

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

SEP 19 2012

Form C-101
June 16, 2008

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

RECEIVED Submit to appropriate District Office

☐ AMENDED REPORT

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

¹ Operator Name and Address Apache Corp 303 Veterans Airpark Ste 3000 Midland TX 79705		² OGRID Number 873
		³ API Number 30 - 025-34017
⁴ Property Code 309138	⁵ Property Name J H Williams	⁶ Well No. 001
⁹ Proposed Pool 1 Weir Monument, Blinebry (46990) 63780		¹⁰ Proposed Pool 2 SKaggs Drinkard (49190) 96768

⁷ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	34	19S	37E		660	South	1980	East	Lea

⁸ Proposed 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

Additional Well Information

¹¹ Work Type Code A	¹² Well Type Code O	¹³ Cable/Rotary R	¹⁴ Lease Type Code P	¹⁵ Ground Level Elevation 3564' GL
¹⁶ Multiple N	¹⁷ Proposed Depth 7000'	¹⁸ Formation Tubb	¹⁹ Contractor	²⁰ Spud Date 6/30/1997

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4"	9-5/8"	36#	1200'	400 sx Class C	Surface
8-3/4"	5-1/2"	15.5#	7000'	700 sx Class C	3010'

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Apache intends to acid frac this well to commingle production from the Blinebry, Tubb & Drinkard formations.

CONDITION OF APPROVAL - Approval for drilling only. Can not produce without a DHC Order approved by the Hobbs District.

Permit Expires 2 Years From Approval Date Unless Drilling Underway

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.		OIL CONSERVATION DIVISION	
Signature: <i>Reesa Holland</i>		Approved by: <i>[Signature]</i>	
Printed name: Reesa Holland		Title: Petroleum Engineer	
Title: Sr. Staff Regulatory Tech		Approval Date:	Expiration Date:
E-mail Address: Reesa.Holland@apachecorp.com		SEP 20 2012	
Date: 09/19/2012	Phone: 432/818-1062	Conditions of Approval Attached <input type="checkbox"/>	

SEP 20 2012

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Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

HOBBS OCD

SEP 19 2012

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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

API Number 30-025-34017		Pool Code 47090	Pool Name Monument; Tubb
Property Code 309138	Property Name J H Williams		Well Number 001
OGRID No. 873	Operator Name Apache Corporation: 303 Veterans Airpark Lane, Suite 3000 Midland, TX 79705		Elevation 3564' GL

¹⁰ Surface Location

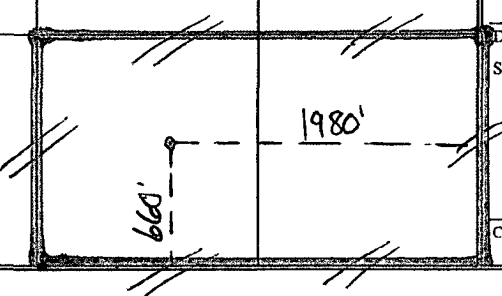
UL or lot no. O	Section 34	Township 19S	Range 37E	Lot Idn 660	Feet from the South	North/South line South	Feet from the 1980	East/West line East	County Lea
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 80		Joint or Infill	Consolidation Code		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					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> <u>Reesa Holland</u> 09/19/2012 Signature Date Reesa Holland Printed Name	
					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	



HOBBS OGD**District I**

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State of New Mexico

SEP 19 2012

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION**RECEIVED**

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**

1 API Number 30-025-34017		2 Pool Code 46990 63780		3 Pool Name Weir Monument; Blinebry			
4 Property Code 309138		5 Property Name J H Williams				6 Well Number 001	
7 OGRID No. 873		8 Operator Name Apache Corporation: 303 Veterans Airpark Lane, Suite 3000 Midland, TX 79705				9 Elevation 3564' GL	

10 Surface Location

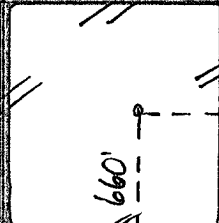
UL or lot no. O	Section 34	Township 19S	Range 37E	Lot Idn	Feet from the 660	North/South line South	Feet from the 1980	East/West line East	County Lea
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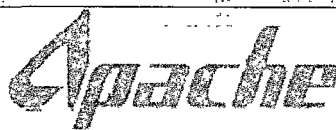
11 Bottom Hole Location If Different From Surface

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									
13 Joint or Infill									
14 Consolidation Code									
15 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					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> Reesa Holland 09/19/2012 Signature Date Reesa Holland Printed Name	
					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	

16				<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</i></p> <p>hereby entered by the division</p> <p><u>Reesa Holland</u> 09/19/2012</p> <p>Signature Date</p> <p>Reesa Holland</p> <p>Printed Name</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>



J.H. Williams # 1

API: 30-025-34017

Skaggs Field

Lea, New Mexico

AFE Number: PA-12-4239

KB: 3676' GL: 3664' (KB 12' above GL)

9-5/8" 36 lb/ft casing set @ 1226'

5-1/2" 15.5 lb/ft K-55 casing set @ 7000'

TD: 7,000' PBD: 6,950' CIBP: 6,785'

SINGLE STAGE ACID FRAC & CO2 FOAMED ACID FRAC COMPLETION PROCEDURE

Casing: 5-1/2", 15.5lb/ft, K-55

ID: 4.95"

Drift= 4.825"

