Palmillo 26 State 315H

NMOCD permit for Palmillo wells (Spudder rig)

30-015-44907

Apache respectfully request approval to utilize spudder rig to drill & pre-set surf hole section. After drlg surf hole, rig will run csg & cmt following all applicable rules & regulations (19.15.16 NMAC drilling & production). Solids control will be handled entirely on closed loop basis. Wellhead will be installed & tested once 13-3/8" surf csg is cut off & WOC time has been reached. A blind flange with same pressure rating as wellhead will be installed to seal wellbore. Pressure will be monitored with pressure gauge installed on wellhead. A means for intervention will be maintained while drilling rig is not over well. Spudder rig ops expected to take 1-2 days on single well pad. NMOCD will be contacted & notified 24hrs prior to commencing spudder rig ops. Drillings ops will be performed with drilling rig. At that time, an approved BOP stack will be nippled up & tested on wellhead before drilling ops commences on each well. NMOCD will be contacted/notified 24 hrs before drilling rig moves back on pad. Apache Corp will have supervision over rig to ensure compliance with all NMOCD regulations & to oversee ops. Once rig is moved, Apache will secure wellhead area by placing a guard rail around cellar area.

NM OIL CONSERVATION ARTESIA DISTRICT APR 2 5 2018

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		315 H 347H BALMULO 26 STATE COM 315H 30 01				ARTESIA DISTRICT			
Fiuld Type (air, FW, Cut Brine, Brine, Prod Wtr, Mud, Oil Base Mud)	Hole Sz	Csg Sz	Csg Grade	Csg Wt (lbs/ft)	Top MD				
FW	17-1/2"	13-3/8"	H-40	48	0	400	285	0	
Brine	12-1/4"	9-5/8"	J-55	40	0	8000	1310	0	
Cut Brine/Mud	8-3/4"	5-1/2"	P-110	17	0	8943	220	7500	
Cut Brine/Mud	8-1/2"	5-1/2"	P-110	17	8943	13502	855	8945	
	(air, FW, Cut Brine, Brine, Prod Wtr, Mud, Oil Base Mud) FW Brine Cut Brine/Mud	(air, FW, Cut Brine, Brine, Prod Wtr, Mud, Oil Base Mud)Hole SzFW17-1/2"Brine12-1/4"Cut Brine/Mud8-3/4"	(air, FW, Cut Brine, Brine, Prod Wtr, Mud, Oil Base Mud)Hole SzCsg SzFW17-1/2"13-3/8"Brine12-1/4"9-5/8"Cut Brine/Mud8-3/4"5-1/2"	(air, FW, Cut Brine, Brine, Prod Wtr, Mud, Oil Base Mud)Hole SzCsg SzCsg GradeFW17-1/2"13-3/8"H-40Brine12-1/4"9-5/8"J-55Cut Brine/Mud8-3/4"5-1/2"P-110	PALMILLO 26 STATE COM 315H   Fluid Type (air, FW, Cut Brine, Brine, Prod Wtr, Mud, Oil Base Mud) L Csg Wt (bs/ft)   Base Mud) Hole Sz Csg Sz Csg Grade Csg Wt (lbs/ft)   FW 17-1/2" 13-3/8" H-40 48   Brine 12-1/4" 9-5/8" J-55 40   Cut Brine/Mud 8-3/4" 5-1/2" P-110 17	PALMILLO 26 STATE COM 315H 30-01   Fluid Type (air, FW, Cut Brine, Brine, Prod Wtr, Mud, Oil Base Mud) Heat Land Land Csg Wt (lbs/ft) Top MD   FW 17-1/2" 13-3/8" H-40 48 0   Brine 12-1/4" 9-5/8" J-55 40 0   Cut Brine/Mud 8-3/4" 5-1/2" P-110 17 0	SIS #   FIUID TYPE   (air, FW, Cut Image: Sister colspan="4">Sister colspan="4"   Fluid Type (air, FW, Cut Hene Sister colspan="4">Sister colspan="4">Csg Wt Csg Wt   Brine, Brine, Prod Hole Sz Csg Sz Csg Grade Clibs/ft) Top MD Setting Depth   FW 17-1/2" 13-3/8" H-40 48 0 8000 Sister colspan="4">Sister colspan="4">Sister colspan="4">Sister colspan="4">Sister colspan="4">Sister colspan="4">Sister colspan="4">Sister colspan="4">Sister colspan="4">Sister colspan="4"Sister colspan="4">Sister colspan="4"Sister colspan="4"Sister colspan="4"Sister colspan="4"Sister colspan="4"Sister colspan="4"Sister c	SIS N 317H 317H PALMILLO 26 STATE COM 315H 30-015-44490 APR 25 20 APR 25 20   Fluid Type (air, FW, Cut Brine, Brine, Prod Wtr, Mud, Oil Base Mud) Hole Sz Csg Sz Csg Grade (lbs/ft) Top MD Setting Depth (lead/tail) RECEIVEN Total Sx Cmt (lead/tail)   FW 17-1/2" 13-3/8" H-40 48 0 400 285   Brine 12-1/4" 9-5/8" J-55 40 0 8000 1310   Cut Brine/Mud 8-3/4" 5-1/2" P-110 17 0 8943 220	

BOP type: 13-5/8" Annular & Double Ram WP: 3000 psi (Types: Annular, Double Ram, Pipe, Blind, Hydril) TP: 3000 psi for Rams and 1500 psi for Annular

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(Types: Annular, Double Ram, Pipe, Billio, Hydri

A spudder rig will be used to set surface (See attachment). A flex line will be used with the big rig for the choke manifold.

## **Contingencies:**

For the deep set intermediate casing string if lost circulation is encountered, Apache may 2-stage intermediate casing. A DVT may be used in the 9-5/8" casing & ECP may be placed below DVT. DVT depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Interm1	Brine	12-1/4"	9-5/8"	J-55	40	0	8000	1745	0
	(air, FW, Cut Brine, Brine, Prod Wtr, Mud, Oil Base Mud)	Hole Sz	Csg Sz	Csg Grade	Csg Wt (lbs/ft)	Top MD	Setting Depth	Total Sx Cmt (lead/tail)	Est TOC

The deep set intermediate casing is being planned due to the possible risk of overpressure in the lateral based on a nearby offset well. Below is the contingent shallow set intermediate casing design if there is no overpressure seen in the lateral:

	Fiuld Type (air, FW, Cut Brine, Brine, Prod Wtr, Mud, Oil Base Mud)	Hole Sz	Csg Sz	Csg Grade	Csg Wt (lbs/ft)	Top MD	Setting Depth	Total Sx Cmt (lead/tail)	Est TOC
Surf	FW	17-1/2"	13-3/8"	H-40	48	0	400	285	0
Interm1	Brine	12-1/4"	9-5/8"	J-55	36	0	3000	625	0
Interm2									1.
Prod	Cut Brine/Mud	8-3/4"	5-1/2"	P-110	17	0	8943	730	2500
	Cut Brine/Mud	8-1/2"	5-1/2"	P-110	17	8943	13502	855	8943