

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

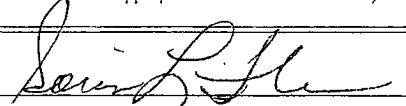
FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5 Lease Serial No. NMLC-0029395B
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
3a Address 303 VETERANS AIRPARK LN #3000 MIDLAND, TX 79705		8 Lease Name and Well No. LEE FEDERAL #042 <308720>
3b. Phone No. (include area code) 432-818-1167		9 API Well No. 30-015- 39223
4. Location of Well (Report location clearly and in accordance with any State requirements*) At surface 425' FSL & 2185' FEL At proposed prod. zone SAME		10 Field and Pool, or Exploratory CEDAR LAKE; GLORIETA-YESO
14. Distance in miles and direction from nearest town or post office* APPROX 5 MILES EAST OF LOCO HILLS, NM		11 Sec., T. R. M. or Blk. and Survey or Area UL: O SEC: 17 T17S R31E
15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 425'	16 No. of acres in lease 1786.15	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. 350'	19 Proposed Depth 6500'	20 BLM/BIA Bond No. on file BLM - CO - 1463 NATIONWIDE
21 Elevations (Show whether DF, KDB, RT, GL, etc) 3677'	22. Approximate date work will start* 04/15/2011	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 	Name (Printed/Typed) SORINA L. FLORES	Date 04/07/2011
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Title

DRILLING TECH

Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date JUL 12 2011
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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 USC Section 1001 and Title 43 USC 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)

RECEIVED**JUL 15 2011****NMOCD ARTESIA****ROSWELL CONTROLLED WATER BASIN**

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

**APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED**



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

APACHE CORPORATION (OGRID: 873) LEE FEDERAL #42

Lease #: NMLC-0029395B Projected TD: 6500' GL: 3677'
425' FSL & 2185' FEL, UL: O SEC: 17 T17S R31E EDDY 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:**

FORMATION	WELL DEPTH	WATER/OIL/GAS
Quaternary Aeolian	Surface	
Rustler	256'	
Salt Top	495'	
Salt Bottom	1252'	
Yates	1466'	
Seven Rivers	1759'	Oil
Queen	2362'	Oil
Grayburg	2714'	Oil
San Andres	3066'	Oil
Glorieta	4559'	
Yeso	4641'	Oil
Blaine	5180'	
Tubb	6176'	
TD	6500'	
Depth to Ground Water:	91'	

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. The surface fresh water sands will be protected by setting 13-3/8" csg @ 256' & circ cmt back to surface. All intervals will be isolated by setting 5-1/2" csg to TD & circ cmt above the base of 8-5/8" csg.

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

SEE LOG

HOLE SIZE	DEPTH	OD CSG	WEIGHT	COLLAR	GRADE	COLLAPSE	BURST	TENSION
17-1/2"	0' - 280' ^{37'}	13-3/8"	48#	STC	H-40	1.125	1.0	1.8
11"	280' - 1480'	8-5/8"	24#	STC	J-55	1.125	1.0	1.8
7-7/8"	1480' - 6500'	5-1/2"	17#	LTC	J-55	1.125	1.0	1.8

4. **CEMENT PROGRAM:**

A. 13-3/8" Surface: Run & set 13-3/8" 48# H-40 STC csg to 280'. Cmt with:

Lead: 320 sx Class C w/ 1% CaCl₂, 0.25% R38 (14.8 wt, 1.34 yld)

Compressive Strengths: 12 hr - 813 psi 24 hr - 1205 psi ***100% excess cmt; cmt to surface***

B. 8-5/8" Intermediate: Run & set 8-5/8" 24# J-55 STC csg to 1480'. Cmt with:

Lead: 180 sx (50:50) Poz C w/ 4% Bentonite, 1% CaCl₂, 0.25% R38 (12wt, 2.3 yld)

Compressive Strengths: 12 hr - 589 psi 24 hr - 947 psi

Tail: 160 sx Class C w/ 1% CaCl₂, 0.25% R38 (14.8 wt, 1.34 yld)

Compressive Strengths: 12 hr - 813 psi 24 hr - 1205 psi ***100% excess cmt; cmt to surface***