Capacity= 0.0238 BBL/ft

Burst= 4810 psi; 80%= 3848 psi

5-1/2" x 3-1/2" Annular capacity 0.0119 BBL/ft

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

Capacity= 0.00870 bbl/ft

Burst= 10,160 psi; 80%= 8128 psi

Collapse 10,530 psi; 80%= 8424 psi

Yield 159,090 lbs; 80%= 127,272 lbs

- **Anticipate one day for stimulations. Prepare service co. and other associated contractors to be present during job.**

1. Prep location. Spot the necessary 500 BBL lined acid tanks, 500 BBL water tanks, and BOP onto location. Set a flow back tank before stimulation. Have Service Co test water for quality.
2. MIRU PU. Kill well as necessary. Unseat pump. POOH w/ rods and pump.
3. ND wellhead. NU BOP. Release TAC. POOH w/ tubing and TAC. PU & TIH w/ 4-3/4" bit and scrapper for 5-1/2", 15.5 lb/ft, K-55 casing on 3-1/2" N-80 tubing to be used as WS. Tag CIBP at \pm 6,750'. Circulate hole clean.
4. Break circulation and drill out cement and CIBP. TIH to PBD at 6,950'. Circulate hole clean. POOH and stand back tbg. LD DC and bit.

STAGE I- DRINKARD

5. RIH w/ SN and PKR-RBP straddle assembly on WS. Set RBP w/ at \pm 6,900'. Set PRK \pm 6,880. Test RBP to 500 psi. Release PRK. TOH and set PKR just above perforations at \pm 6,760'. Drinkard perms from 6810-6848' (50 holes). **Note open Tubb perforations from 6,310-6,599.**
6. ND BOP. NU 10K psi frac valve. MIRU frac services. NU and test surface lines to 9,000 psi. Max pressure to be **8,000 psi** at surface, set pressure alarms and pop-offs accordingly.

-
7. Load hole and establish rate and pressure. Acid frac the Drinkard down tubing per recommendations as provided by Service Company. Flush to top perf w/ 40 bbls. SD. Shut-in well.

Target Rate: 20 BPM

Max Pressure: **8,000 psi**

8. If necessary, kill well. Release PKR and TIH to RBP. Latch and release RBP. TOH w/ PRK-RBP. Set RBP at $\pm 5,860'$. Set PKR and test RBP to 500 psi. TOH w/ PRK and WS.

STAGE II- BLINEBRY

9. MIRU WL. RIH w/ available perforator and perforate the Blinebry at 5754-59; 5771-76; 5781-86; 5795-5800 w/ 2 jspf 60° phasing with Connex 0.5" BH charges (40 holes). POOH with perf guns and rig down WL. **Correlate to Western Atlas Compensated Z-Densilog Neutron, Gamma Ray Caliper log dated 7/27/1997.**
10. RIH w/ SN and PKR on WS. Set PKR just above perforations at $\pm 5700'$. Test backside to 1000 psi.
11. ND BOP, NU 10K psi frac valve. MIRU frac and CO2 services. NU and test surface lines to 9,000 psi. Max pressure to be 8,000 psi at surface, set pressure alarms and pop-offs accordingly.
12. Load hole and establish rate and pressure. Acid frac w/ CO2 the Drinkard down tubing per recommendations as provided by Service Company. Flush to top perf w/ 34 bbls. SD. Shut-in well. RDMO frac service.

Target Rate: 25 BPM

Max Pressure: **8,000 psi**

13. Flow back well to flow back tank till the CO2 concentration gets below sales limits or until the well dies.
14. ND frac valve and tree. NU BOP's. Kill well as necessary. RU reverse unit and swivel. Wash down to RBP. Latch and release RBP. TIH to PBTD. Set RBP at $\pm 6,900'$. Break circulation and circulate hole clean. TIH and latch and release RBP. TOH w/ PKR-RBP assembly and WS.
15. Run production tubing and rods as per the Hobbs office specifications.
16. RDMOPU. Place well into production and on test for 2 weeks. Have chemical rep test fluids and put well on the appropriate chemical maintenance program.

GL=3664'
KB=3676'
Spud: 6/30/97

Apache Corporation – J.H. Williams #1

Wellbore Diagram – Proposed Status

Date : 8/9/2012

API: 30-025-34017

R. Taylor

Surface Location

660' FSL & 198' FEL, Unit
Lot O Sec 34, T19S, R37E, Lea County, NM



Surface Casing

9-5/8" 36# @ 1226' w/ 560 sx to surface

Hole Size
=12 1/4"

Hole Size
=8-3/4"

TOC @ 3010'

TAC @ TBD'

SN @ TBD'

TBD: Perf Blinebry @ 5754-59; 5771-76; 5781-86; 5795-5800 w/ 2 jspf (40 holes). Acid frac w/ 6000 gal 15% gelled acid system w/ XX tons of CO2 (70Q) @ 40 BPM

8/97: Perf Tubb @ 6310-6448 w/ 2 jspf (117 holes). Acidized w/ 6000 gal 15% HCL w/ 80 MCF N2

8/97: Perf Tubb @ 6487-6599 w/ 2 jspf (105 holes). Acidized w/ 4000 gal 15% HCL w/ 60 MCF N2

8/97: Perf Drinkard @ 6810-24; 6837-48 w/ 2 jspf (50 holes).
Acidized w/ 2500 gal 15% NEFE
TBD: Acid frac w/ XX gallons 15% Divert S acid system

Production Casing

5-1/2" 15.5# K-55 @ 7000' w/ 730 sxs

PBTD = 6950'
TD = 7000'