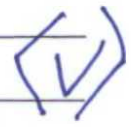


Form 3160-3  
(March 2012)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014HOBBS OCD  
OCT 16 2015  
RECEIVED5. Lease Serial No.  
NMNM-02512

6. If Indian, Allottee or Tribe Name

1a. Type of work: ☒ DRILL ☐ REENTER1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator APACHE CORPORATION (873)

3a. Address 303 VETERANS AIRPARK LN #100  
MIDLAND, TX 797053b. Phone No. (include area code)  
432-818-11677. If Unit or CA Agreement, Name and No.  
NMNM-072602X; Northeast Drinkard Unit8. Lease Name and Well No.  
NORTHEAST DRINKARD UNIT #431 (22503)9. API Well No.  
30-025- 4288010. Field and Pool, or Exploratory  
Eunice, Bli-Tu-Dr, N. (22900)

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

SEC: 10 T21S R37E

14. Distance in miles and direction from nearest town or post office\*  
APPROX 4.5 MILES NORTH OF EUNICE, NM12. County or Parish  
LEA13. State  
NM15. Distance from proposed\*  
location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any) 955'16. No. of acres in lease  
708.67 ACRES17. Spacing Unit dedicated to this well  
40 ACRES18. Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft. ~ 250'19. Proposed Depth  
7000'20. BLM/BIA Bond No. on file  
BLM-CO-1463 NATIONWIDE; NMB00073621. Elevations (Show whether DF, KDB, RT, GL, etc.)  
3433'22. Approximate date work will start\*  
AS Soon As Approved23. Estimated duration  
~ 8 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:

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 must 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 BLM.

25. Signature

Name (Printed/Typed)  
SORINA L. FLORES

Date

4/21/15

Title

SUPV OF DRILLING SERVICES

Approved by (Signature)

/s/ STEPHEN J. CAFFEY

Name (Printed/Typed)

Date

OCT 13 2015

Title

FOR FIELD MANAGER

Office

BLM-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

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHEDK-2  
10/16/15 Witness Surface CasingSEE ATTACHED FOR  
CONDITIONS OF APPROVAL

OCT 19 2015

# APACHE CORPORATION

NEDU 431

HOBBS OCD

OCT 16 2015

## 1. Geologic Formations

RECEIVED

TVD of target	7000'	Pilot hole depth	N/A
MD at TD:	7000'	Deepest expected fresh water:	91'

### Back Reef

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Aeolian	Surf		
Rustler	1238'		
Top of Salt	1321'		
Tansil	2431'		
Yates	2595'		
Seven Rivers	2825'	Oil	
Queen	3399'	Oil	
Grayburg	3743'	Oil	
San Andres	4080'	Oil	
Glorieta	5187'		
Paddock	5245'	Oil	
Blinbry	5660'	Oil	
Tubb	6129'	Oil	
Drinkard	6493'	Oil	
ABO	6732'	Oil	

\*H2S, water flows, loss of circulation, abnormal pressures, etc.

## 2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
11"	0'	1263' 1343'	8-5/8"	24	J-55	STC	2.1	2.1	8.8
7-7/8"	0'	7000'	5-1/2"	17	L-80	LTC	1.7	2.2	3.34
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

\*All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N



# APACHE CORPORATION

## NEDU 431

If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

### 3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H <sub>2</sub> O gal/s k	500# Comp. Strength (hours)	Slurry Description
Surf	465	13.5	1.73	9.13	9	Lead: Cl C + 4 % Bentonite + 1% CaCL <sub>2</sub> + 0.25# CF (12hr-677psi; 24hr-1093psi)
	250	14.8	1.35	6.34	5	Tail: Cl C w/2% CaCL <sub>2</sub> + 0.25# CF (12hr-1121psi; 24hr-1795psi)
Prod	605	12.6	1.95	10.65	8.5	Lead: Cl C 35/65 + 6% Bentonite + 0.1% R-20 + 0.25# CF + 3% Salt (12hr-671psi, 24hr-979psi)
	DV/ECP Tool: N/A					
	345	14.2	1.28	5.81	8.5	Tail: 50:50 Poz C w/2% Bentonite + 0.4% Fl-12 + 0.1% R-20 + 0.25# CF + 3% Salt (12hr-910psi; 24hr-____psii)

