Form 3160-5
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014

**SUNDRY NOTICES AND REPORTS ON WELLS**

***Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.***

***SUBMIT IN TRIPLICATE** – Other instructions on page 2.*

5. Lease Serial No.
NMNM 90161

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☐ Gas Well ☑ Other Injection

8. Well Name and No.
West Blinebry Drinkard Unit (WBDU) #036

2. Name of Operator
Apache Corporation (873)

9. API Well No.
30-025-09908

3a. Address
303 Veterans Airpark Lane, Suite 3000
Midland, TX 79705

3b. Phone No. *(include area code)*
432/818-1062

10. Field and Pool or Exploratory Area
Eunice; B-T-D, North (22900)

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*
1980' FSL & 1980' FWL UL K Sec 9 T21S R37E

11. County or Parish, State
Lea County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | | |
|---|---|---|---|---|
| ☑ Notice of Intent | ☐ Acidize | ☑ Deepen | ☐ Production (Start/Resume) | ☐ Water Shut-Off |
| | ☐ Alter Casing | ☐ Fracture Treat | ☐ Reclamation | ☐ Well Integrity |
| ☐ Subsequent Report | ☐ Casing Repair | ☐ New Construction | ☐ Recomplete | ☑ Other Re-perf & Stimulate |
| | ☐ Change Plans | ☐ Plug and Abandon | ☐ Temporarily Abandon | |
| ☐ Final Abandonment Notice | ☐ Convert to Injection | ☐ Plug Back | ☐ Water Disposal | |

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Apache would like to deepen this well, run a liner and re-perf & stimulate, per the attached procedure.

During this procedure we will be using the Closed Loop System.

HOBBS OCD
SEP 26 2013
RECEIVED

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*
Reesa Holland Fisher

Title Sr. Staff Reg Tech

Signature Reesa Fisher

Date 07/31/2013

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

APPROVED
SEP 25 2013
Jennifer Mason
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

OCT 0 2 2013

**WBDU 36W Proposed Procedure**

**Deepen Well, Run 4.5" Liner, Re-Perforate and Stimulate**

1. MIRU. Install BOP. Release 7" packer and POOH w/ 2-3/8" IPC injection tubing and packer
2. RIH w/ 6-1/8" bit on 2-7/8" work string. Drill well out from current PBTD at 6703' to new TD at 6775'. Circulate clean. POOH
3. RU WL. RIH w/GR/CNL/CCL/CBL. Log well from TD to surface (perforation intervals to be determined from log interpretation)
4. RU casing crew and equipment. RIH w/ 4-1/2" 11.6# J-55 LTC 8 RD casing w/ centralizers, float equipment, marker joint and stage tool to +/- 6775'. Set stage tool @ +/-5500'
5. RU cementers. Perform two stage cement job to surface as follows:
    a. Pump first stage consisting of 10 bbl fresh water flush, 40 bbl seal bond LCM spacer, and 180 sacks of 50:50 Fly Ash (Pozzolan):Class C cement + additives (weight 14.2 ppg, yield 1.31 cf/sack, volume 42 bbls, 50% excess slurry)
    b. Drop plug, displace with 105 bbl fresh water (confirm volumes) and bump plug. Drop dart, open stage tool
    c. Circulate through stage tool with fresh water until setting time for first cement stage has elapsed
    d. Pump second cement stage consisting of 20 bbl fresh water flush, lead slurry of 330 sacks 35:65 Fly Ash (Pozzolan):Class C cement + additives (weight 12.5 ppg, yield 2.13 cf/sack, 125.5 bbl), tail slurry of 100 sacks of class C cement + additives (weight 14.8 ppg, yield 1.33 cf/sack, 23.7 bbl)
    e. Drop stage tool plug, displace with 84 bbl fresh water (confirm volumes)
    f. WOC
6. RIH w/ 3-3/4" bit on 2-3/8" work string. Drill out stage tool, float collar and cement to +/- 6750'. Circulate clean. POOH
7. RU wireline unit. RIH w/CBL/CCL, log well from TD to surface. RIH w/ perforating guns, perforate the Drinkard as per the log evaluation above @ 4 SPF, 90 degree phasing
8. RIH w/4-1/2" treating packer on 2-3/8" work string. Set packer @ +/-6500'. Acidize the Drinkard w/10,000 gals 15% HCl-NE-FE BXDX acid w/scale inhibitor and rock salt in 3 equal stages @ +/- 10 BPM. Release packer. Wash out salt. POOH
9. RIH w/4-1/2" injection packer, on-off tool and 2-3/8" work string. Set packer @ +/- 6500'. P/T backside to 500 psi. Release on/off tool and POOH LD work string
10. RIH w/2-3/8" IPC injection tubing. Latch on to packer @ +/- 6500'. RO
11. Run MIT for NMOCD. Place well on injection
12. Allow injection rates to stabilize, run injection profile and temperature survey
13. At later date, shut well in to perform a fall-off test or static gradient

