

HOBBS OCD
JAN 07 2014

13-689

Form 3160-3
(April 2004)

RECEIVED

OCD Hobbs

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

5. Lease Serial No.
NMNM-14812

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.

WERTA FEDERAL #004 <3023847

9. API Well No.

30-025- 41593

10. Field and Pool, or Exploratory
House; Drinkard <33230> <33230>

House; Blumhry <33230> <33230>
House; Tubbs <33470> <33470>
House; FRO <33210> <33210>

11. Sec., T. R. M. or Bk. and Survey or Area

UL: I SEC: 35 T19S R38E

1a. Type of work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone

2. Name of Operator
APACHE CORPORATION

3a. Address 303 VETERANS AIRPARK LN #3000
MIDLAND, TX 79705

3b. Phone No. (include area code)
432-818-1167

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface 1650' FSL & 990' FEL

At proposed prod. zone SAME

14. Distance in miles and direction from nearest town or post office*
APPROX 8 MILES SOUTH OF HOBBS, NM

12. County or Parish
LEA

13. State
NM

15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any)

990'

16. No. of acres in lease
1109.46 ACRES

17. Spacing Unit dedicated to this well
40 ACRES

18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft.

~ 1000'

19. Proposed Depth
7500' 7400'
123113' FLORES

20. BLM/BIA Bond No. on file
BLM-CO-1463 NATIONWIDE / NMB000736

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
GL - 3588'

22. Approximate date work will start*

AS Soon AS Approved

23. Estimated duration
~ 10 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature *Sorina L Flores*

Name (Printed/Typed)
SORINA L. FLORES

Date 4/15/13

Title
SUPV OF DRILLING SERVICES

Approved by (Signature)
/s/ STEPHEN J. CAFFEY
Title
FIELD MANAGER

Name (Printed/Typed)
Office
CARLSBAD FIELD OFFICE

Date
DEC 31 2013

Application approval 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.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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)

Lea County Controlled Water Basin

Ka
01/10/14

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

JAN 13 2014

dm

DRILLING PLAN: BLM COMPLIANCE

(Supplement to BLM 3160-3)

APACHE CORPORATION (OGRID: 873) WERTA FEDERAL #4

Lease #: NM-14812 Projected TD: 7400' GL: 3579'

1650' FSL & 990' FEL UL: I SEC: 35 T19S R38E LEA COUNTY, NM

1. GEOLOGIC NAME OF SURFACE FORMATION: Quaternary Aeolian Deposits

2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Quaternary Aeolian	Surf	San Andres	4348'
Rustler	1594'	Glorieta	5610'
Salt Top	1610'	Paddock	5666'
Salt Bottom	2735'	Blinberry	6046' (Oil)
Yates	2870'	Tubb	6568' (Oil)
Seven Rivers	3123'	Drinkard	6903' (Oil)
Queen	3797'	ABO	7154' (Oil)
Grayburg	4059'	TD	7400'

Depth to Ground Water: ~ 55'

All fresh water & prospectively valuable minerals, as described by BLM, encountered during drilling, will be recorded by depth and adequately protected. All oil & gas shows within zones of correlative rights will be tested to determine commercial potential. Surface fresh water sands will be protected by setting 11" csg @ 1635' & circ cmt back to surface. Hydrocarbon zones will be protected by setting 7-7/8" csg @ 7400'.

3. CASING PROGRAM: All casing is new & API approved

HOLE SIZE	DEPTH	OD CSG	WEIGHT	COLLAR	GRADE	COLLAPSE	BURST	TENSION
11"	0' - 1635'	8-5/8"	24#	STC	J-55	1.125	1.0	1.8
7-7/8"	0' - 7400'	5-1/2"	17#	LTC	L-80	1.125	1.0	1.8

