

Split Estate

JUL 03 2014

Form 3160-3
(March 2012)OCD Hobbs
RECEIVEDFORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM-42057-125057

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.
LOCKHART B 12 #16 < 24428>9. API Well No.
30-025- 46194410. Field and Pool, or Exploratory
~~Alinebry 05926660; Drinkard (19190)~~
~~Tabb 046460240; Wenz PRD (62700)~~

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

UL: G SEC: 12 T21S R37E

12. County or Parish
LEA13. State
NM1a. Type of work: ☒ DRILL ☐ REENTER1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator APACHE CORPORATION

3a. Address 303 VETERANS AIRPARK LN #1000
MIDLAND, TX 797053b. Phone No. (include area code) 7
432-818-1167

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

At surface 1980' FNL & 1650' FEL

At proposed prod. zone SAME

14. Distance in miles and direction from nearest town or post office*
APPROX 4 MILES NORTHEAST OF EUNICE, NM15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any) 1650'16. No. of acres in lease
1200 ACRES17. Spacing Unit dedicated to this well
40 ACRES18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft. ~ 275'19. Proposed Depth
7700'20. BLM/BIA Bond No. on file
BLM-CO-1463 NATIONWIDE / NMB00073621. Elevations (Show whether DF, KDB, RT, GL, etc.)
GL: 3479' 3499' per plat22. Approximate date work will start*
As Soon As Approved23. Estimated duration
~ 10 DAYS

24. Attachments

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

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature

*Sorina L Flores*Name (Printed/Typed)
SORINA L. FLORES

Date

12/17/13

Title

SUPV OF DRILLING SERVICES

Approved by (Signature)

Steve Caffey

Name (Printed/Typed)

Date JUN 19 2014

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.
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.

(Continued on page 2)

*(Instructions on page 2)

Capitan Controlled Water Basin

K2
07/07/14SEE ATTACHED FOR
CONDITIONS OF APPROVALApproval Subject to General Requirements
& Special Stipulations Attached

JUL 08 2014

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE
620 E. GREENE STREET
CARLSBAD, NM 88220

OPERATOR CERTIFICATION

I HEARBY CERTIFY THAT I, OR SOMEONE UNDER MY DIRECT SUPERVISION, HAVE INSPECTED THE DRILL SITE AND ACCESS ROUTE PROPOSED HEREIN; THAT I AM FAMILIAR WITH THE CONDITIONS WHICH CURRENTLY EXIST; THAT I HAVE FULL KNOWLEDGE OF STATE AND FEDERAL laws applicable to this operation; that the statements made in the APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 13 day of December 2013

Well: LOCKHART B 12 #16

Operator Name: APACHE CORPORATION

Signature:  Printed Name: BARRY GREEN

Title: Drilling Engineer Date: 12/13/2013

Email (optional): barry.green@apachecorp.com

Street or Box: 303 Veterans Airpark Ln., Ste. 1000

City, State, Zip Code: Midland, TX 79705

Telephone: 432-818-1059

Field Representative (if not above signatory): _____

Address (if different from above): _____

Telephone (if different from above): _____

Email (optional): _____

Agents not directly employed by the operator must submit a letter from the operator authorizing that the agent to act or file this application on their behalf.

PRIVATE SURFACE OWNER AGREEMENT

OPERATOR: APACHE CORPORATION

WELL NAME: LOCKHART B 12 #16

UL: G SECTION: 12 TOWNSHIP: 21S RANGE: 37E

LOCATION: 1980' FNL & 1650' FEL COUNTY: LEA STATE: NM

LEASE NUMBER: NMNM - 0557256

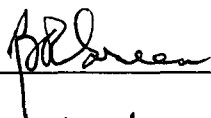
STATEMENT OF SURFACE USE

The surface to the subject land is owned by MC NEILL RANCH ATTN: PAIGE MC NEILL
PO BOX 1092, HOBBS, NM 88241
575-390-2870

The surface owner has been contacted regarding the drilling of the subject well, and an agreement for surface use has been negotiated.

CERTIFICATION: I hereby certify that the statements made in this statement are to the best of my knowledge, true and correct.

NAME: BARRY GREEN

SIGNATURE: 

DATE: 12/13/2013

TITLE: DRILLING ENGINEER

To expedite your Application to Drill please fax the completed form to the
Bureau of Land Management (575) 234-5927 or (575) 885-9264
Attn: Legal Instruments Examiner
620 E. Green Street
Carlsbad, NM 88220

The original document with signature should be mailed as soon as possible.

