

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

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 November 14, 2012

HOBBS OCD

☐ AMENDED REPORT

MAY 13 2013

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 3000 Midland, TX 79705		² OGRID Number 873
		³ API Number 30-025-39905
⁴ Property Code 306624	⁵ Property Name W H Laughlin	⁶ Well No. 012

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
E	09	20S	37E		1650	North	330	West	Lea

*** 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 Monument, Abo, Southeast	Pool Code 96764
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Additional Well Information

¹¹ Work Type A	¹² Well Type O	¹³ Cable/Rotary R	¹⁴ Lease Type P	¹⁵ Ground Level Elevation 3550'
¹⁶ Multiple N	¹⁷ Proposed Depth 7692'	¹⁸ Formation Abo	¹⁹ Contractor	²⁰ Spud Date 01/03/2011
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
S	17-1/2"	13-3/8"	48#	1175'	1010 sx Class C	
I	11"	8-5/8"	32#	4800'	625 sx Class C	
P	7-7/8"	5-1/2"	17#	7692'	1150 sx Class C	

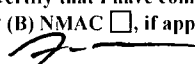
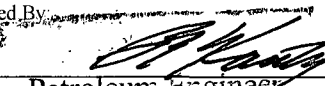
Casing/Cement Program: Additional Comments

Apache intends to DO two CIBPs, perforate the Abo, and commingle the B-T-D-A production per the attached procedure.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer

Permit Expires 2 Years From Approval Date Unless Drilling Underway
Plugback

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	
Printed name: Fatima Vasquez		Approved By: 	
Title: Regulatory Tech I		Title: Petroleum Engineer	
E-mail Address: Fatima.Vasquez@apachecorp.com		Approved Date: 05/16/13	Expiration Date: 05/16/15
Date: 05/10/2013	Phone: (432) 818-1015	Conditions of Approval Attached	

MAY 20 2013

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HOBBS OGD
MAY 13 2013
RECEIVED

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 30-025-39905		² Pool Code 96764		³ Pool Name Monument; Abo, Southeast	
⁴ Property Code 306624		⁵ Property Name W H Laughlin			⁶ Well Number 012
⁷ OGRID No. 873		⁸ Operator Name Apache Corporation: 303 Veterans Airpark Lane, Suite 3000 Midland, TX 79705			⁹ Elevation 3550' GR

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
E	09	20S	37E		1650	North	330	West	Lea

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 40.00		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No. DHC - 4502-0			

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.

	<p>¹⁷ OPERATOR CERTIFICATION</p> <p><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></p> <p>Signature: Date: 05/10/2013</p> <p>Printed Name: Fatima Vasquez</p> <p>E-mail Address: Fatima.Vasquez@apachecorp.com</p>			
	<p>¹⁸ SURVEYOR CERTIFICATION</p> <p><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></p> <p>Date of Survey: _____</p> <p>Signature and Seal of Professional Surveyor: _____</p> <p>Certificate Number: _____</p>			

W. H. Laughlin #12
API # 30-025-39905
Sec 9, T20S, R37E
Elevation: 3562' KB, 3550' GL
TD: 7,692'
PBSD: 7,646'
Casing Record:

13-3/8" 48# H-40 @ 1175' w/ 1010 sxs

8-5/8" 32# J-55 @ 4800' w/ 625 sxs

5-1/2" 17# J-55 @ 7,693' w/ 1150 sxs Burst: 5320 psi; 80%= 4256 psi

Perfs: **Blinebry:** 6146; 48; 50; 96; 98; 6200; 18; 20; 22; 30; 32; 34; 40; 42; 68; 70; 76; 78; 80; 94; 96; 6305; 07; 09; 18; 20; 24; 26; 28; 38; 40; 42; 48; 50; 52; 54; 56 w/ 1 jspf (37 holes)

Tubb: 6448; 50; 52; 70; 72; 78; 89; 96; 98; 6500; 02; 22; 24; 26; 28; 32; 44; 45; 62; 64; 66; 72; 74; 76; 84; 90; 92; 94; 6632; 52; 54; 56; 58; 60; 62; 64; 86; 88; 90; 92 w/ 1 jspf (40 holes)

Drinkard: 6818-22; 6826-32; 6858-62; 6880-84; 6900-04 w/ 2 jspf (54 holes)

Abo (Behind CIBP):

Stage II: 6987-92; 6996-7002 w/ 4 jspf (52 holes)

Stage I: 7144-48; 7153-64; 7167-74; 7178-81; 7184-92; 94; 96; 7205-13 w/ 2 jspf (100 holes)

Objective: Drill out two CIBP's above Abo, perforate and stimulate additional Abo, and commingle B-T-D-A production.