**WBDU 36W Proposed Procedure**

**Deepen Well, Run 4.5" Liner, Re-Perforate and Stimulate**

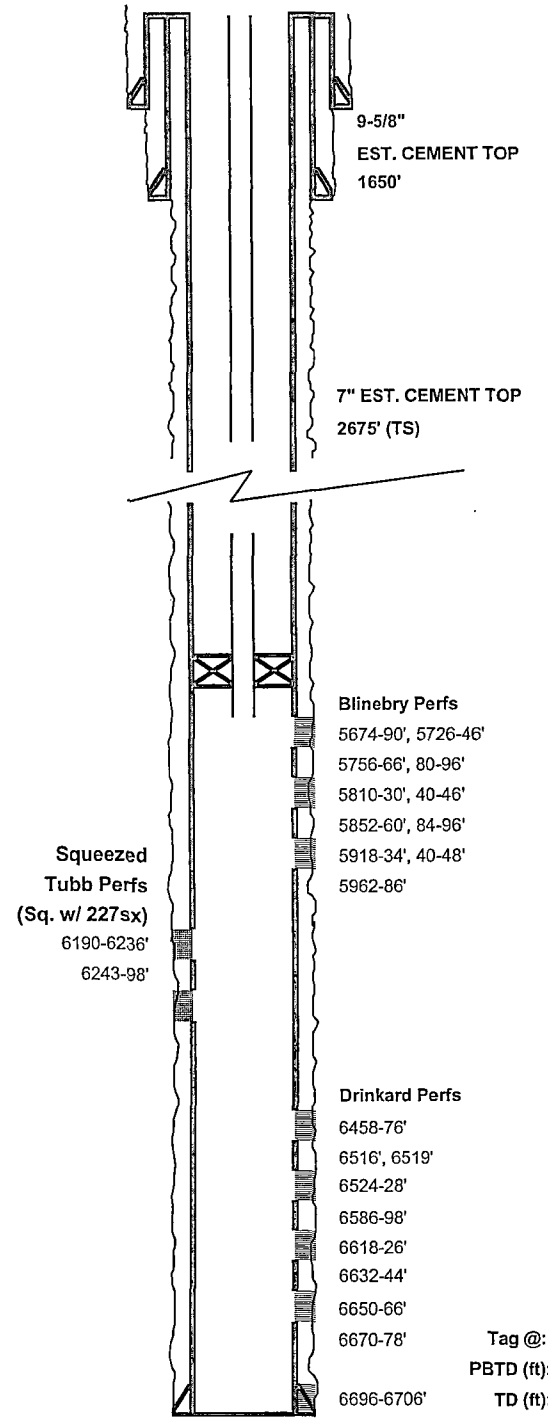
1. MIRU. Install BOP. Release 7" packer and POOH w/ 2-3/8" IPC injection tubing and packer
2. RIH w/ 6-1/8" bit on 2-7/8" work string. Drill well out from current PBTD at 6703' to new TD at 6775'. Circulate clean. POOH
3. RU WL. RIH w/GR/CNL/CCL/CBL. Log well from TD to surface (perforation intervals to be determined from log interpretation)
4. RU casing crew and equipment. RIH w/ 4-1/2" 11.6# J-55 casing w/ centralizers, float equipment, marker joint and stage tool (@ +/-5500') to +/- 6775'
5. Perform two stage cement job to surface. WOC
6. RIH w/ 3-3/4" bit on 2-3/8" work string. Drill out stage tool, float collar and cement to +/- 6750'. Circulate clean. POOH
7. RU wireline unit. RIH w/CBL/CCL, log well from TD to surface. RIH w/ perforating guns, perforate the Drinkard as per the log evaluation above @ 4 SPF, 90 degree phasing
8. RIH w/4-1/2" treating packer on 2-3/8" work string. Set packer @ +/-6500'. Acidize the Drinkard w/10,000 gals 15% HCl-NE-FE BXDX acid w/scale inhibitor and rock salt in 3 equal stages @ +/- 10 BPM. Release packer. Wash out salt. POOH
9. RIH w/4-1/2" injection packer, on-off tool and 2-3/8" work string. Set packer @ +/- 6500'. P/T backside to 500 psi. Release on/off tool and POOH LD work string
10. RIH w/2-3/8" IPC injection tubing. Latch on to packer @ +/- 6500'. RO
11. Run MIT for NMOCD. Place well on injection
12. Allow injection rates to stabilize, run injection profile and temperature survey
13. At later date, shut well in to perform a fall-off test or static gradient

