

**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, Artec, 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

State of New Mexico

Form C-101  
Revised November 14, 2012

Energy Minerals and Natural Resources

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

AMENDED REPORT  
**RECEIVED**  
JAN 23 2013  
NM OGD ARTESIA

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

<sup>1</sup> Operator Name and Address Apache Corporation: 303 Veterans Airpark Lane, Suite 3000 Midland, TX 79705		<sup>2</sup> OGRID Number 873
		<sup>3</sup> API Number 30-015-40112
<sup>4</sup> Property Code 309175	<sup>5</sup> Property Name Washington 33 State	<sup>6</sup> Well No. 062

<sup>7</sup> Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
M	33	17S	28E		330	South	895	West	Eddy

<sup>8</sup> Proposed Bottom Hole Location

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

<sup>9</sup> Pool Information

<sup>10</sup> Pool Name Artesia; Glorieta-Yeso(O)	<sup>11</sup> Pool Code 96830
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*Add pay*

Additional Well Information

<sup>12</sup> Work Type A	<sup>13</sup> Well Type O	<sup>14</sup> Cable/Rotary R	<sup>15</sup> Lease Type S	<sup>16</sup> Ground Level Elevation 3673'
<sup>17</sup> Multiple N	<sup>18</sup> Proposed Depth 4390'	<sup>19</sup> Formation Blinebry	<sup>20</sup> Contractor	<sup>21</sup> Spud Date 06/13/2012
<sup>22</sup> Depth to Ground water 66'		<sup>23</sup> Distance from nearest fresh water well None within 1/2 mile radius		<sup>24</sup> Distance to nearest surface water None

<sup>25</sup> Proposed Casing and Cement Program

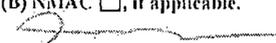
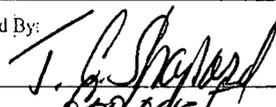
Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
S	12-1/4"	8-5/8"	24#	493'	350 sx Class C	Surface
P	7-7/8"	5-1/2"	17#	5095'	790 sx Class C	Surface

Casing/Cement Program: Additional Comments

Apache would like to recomplete the Glorieta/Yeso as per the attached procedure.

<sup>26</sup> Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer

<sup>27</sup> 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:  Printed name: Fatima Vasquez Title: Regulatory Tech I E-mail Address: Fatima.Vasquez@apachecorp.com Date: 01/23/2012	OIL CONSERVATION DIVISION	
	Approved By: 	
	Title: 	
	Approved Date: 1/24/2013	Expiration Date: 1/24/2015
	Conditions of Approval Attached	

# APACHE CORPORATION

12/6/12

## WASHINGTON 33 STATE #62

30-015-40112

## COMPLETION PROCEDURE

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### Relative Data:

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

ID = 4.892"

Drift = 4.767"

Capacity = 0.02324 BBL/ft

Burst = 5320 psi; 80% = 4256 psi

**Tubing:** 2-7/8", 6.5 lb/ft, J-55, 8rd, EUE

Capacity = 0.005794 bbl/ft

Burst = 7260 psi; 80% = 5808 psi

Collapse 7680 psi; 80% = 6144 psi

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

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5 1/2" x 2 7/8" Annular capacity 0.0152 BBL/ft KB = 12 ft (AGL) PBTB = x,xxx' KB TD = 5,095' KB

