1000.00	0.000	153.217	1000.00	Start Build
1766.67	11.500	153.217	1761.53	End Build
5864.01	11.500	153.217	5776.61	Start Drop
6630.67	0.000	89.012	6538.14	End Drop
6696.70	0.000	89.012	6604.17	Start Build
7431.54	88.180	89.012	7081.40	End Build - Landing
17715.15	88.180	89.012	7408.00	LTP (1790'FSL & 100'FEL)

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: APACHE CORPORATION **OGRID:** 873 **Date:** 11 / 02 / 2022

II. Type: XX Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name (Middle Pad)	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Palmillo 29-30 State Com 377H		Sec 25 T19S R27E	2660' FNL 750' FEL			
Palmillo 29-30 State Com 273H		Sec 25 T19S R27E	2630' FNL 750' FEL			
Palmillo 29-30 State Com 272H		Sec 25 T19S R27E	2600' FNL 750' FEL			
Palmillo 29-30 State Com 376H		Sec 25 T19S R27E	2570' FNL 750' FEL			

IV. Central Delivery Point Name: PALMILLO 29-30 CTB [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Palmillo 29-30 State Com 377H				Not yet scheduled	Not yet scheduled	Not yet scheduled
Palmillo 29-30 State Com 273H				Not yet scheduled	Not yet scheduled	Not yet scheduled
Palmillo 29-30 State Com 272H				Not yet scheduled	Not yet scheduled	Not yet scheduled
Palmillo 29-30 State Com 376H				Not yet scheduled	Not yet scheduled	Not yet scheduled

VI. Separation Equipment: ☐ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: XX Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: XX Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

XX Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

XX Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	Sorina L Flores
Printed Name:	Sorina L Flores
Title:	Sr Regulatory Analyst
E-mail Address:	sorina.flores@apachecorp.com
Date:	11/2/2022
Phone:	432-818-1167

OIL CONSERVATION DIVISION

(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

VI. SEPARATION EQUIPMENT

(Complete description of how Apache will size separation equipment to optimize gas capture)

Apache Corporation production tank batteries will include separation equipment designed to efficiently separate gas from liquid phases to optimize gas capture based on projected and estimated volumes from the targeted pool in conjunction with the total number of wells planned to/or existing within the facility. If determined to be undersized or needed, separation equipment will be upgraded prior to well(s) being drilled or completed. The separation equipment will be designed and built according to relevant industry specifications, ie API specifications 12J and ASME Sec VIII Div 1. Other recognized industry publications such as Gas Processors Suppliers Association will be referenced when designing separation equipment to optimize gas capture.

VII. OPERATIONAL PRACTICES

(Complete description of actions Apache will take to comply with the requirements of Subsection A-F of 19.15.27.8 NMAC)

(A) Venting & flaring of natural gas

- Apache acknowledges venting or flaring of natural gas during drilling, completion, or production operations constitutes was as defined in 19.15.2 NMAC is prohibited. Apache will maximize recovery of natural gas by minimizing waste of natural gas through venting and flaring. During drilling, completion and production operations, Apache will vent, or flare natural gas only as authorized in subsections B, C and D of 19.15.27.8 NMAC. Apache shall flare rather than vent natural gas except when flaring technically infeasible or would pose a risk to safe operations or personnel safety, and venting is a safer alternative than flaring.

(B) Venting & flaring during drilling operations

- Apache shall capture or combust natural gas, if technically feasible, using best industry practices and control technologies
- A properly sized flare stack will be located at a minimum of 100 feet from the nearest surface hole location unless otherwise approved by the division.
- In the event of an emergency or malfunction, Apache may vent natural gas to avoid risk of an immediate and substantial adverse impact on safety, public health, or the environment. Apache shall report natural gas vented or flared during an emergency or malfunction to the NMOCD division pursuant Paragraph (1) of Subsection G of 19.15.27.8 NMAC.

