

OCD HOBBS OCD

ATS-15-31

FORM 3160-3  
OMB No. 1004-0188  
Expires October 2015

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

MAY 12 2015

RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial: NMNM 90161
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 (873)		7. If Unit or CA Agreement, Name and No.
3a. Address 303 VETERANS AIRPARK LN #1000 MIDLAND, TX 79705		8. Lease Name and Well No. HAWK FEDERAL B 1 #74 <24427> ✓
3b. Phone No. (include area code) 432-818-1167		9. API Well No. 30-025- 42555
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 330' FSL & 2310' FWL (N) At proposed prod. zone SAME		10. Field and Pool, or Exploratory WANTZ; ABO <62700>
14. Distance in miles and direction from nearest town or post office* APPROX 3 MILES NORTH OF EUNICE, NM		11. Sec., T. R. M. or Blk and Survey or Area UL: N SEC: 8 T21S R37E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330'	16. No. of acres in lease 640 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. ~ 500'	19. Proposed Depth 7600'	20. BLM/BIA Bond No. on file BLM-CO-1463 NATIONWIDE / NMB000736
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL: 3497'	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, 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 <i>Sorina L Flores</i>	Name (Printed/Typed) SORINA L. FLORES	Date 9/2/14
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Title

SUPV OF DRILLING SERVICES

Approved by (Signature) <i>Steve Caffey</i>	Name (Printed/Typed)	Date MAY - 6 2015
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Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE
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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

Ka  
05/12/15

Po

Approval Subject to General Requirements  
& Special Stipulations Attached

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

MAY 12 2015

# APACHE CORPORATION (OGRID: 873)

HAWK FEDERAL B 1 #74

HOBBS OCD

MAY 12 2015

## 1. Geologic Formations

RECEIVED

TVD of target	7600'	Pilot hole depth	N/A
MD at TD:	7600'	Deepest expected fresh water:	65'

### Back Reef

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Aeolian	Surface	Water	
Rustler	1284'	Water	
Top of Salt	1360'	Salt	
Tansill	2517'	Barren	
Yates	2664'	Oil, Gas, Water	
Queen	3387'	Oil, Gas, Water	Loss circ
Grayburg	3721'	Oil, Gas, Water	Loss circ
San Andres	4118'	Oil, Gas, Water	Loss circ
Glorieta	5178'	Oil, Gas, Water	
Blinbry	5697'	Oil	
Tubb	6236'	Oil	
Drinkard	6574'	Oil	
ABO	6837'	Target Zone	
TD	7600'		

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

### See COFF Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
11"	0	1340' 1340	8-5/8"	24	J55	STC	2.25	1.40	7.97
7-7/8"	0	7600'	5-1/2"	20	P110	LTC	3.07	3.20	3.61
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

Must have table for contingency casing

	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?	N/A
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
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	

# APACHE CORPORATION (OGRID: 873)

HAWK FEDERAL B 1 #74

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 ft <sup>3</sup> / sack	H <sub>2</sub> O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	275	13.5	1.75	8.962	10	Lead: Class C + 2% CaCL <sub>2</sub> + 4% Bentonite
	200	14.8	1.34	6.31	8	Tail: Class C + 1% CaCL <sub>2</sub>
Prod.	700	12.6	2.0	10.57	12	Lead: 35/65 Poz C + 5% Salt + 0.25% Retarder + 6% Bentonite
	DV/ECP Tool : N/A					
	300	12.4	1.31	5.61	9	Tail: 50:50 Poz C + 5% Salt + 0.25% Retarder + 2% Bentonite

*\*\*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.*

Casing String	TOC	% Excess
Surface	0'	100%
Production	0'	35%

Include Pilot Hole Cementing specs:

Pilot hole depth: N/A

KOP: N/A

Plug top	Plug Bottom	% Excess	No. Sacks	Wt. lb/gal	Yld ft <sup>3</sup> /sack	Water gal/sk	Slurry Description and Cement Type

# APACHE CORPORATION (OGRID: 873)

HAWK FEDERAL B 1 #74

## 4. Pressure Control Equipment

must be to 3,000PSI

**No** A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

See COA

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
7-7/8"	11"	<del>2M</del> 3m	Annular	x	50% of working pressure  <del>2M</del> 3m
			Blind Ram	x	
			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 & 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 & 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 & floor safety valve (inside BOP) & choke lines and choke manifold. See attached schematics.

<b>No</b>	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 & 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 & hydrostatic test chart.
<b>Y/N</b>	Are anchors required by manufacturer?
<b>MD</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. • Provide description here  See attached schematic.

