

HOBBS OCD

JAN 07 2014

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) House; Blimbry (33230) House; Tubbs (33470) House; AFD (33210) 11. Sec., T. R. M. or Bk. and Survey of Area UL: I SEC: 35 T19S R38E

1a. Type of work: [X] DRILL [] REENTER

1b. Type of Well: [X] Oil Well [] Gas Well [] Other [] Single Zone [X] Multiple Zone

2. Name of Operator APACHE CORPORATION

3a. Address 303 VETERANS AIRPARK LN #3000 MIDLAND, TX 79705 3b. Phone No. (include area code) <873> 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 Name (Printed/Typed) Name (Printed/Typed) Date DEC 31 2013

Title FIELD MANAGER Office CARLSBAD FIELD OFFICE

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. APPROVAL FOR TWO YEARS Conditions of approval, if any, are attached.

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)

Ka 01/10/14

Lea County Controlled Water Basin

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

- GEOLOGIC NAME OF SURFACE FORMATION:** Quaternary Aeolian Deposits
- 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' | Blinbery | 6046' (Oil) |
| Yates | 2870' | Tubb | 6568' (Oil) |
| Seven Rivers | 3123' | Drinkard | 6903' (Oil) |
| Queen | 3797' | ABO | 7154' (Oil) |
| Grayburg | 4059' | TD | 7400' |

missing formation →

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'.

See COA

- 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 |

- CEMENT PROGRAM:**

- 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

- 5-1/2" Production cmt with (40% excess cmt, 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
COA

| 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:

- A. OH logs: Dual Laterolog, MSFL, CNL, Litho-Density, Spectral Gamma Ray, Caliper & Sonic from TD back to last csg shoe.
- B. Run CNL, Gamma Ray from last csg shoe back to surface.
- C. No cores or DST's are planned at this time. Mud log will be included on this well.
- D. 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:

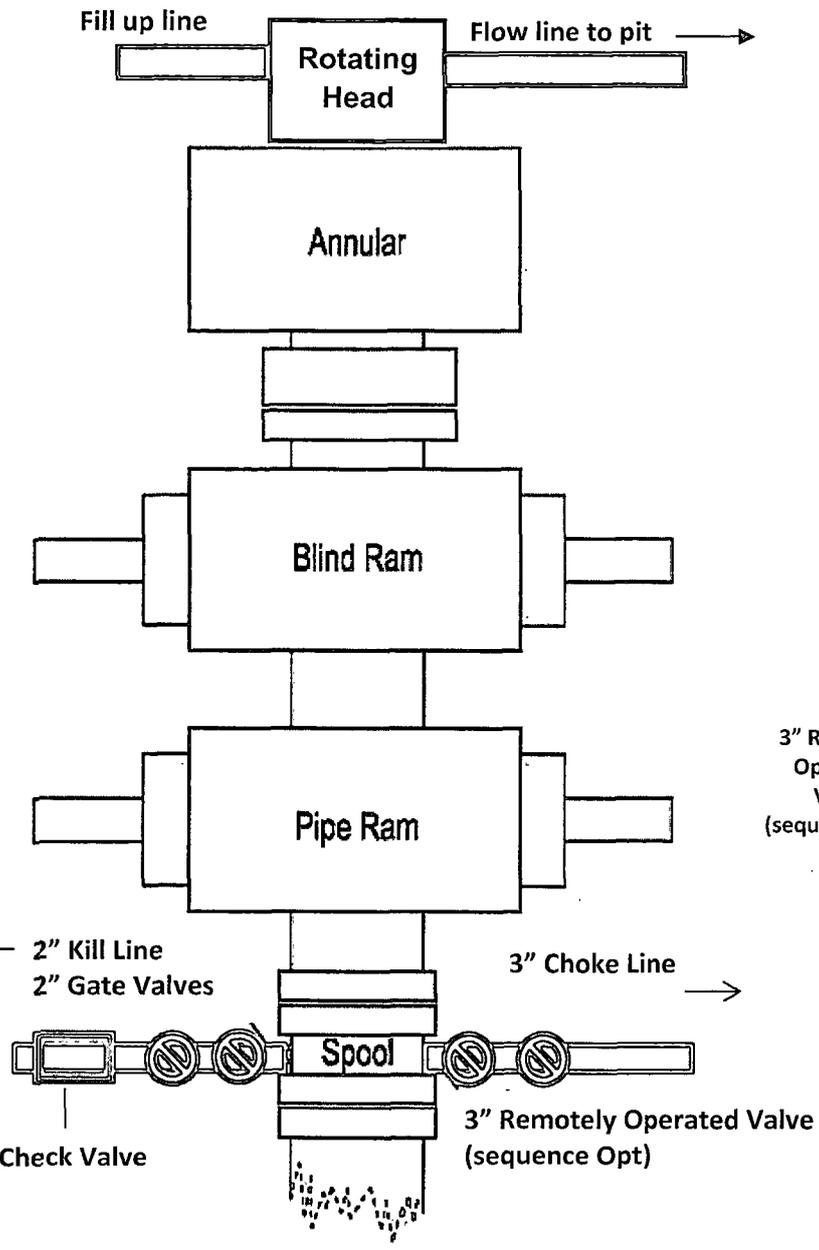
No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered, however, the proposed mud program will be modified to increase the mud-weight. There is known presence of H₂S in this area. If H₂S is encountered the operator will comply with the provisions of *Onshore 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.