C. 5-1/2" Production: Run & set 5-1/2" 17# J-55 LTC csg to 6500' (DV or Post tool w/ be set at @ 3500' if DV or Post is to be moved cement will be adjusted proportionately / TOC: 500') Cmt with:

1st Stage Lead: 530 sx (50:50) Poz C w/ 0.3% C12, 5% Salt, 0.25% R38 (14.2 wt, 1.26 yld)

Compressive Strengths: 12 hr - 1379 psi 24 hr - 2332 psi

2nd Stage Lead: 270 sx (50:50) Poz C w/ 5% Salt, 0.25% R38 (11.8 wt, 2.45 yld)

Compressive Strengths: 12 hr - 540 psi 24 hr - 866 psi

Stage Tail: 90 sx (50:50) Poz C w/ 5% Salt, 0.25% R38 (14.2 wt, 1.28 yld)

Compressive Strengths: 12 hr - 1031 psi 24 hr - 1876 psi ***30% excess cmt***

See COA ** The above cmt volumes could be revised pending caliper measurement from open hole logs. For Surface csg: If cmt does not circ to surface, the appropriate BLM office shall be notified & a tag with 1" will be performed at four positions 90 degrees apart to verify cmt depth. If depth is greater than 100' or water is standing in the annulus, remedial cementing will be done. If no water & TOC tag is less than 100', when 100% excess cmt of the annulus volume is run on the primary job, ready-mix will be used to bring cmt to surface.

5. PROPOSED CONTROL EQUIPMENT

Exhibit "1" shows an 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 13-3/8" surface csg and tested to 70% of casing burst. After the intermediate casing is set & cemented the 13 3/8" casing head will be removed and a 11" 3M head will be installed on the 8 5/8" casing and utilized continuously until total depth is reached. The BOP will be tested at 2000 psi, maximum surface pressure is not expected to exceed 2M psi, BHP is calculated to be approximately 2662 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 "1" 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 of temperatures are expected in this well. No nearby wells have encountered any problems.

6. PROPOSED MUD CIRCULATION SYSTEM: (Closed Loop System)

INTERVAL	MW (ppg)	VISC (sec/qt)	FLUID LOSS (cc)	MUD TYPE
0' - 280' 375'	8.4	29	NC	Fresh Water
280' to 1480'	9.8 - 10.0	29	NC	Brine
1480' - 6500'	8.9 - 9.0	29	NC	Cut Brine

** The necessary mud products for weight addition and 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.

7. AUXILIARY WELL CONTROL EQUIPMENT / MONITORING EQUIPMENT:

11" x 3000 psi Double BOP/Blind & pipe ram (2M BOP if available)
 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 - 3" blow down line

8. LOGGING, CORING & TESTING PROGRAM: *See COA*

- OH logs: Dual Laterolog, MSFL, CNL, Litho-Density, Gamma Ray, Caliper & Sonic from TD back to 8-5/8" csg shoe.
- Run CNL, Gamma Ray from 8-5/8" csg shoe back to surface.
- No cores, DST's or mud logger are planned at this time.
- 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:

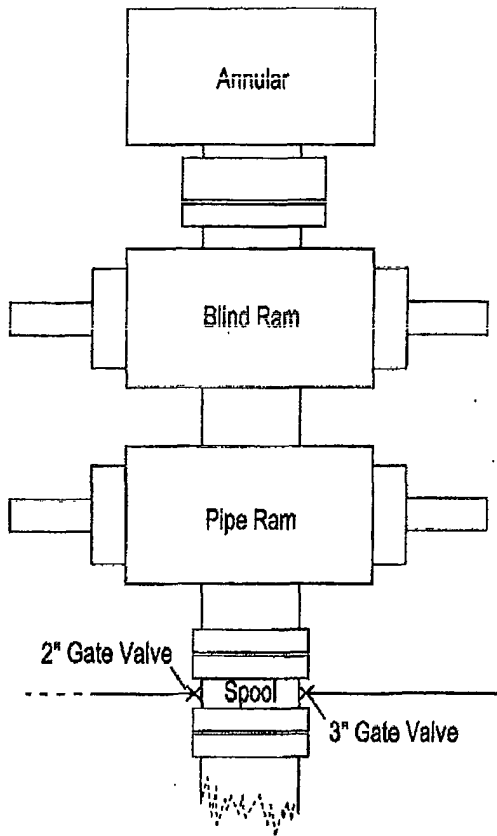
No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered, however, the proposed mud program will be modified to increase the mud-weight. There is no known presence of H₂S in this area. If H₂S is encountered the operator will comply with the provisions of *Onshore Oil & Gas Order No. 6*. 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: 2662 psi and estimated BHT: 115°.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

Road and location construction will begin after Santa Fe & 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.