DRILLING PLAN: BLM COMPLIANCE
(Supplement to BLM 3160-3)

APACHE CORPORATION (OGRID: 873) LOCHART B 12 #16

Lease #: NMLC-032096B Projected TD: 7700' GL: 3499'
1980' FNL & 1650' FEL UL: G SEC: 12 T21S R37E 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	4260'
Rustler	1505'	Glorieta	5411'
Salt Top	1595'	Blinbry	5788' (Oil)
<u>Salt Bottom</u>	2631'	Tubb	6268' (Oil)
Yates	2759'	Drinkard	6718' (Oil)
Queen	3613'	ABO	6964' (Oil)
Grayburg	3970'	TD	7700'

Depth to Ground Water: 65'

All fresh water & prospectively valuable minerals, as described by BLM, encountered during drilling, will be recorded by depth & adequately protected. All oil & gas shows within zones of correlative rights will be tested to determine commercial potential.

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

See CoA

HOLE SIZE	DEPTH	OD CSG	WEIGHT	COLLAR	GRADE	COLLAPSE	BURST	TENSION
11"	0' - 1530'	8-5/8"	24#	STC	J-55	1.125	1.0	1.8
7-7/8"	0' - 1000'	5-1/2"	17#	LTC	L-80	1.125	1.0	1.8
7-7/8"	1000' - 7700'	5-1/2"	17#	LTC	J-55	1.125	1.0	1.8

4. **CEMENT PROGRAM:**

per Sorina Flores 6/18/14

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

Lead: 330 sx Class C w/ 2% CaCl₂, 4% Bentonite (13.5 ppg, 1.75 yld)
Comp Strengths: 12 hr - 755 psi 24 hr - 1347 psi

Tail: 180 sx Class C w/ 1% CaCl₂ (14.8 ppg, 1.34 yld)
Comp Strengths: 12 hr - 500 psi 24 hr - 782 psi *** 100% excess cmt; cmt to surf***

*Water
g/lak each
slurry*

B. 5-1/2" Production, cmt with (50% excess cmt; cmt to surf):

Lead: 660 sx (50:50) Poz C w/ 5% Sodium Chloride, 6% Bentonite
(12.5ppg, 2.04 yld) Comp Strengths: 12 hr - 344 psi 24 hr - 835 psi

Tail: 450 sx (50:50) Poz C w/ 5% Sodium Chloride, 2% Bentonite (14.2 ppg, 1.31 yld)
Comp Strengths: 12 hr - 869 psi 24 psi - 1768 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. For Surface csg: If cmt does not circ to surface, the appropriate BLM office shall be notified, TOC shall be determined by a method approved by BLM, operator will propose a remediation method & request BLM approval. 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

Must test to 3,000 psi

See COA
"EXHIBIT 3" shows a 11" 3M psi WP BOP consisting of an annular bag type preventer, middle pipe rams, bottom blind 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~~ *3000* psi, maximum surface pressure is not expected to exceed 2M psi, BHP is calculated to be approximately 3388 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. Function tests will be documented on the daily driller's log. "EXHIBIT 3" also shows a 3M psi choke manifold with a 3" blow down 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 well control problems.

6. AUXILIARY WELL CONTROL EQUIPMENT / MONITORING EQUIPMENT:

- 4-1/2" x 3000 psi Kelly valve
- 9" 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' - 1530' <i>1550'</i>	8.4	28 - 32	NC	Fresh Water
1530' - 7100'	9.8 - 10.0	28 - 32	NC	Brine
7100' - 7700	9.0 - 10.0	28 - 32	10 - 12	Cut 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 be altered to meet these needs.*

8. LOGGING, CORING & TESTING PROGRAM:

- See COA*
- A. OH logs: Dual Laterolog, MSFL, CNL, Litho-Density, Spectral Gamma Ray, Caliper & Sonic from TD back to 8-5/8" csg shoe.
 - B. Run CNL, Gamma Ray from 8-5/8" 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.

9. POTENTIAL HAZARDS:

See COA
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. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP: 3388 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 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 Blinberry, Tubbs, Drinkard & Wantz; ABO formations will be perforated and stimulated in order to establish production. The well will be tested & potentialized as an oil well.