9/22/2013

# Apache Corporation

## WBDU #36W (HAWK B-1 #5)

### WELL DIAGRAM (CURRENT CONFIGURATION)




| | | | |
|---|---|---|---|
| **WELL NAME:** | WBDU #36W (HAWK B-1 #5) | **API:** | 30-025-09908 |
| **LOCATION:** | 1980'S/1980'W C-NE-SW, Sec. 9, T-21S, R-37E | **COUNTY:** | Lea Co., NM |
| **SPUD/TD DATE:** | 5-14-48 / 6-15-48 | **COMP. DATE:** | 6/22/1948 |
| **INJ ORDER DATE:** | 8/11/2008 **INJ. ORDER #:** | R-1298/A | **BPD/PSI:** 490/1120 |
| **PREPARED BY:** | Michael Hunter | **DATE:** | 5/3/2013 |
| **TD (ft):** 6,707.0 | **KB Elev. (ft)** 3,509.0 | | |
| **PBTD (ft):** 6,703.0 | **Ground Elev. (ft)** 3,499.0 | **KB to Ground (ft)** | 10.00 |

| CASING/TUBING | SIZE (IN) | WEIGHT (LB/FT) | GRADE | DEPTHS (FT) | |
|---|---|---|---|---|---|
| Surface Casing | 13-3/8" (200sx, circ.) | 48.00 | H-40 | 0.00 | 226.00 |
| | 9-5/8" (500sx, TOC @ 1650') | 36.00 | J-55 | 0.00 | 2,790.00 |
| Prod. Casing | 7" (940sx, TOC @ 2675') | 23.00 | J-55/N-80 | 0.00 | 6,706.00 |
| | | | | | |
| Open Hole | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Tubing | | | | | |
| | | | | | |
| | | | | | |

**INJECTION TBG STRING**

| ITEM | DESCRIPTION | LENGTH (FT) | Depth (FT) |
|---|---|---|---|
| 1 | ON/OFF TOOL | | |
| 2 | BAKER LOK-SET PACKER | | 5,598 |
| 3 | PROFILE NIPPLE | | 5,608 |
| 4 | 172 JTS 2-3/8" 4.7# J-55 IPC TBG | | 5,615 |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

