

HOBBS OCD

Form 3160-3  
(April 2004)

JUL 17 2013

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM-2512	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator APACHE CORPORATION		7. If Unit or CA Agreement, Name and No. NE DRINKARD <NMNM072602X>	
3a. Address: 303 VETERANS AIRPARK LN #3000 MIDLAND, TX 79705		8. Lease Name and Well No. <u>&lt;22503&gt;</u> NORTHEAST DRINKARD UNIT #269	
3b. Phone No. (include area code) 432-818-1167		9. API Well No. 30-025-41272	
4. Location of Well (Report location clearly and in accordance with city State requirements.) At surface 2410' FSL & 1950' FEL At proposed prod. zone SAME		10. Field and Pool, or Exploratory EUNICE; BLI-TU-DR, N: <u>&lt;22900&gt;</u>	
14. Distance in miles and direction from nearest town or post office* APPROX 5 MILES NORTH OF EUNICE, NM		11. Sec., T. R. M. or Blk. and Survey or Area UL: J SEC: 3 T21S R37E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any) 690'	16. No. of acres in lease 708.67	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. ~ 400'	19. Proposed Depth 7100'	20. BLM/BIA Bond No. on file BLM - CO - 1463 NATIONWIDE / NMB000736	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3465' - GL	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.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Sorina L Flores</i>	Name (Printed/Typed) SORINA L. FLORES	Date 12/13/12
Title SUPV. OF DRILLING SERVICES		
Approved by (Signature) <i>/s/George MacDonell</i>	Name (Printed/Typed) /s/George MacDonell	Date JUL 11 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.

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)

Capitan Controlled Water Basin

K  
07/19/13SEE ATTACHED FOR  
CONDITIONS OF APPROVALApproval Subject to General Requirements  
& Special Stipulations Attached

JUL 31 2013

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**PRIVATE SURFACE OWNER AGREEMENT**

OPERATOR: APACHE CORPORATION

WELL NAME: NORTHEAST DRINKARD UNIT #269

UL: J SECTION: 3 TOWNSHIP: 21S RANGE: 37E

LOCATION: 2410' FSL & 1950' FEL COUNTY: LEA STATE: NM

LEASE NUMBER: NMNM - 2512

**STATEMENT OF SURFACE USE**

The surface to the subject land is owned by RAYMOND W. FARMER  
PO BOX 348

CHANDLER, TX 75758 (903-530-7456)

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: TERRY WEST

SIGNATURE: *Terry West*

DATE: 11/14/12

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) NORTHEAST DRINKARD UNIT #269**

Lease #: NM-2512 Projected TD: 7100' GL: 3465'  
2410' FSL & 1950' FEL UL: J SEC: 3 T21S R37E 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	4114'
Rustler	1311'	Glorieta	5257'
Salt Top	1351'	Paddock	5319'
Salt Bottom	2469'	Blinbry	5658' (Oil)
Yates	2611'	Tubb	6138' (Oil)
Seven Rivers	2861'	Drinkard	6590' (Oil)
Queen	3456'	ABO	6842' (Oil)
Grayburg	3798'	TD	7100'

Depth to Ground Water: ~ 75'

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.

- CASING PROGRAM:** All casing is new & API approved

HOLE SIZE	DEPTH	OD CSG	WEIGHT	COLLAR	GRADE	COLLAPSE	BURST	TENSION
11"	0' - 1336'	8-5/8"	24#	STC	J-55	1.125	1.21	1.8
7-7/8"	0' - 7100'	5-1/2"	17#	LTC	L-80	1.125	1.21	1.8

- CEMENT PROGRAM:**

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

Lead: 260 sx Class C w/ 2% CaCl<sub>2</sub>, 0.13# CF, 3# LCM1, 0.005 gps FP-6L, 4% Bentonite  
(13.5 ppg, 1.75 yld) Comp Strengths : **12 hr** – 500 psi **24 hr** – 782 psi

Tail: 200 sx Class C w/ 1% CaCl<sub>2</sub>, 0.13 # CF, 0.005 gps FP-6L  
(14.8 ppg, 1.34 yld) Comp Strengths : **12 hr** – 755 psi **24 hr** – 1347 psi