*\*If DVT used: DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.*

\*\*\* PRODUCTION CMT CONTINGENCY IF WATER FLOWS ENCOUNTERED\*\*\*\*\*

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H <sub>2</sub> O gal/sk	500# Comp. Strength (hours)	Slurry Description
Prod 1 <sup>st</sup> Stage	75	12.6	1.95	10.65	8.5	Lead: Cl C 35/65 + 6% Bentonite + 0.1% R-20 + 0.25# CF + 3% Salt (12hr-671psi, 24hr-979psi)
	345	14.2	1.28	5.81	8.5	Tail: Cl C 50/50 + 2% Bentonite + 0.4% FL-12 + 0.1% R-20 + 0.25# CF + 3% Salt (12hr-910psi, 24hr-16985psi)
DV/ECP Tool : 4440'						
Prod 2 <sup>nd</sup> Stage	465	12.6	1.95	10.65	8.5	Lead: Cl C 35/65 + 6% Bentonite + 0.1% R-20 + 0.25# CF + 3% Salt (12hr-671psi, 24hr-979psi)
	100	14.8	1.33	6.32	6.5	Tail: Cl C (12hr-1281psi, 24hr-1951psi)

Casing String	TOC	% Excess
Surface	0'	100%
Production	0'	30%

# APACHE CORPORATION

## NEDU 431

Include Pilot Hole Cementing specs:

Pilot hole depth : N/A

KOP : N/A

Plug top	Plug Bottom	% Excess	No. Sacks	Wt. lb/gal	Yld ft3/sack	Water gal/sk	Slurry Description and Cement Type

### 4. Pressure Control Equipment

<b>No</b>	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
-----------	--

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
7-7/8"	11"	3M	Annular	x	50% of working pressure
			Blind Ram	x	must test to 3,000 psi 2M 3M
			Pipe Ram	x	
			Double Ram		
			Other*		

\*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
<b>No</b>	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
	<b>NO</b> Are anchors required by manufacturer?
<b>No</b>	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. <ul style="list-style-type: none"><li>• Provide description here</li></ul> See attached schematic.



# APACHE CORPORATION

## NEDU 431

### 5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. shoe	FW	8.7 – 9.1	32-34	N/C
Surf shoe	TD	Brine	9.8 – 10.2	32-34	N/C

*\*Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.*

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
---	-----------------------------

### 6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned		Interval
X	Resistivity	TD to Int. shoe
X	Density	TD to Int. shoe
X	CBL	Production casing
	Mud log	
	PEX	

### 7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	3080 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe: N/A

Hydrogen Sulfide (H<sub>2</sub>S) monitors will be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