4. CEMENT PROGRAM:

A. 8-5/8" Surface cmt with (100% excess cmt to Surface):

Lead: 380 sx Class C w/ 4% Gel + 2% CaCl₂ + 0.125 #/sx CF + 0.25#/sx Defoamer
(13.5 ppg, 1.75 yld) Comp Strengths: 12 hr - 786 psi 24 hr - 1213 psi

Tail: 200 sx Class C w/ 1% CaCl₂
(14.8 ppg, 1.34 yld) Comp Strengths: 12 hr - 1565 psi 24 hr - 2442 psi

B. 5-1/2" Production cmt with (40% excess cmt to surf, TOC 5546):

Lead: 700 sx Cl C 50/50 poz + 5% Salt + 10% Gel + 3#/sx Kol-Seal + 0.25% Defoamer + 0.125#/sx CF
(12.6 ppg, 2.0 yld) Comp Strengths: 12 hr - 156 psi 24 hr - 1081 psi

Tail: 350 sx PVL + 1.3% Salt + 5% Expanding cmt + 0.5% Gel suppressing agen + 0.1% antisetting agent + 0.25% defoamer + 0.2% retarder (14.2 ppg, 1.31 yld) Comp Strengths: 12 hr - 642 psi 24 psi - 1016 psi

** The above cmt volumes could be revised pending caliper measurement from open hole logs. TOC is designed to reach surface on Surface and Production. The above slurry design may change, but will meet BLM specifications. All slurries will be tested prior to loading to confirm thickening times & a lab report furnished to Apache. Fluid loss will be tested & reported on slurries with fluid loss additives. Lab test report will be furnished prior to pumping cement.

5. PROPOSED CONTROL EQUIPMENT

"EXHIBIT 3A" shows a 900 series 11" 3M psi WP BOP consisting of an annular bag type preventer, middle blind rams, bottom pipe rams. The BOP will be nipped up on the 8-5/8" csg and utilized continuously until TD is reached. The BOP will be tested at 2000 psi, maximum surface pressure is not expected to exceed 3M psi, BHP is calculated to be approximately 3344 psi. All BOP's and associated equipment will be tested as per BLM *Drilling Operations Order #2*. The BOP will be operated and checked each 24 hr period & the blind rams will be operated & checked when the drill pipe is out of the hole. Functional tests will be documented on the daily driller's log. "EXHIBIT 3A" also shows a 3M psi choke manifold with a 4" panic line. Full opening stabbing valve & Kelly cock will be on derrick floor in case of need. No abnormal pressures or temperatures are expected in this well. No nearby wells have encountered any problems.

6. AUXILIARY WELL CONTROL EQUIPMENT / MONITORING EQUIPMENT:

11" x 3000 psi Double BOP/Blind & pipe ram (3M BOP/BOPE to be used as 2M system)
4-1/2" x 3000 psi Kelly valve
11" x 3000 psi mud cross - H₂S detector on production hole
Gate-type safety valve 3" - choke line from BOP to manifold
2" adjustable chokes - 4" blow down line
Fill up line as per Onshore Order #2

7. PROPOSED MUD CIRCULATION SYSTEM: (Closed Loop System)

See
COTG

INTERVAL	MW (ppg)	VISC (sec/qt)	FLUID LOSS (cc)	MUD TYPE
0' - 1635' ^{1075'}	8.4 - 8.6	32 - 35	NC	Fresh Water
0 - 7400'	8.8 - 9.0 ¹⁰	30 - 32	NC	Brine

*** Visual mud monitoring equipment shall be in place to detect volume changes. A mud test shall be performed every 24 hrs after mudding up to determine, as applicable: density, visc, gel strength, filtration, and pH. The necessary mud products for weight addition & fluid loss control will be on location at all times. In order to run open hole logs & casing, the above mud properties may have to be altered to meet these needs.*

8. LOGGING, CORING & TESTING PROGRAM:

- OH logs: Dual Laterolog, MSFL, CNL, Litho-Density, Spectral Gamma Ray, Caliper & Sonic from TD back to last csg shoe.
- Run CNL, Gamma Ray from last csg shoe back to surface.
- No cores or DST's are planned at this time. Mud log will be included on this well.
- Additional testing will be initiated subsequent to setting the 5-1/2" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows & drill stem tests.