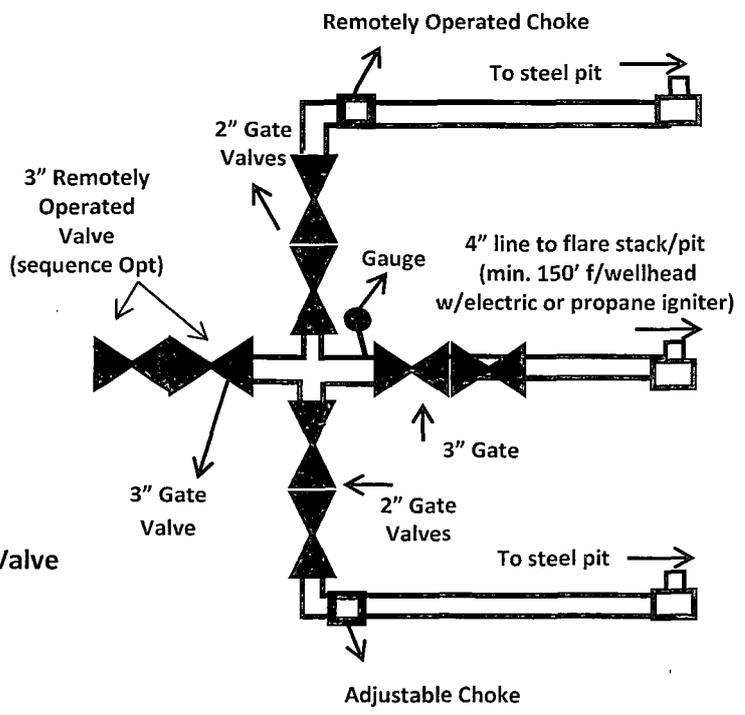
11. OTHER FACETS OF OPERATION:

After running csg, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The House; Blinebry, 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

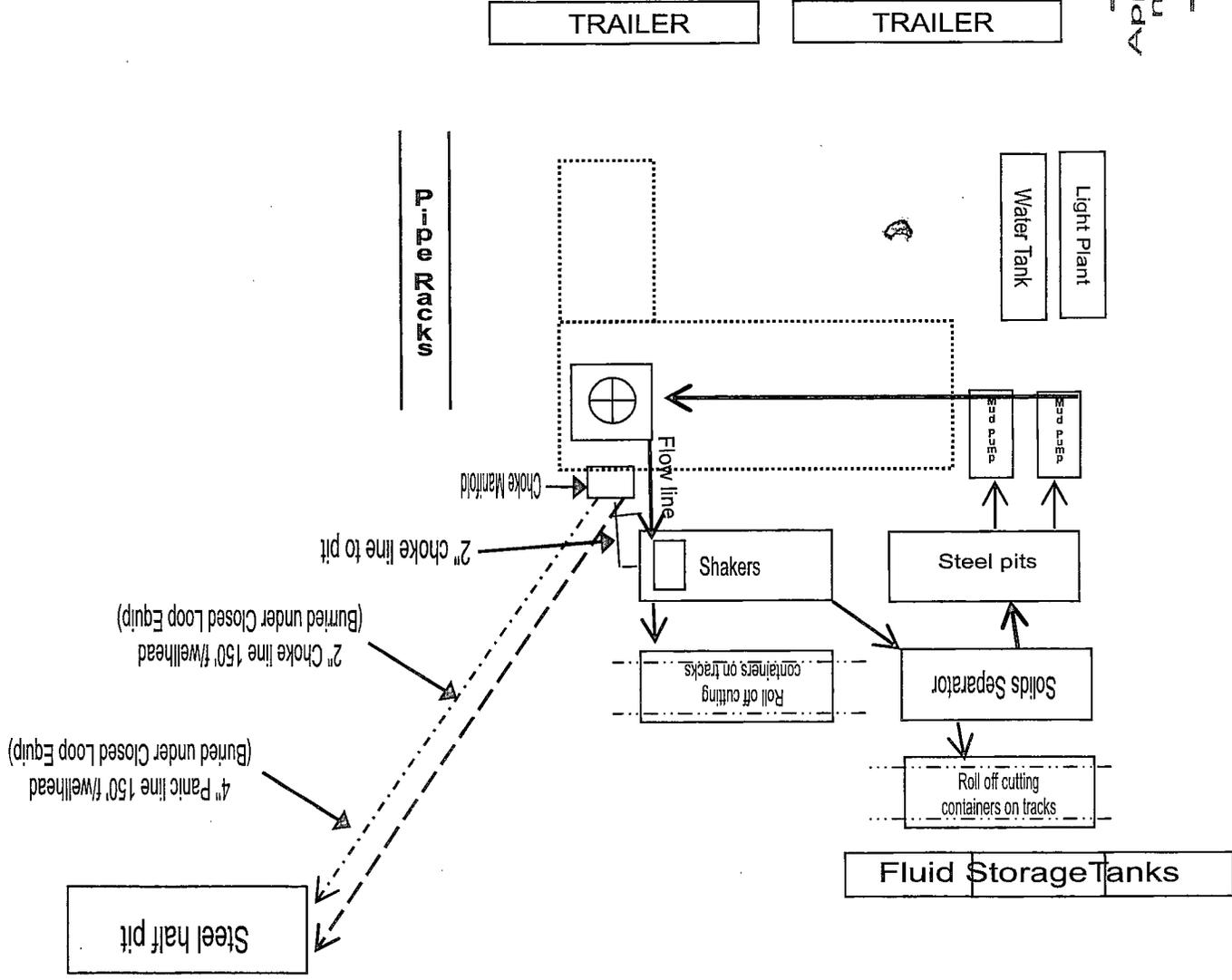
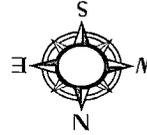
All valve & lines on choke manifold are 2" unless noted.
 Exact manifold configuration may vary