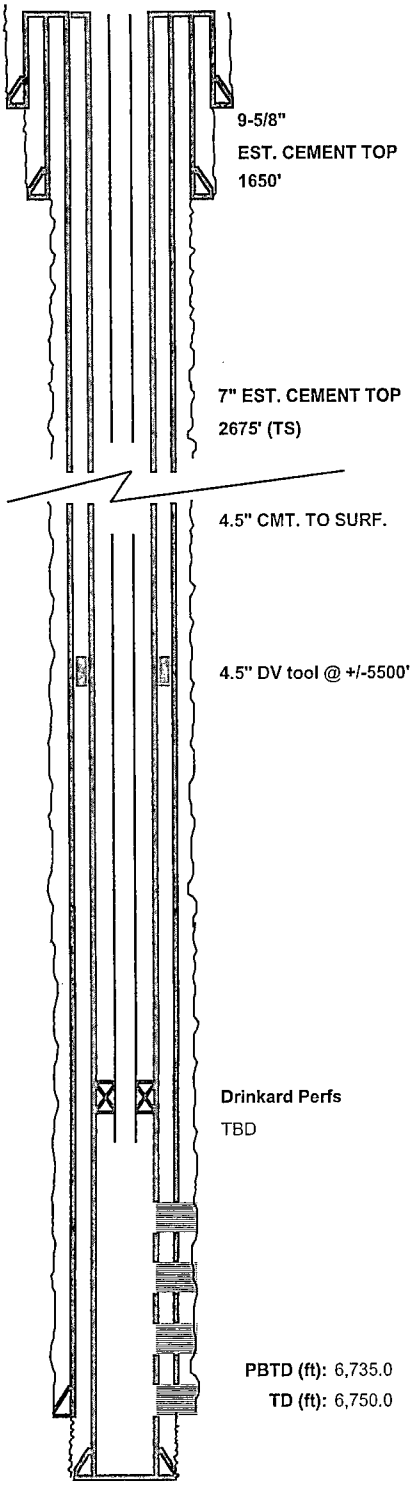
**PERFORATIONS**

| Zone | Intervals | Density |
|---|---|---|
| Blinebry | 5674-90', 5726-46', 56-66', 80-96', 5810-30', 40-46', 52-60', 84-96' (Active) | 2 SPF |
| | 5918-34', 40-48', 62-86' (Active) | 2 SPF |
| | | |
| Tubb | 6190-6236', 6243-98' (Sq. w/ 227sx) | 4 SPF |
| | | |
| | | |
| Drinkard | 6458-76', 6516', 6519', 24-28', 86-98', 6618-26', 32-44', 50-66', 70-78' (Active) | 2/4 SPF |
| | 6696-6706' (Active) | 8 SPF |
| | | |

# Apache Corporation

## WBDU #36W (HAWK B-1 #5)

### WELL DIAGRAM (PROPOSED CONFIGURATION)




| | | | | | |
|---|---|---|---|---|---|
| **WELL NAME:** | WBDU #36W (HAWK B-1 #5) | | **API:** | 30-025-09908 | |
| **LOCATION:** | 1980'S/1980'W C-NE-SW, Sec. 9, T-21S, R-37E | | **COUNTY:** | Lea Co., NM | |
| **SPUD/TD DATE:** | 5-14-48 / 6-15-48 | | **COMP. DATE:** | 6/22/1948 | |
| **INJ ORDER DATE:** | 8/11/2008 | **INJ. ORDER #:** | R-1298/A | **BPD/PSI:** | 490/1120 |
| **PREPARED BY:** | Michael Hunter | | **DATE:** | 5/3/2013 | |
| **TD (ft):** 6,750.0 | **KB Elev. (ft)** | 3,509.0 | | | |
| **PBTD (ft):** 6,735.0 | **Ground Elev. (ft)** | 3,499.0 | **KB to Ground (ft)** | | 10.00 |

| CASING/TUBING | SIZE (IN) | WEIGHT (LB/FT) | GRADE | DEPTHS (FT) | |
|---|---|---|---|---|---|
| Surface Casing | 13-3/8" (200sx, circ.) | 48.00 | H-40 | 0.00 | 226.00 |
| | 9-5/8" (500sx, TOC @ 1650') | 36.00 | J-55 | 0.00 | 2,790.00 |
| Prod. Casing | 7" (940sx, TOC @ 2675') | 23.00 | J-55/N-80 | 0.00 | 6,706.00 |
| | 4-1/2" (CMT TO SRF.) | 11.60 | J-55 | 0.00 | 6,750.00 |
| Open Hole | | | | | |
| | | | | | |
| | | | | | |
| Tubing | 2-3/8" | 4.70 | J-55 IPC | 0.00 | +/-6520 |
| | | | | | |

**INJECTION TBG STRING**

| ITEM | DESCRIPTION | LENGTH (FT) | Depth (FT) |
|---|---|---|---|
| 1 | ON/OFF TOOL | | +/-6498 |
| 2 | BAKER LOK-SET PACKER | | +/-6500 |
| 3 | 200 JTS 2-3/8" 4.7# J-55 IPC TBG | | +/-6520 |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

**PERFORATIONS**

| Zone | Intervals | Density |
|---|---|---|
| Blinebry | | |
| | | |
| | | |
| Tubb | | |
| | | |
| | | |
| Drinkard | TBD | 4 SPF |
| | | |
| | | |