(C) Venting & flaring during completions and recompletion

- During initial flowback, Apache shall route flowback fluids into a completion or storage tank and, if technically feasible under the applicable well conditions, flare rather than vent and commence operations of a separator as soon as it is technically feasible for a separator to function.
- During separation flowback, Apache shall capture and route natural gas from separation equipment:
  - To a gas flowline or collection system, reinject into the well, or use on-site as a fuel source or other purpose that a purchased fuel or raw material would serve; or
  - To flare if routing natural gas to a gas flowline or collecting system, reinjecting it into the well, or using it on-site as fuel source or other purpose that a purchased fuel or raw material would serve would pose a risk to safe operation or personnel safety.
- If natural gas does not meet gathering pipeline quality specifications, Apache may flare natural gas for 60 days or until the natural gas meets pipeline quality specifications, whichever is sooner, provided:
  - A properly sized flare stack is equipped with an automatic igniter or continuous pilot
  - Apache analyzes natural gas samples twice per week
  - Apache routs natural gas into a gathering pipeline as soon as pipeline specifications are met
  - Apache provides pipeline specifications and natural gas analyses to NMOCD division upon request

(D) Venting & flaring during production operations

- Apache shall not vent or flare natural gas except:
  - During an emergency or malfunction
  - To unload or clean up liquid holdup in a well to atmospheric pressure, provided:
    - Apache does not vent after well achieves stabilized rate and pressure
    - For liquids unloading by manual purging, Apache remains present on-site until the end of unloading or posts at the well site, contact information of personnel conducting liquids unloading operations in close proximity (<30 minutes' drive time) of well being unloaded until end of unloading, takes all

reasonable actions to achieve stabilized rate and pressure at earliest practical time and takes reasonable actions to minimize venting to maximum extent practicable
- Apache will optimize system to minimize venting of natural gas for any well equipped with a plunger lift system or automated control system
- During downhole maintenance, best management practices will be used to the extent that it does not pose a risk to safe operations and personnel safety.

♦ During first 12 months of production from an exploratory well, or as extended by the division for good cause shown, provided:
- Apache proposes and the division approves well as exploratory
- Apache is in compliance with its' statewide gas capture requirements
- Apache submits an updated C-129 form to the division, including a NGMP and timeline for connecting well to a natural gas gathering system or otherwise approved by the division

♦ During the following activities unless prohibited
- Gauging or sampling a storage tank or other low pressure production vessel
- Loading out liquids from a storage tank or other low pressure production vessel to a transport vehicle
- Repair and maintenance, including blowing down and depressurizing production equipment to perform repair and maintenance
- Normal operation of gas activated pneumatic controller or pump
- Normal operation of storage tank or other low pressure production vessel, but not including venting from a thief hatch that is not properly closed or maintained on an established schedule
- Normal operations of dehydration units and amine treatment units
- Normal operations of compressors, compressor engines, and turbines
- Normal operations of valves, flanges and connectors that is not the result of inadequate equipment design or maintenance
- Bradenhead, packer leakage test or production test lasting less than 24 hours unless the division requires or approves a longer test period
- When natural gas does not meet gathering pipeline specifications
- Commissioning of pipelines, equipment, or facilities only for as long as necessary to purge introduced impurities from pipeline or equipment

(E) Performance standards

➢ All tanks and separation equipment are designed for maximum thoughput and pressure to minimize waste
➢ Permanent storage tanks associated with production operations that is routed to a flare or control device installed after May 25, 2021, shall equip storage tank with an automatic gauging system that reduces venting of natural gas
➢ Apache will install a flare properly sized and designed to ensure proper combustion efficiency
  ♦ Flare stack installed or replaced after May 25, 2021, shall be equipped with an automatic ignitor or continuous pilot
  ♦ Flare stack installed before May 25, 2021, shall be retrofitted with an automatic ignitor, continuous pilot or technology that alerts operator that flare may have malfunctioned no later than 18 months after May 25, 2021
  ♦ Flare stack located at well or facility, with an average daily production of equal to or less than 60 mcf of natural gas shall be equipped with an automatic ignitor or continuous pilot if flare stack is replaced after May 25, 2021
➢ Flare stack constructed after May 25, 2021, shall be securely anchored, and located at least 100 feet from well and storage tanks unless otherwise approved by the division
➢ At any point in the life of the well (drilling, completion, production, inactive) an audio, visual and olfactory (AVO) inspection will be performed weekly, during first year of production and on well or facility with average daily production greater than 60,000 cubic feet of natural gas, to confirm all production components are operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.
➢ Apache will make and keep records of AVO inspections available to NMOCD for at least 5 years
➢ Apache may use a remote or automated monitoring technology to detect leaks and release in lieu of AVO inspections with prior NMOCD approval
➢ Facilities will be designed to minimize waste
➢ Apache will minimize waste and shall resolve emergencies as quickly and safely as feasible