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

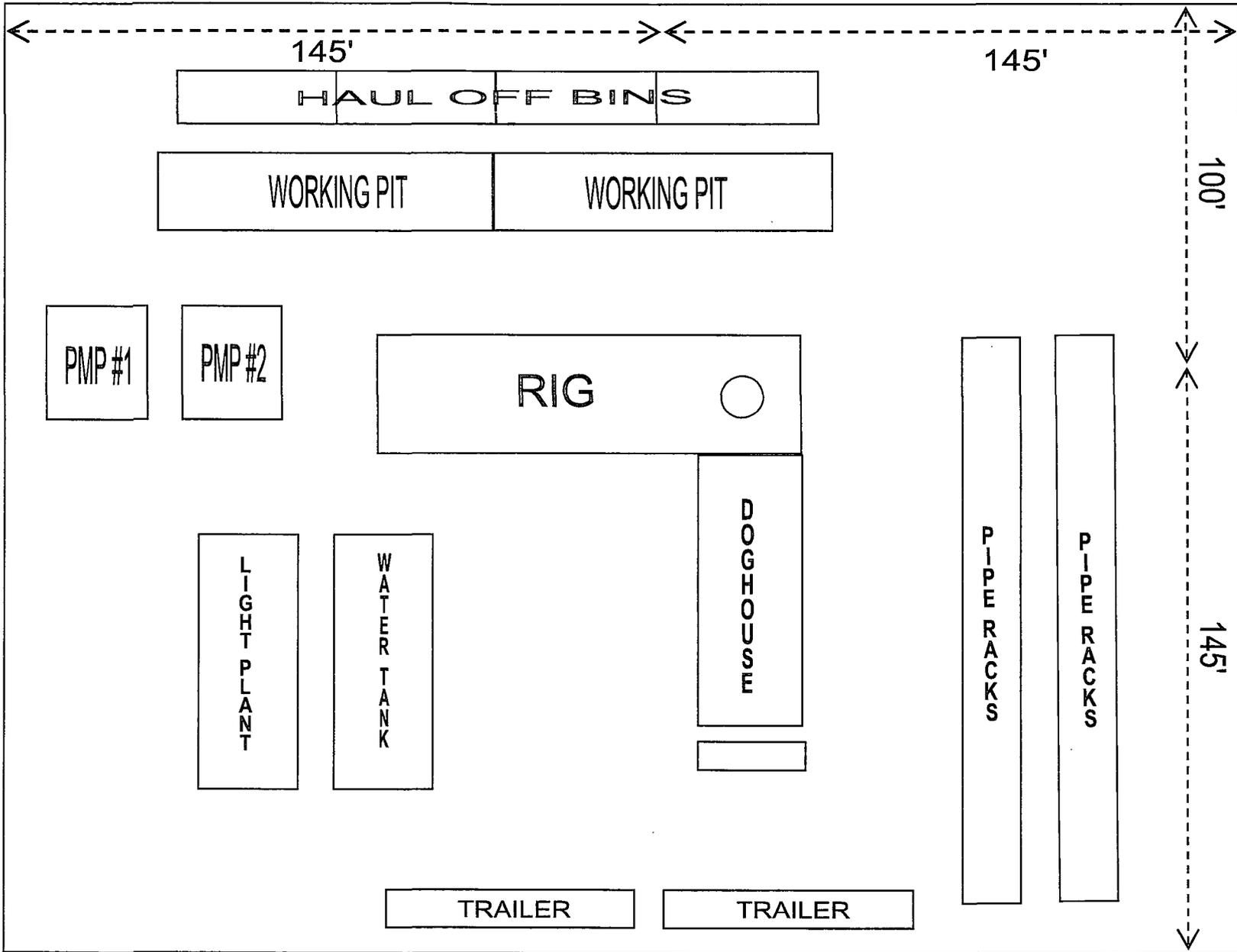
Inspection to occur every tour for proper operation of system and individual components. If any problems are found they will be repaired and/or corrected immediately.

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



~ 1021'
Proposed
Road

DOOR