## 5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. shoe	FW	8.8 – 9.2	28 – 36	N/C
Surf shoe	TD	Brine	9.8 – 10.0	28 – 29	N/C

Sufficient mud materials to maintain mud properties & meet minimum lost circulation & 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
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# APACHE CORPORATION (OGRID: 873)

## HAWK FEDERAL B 1 #74

### 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	Int. shoe to TD
X Density	Int. shoe to TD
X CBL	Production casing
	Mud log
	Intermediate shoe to TD
	PEX

### 7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	3150 psi
Abnormal Temperature	NO

Mitigation measure for abnormal conditions. *Describe:* \_\_\_\_\_

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S 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.	
<input checked="" type="checkbox"/>	H2S is present
	H2S Plan attached

### 8. Other facets of operation

Is this a walking operation? If yes, describe. N/A

Will be pre-setting casing? If yes, describe. N/A

Attachments

N/A Directional Plan

N/A Other, describe

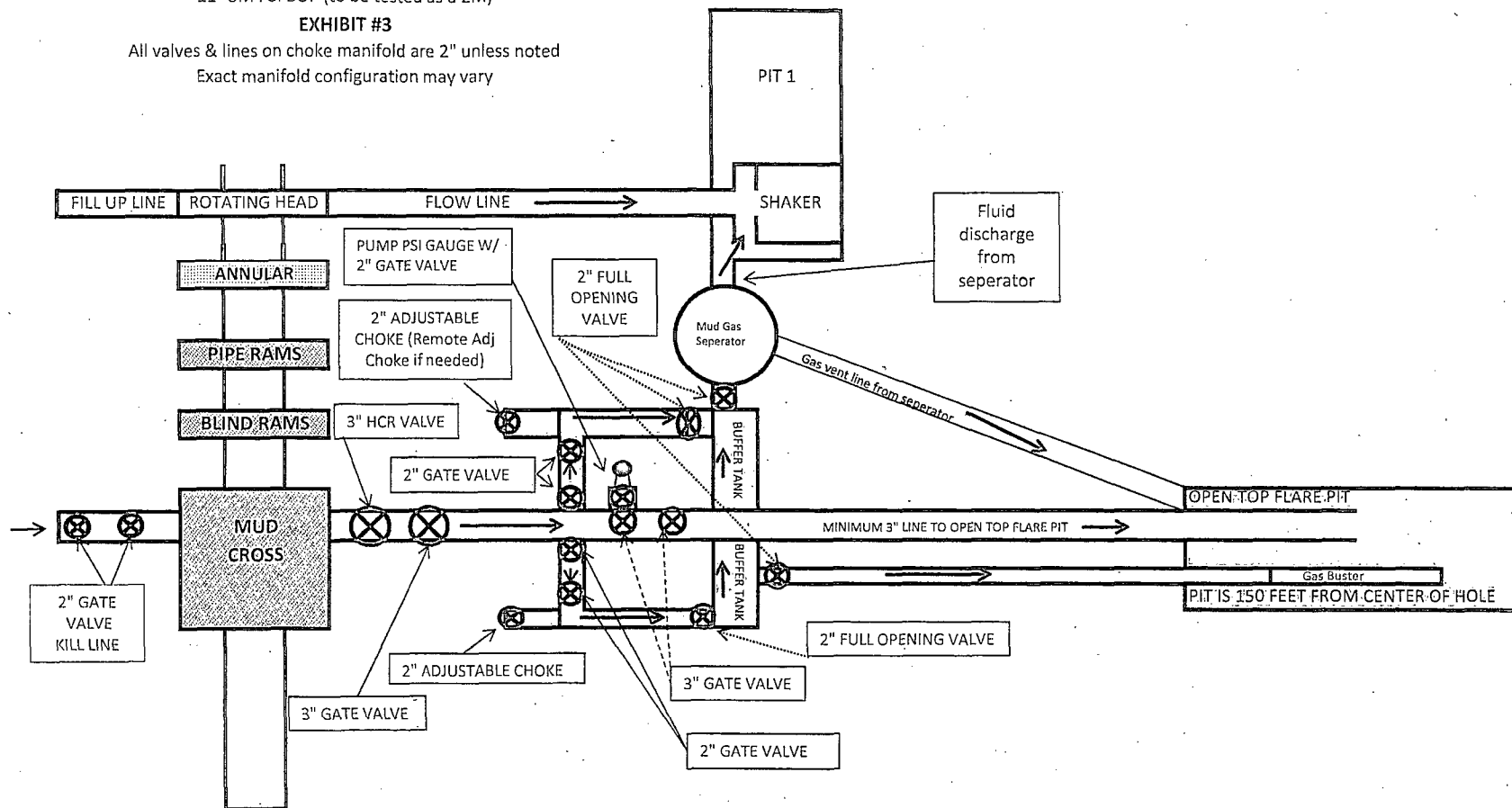
# APACHE BOP AND CHOKE MANIFOLD SCHEMATIC