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1. MIRUDDPU. Install BOP. TOH w/Equip. Set CIBP @ 4420' w/30' cmt. Test to casing & CIBP to 2500 psi. TIH spot 900 gallons 10% Acetic @ 4100'. Perforate the Glorieta/Yeso zone per log analysis 3535', 51, 63, 80, 93, 3639, 49, 72, 3702, 32, 41, 58, 73, 82, 3802, 12, 23, 36, 61, 77, 95, 3920, 31, 57, 72, 4006, 38, 48, 70 & 87'. (1 JSPF) (30 holes) using a charge that generates a .37" - .42" diameter hole with a min. 21" penetration. RD wireline. RD WL.
2. RU wellhead tree saver & multi-stg frac tool for fracture stimulating. Acidize W/3500 gals of 15% NEFE HCl W/additives using 40 balls to divert evenly spaced throughout job at max rate but not exceeding 3000 psi surface pressure. Surge balls off perms and allow to fall to bottom.
3. Frac the Glorieta/Yeso dn csg according to vendor recommended procedure.
4. Flow back well until dead. RU reverse unit & swivel.
5. TIH W/4 3/4" bit & CO well to PBTB. Reverse circ clean. TOH & LD bit.
6. Hydrotest in hole with W/tbg for production as specified by the Artesia office. TIH W/pump & rods as specified by the Artesia office.

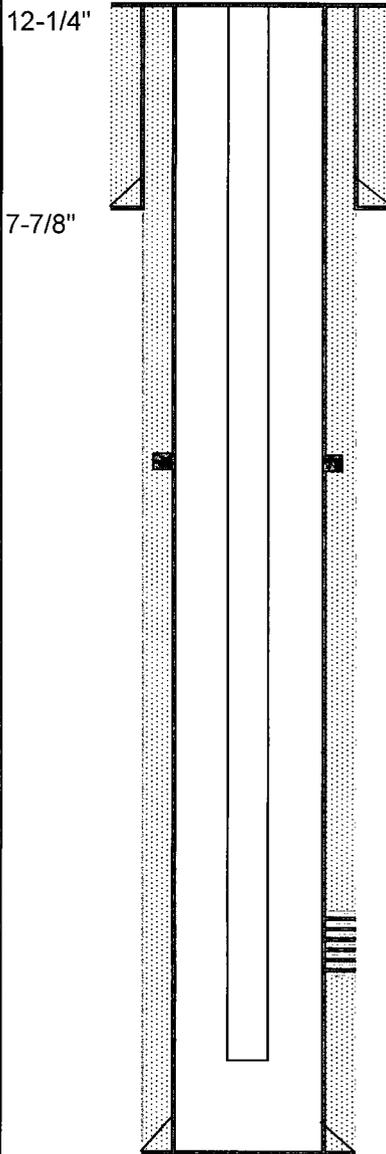
**Apache Corp.**  
**Current Wellbore**

**GROUP:** Permian North  
**FIELD:** Artesia (BP)  
**LEASE/UNIT:** Washington 33 State  
**COUNTY:** Eddy  
**API:** 30-015-40112

**DATE:** Jan. 16, 2013  
**BY:** S Hardin  
**WELL:** #62  
**STATE:** New Mexico

Spud Date: 6/13/2012  
Rig Release Date: 6/19/2012  
Completion Date: 8/20/2012

**KB = 11'**  
**GL = 3673'**



8-5/8" 24# J-55 Set @ 493'  
CMT W/ 350 SX (SURF/CIRC)

DVT @ 3008'

2-7/8 J-55 TUBING @ 4861'

**BLINEBRY**  
4450'-4850' (1 JSPF, 27 holes)

5-1/2" 17# J-55 (+ 1 marker joint of L-80) Set @ 5095'  
CMT W/ 340 SX (1st stage) & 450 SX (2nd stage) (SURF/CIRC)