APACHE BOP AND CHOKE MANIFOLD SCHEMATIC

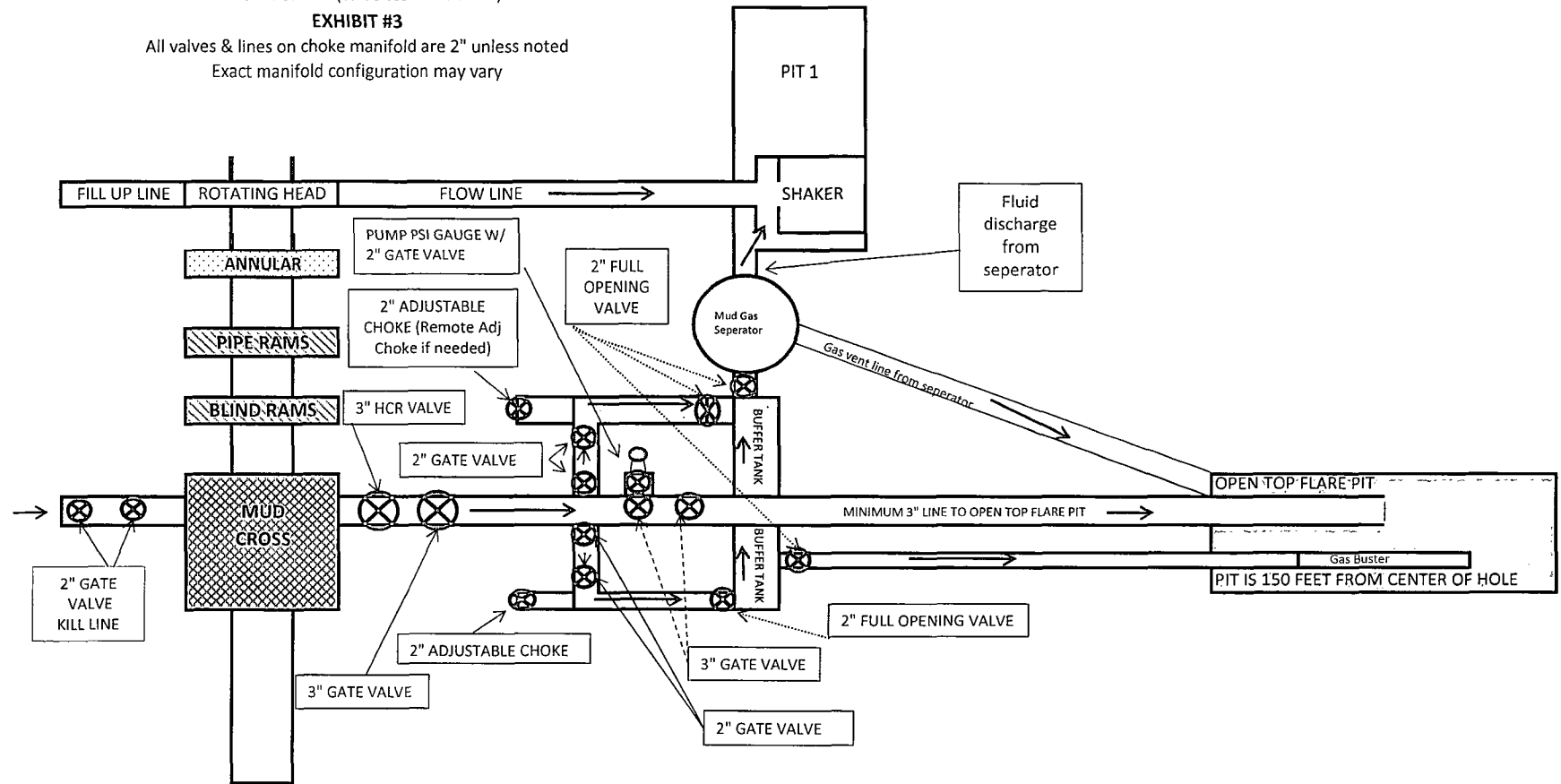
LOCKHART B 12 #16 **3M**

11" 3M PSI BOP (to be tested as a **2M**)