Y	H <sub>2</sub> S is present
	H <sub>2</sub> S Plan attached

### 8. Other facets of operation

Is this a walking operation? NO

Will be pre-setting casing? NO

Attachments

\_\_\_ Directional Plan

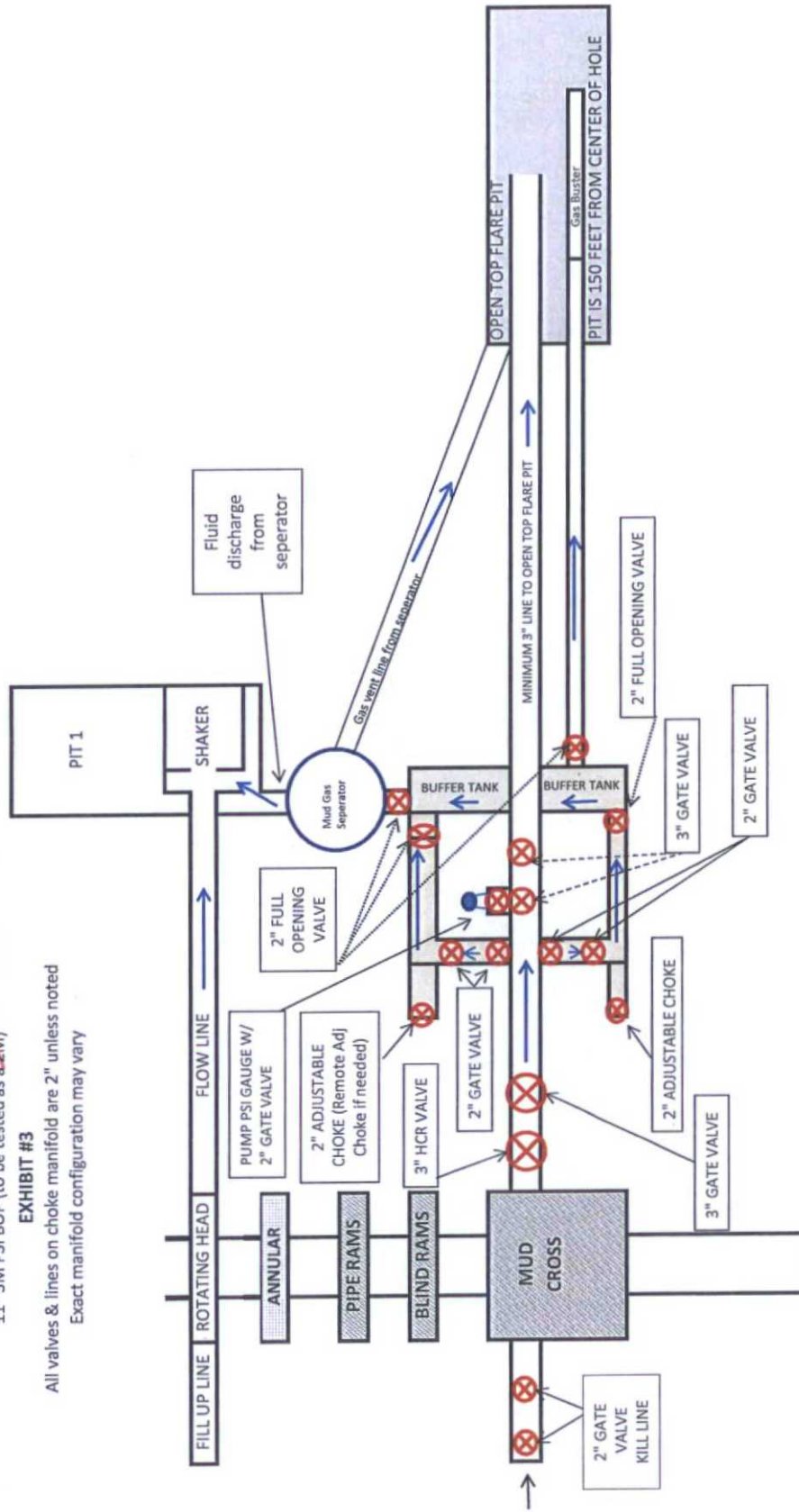