**TD: 5095'**  
**PBTD: 5047'**

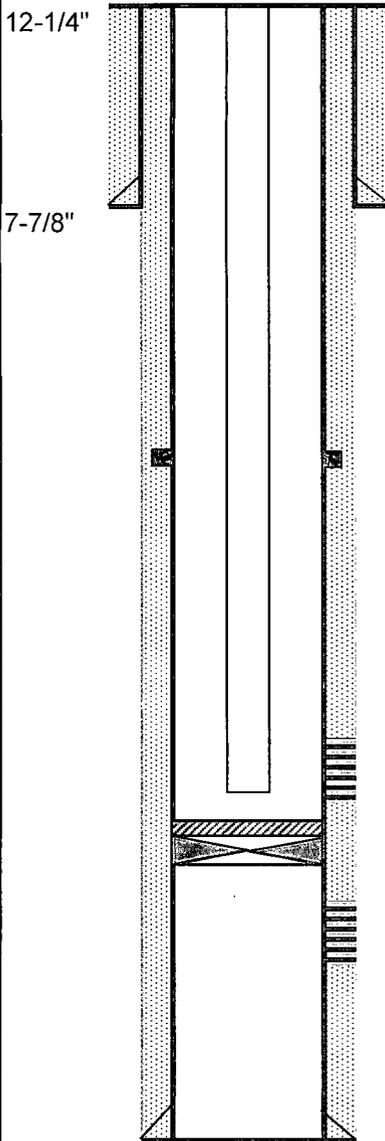
**Apache Corp.**  
**Proposed Wellbore**

**GROUP:** Permian North  
**FIELD:** Artesia (BP)  
**LEASE/UNIT:** Washington 33 State  
**COUNTY:** Eddy  
**API:** 30-015-40112

**DATE:** Jan. 16, 2013  
**BY:** S Hardin  
**WELL:** #62  
**STATE:** New Mexico

Spud Date: 6/13/2012  
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8-5/8" 24# J-55 Set @ 493'  
CMT W/ 350 SX (SURF/CIRC)

DVT @ 3008'

2-7/8 J-55 TUBING

**GLORIETA/YESO**  
3535'-4087' (1 JSPF, 30 holes)

**CIBP @ 4420' w/30' cmt**

**BLINEBRY**  
4450'-4850' (1 JSPF, 27 holes)

5-1/2" 17# J-55 (+ 1 marker joint of L-80) Set @ 5095'  
CMT W/ 340 SX (1st stage) & 450 SX (2nd stage) (SURF/CIRC)

**TD: 5095'**  
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1625 N. French Dr., Hobbs, NM 88240  
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1220 S. St. Francis Dr., Santa Fe, NM 87505

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 October 12, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number 30-015-40112	<sup>2</sup> Pool Code 96830	<sup>3</sup> Pool Name Artesia; Glorieta-Yeso (O)
<sup>4</sup> Property Code 309175	Washington 33 State	<sup>5</sup> Property Name
<sup>7</sup> OGRID No. 873	<sup>8</sup> Operator Name Apache Corporation: 303 Veterans Airpark Lane, Suite 3000 Midland, TX 79705	<sup>6</sup> Well Number 062
		<sup>9</sup> Elevation 3673'

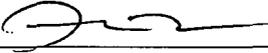
<sup>10</sup> Surface Location

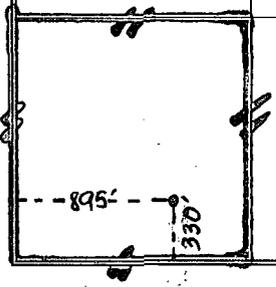
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	33	17S	28E		330	South	895	West	Eddy

<sup>11</sup> 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
<sup>12</sup> Dedicated Acres 40	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.						

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	<b><sup>17</sup> OPERATOR CERTIFICATION</b>	
	<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>	
		01/16/2013
	Signature	Date
	Fatima Vasquez	
	Printed Name	
	<b><sup>18</sup> SURVEYOR CERTIFICATION</b>	
	<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	





## Closed-Loop System Design, Operation, Maintenance, and Closure Plan for Completion/Workover Operations

This document is intended to provide design requirements as well as operating, maintenance and closure instructions for closed-loop (completion/workover fluid) systems, ensuring compliance with New Mexico Title 19, Chapter 15, Part 17 rules and regulations. Completion/workover units operating for Apache Corporation in New Mexico should be rigged up with a closed-loop system consistent with this design and should be operated, maintained, and closed in a manner consistent with this document.

### **Design**

The closed-loop system shall be designed and constructed to ensure the confinement of oil, gas, or water and to prevent uncontrolled releases. We will utilize cuttings bins to contain drilled solids for transport and disposal off site at a New Mexico licensed disposal facility. Figure 1 is attached for reference when reviewing the following design specifications.