(F) Measurement or estimation of vented and flared natural gas

- Apache shall measure or estimate volume of natural gas it vents, flares, or beneficially uses during drilling, completion, and production operations regardless of the reason or authorization for such venting or flaring
- Measurement equipment will be installed to measure volume of natural gas flared from existing process piping or flowline piped from equipment associated with a well or facility associated with approved application for permit to drill that has an average daily production greater than 60 mcf of natural gas
- Measuring equipment shall conform to an industry standard
- Measuring equipment shall not be designed or equipped with a manifold that allows diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment
- Apache may estimate volume of vented or flared natural gas using methodology that can be independently verified if metering is not practicable due to low flow rate or pressure
- Apache will estimate volume of vented and flared natural gas based on result of an annual GOR test for that well reported on form C-116 to allow division to independently verify volume and rate of flared natural gas for a well that does not require measuring equipment
- Apache shall install measuring equipment whenever the division determines metering is practicable or the existing measuring equipment or GOR test is not sufficient to measure volume of vented and flared natural gas

VIII. BEST MANAGEMENT PRACTICES

(Complete description of Apache's best management practices to minimize venting during active and planned maintenance)

- Apache has a flare stack designed to handle sufficient volume to ensure proper combustion efficiency. Flare stacks are securely anchored at lease 100 feed from wells and storage tanks and are equipped with continuous pilots.
- Apache will not produce oil or gas but will maintain adequate well control through completion operations
- Apache will not flow well during initial production until all flowlines, tank batteries, and oil/gas takeaway are installed, tested, and determined operational
- Apache will equip storage tanks with automatic gauging system to reduce venting of natural gas
- When feasible, Apache will combust natural gas that would otherwise be vented or flared
- When feasible, Apache will minimize venting through pump downs of vessels and reducing time required to purge equipment before returning to service
- When feasible, Apache will shut in wells in the event of a takeaway disruption, emergency situations, or other operations where venting or flaring may occur due to equipment failures
- Reduce number of blowdowns by looking for opportunities to coordinate repair and maintenance activities

HYDROGEN SULFIDE (H_2S) DRILLING OPERATIONS PLAN

Hydrogen Sulfide Training:

All regularly assigned personnel, contracted or employed by Apache Corporation will receive training from qualified instructor(s) in the following areas prior to commencing drilling possible hydrogen sulfide bearing formations in this well:

- The hazards and characteristics of hydrogen sulfide (H_2S)
- The proper use and maintenance of personal protective equipment and life support systems.
- The proper use of H_2S detectors, alarms, warning systems, briefing area, evacuation procedures & prevailing winds.
- The proper techniques for first aid and rescue procedures.

Supervisory personnel will be trained in the following areas:

- The effects of H_2S on metal components. If high tensile tubulars are to be utilized, personnel will be trained in their special maintenance requirements.
- Corrective action & shut-in procedures when drilling or reworking a well & blowout prevention / well control procedures.
- The contents and requirements of the H_2S Drilling Operations Plan

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500') and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received proper training.

H_2S SAFETY EQUIPMENT AND SYSTEMS:

Well Control Equipment that will be available & installed if H_2S is encountered:

- Flare Line with electronic igniter or continuous pilot.
- Choke manifold with a minimum of one remote choke.
- Blind rams & pipe rams to accommodate all pipe sizes with properly sized closing unit.
- Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head & flare gun with flares

Protective Equipment for Essential Personnel:

- Mark II Survive-air 30 minute units located in dog house & at briefing areas, as indicated on wellsite diagram.

H2S Dection and Monitoring Equipment:

- Two portable H_2S monitors positioned on location for best coverage & response. These units have warning lights & audible sirens when H_2S levels of 20 ppm are reached.
- One portable H_2S monitor positioned near flare line.