9. POTENTIAL HAZARDS:

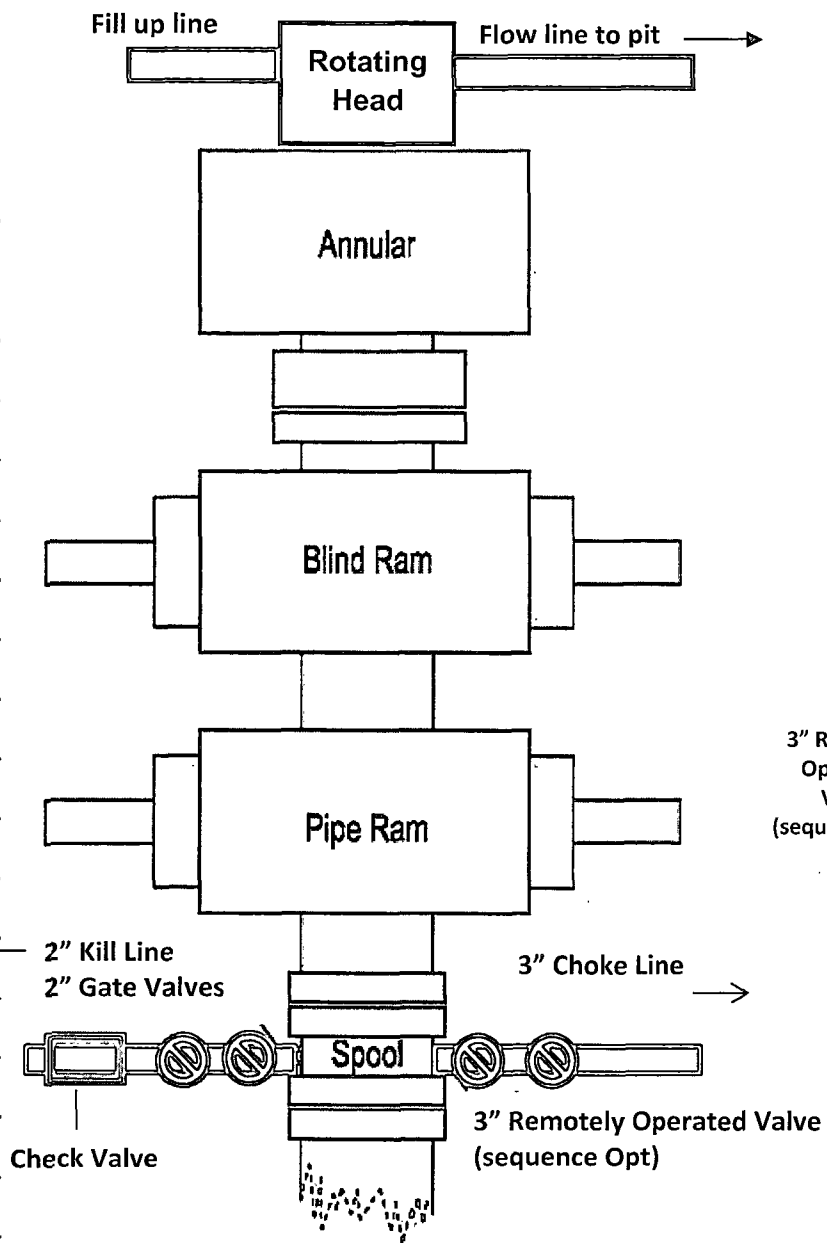
No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered, however, the proposed mud program will be modified to increase the mud-weight. There is known presence of H₂S in this area. If H₂S is encountered the operator will comply with the provisions of *Onshore Oil & Gas Order No. 6 (SEE EXHIBIT 6)*. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP: 3256 psi and estimated BHT: 115°.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