The minimum solids removal equipment includes an above ground steel tank. The steel tank(s) shall be a minimum of 90 barrels and constructed and in a condition such that no leaks or uncontrolled releases would be expected. The tank(s) shall be placed to receive all of the fluid and cuttings as they return from the well bore and entry from the flow line shall be such that splash is minimized. The tank is divided into two sections such that the drilled solids will be separated from the liquid by gravity and the solids will be removed from the steel tank using a vacuum truck and disposed of at a licensed and approved disposal facility. The first section is used to collect the drilled solids and the clean drilling fluids are then carried over to the second section of the steel tank which is used as a suction tank for the pump.

The steel tanks(s) shall comply with any applicable requirements specified in 19.15.17 NMAC. Additionally, the appropriate well signs shall be in place to comply with 19.15.17 NMAC.

### **Operation and Maintenance**

The closed-loop system shall be operated and maintained at all times in such a manner as to prevent contamination of fresh water and protect the public health and the environment. While Apache Corporation relies on various third party vendors to provide, operate and maintain the closed-loop system, in the end it is the Apache Corp on-site representative who must take responsibility for the effective operation of the system. At the end of the well, all drilling fluids and drilled solids should be disposed of in a licensed disposal facility in New Mexico.

Know which licensed and approved disposal facility is closest to your location and verify that they are capable and prepared to receive the cuttings and fluids from your well. Track all loads sent during the drilling of the well and up to the time the rig is moved off of the location.

Current approved facilities are;

- Controlled Recovery Inc. (877) 505-4274
- Sundance Incorporated (575) 394-2511

Ensure that the closed-loop system meets the design criteria listed above and is properly installed and fully functional prior to commencing any operations which require circulation.

Inspect the active system tanks at least every tour to ensure no drilling fluid is leaking onto the location. Check any dump valves and interconnecting pipes for leaks. Correct any leaks as soon as possible upon detection.

Monitor and know/plan the fluid level in the steel fluid containment pits. Call for vacuum trucks with enough lead time to allow for possible delays.

Make every effort to operate and maintain the closed-loop system in a manner that puts no drilling fluid or well bore discharge/cuttings in contact with the location or surrounding area.

In the event of an oil spill that reaches water, or an oil spill to land over five (5) barrels take immediate action to contain the spill and make to following notifications;

- EHS Apache Hotline (800) 874-3262
- NMOCD

In the event of oil reaching water include the following notification;

- Environmental Protection Agency (EPA) National Response Center

### **Closure**

The "closure" of the closed-loop system must be completed within six months of the date the completion/workover is released from the location. A Closure Report must be filed with the New Mexico Oil Conservation Division within 60 days of completing the closure. "Closure" of a closed-loop system begins with the proper disposal of all liquid mud and cuttings that are on location upon rig release. The cuttings and liquid should be transported to an approved disposal facility. See operating instructions above. Next all of the equipment associated with the closed-loop system must be removed. Ensure that equipment being removed and transported to the next location or other facility is clean and in such a state that no waste will be discharged during transportation.