AFE: PA-13-3542

1. MIRU unit. Kill well as necessary. Unseat pump. POOH w/ rods and pump.
2. ND WH. NU BOP. Release TAC @ 6,094'. POOH w/ tubing and TAC.
3. RU reverse unit. PU 4-3/4" bit, bit sub, and 5-1/2" casing scraper on 2-7/8" tubing to be used as work string. RIH and tag the CIBP @ 6,948'. Break circulation and drill out plugs at 6,948' and CBP at 6,950'. CIH to PBSD @ 7,646'. Circulate hole clean. POOH.
4. MIRU WL. PU and RIH w/ perforator and perforate the Abo from 7088-91; 7094-99; 7306-11; 7318-23; 7471-78; 7564-68; 7573-77 w/ 2 jspf using Connex 0.5" diameter BH charges at 60° phasing (66 holes). **Correlate to Weatherford Photo Density Compensated Neutron Spectral Gamma Ray log dated 1/19/2011.** TOH w/ perforating guns and RDMO WL.
5. RIH w/ SN + PKR-RBP straddle assembly and ball catcher on 2-7/8" J-55 tubing string. Set RBP ± 7,610'. TOH and set PKR at ± 7,250'.
6. MIRU acid services. Acidize down 2-7/8" WS w/ 2500 gals of 20% NEFE HCL w/ additives using 100 ball sealers to divert evenly spaced through the job as a max rate as a max rate but do not exceed 6,000 psi surface treating pressure. Displace to bottom perf with 50 bbls of flush. Surge balls.
7. Release PKR and TIH and latch onto RBP ± 7,610'. TOH to 7140' and set RBP. TOH and set PKR at ± 7040'.
8. Acidize down tbg w/ 1000 gal of 20% NEFE HCL w/ additives without any ball sealers as a max rate but do not exceed 6,000 psi surface treating pressure. Displace to bottom perf with 42 bbls of flush. Surge balls.
9. Release PKR and TIH and latch onto RBP ± 7,140'. TIH to 7,610' and set RBP. TOH and set PKR at ± 6,940'.

10. Acidize down tbg w/ 4000 gal of 20% NEFE HCL w/ additives using 250 ball sealers to divert evenly spaced throughout the job as a max rate but do not exceed 6,000 psi surface treating pressure. Displace to bottom perf with 55 bbls of flush. Surge balls.
11. RU swab equipment and recover load and swab test perfs for fluid entry. Report results to Midland. RD swab equipment. *If unsuccessful, set CIBP 6,946'. RTP in B-T-D.*
12. Kill well if necessary. Release PKR and TIH and latch onto RBP at 7,610'. TOH with PKR, ball catcher and RBP and WS.
13. RIH w/ 2-7/8" production string as per the Monument office specifications.
14. RDMOPU. Return well to production and place into test for 10 days. Have chemical representative test fluids and put well on the appropriate chemical maintenance program.

GL=3550'
KB=3562'
Spud:1/3/2011

Apache Corporation – W. H. Laughlin #12

Wellbore Diagram – Proposed

Date : 3/19/2013

API: 30-025-39905

Surface Location

R. Taylor



1650' FNL & 330' FWL,
Sec 9, T20S, R37E, Lea County, NM

Surface Casing
20" 48# H-40 @ 40'

1/13: Perf @ 2180' & SQZ'd w/ 30 bbls & topped w/ 50 sxs

Intermediate Casing
13-3/8" 48# H-40 @ 1175' w/ 1010 sxs to surface

Intermediate Casing II
8-5/8" 32# J-55 @ 4800' w/ 625 sxs

TAC @ TBD

1/12: Perf Blinbry @ 6146; 48; 50; 96; 98; 6200; 18; 20; 22; 30; 32; 34; 40; 42; 68; 70; 76; 78; 80; 94; 96; 6305; 07; 09; 18; 20; 24; 26; 28; 38; 40; 42; 48; 50; 52; 54; 56 w/ 1 jsp (37 holes). Acidized w/ 4000 gal 15% HCL. Frac w/ 47k gal SS-3000 w/ 154k# 20/40 2#-6# ramp.