Road and location construction will begin after BLM has approved APD. Anticipated spud date will be as soon after Santa Fe and BLM approval and as soon as rig will be available. Move in operations and drilling is expected to take ~ 10 days. If production casing is run then an additional 90 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

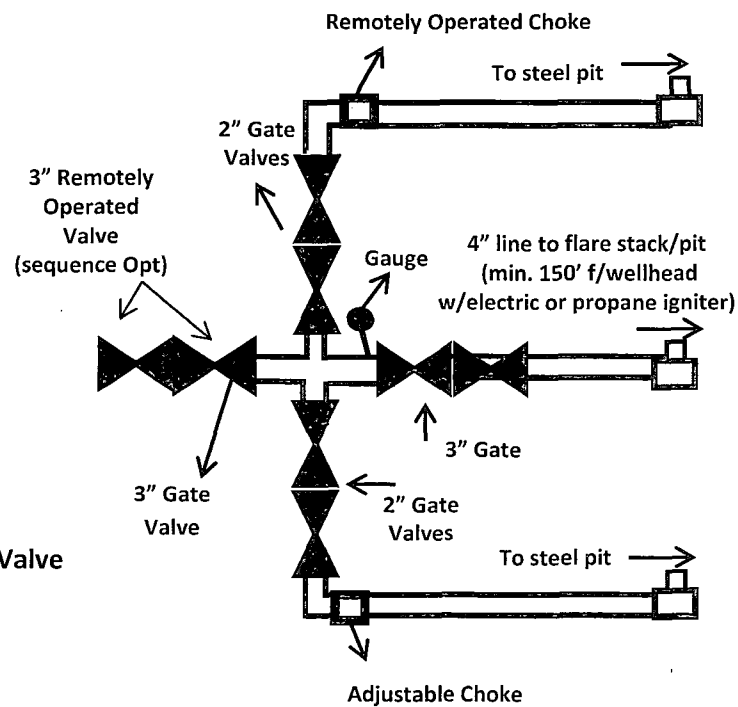
11. OTHER FACETS OF OPERATION:

After running csg, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The House;Blaine; House;Tubb, N., House;Drinkard; and House;ABO formations will be perforated and stimulated in order to establish production. The well will be swab tested & potentialized as an oil well.



**11" 3M psi
BOPE & Choke Manifold
EXHIBIT 3A**

All valve & lines on choke manifold are 2" unless noted.
Exact manifold configuration may vary