# Conditions of Approval

## Apache Corporation
## West Blinebry Drinkard Unit - 036
## API: 30-025-09908,
## T21S-R37E, Sec 09

September 20, 2013

1. Work to be complete within 180 days.
2. Surface disturbance beyond the existing pad requires prior approval.
3. Closed loop system to be used.
4. H2S monitoring equipment should be onsite for personnel protection from surrounding oil operations. Operator should not encounter H2S while deepening.
5. BOP to be tested to **2000 psi** based on BHP expected.
6. If cement does not circulate to surface, the appropriate BLM office is to be notified.
7. Test casing as per Onshore Order 2.III.B.1.h.
8. Subsequent sundry detailing work and current well test data are to be submitted when work is complete.
9. **Prior to Step 2 of the proposed procedure place cement in the 9 5/8" – 7" annulus from the TOC to surface. Expect to circulate cement out the 9 5/8" casing vent.**
10. **After cementing the 4 ½" casing and before perforating, perform a BLM PET witnessed (charted) casing integrity test of 1500psig. Pressure leakoff may require correction for approval. Include a copy of the chart in the subsequent sundry for this workover. Make arrangements 24 hours before the test for BLM to witness, phone 575-393-3612.**

### Well with a Packer - Operations

1) Conduct a Mechanical Integrity Test of the tubing/casing annulus after a tubing, packer or casing seal is established. Repair that seal any time more than five barrels of packer fluid is replaced within 30 days.
2) The minimum test pressure should be 500 psig for 30 minutes or 300 psig for 60 minutes, with minimum 200 psig differential between tubing and casing pressure (at test time) but no more than 70% of casing burst pressure as described by Onshore Order 2.III.B.1.h. (The tubing or reservoir pressure may need to be reduced). An alternate method for a BLM approved MIT is to have the fluid filled system open to atmospheric pressure and have a loss of less than five barrels in 30 days witnessed by a BLM authorized officer.
3) Document the pressure test on a one hour full rotation calibrated recorder chart registering within 25 to 85 per cent of its full range. Greater than 10% pressure leakoff will be viewed as a failed MIT. Less than 10% pressure leakoff will be evaluated site specifically and may restrict injection approval.

4) **Make arrangements 24 hours before the test for BLM to witness, phone 575-393-3612.** If no answer, leave a voice mail or email with the API#, workover purpose, and a call back phone number. Note the contact, time, & date in your subsequent report.
5) Submit a subsequent Sundry Form 3160-5 relating the MIT activity. Include a copy of the recorded MIT pressure chart. List the name of the BLM witness, or the notified person and date of notification. NMOCD is to retain the original recorded MIT chart.
6) Use of tubing internal protection, tubing on/off equipment just above the packer, a profile nipple, and an in line tubing check valve below the packer or between the on/off tool and packer is a "Best Management Practice". The setting depths and descriptions of each are to be included in the subsequent sundry. List (by date) descriptions of daily activity of any previously unreported wellbore workover.
7) **Submit the original subsequent sundry with three copies to BLM Carlsbad.**
8) Compliance with a NMOCD Administrative Order is required, submit documentation of that authorization.
   a) Approved injection pressure compliance is required.
   b) If injection pressure exceeds the approved pressure you are required to reduce that pressure and notify the BLM within 24 hours.
   c) When injection pressure is within 50 psig of the maximum pressure, install automation equipment that will prevent exceeding that maximum. Submit a subsequent report (Sundry Form 3160-5) describing the installed automation equipment within 30 days.
9) Unexplained significant variations of rate or pressure to be reported within 5 days of notice.
10) The casing/tubing annulus is required to be monitored for communication with injection fluid or loss of casing integrity. A BLM inspector may request verification of a full annular fluid level at any time.
11) A "Best Management Practice" is to maintain the annulus full of packer fluid at atmospheric pressure. Equipment that will display on site, continuous open to the air fluid level is necessary to achieve this goal.
12) Loss of packer fluid above five barrels per month indicates a developing problem. Notify BLM Carlsbad Field Office, Petroleum Engineering within 5 days.
13) A suggested format for monthly records documenting that the casing annulus is fluid filled is available from the BLM Carlsbad Field Office.
14) Gain of annular fluid requires notification within 24 hours. Cease injection and maintain a production casing pressure of 0 psia. Notify the BLM's authorized officer ("Paul R. Swartz" <pswartz@blm.gov>, cell phone 575-200-7902). If there is no response phone 575-361-2822.

15) Submit a (Sundry Form 3160-5) subsequent report (daily reports) describing all wellbore activity and Mechanical Integrity Test as per item 1) above. Include the date(s) of the well work, and the setting depths of installed equipment: internally corrosive protected tubing, tubing on/off equipment just above the packer, and an in line tubing check valve below the packer or between the on/off tool and packer. The setting depths and descriptions of each are to be included in the subsequent sundry. List daily descriptions of any previously unreported wellbore workover(s) and reason(s) the well annular fluid was replaced.

**JAM/PRS 092513**