**B. 5-1/2" Production cmt with (30% excess cmt; cmt to surf):**

Lead: 600 sx (35:65) Poz Cl C w/ 5% CaCl<sub>2</sub>, 0.125 # CF, 3# LCM1, 0.5% FL52, 0.005gps FP6L, 6% Bentonite, 0.3% Sodium Metasilicate  
(11.9ppg, 2.24 yld) Comp Strengths: **12 hr** – 603 psi **24 hr** – 850 psi

Tail: 330 sx (50:50) Poz Cl C w/ 5% CaCl<sub>2</sub> + 0.13% CF, 3# LCM1 + 0.005gps FP6L + 2% Bentonite + 1% FL25 + 1% BA58 + 0.1% Sodium Metasilicate (14.8 ppg, 1.34 yld) Comp Strengths: **12 hr** – 850 psi **24 psi** – 1979 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 5" 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 3124 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 5" 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  
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)

INTERVAL	MW (ppg)	VISC (sec/qt)	FLUID LOSS (cc)	MUD TYPE
0' - 1336' <sup>OK</sup>	8.3 – 8.8	28 – 32	NC	Fresh Water
1336 – 7100'	9.8 – 10.2	28 – 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:

*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 H<sub>2</sub>S in this area. If H<sub>2</sub>S 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: 3124 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:

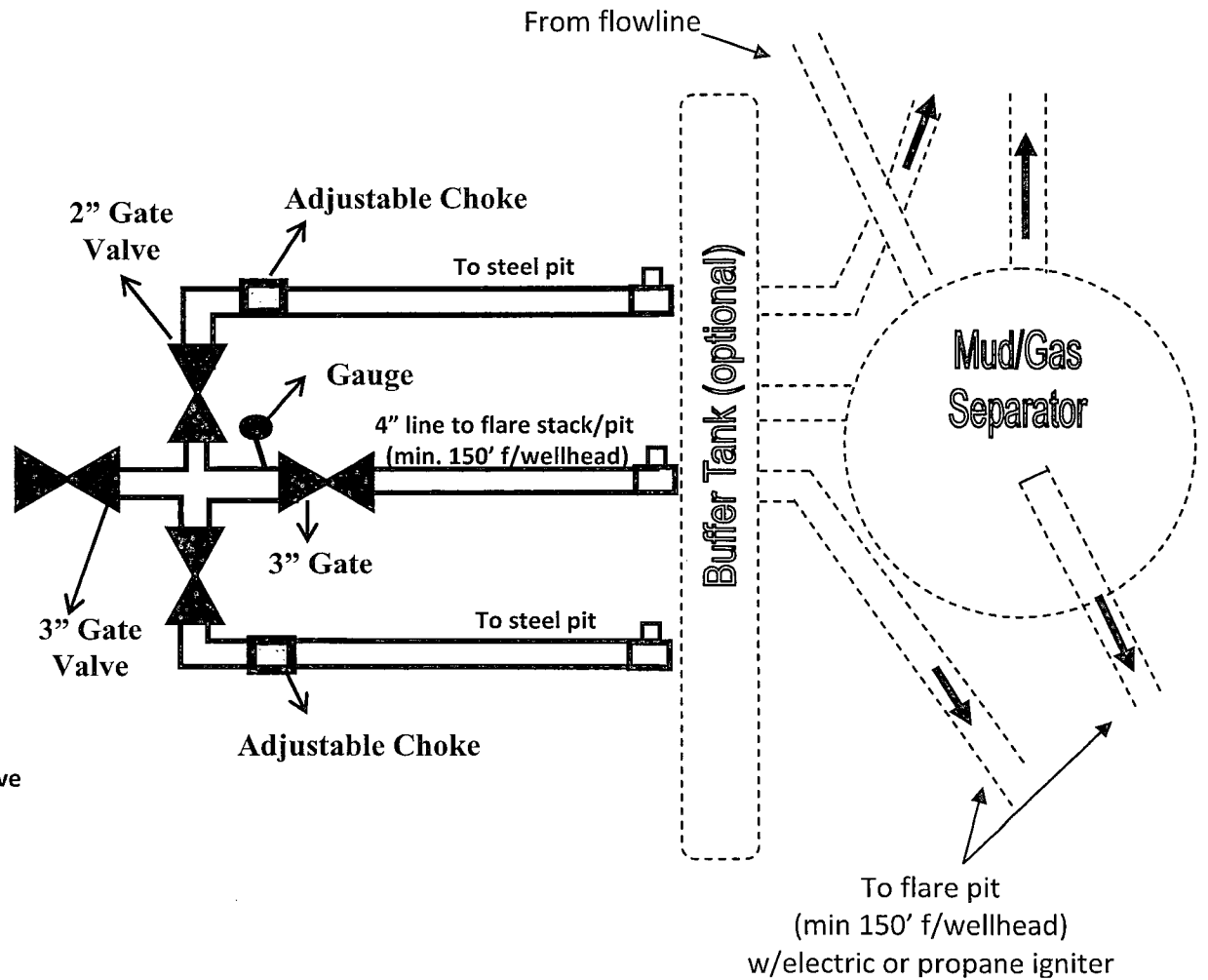
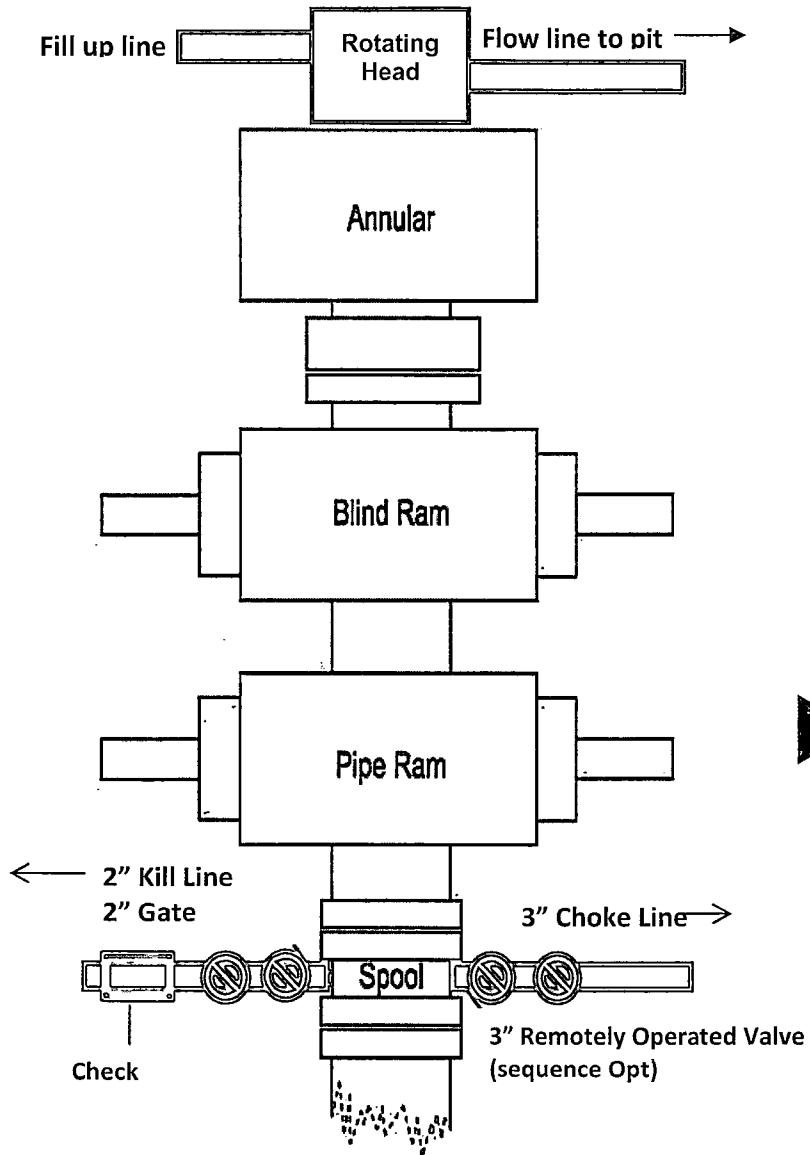
After running csg, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Eunice, BLI-TU-DRI, North formations will be perforated and stimulated in order to establish production. The well will be swab tested & potentialized as an oil well.