*must test to 3,000 PSI*

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



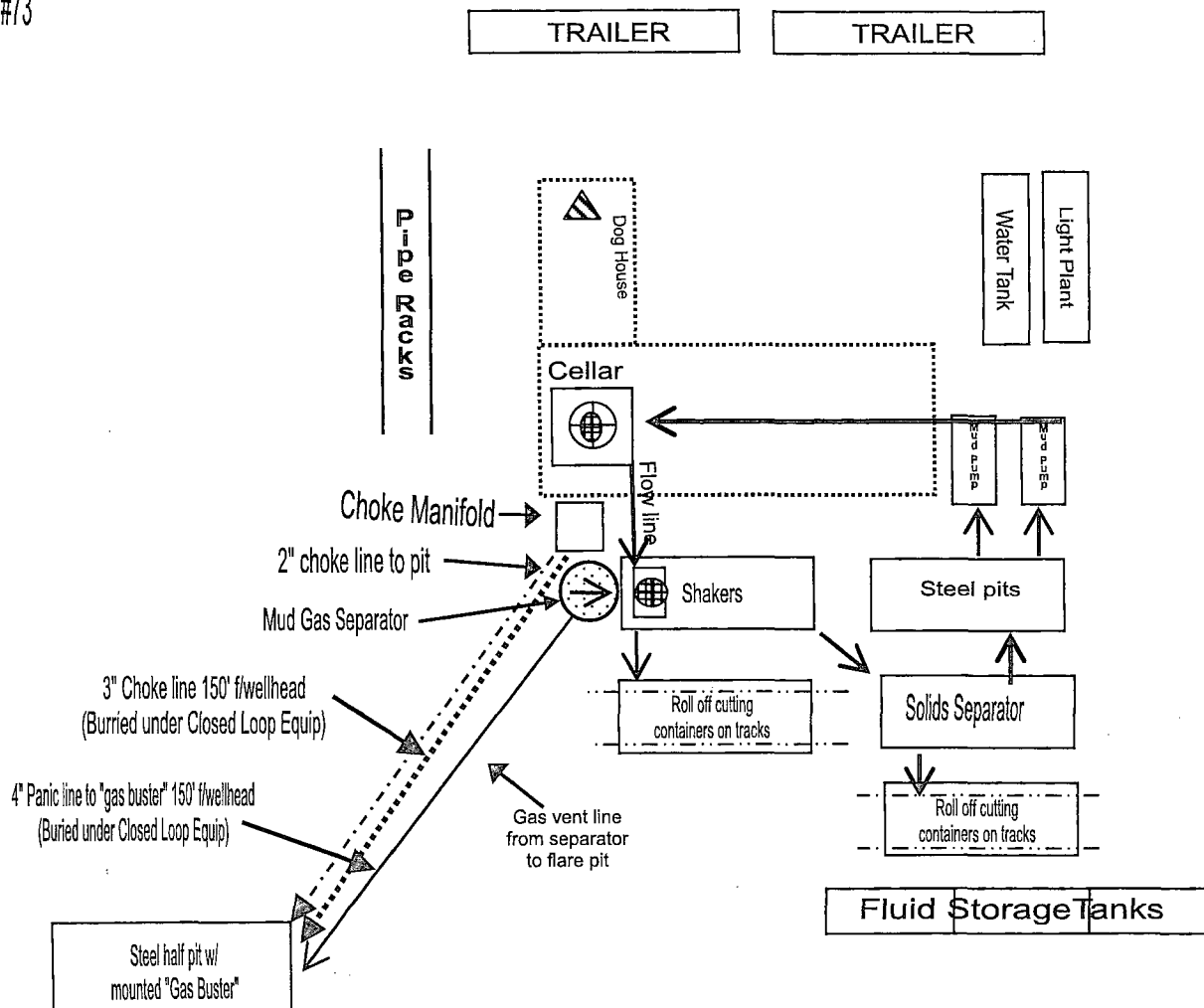
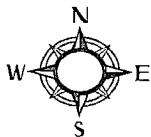
\*\*\* If H2S is encountered in quantities greater than 100ppm, Apache will shut in well & install a remote operated choke \*\*\*