\_\_\_ Other, describe

# APACHE BOP AND CHOKE MANIFOLD SCHEMATIC

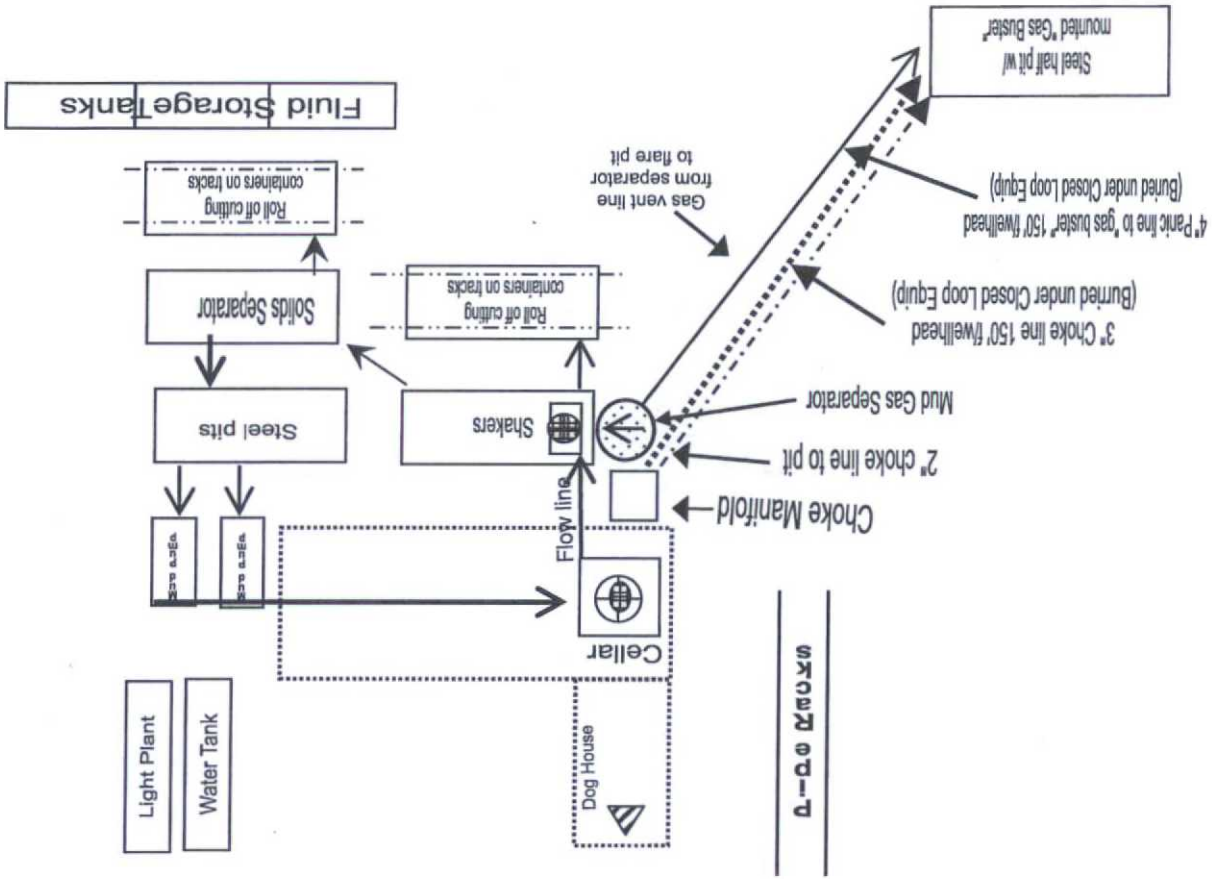
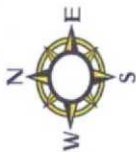
11" 3M PSI BOP (to be tested as a 2M) *3M must test to 3,000 psi*