## 3M psi BOPE & Choke Manifold

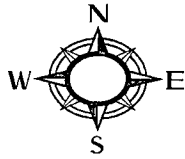
### Exhibit 3

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

Northeast Drinkard Unit #269



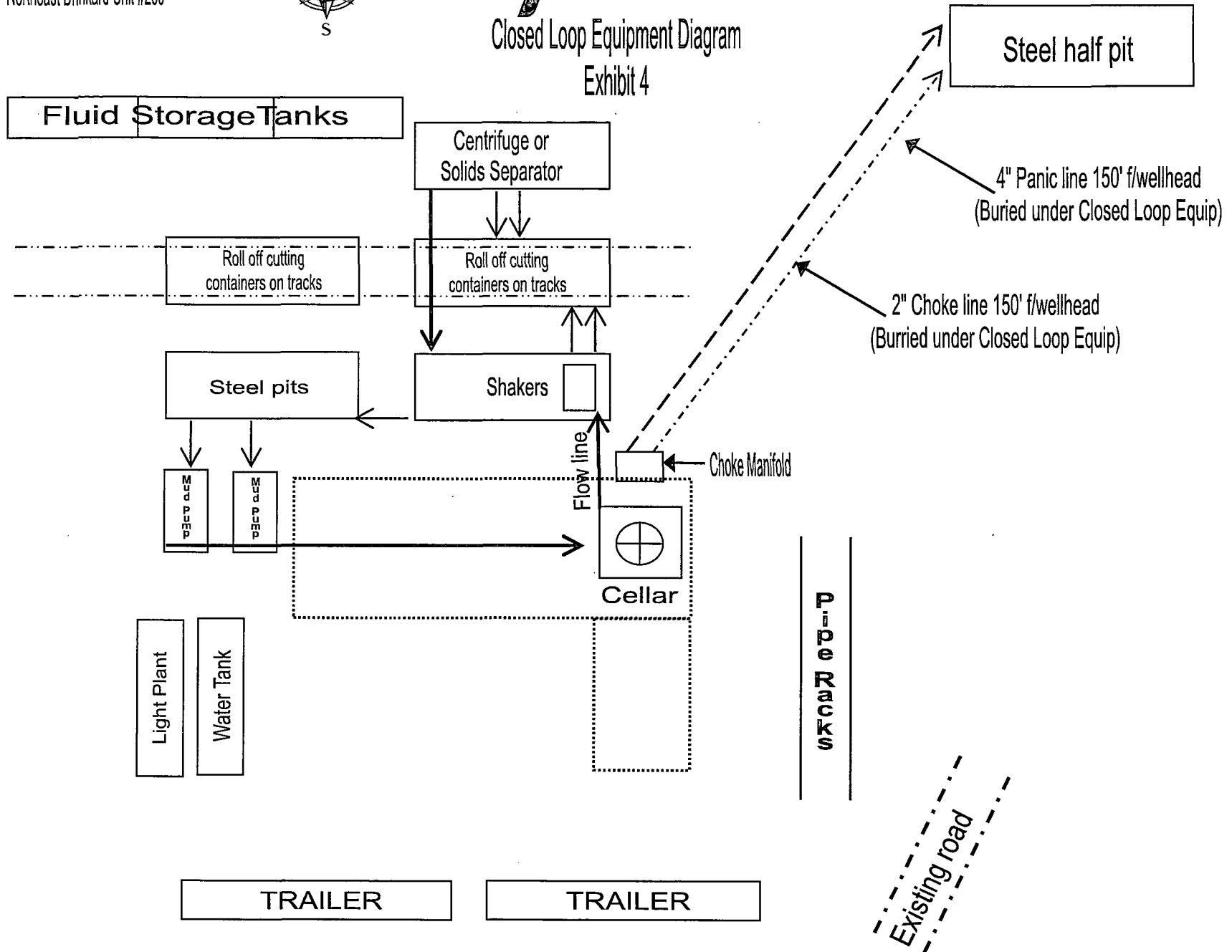
Northeast Drinkard Unit #269



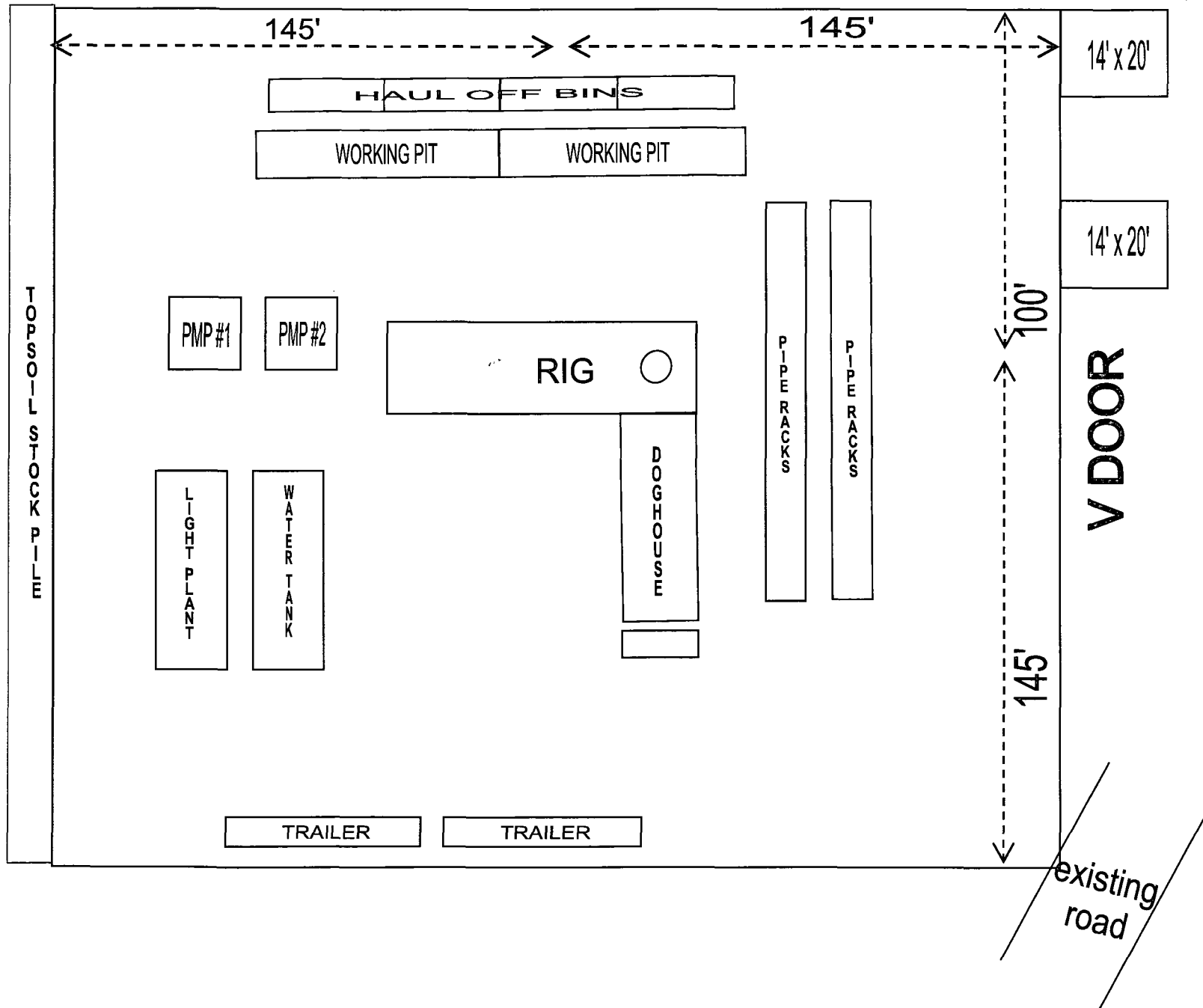
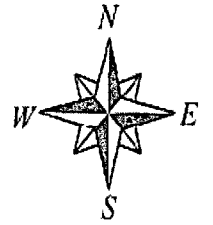
# Apache