## Closed Loop Equipment Diagram

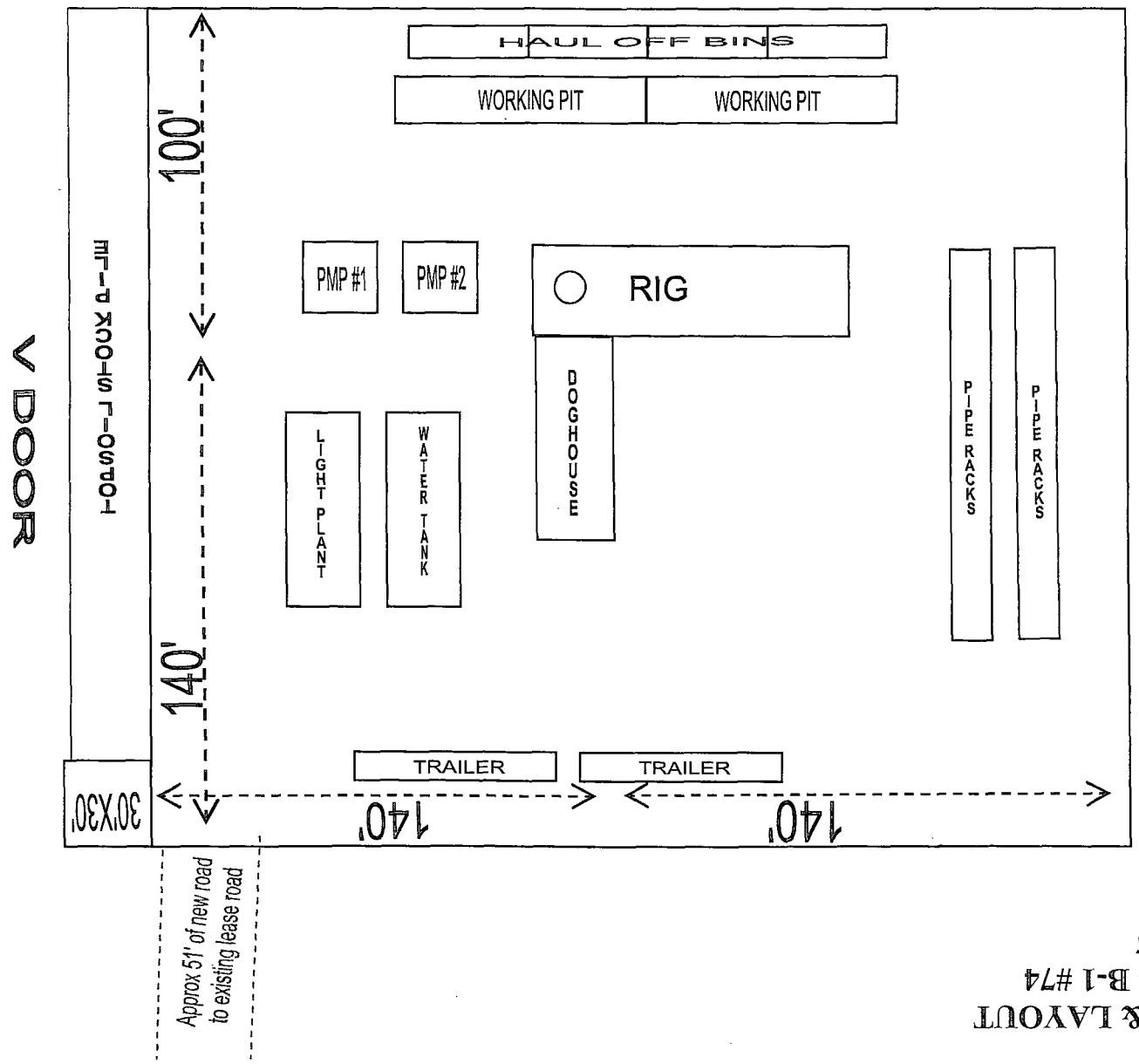
Exhibit 4

HAWK FEDERAL B-1 #73



Approx 51' of new road  
to existing lease road

**RIG ORIENTATION & LAYOUT**  
**HAWK FEDERAL B-1 #74**  
**EXHIBIT 5**





**PRIVATE SURFACE OWNER AGREEMENT**

OPERATOR: APACHE CORPORATION

WELL NAME: HAWK FEDERAL B 1 #74

UL: N SECTION: 8 TOWNSHIP: 21S RANGE: 37E

LOCATION: 330' FSL & 2310' FWL COUNTY: LEA STATE: NM

LEASE NUMBER: NMNM-90161

**STATEMENT OF SURFACE USE**

The surface to the subject land is owned by Millard Deck Estate, c/o Bank of America NA, Trustee of Millard Deck Testamentary Trust under Last Will & Testament of Millard Deck, ATTN: Jeff Petter, Asst VP, US Trust-Farm & Ranch, Bank of America Private Wealth Mgmt, PO Box 270, Midland, TX 79702 (303 W. Wall St, Midland, TX 79701) 432-688-7926

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: MAXWELL GROVE

SIGNATURE: 

DATE: 08/17/2014

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.