## 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 195' of  
new road

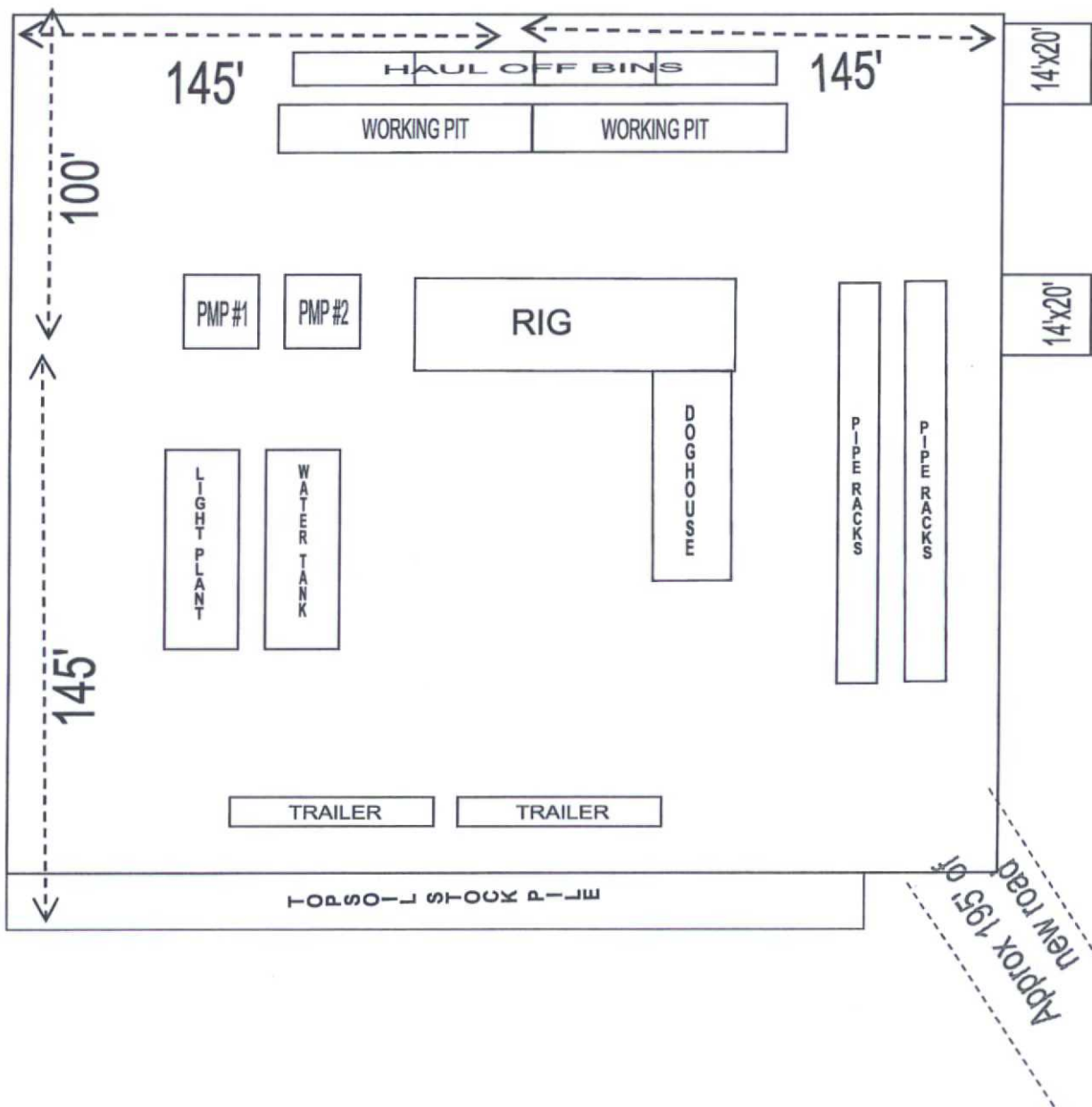
TRAILER

TRAILER



**RIG ORIENTATION & LAYOUT**  
**NORTHEAST DRINKARD UNIT #431**  
**EXHIBIT 5**

**V DOOR**





UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
Carlsbad Field Office  
620 E. Greene Street  
Carlsbad, NM 88220

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

Operator Name: APACHE CORPORATION  
Street or Box: 303 VETERANS AIRPARK LANE, STE. 1000  
City, State: MIDLAND, TX  
Zip Code: 79705

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Lease No: NMNM-02512 NORTHEAST DRINKARD UNIT #431

Legal Description of Land: 2600' FNL & 955' FEL

Section: 10 Township: 21S Range: 37E

County: LEA State: NM

Bond Coverage: \$150,000

Statewide Oil and Gas Surety Bond, APACHE CORPORATION.

BLM Bond File No.: BLM-CO-1463 NATIONWIDE / NMB000736

Signature: Bobby L Smith Printed Name: BOBBY L. SMITH

Title: DRILLING MANAGER, PERMIAN REGION

Date: 4/29/15

**PRIVATE SURFACE OWNER AGREEMENT**

OPERATOR: APACHE CORPORATION

WELL NAME: NORTHEAST DRINKARD UNIT 431

SECTION: 10 TOWNSHIP: 21S RANGE: 37E

LOCATION: 2600' FSL & 955' FEL COUNTY: LEA STATE: NM

LEASE NUMBER: NMNM-02512

**STATEMENT OF SURFACE USE**

The surface to the subject land is owned by MC NEILL RANCHS C/O PAIGE MCNEILL  
PO BOX 1092  
HOBBS, NM 88241  
575-393-3386

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: 

DATE: 4/28/15

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.