Closed Loop Equipment Diagram

Exhibit 4



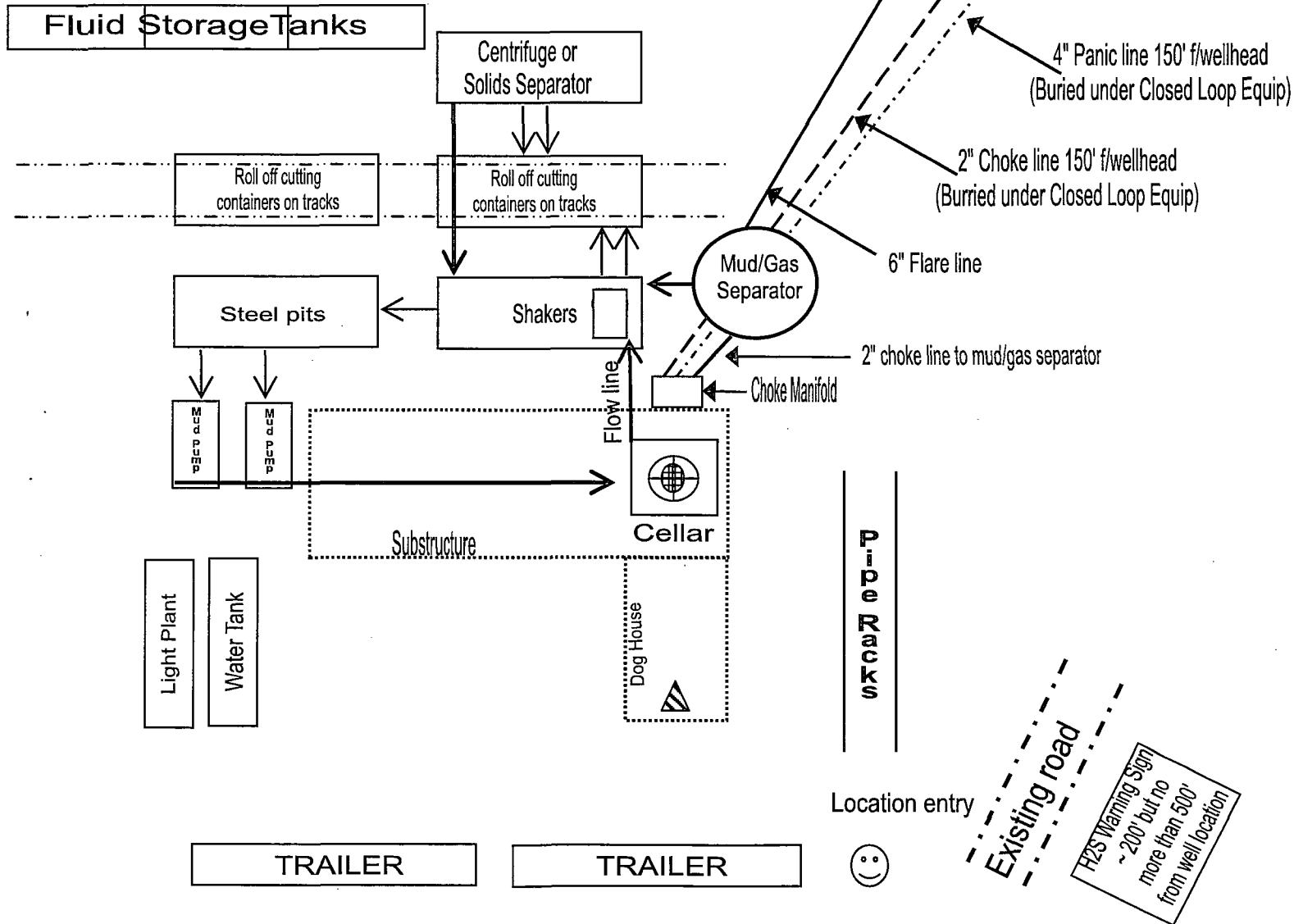
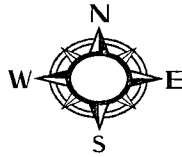
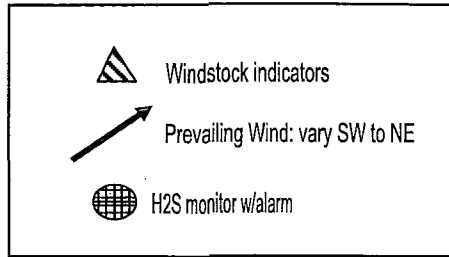
**RIG ORIENTATION & LAYOUT**  
**NFE FEDERAL #269**  
**EXHIBIT 5**



Northeast Drinkard Unit #269

# Apache

## Drilling Location H2S Safety Equipment Diagram Exhibit 3A



Secondary  
Egress