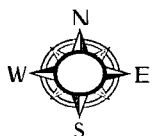
EXHIBIT #3

All valves & lines on choke manifold are 2" unless noted

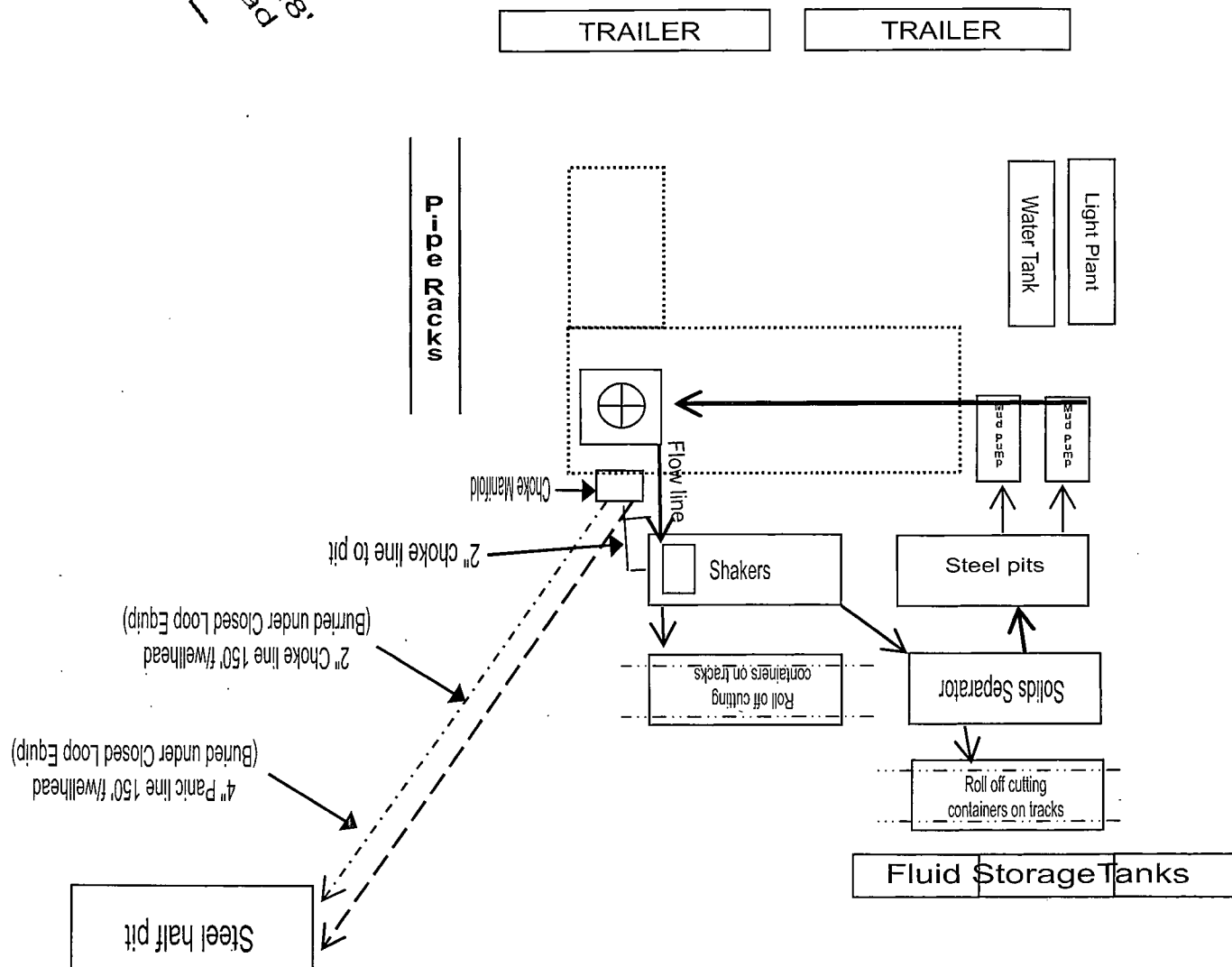
Exact manifold configuration may vary



*** If H2S is encountered in quantities greater than 100ppm, Apache will shut in well & install a remote operated choke ***

