

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

NM OIL CONSERVATION
State of New Mexico
ARTESIA DISTRICT
Energy Minerals and Natural Resources
Oil Conservation Division
RECEIVED 1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

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

¹ Operator Name and Address Apache Corporation: 303 Veterans Airpark Lane Midland, TX 79705		² OGRID Number 873
		³ API Number 30-015-30195
⁴ Property Code 309175	⁵ Property Name Washington 33 State	⁶ Well No. 021

7. Surface Location

UL - Lot L	Section 33	Township 17S	Range 28E	Lot Idn	Feet from 2310	N/S Line South	Feet From 990	E/W Line West	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
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9. Pool Information

⁹ Pool Name Artesia; Glorieta-Yeso(O)	¹⁰ Pool Code 96830
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Additional Well Information

¹¹ Work Type A	¹² Well Type O	¹³ Cable/Rotary R	¹⁴ Lease Type S	¹⁵ Ground Level Elevation 3672'
¹⁶ Multiple N	¹⁷ Proposed Depth 4200'	¹⁸ Formation Paddock	¹⁹ Contractor	²⁰ Spud Date 09/14/1998
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

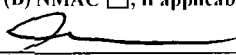


Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	12-1/4"	8-5/8"	24#	505'	325 sx Class C	Surface
Production	7-7/8"	5-1/2"	15.5# / 17#	4200'	910 sx Class C	Surface

Casing/Cement Program: Additional Comments

Apache would like to squeeze existing perms and recomplete the Glorieta-Yeso per the attached procedure and wellbore diagrams.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that I have complied with 19.15.14.9 (A) NMAC <input type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input type="checkbox"/> , if applicable. Signature: 	OIL CONSERVATION DIVISION	
	Approved By:  Title:  Approved Date: 4/27/15 Expiration Date:	
Printed name: Fatima Vasquez		
Title: Regulatory Analyst II		
E-mail Address: Fatima.Vasquez@apachecorp.com		
Date: 04/14/2015	Phone: (432) 818-1015	Conditions of Approval Attached

APACHE CORPORATION

4/13/15

Washington 33 State #21

API 30-015-30195 AFE#

CEMENT SQUEEZE & RECOMPLETION PROCEDURE

Relative Data:

Casing:

5 1/2" 17 lb/ft, J-55

ID = 4.892"

Drift = 4.767"

Capacity = 0.02324 BBL/ft

Burst = 5,320 psi; 80% = 4,256 psi

Tubing:

2-7/8", 6.5 lb/ft, J-55, EU

Capacity = 0.005794 bbl/ft

Burst = 7,260 psi; 80% = 5,808 psi

Collapse 7,680 psi; 80% = 6,144 psi

Yield 99,660 psi; 80% = 79,728 psi

3 1/2", 9.3lb/ft, N-80, EU

Capacity = .0087 BBL/ft

Burst = 10,160 psi; 80% = 8,128 psi

Collapse = 10,540; 80% = 8,432 psi

Yield = 207,200; 80% = 165,760 psi

Perfs:

Shallow Sands: 1,428'-1,994'

San Andres: 2,360'-2,766'

5 1/2" x 2 7/8" Annular capacity 0.0152 BBL/ft. 5 1/2" x 3 1/2" Annular capacity 0.0113 BBL/ft KB = 7 ft

PBTD = 4,164' KB TD = 4,200' KB GL: 3,672' KB: 3,679'

1. Spot 500 BBL wtr tanks. Load all 500 BBL tanks with W/fresh wtr to be used for stimulation work.
2. MIRUSU. POOH & lay down rods, tbg, & prod equipment.
3. MIRU cmt service company. Sqz existing perf interval per recommendation. Tag cmt, re-sqz if entire interval is not covered. RDMO cmt company.
4. RIH w/ bit on 2 7/8" WS and DO cmt. CO to PBTD. POOH and lay down.
5. MIRU WL. RIH w/ guns and perforate the Glorieta and the Paddock per log analysis:

3716	3712	3705	3698	3673	3668	3652	3646	3642	3630	3625	3610	3606
3602	3598	3592	3588	3568	3555	3551	3541	3535	3503	3497	3488	3478

@ 1 JSPF (26 holes) using a charge that generates a .37" - .42" diameter hole with a min. 21" penetration.
RDMO WL

6. RU acid crew, wellhead tree saver. TIH w/ 3 1/2" WS and pkr. Set pkr \pm 3448'. Spot 15% NEFE across perfs, break down perfs with fresh wtr. Acidize W/3,500 gals of 15% NEFE HCl using ball sealers (double amount of perfs) evenly spaced throughout the job at max rate but not exceeding 8,000 psi surface pressure. Surge balls. RDMO acid crew.
7. RIH w/ tbg and pkr to knock off balls past lowest perf. PUH and set pkr \pm 3448'. Prep for frac.
8. MIRU pump company & frac the Glorieta and Paddock down the 3 1/2" tbg according to procedure.
9. RD Frac. Flow back well until dead. Release pkr and POOH, lay down.
10. RIH w/ bailer, tag fill. Bail until PBTD. If not able to bail, MIRU RU. TIH w/ bit and tbg to top of fill. CO well to PBTD, reverse circ clean. RDMO RU.
11. RIH w/ production tbg and production equipment as specified by the Artesia office, return to production.

Date : 4/9/2015

Apache Corporation – Washington 33 State #21

Wellbore Diagram – Existing

API: 30-015-30195



Spud Date: 9/14/98

GL=3,672'

KB=3,679'

Surface Location

2310' FSL & 990' FWL

Sec 33, T17S, R28E

Eddy County, NM

Hole Size
12 1/4"

Hole Size
7 7/8"

Surface Casing

8 5/8" 24# @ 505' w/325 sx to surface

Production Casing

5 1/2" 17# @ 4200' w/910 sx to surface

Existing:

Perfs @ 1,428'-1,994' (Shallow Sands)

Perfs @ 2,360'-2,766' (San Andres)

PBTD @ 4,164'

TD @ 4,200'

Date : 4/9/2015

Apache Corporation – Washington 33 State #21

Wellbore Diagram – Proposed

API: 30-015-30195



Spud Date: 9/14/98

GL=3,672'

KB=3,679'

Surface Location

2310' FSL & 990' FWL

Sec 33, T17S, R28E

Eddy County, NM

Hole Size
12 1/4"

Hole Size
7 7/8"

Surface Casing

8 5/8" 24# @ 505' w/325 sx to surface

Production Casing

5 1/2" 17# @ 4200' w/910 sx to surface

Existing: Propose to squeeze

Perfs @ 1,428'-1,994' (Shallow Sands)

Perfs @ 2,360'-2,766' (San Andres)

Proposed:

Perfs @ 3,478'-3,716' (Yeso)

PBTD @ 4,164'

TD @ 4,200'

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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 30-015-30195	² Pool Code 96830	³ Pool Name Artesia; Glorieta-Yeso (O)
⁴ Property Code 309175	⁵ Property Name Washington 33 State	⁶ Well Number 021
⁷ OGRID No. 873	⁸ Operator Name Apache Corporation: 303 Veterans Airpark Lane, Midland, TX 79705	⁹ Elevation 3672'

¹⁰ Surface Location

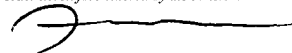
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	33	17S	28E		2310	South	990	West	Eddy

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

¹² Dedicated Acres 40.0	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. PC-1242-0
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁶ 	¹⁷ OPERATOR CERTIFICATION <i>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.</i>  04/13/2015 Signature Date Fatima Vasquez Printed Name Fatima.Vasquez@apachecorp.com E-mail Address		
	¹⁸ SURVEYOR CERTIFICATION <i>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.</i>		
	Date of Survey Signature and Seal of Professional Surveyor:		
	Certificate Number		