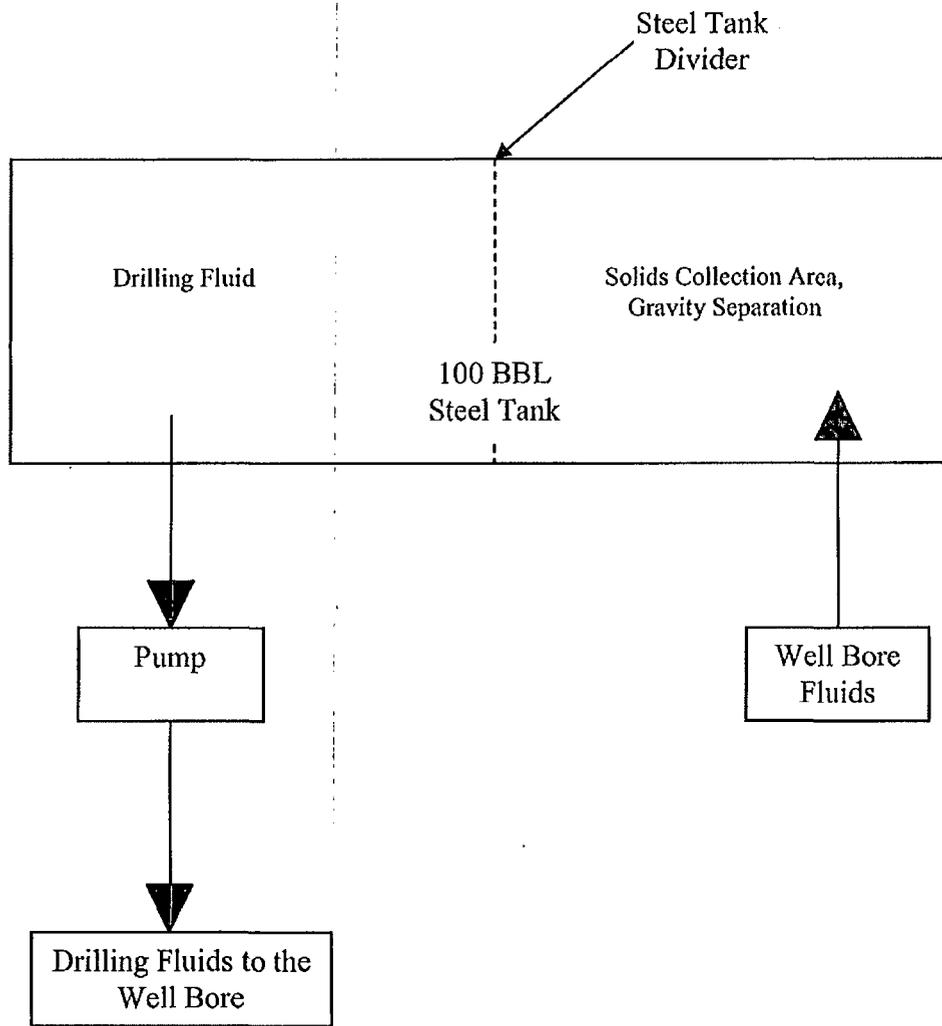
If there is evidence of a release of mud or cuttings to the surface collect individual grab samples from the potentially contaminated area and analyze for benzene, total BTEX,

THP, the GRO and DRO combined fraction and chlorides to demonstrate that benzene, as determined by EPA SW-846 method 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX, as determined by EPA SW-846 method 8021B or 8260B or other EPA methods that the division approves, does not exceed 50 mg/kg; TPH, as determined by EPA SW-846 method 418.1 or other EPA method that the division approves does not exceed 2500 mg/kg; the GRO and DRO combined fraction determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg; and chlorides as determined by EPA method 300.1 do not exceed 500 mg/kg or the background concentration, whichever is greater.

When closure is completed a closure report must be filed with the NMOCD within 60 days. The filing consists of printing a copy of the C-144 that was approved previously, completing the Closure Report on page 4 and submitting it to the NMOCD.

For our closed-loop systems in the Closure Report area of the form we will provide the closure completion date and check the "Closure Completion Date" box found approx. 2/3 of the way down the page. In the Closure Method area, check the "Waste Excavation and Removal" box. In the Closure Report Attachment Checklist put a check mark in the "Disposal Facilities Name and Permit Number". In the space to the right of the checklist write in the name(s) of the disposal facility or facilities used during both the drilling and the closure phase of the closed-loop operation.

If there was evidence of leakage requiring samples and analysis, in addition to the instructions for completing Form C-144 listed above, check the "Confirmation Sampling Analytical Results" box in the Closure Report Attachment Checklist and attach a copy of the soil analysis report.



**Figure 1** – New Mexico Typical Closed-Loop System for Completion/Workover Operations