1/12: Perf Tubb @ 6448; 50; 52; 70; 72; 78; 89; 96; 98; 6500; 02; 22; 24; 26; 28; 32; 44; 45; 62; 64; 66; 72; 74; 76; 84; 90; 92; 94; 6632; 52; 54; 56; 58; 60; 62; 64; 86; 88; 90; 92 w/ 1 jsp (40 holes). Acidized w/ 3000 gal 15% NEFE. Frac w/ 44k gal SS-3000 w/ 134k# 20/40 2#-6# ramp.

1/12: Perf Drinkard @ 6818-22; 26-32; 58-62; 80-84; 6900-04 w/ 2 jsp (54 holes). Acidized w/ 5000 gal 15% NEFE.

TBD: Drill out CIBP's at 6948' & CBP at 6950'. Commingle B-T-D-A. All Abo (6987-7577) acidized w/ 4000 gallons of 20% NEFE.

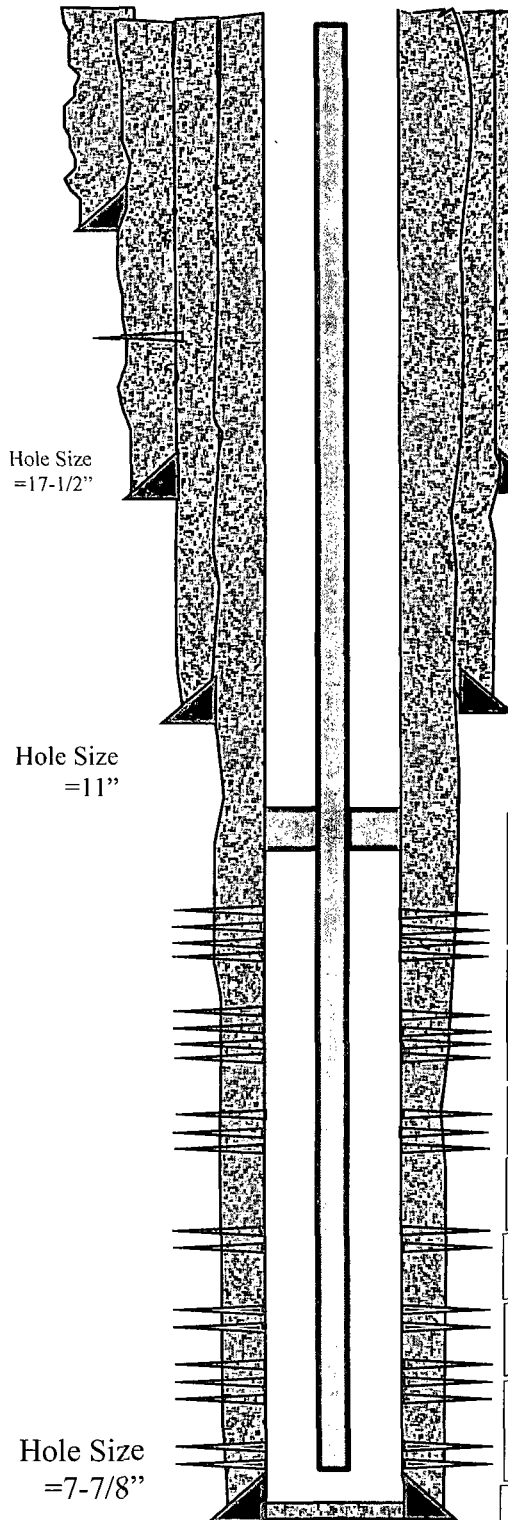
2/11: Perf Abo Stage II @ 6987-92; 6996-7002 w/ 4 jsp 90 phasing (52 holes). Acidized w/ 2400 gals 15% NEFE

TBD: Perf Abo @ 7088-91; 7094-99 w/ 2 jsp (16 holes). Acidized w/ 1000 gal 20% NEFE

2/11: Perf Abo Stage I @ 7144-48; 7153-64; 7167-74; 7178-81; 7184-92; 7194; 96; 7205-13 w/ 2 jsp 120 phasing (100 holes). Acidized w/ 9300 gal 15% NEFE

TBD: Perf Abo @ 7306-11; 18-23; 7471-78; 7564-68; 73-77 w/ 2 jsp (50 holes). Acidized w/ 2500 gal 20% NEFE

Production Casing
5-1/2" 17# J-55 @ 7693' w/ 1150 sxs to SURF



PBD = 7,646'
MD = 7,692'