H2S Visual Warning Systems:

- Wind direction indicators are shown on wellsite diagram.
- Caution / Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

Mud Program:

- The Mud Program has been designed to minimize the volume of H_2S circulated to the surface. Proper mud weights, safe drilling practices & the use of H_2S scavengers will minimize hazards when penetrating H_2S bearing zones.
- A mud-gas separator and H_2S gas buster will be utilized as needed.

Metallurgy:

- All drill strings, casing, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold & lines, & valves will be suitable for H_2S service.
- All elastomers used for packing & seals shall be H_2S trim.

Communication:

- Cellular telephone and 2-way radio communications in company vehicles, rig floor and mud logging trailer.

HYDROGEN SULFIDE (H_2S) CONTINGENCY PLAN

Assumed 100 ppm ROE = 3000'

100 ppm H_2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H_2S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operators and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the :
  - Detection of H_2S, and
  - Measures for protection against the gas,
  - Equipment used for protection and emergency response.

Ignition of Gas source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = I	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = I	2 ppm	N/A	1000 ppm

Contacting Authorities

Apache Corporation personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Apache's response must be in coordination with the State of New Mexico's *"Hazardous Materials Emergency Response Plan" (HMER).*

WELL CONTROL EMERGENCY RESPONSE PLAN

I. GENERAL PHILOSOPHY

Our objective is to ensure that during an emergency, a predetermined procedure is followed so that prompt decisions can be made based on accurate information.

The best way to handle and emergency is with an experienced organization set up for the sole purpose of solving the problem. The *Well Control Emergency Response Team* was organized to handle dangerous & expensive well control problems. The *Team* is structured such that each individual can contribute the most from his area of expertise. Key decision-makers are determined prior to an emergency to avoid confusion about who is in charge.

If the well is flowing uncontrolled at the surface or subsurface, *The Emergency Response Team* will be mobilized. The *Team* is customized for the people currently on the Apache staff. Staff changes may require a change in the plan.

II. EMERGENCY PROCEDURE ON DRILLING OR COMPLETION OPERATIONS

A. In the event of an emergency the *Drilling Foreman or Tool-Pusher* will immediately contact only one of the following starting with the first name listed:

Name	Office	Mobile	Home
Danny Laman – Drlg Superintendent	432-818-1022	432-634-0288	
John Vacek – Drilling Engineer	432-818-1882	281-222-1812	
Bobby Smith – Drilling Manager	432-818-1020	432-556-7701	
Bill Jones – EH&S Coordinator		432-967-9576	

***This one phone call will free the Drilling Foreman to devote his full time to securing the safety of personnel & equipment. This call will initiate the process to mobilize the Well Control Emergency Response Team. Apache maintains an Emergency Telephone Conference Room in the Houston office. This room is available for us by the Permian Region. The room has 50 separate telephone lines.*

B. The Apache employee contacted by the Drilling Foreman will begin contacting the rest of the *Team*. If **DANNY LAMAN** is out of contact**, JOHN VACEK** will be notified.

C. If a member of the *Emergency Response Team* is away from the job, he must be available for call back. Telephone numbers should be left with secretaries or a key decision-maker.