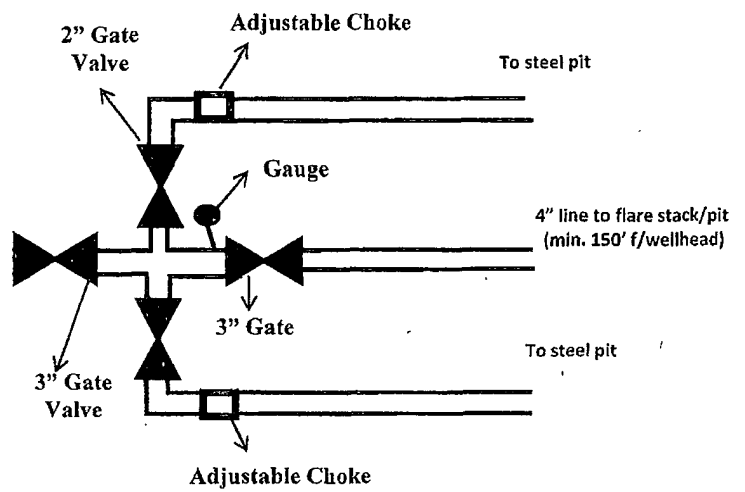
11. OTHER FACETS OF OPERATION:

After running csg, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Cedar Lake; Glorieta-Yeso formation 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

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



DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

Operator APACHE CORP OGRID # 873
 Well Name & # 308720 LEE FERN #42 Surface Type (F) (S) (P)
 Location: UL 0, Sect 17, Township 17 s, RNG 3 e, Sub-surface Type (F) (S) (P)

A. Date C101 rec'd ____/____/____ C101 reviewed ____/____/____

B. 1. Check mark, Information is OK on Forms:

OGRID X BONDING FBI PROP CODE X WELL # X SIGNATURE ____

2. Inactive Well list as of: 7/22/11 # wells 291 # Inactive wells 6

a. District Grant APD but see number of inactive wells:

No letter required X; Sent Letter to Operator ____, to Santa Fe ____

3. Additional Bonding as of: 7/22/11

a. District Denial because operator needs addition bonding:

No Letter required X; Sent Letter to Operator ____, To Santa Fe ____

b. District Denial because of Inactive well list and Financial Assurance:

No Letter required X; Sent Letter to Operator ____, To Santa Fe ____

C. C102 YES ____, NO ____, Signature ____

1. Pool CEDAR LAKE, GULF-YEHO, Code 96831

a. Dedicated acreage 40, What Units ____

b. SUR. Location Standard X Non-Standard Location ____

c. Well shares acres: Yes ____, No X, # of wells ____ plus this well # ____

2. 2nd. Operator in same acreage, Yes ____, No X

Agreement Letter ____, Disagreement letter ____

3. Intent to Directional Drill Yes ____, No X

a. Dedicated acreage ____, What Units ____

b. Bottomhole Location Standard ____, Non-Standard Bottomhole ____

4. Downhole Commingle: Yes ____, No X

a. Pool #2 ____, Code ____, Acres ____

Pool #3 ____, Code ____, Acres ____

Pool #4 ____, Code ____, Acres ____

5. POTASH Area Yes ____, No X

D. Blowout Preventer Yes X No ____

E. H2S Yes X No ____

F. C144 Pit Registration Yes ____, No need

G. Does APD require Santa Fe Approval:

1. Non-Standard Location: Yes ____, No X, NSL # ____

2. Non-Standard Proration: Yes ____, No X, NSP # ____

3. Simultaneous Dedication: Yes ____, No X, SD # ____

Number of wells ____ Plus # ____

4. Injection order Yes ____, No X; PMX # ____ or WFX # ____

5. SWD order Yes ____, NO X; SWD # ____

6. DHC from SF ____; DHC-HOB ____; Holding ____

7. OCD Approval Date ____/____/____

API #30-015-39223

8. Reviewers ____