

**District I**  
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**District II**  
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**District III**  
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**District IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
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**State of New Mexico**  
**Energy Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 South St. Francis Dr.**  
**Santa Fe, NM 87505**

Form C-101  
Revised July 18, 2013

**HOBBS OGD**  
**DEC 09 2014**  
**RECEIVED**

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, Suite 1000 Midland, TX 79705		2. OGRID Number 873	
		3. API Number 30-025-07232	
4. Property Code 26474	5. Property Name L W Ward	6. Well No. 003	

**7. Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
J	11	13S	38E		1983	S	1515	E	Lea

**8. Proposed Bottom Hole Location**

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

**9. Pool Information**

Pool Name <b>WC-025 G-02 S133811J; SAN ANDRES</b>	Pool Code <b>98107</b>
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**Additional Well Information**

11. Work Type RC	12. Well Type O	13. Cable/Rotary	14. Lease Type P	15. Ground Level Elevation 3810'
16. Multiple No	17. Proposed Depth PBSD ~8956'	18. Formation San Andres	19. Contractor	20. Spud Date Est. 01/2015
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	17-1/2"	13-3/8"	54#	319'	450 sx Class C	Did not circ.
Intermediate	12-1/4"	9-5/8"	36#	4546'	1500 sx Class C	2387'
Production	8-3/4"	7"	24#	11,720'	700 sx Class C	6489'

**Casing/Cement Program: Additional Comments**

See attached procedure to plug off Abo & recomplete to San Andres.

**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer

<p>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: <i>Reesa Fisher</i> Printed name: Reesa Fisher Title: Sr Staff Reg Analyst E-mail Address: Reesa.Fisher@apachecorp.com Date: 12/8/2014</p>	<p style="text-align: center;"><b>OIL CONSERVATION DIVISION</b></p> <p>Approved By: <i>[Signature]</i> Title: <b>Petroleum Engineer</b> Approved Date: <i>12/10/14</i>   Expiration Date: <i>12/10/16</i> Conditions of Approval Attached</p>
Phone: (432) 818-1062	

**DEC 12 2014** *[Signature]*

**LW Ward #3**  
**RECOMPLETE TO SAN ADRES**  
**12/8/14**

**AFE No.** 11-14-3797

**AFE Type / Amount:** Capital / ~\$672,000

**CASING:** 13-5/8", J55 54.5#, set at 319'  
9-5/8", J-55/K-55, 40#, set at 4546'  
7" 23/26/29#, S-95 & N-80, set at 11720' (Original TOC at 6489' but squeezed since)

**TD:** 11867'

**PBTD:** 8956' (CIBP w/ 20 ft cmt)

**PERFS:** Previously perfed in Devonian, Mississippian, and Wolfcamp/Abo (all under CIBPs)

**CURRENT STATUS:** TA extended 12 months, to ~Dec 2015. (got passing MIT with RBP set at 5570')

**OBJECTIVE:** R/C to San Andres.

**SPECIAL CONSIDERATION:** CIBP @ 8956 with 20' cmt on top  
Past cement squeezes from 6331-61 (in 1968) and from 4615-5533 (in 2004).  
Well has possible casing leak below 5570'

1. MIRU WL. RIH w/ 7" CIBP and set at 5570'. Pressure test CIBP.
2. Dump bail 30 ft of cement on top of CIBP. Let set up. Tag depth to ensure sufficient cement.
3. Perf San Andres with 3 JSPF at 5100, 49, 5209, 33, 63, 76, 90, 5310, 23, 41, 75, 77 (12 ft, 36 holes) w/ 120 deg phasing. RDWL. Correlate with CNL run 11/25/2014.
4. MIRU PU. Rack ~5,600 ft 2-7/8" WS.
5. RIH w/ WS and 7" pkr and tailpipe and set pkr at 4,970 (note: collar at 4959'). Pressure test backside. Prep for acid job.
6. Acidize San Andres with 5,000 gal 15% HCl at 7-10 bpm with 75 ball sealers. Overflush bottom perf by 5 bbls. SI 2 hrs. Record ISIP/5/10/15".

**LW Ward #3**  
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7. Open well. Flow until it dies. Unset pkr. Knock balls off. PUH, set pkr, and RU Swab to recover remainder of load if necessary. POOH WS & packer. LD WS.
8. Move in and rack 4.5" WS (if available, otherwise 3.5").
9. RIH w/ WS and 7" pkr. Set at 4970'. Pressure test backside. Prep for Frac.
10. Set up Renegade frac tracing. Frac San Andres in accordance with Frac Design provided by Service Company. Adjust rate as necessary with 60 bpm being the max. Underflush top perf by 3 bbls. (Use 23#/ft for the casing: 6.366" ID and 0.03937 bbl/ft). SION to let resin coat set up.

**Note: 7" 23#/ft N-80 casing has burst pressure of 6,340. Let's make our max 80%, which is 5,000 psi.**

11. Open well up and let flow back until it dies.
12. RIH w/ bit and WS and clean out to PBTD at ~5,540'. POOH.
13. RU Renegade and run frac tracer log. RD.
14. RIH w/ WS, pkr, and SN. RU Swab Equipment. Swab well and consult with Engineer.
15. RIH w/ new 2-7/8" tubing and artificial lift equipment (anticipating rods).
16. Put on production and put in test.