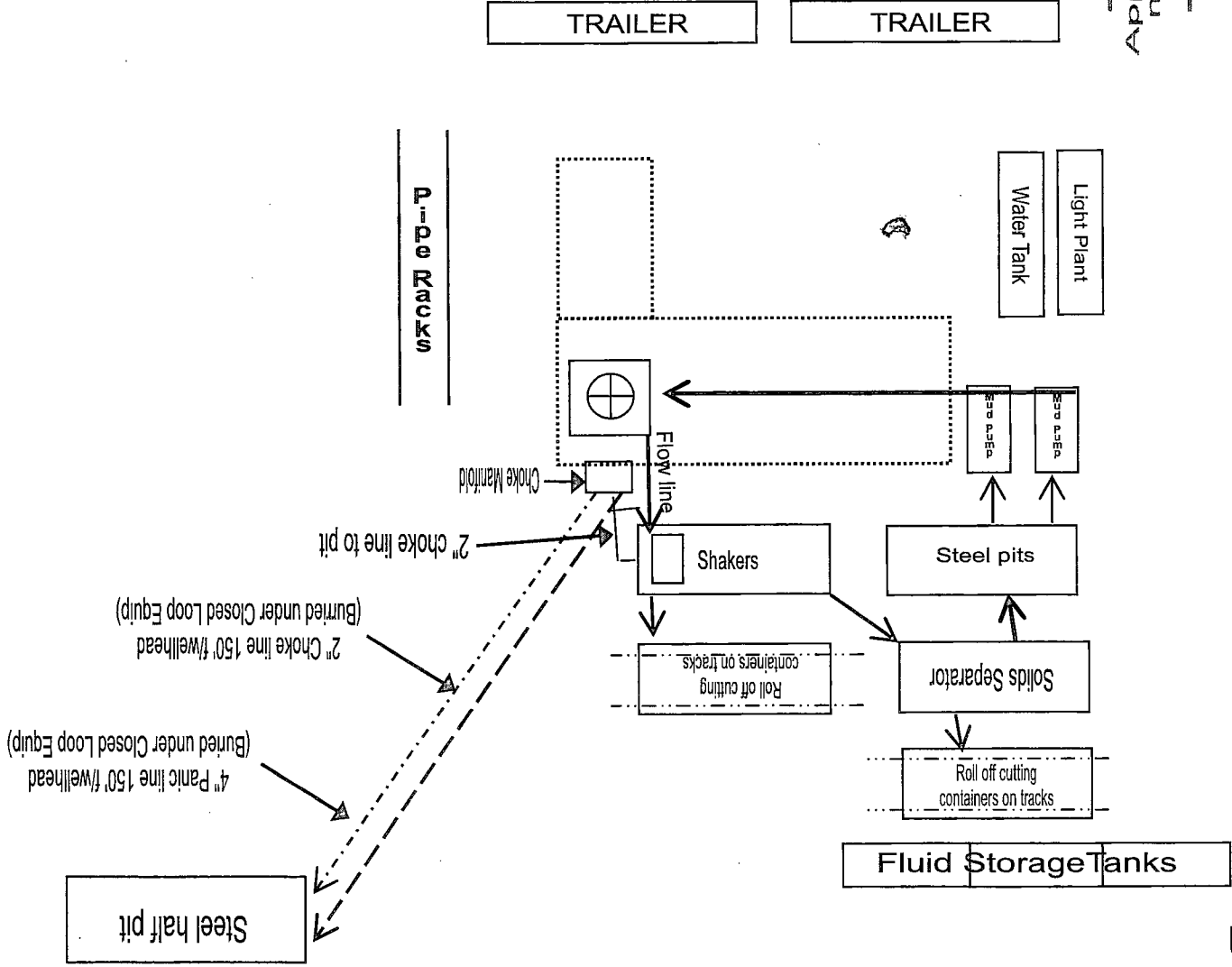
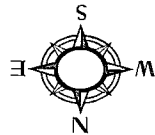


All bleed lines to pit
minimum 2"



Closed Loop Equipment Diagram
Exhibit 4

Werta Federal #4





**DESIGN PLAN, OPERATING & MAINTENANCE PLAN, & CLOSURE PLAN
FOR OCD FOR C-144**

WERTA FEDERAL #4

DESIGN PLAN

Fluid & cuttings coming from drilling operations will pass over the Shale Shaker with the cuttings going to the Sundance Inc / CRI haul off bin and the cleaned fluid returning to the working steel pits.

Equipment includes:

- 2 – 500 bbl steel frac tanks (fresh water for drilling)
- 2 – 180 bbl steel working pits
- 3 – 75 bbl steel haul off bins
- 2 – Pumps (6-1/2" x 10" PZ 10 or equivalent)
- 1 – Shale shaker
- 1 – Mud cleaner – QMAX MudStripper

OPERATING AND MAINTENANCE PLAN

Inspection to occur every tour for proper operation of system and individual components. If any problems are found they will be repaired and/or corrected immediately.

CLOSURE PLAN

All haul bins containing cuttings will be removed from location and hauled to Sundance Incorporated (NM-01-0003) disposal site located 3 miles East of Eunice, NM on the Texas border / Controlled Recovery, Inc's (NM-01-0006) disposal site located near mile marker 66 on Highway 62/180.

Sorina L. Flores
Supv of Drilling Services

WELLSITE / RIG LAYOUT
WERTA FEDERAL #4
EXHIBIT #5