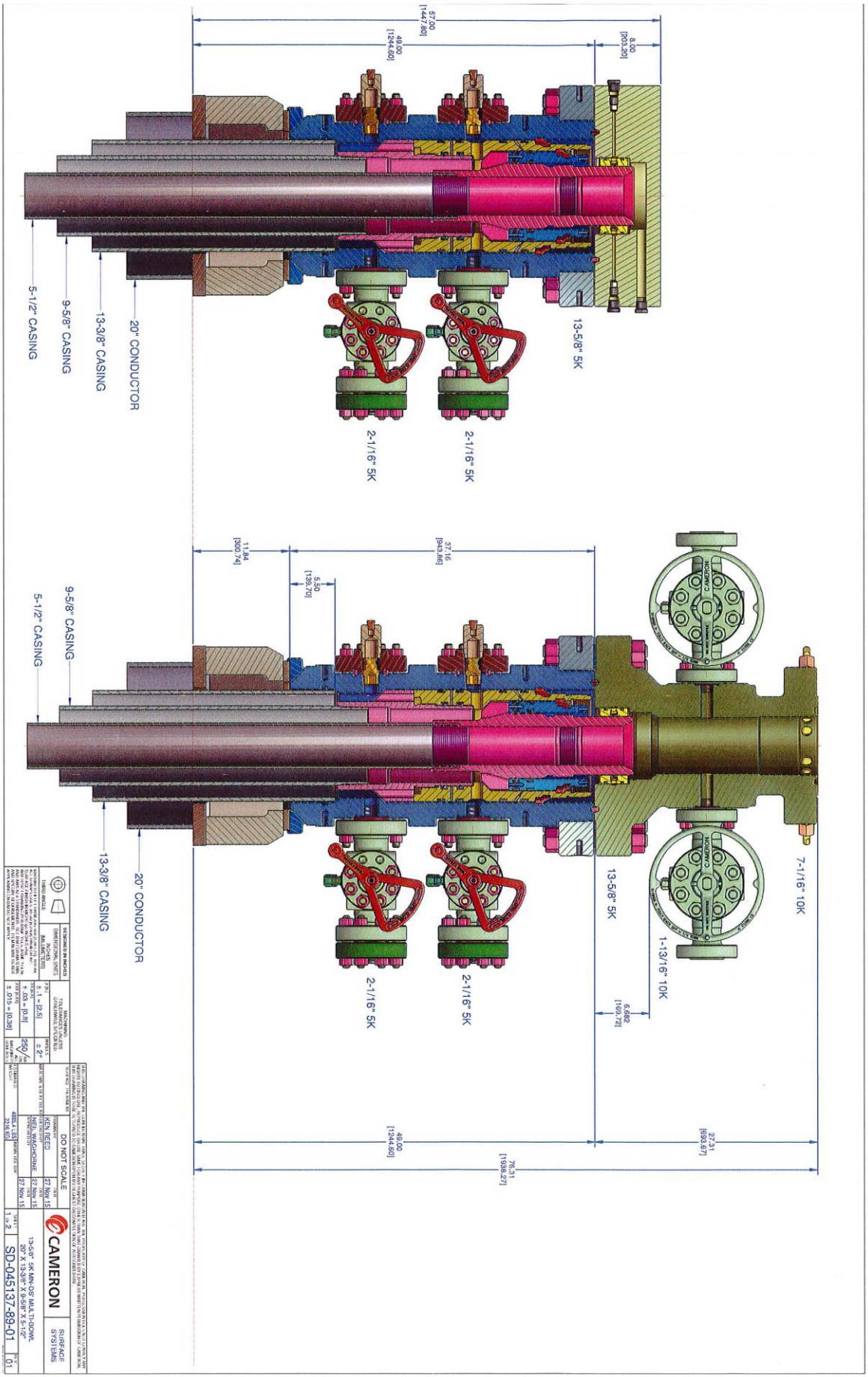
D. Apache's reporting procedure for spills or releases of oil or hazardous materials will be implemented when spills or releases have occurred or are probable.

EMERGENCY RESPONSE NUMBERS:

SHERIFF DEPARTMENT	
Eddy County	575-887-7551
Lea County	575-396-3611
FIRE DEPARTMENT	911
Artesia	575-746-5050
Carlsbad	575-885-2111
Eunice	575-394-2111
Hobbs	575-397-9308
Jal	575-395-2221
Lovington	575-396-2359
HOSPITALS	911
Artesia Medical Emergency	575-746-5050
Carlsbad Medical Emergency	575-885-2111
Eunice Medical Emergency	575-394-2112
Hobbs Medical Emergency	575-397-9308
Jal Medical Emergency	575-395-2221
Lovington Medical Emergency	575-396-2359
AGENT NOTIFICATIONS	
Bureau of Land Management	575-393-3612
New Mexico Oil Conservation Division	575-393-6161

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 29-30 State COM 273H.
        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 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 nippled 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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9-5/8" CASING
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CAMERON
SURFACE SYSTEMS
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20" X 13-3/8" X 9-5/8" X 5-1/2"
SD-045137-89-01
01