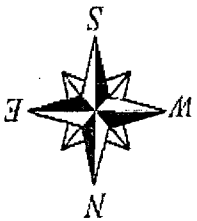
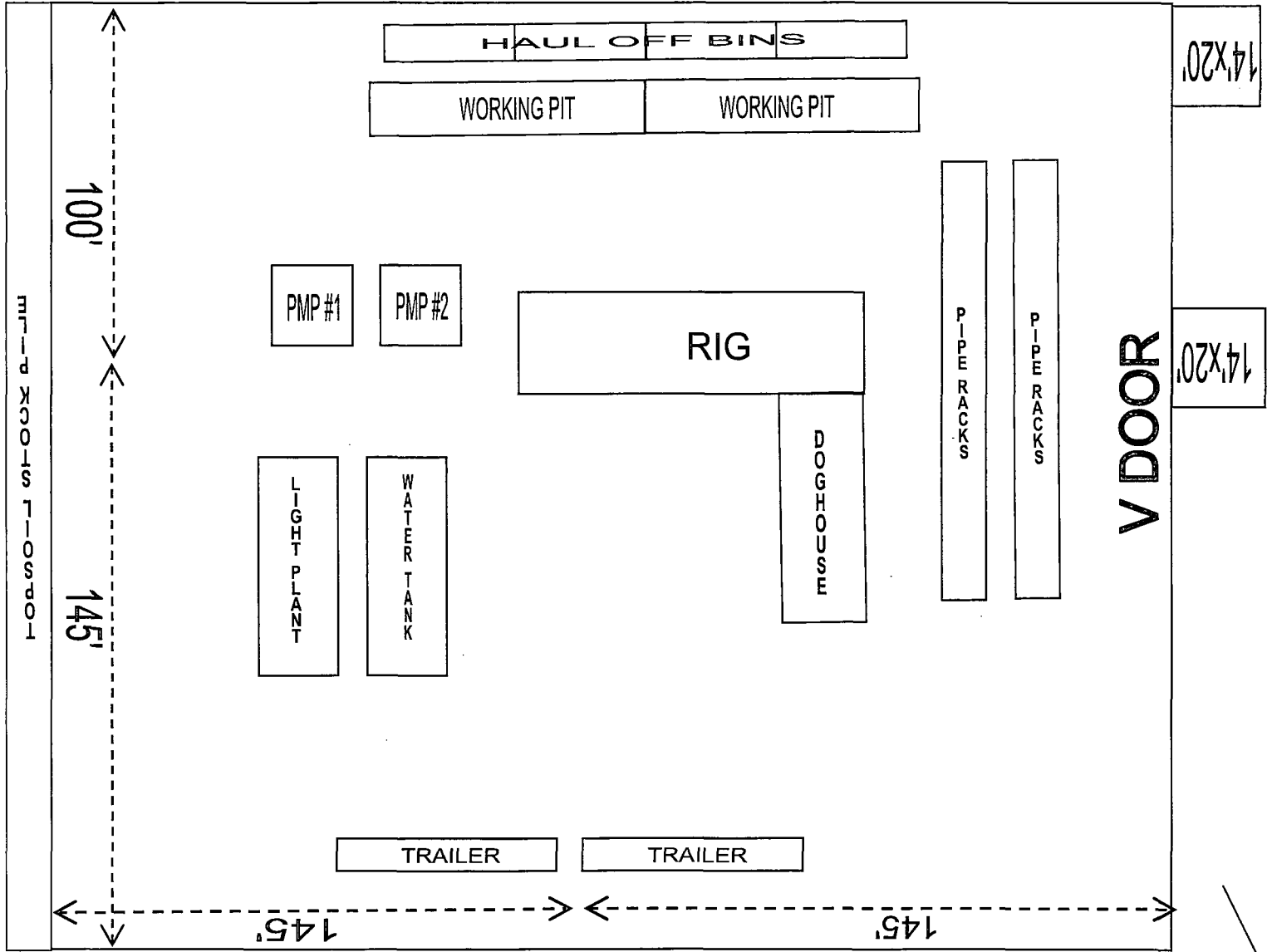


Approx 150' 8"
of new road



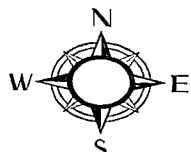
RIG ORIENTATION & LAYOUT **LOCKHART B 12 #16** **EXHIBIT 5**

Approx 150.8'
of new road

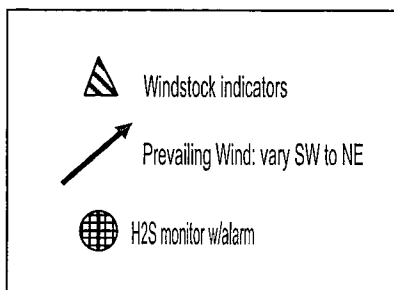


Apache

Drilling Location
H2S Safety Equipment Diagram
Exhibit 3A



Lockhart B 12 #16



Approx 150-8' of new road

H2S Warning Sign
~ 200' but no more than 500' from well location

Primary briefing area w/SCBA



TRAILER

TRAILER



Secondary Egress

